Incidental Take Plan
for
Maine's Trapping Program

Submitted to

U. S. Department of Interior
Fish and Wildlife Service

Prepared by

Maine Department of Inland Fisheries and Wildlife[1]
41 SHS, 284 State Street
Augusta, ME 04333-0041

Plan as accepted October 28, 2014
Minor amendments September 24, 2015

[1] This document was written by Jennifer Vashon, Walter Jakubas, and John DePue, 650 State Street, Bangor, Maine, 04401; James Connolly, 284 State Street, Augusta, Maine, 04333.

Table of Contents

List of Figures

List of Tables

List of Appendices

Executive Summary

Although the U. S. Endangered Species Act (ESA) prohibits the "take" of threatened or endangered species that results in direct harm to the species or habitat destruction, the ESA authorizes the U. S. Fish and Wildlife Service (USFWS) to issue permits for the "incidental take" of listed wildlife species (See Section 10a(1)(B) of the ESA) that may occur from otherwise lawful activities. The Maine Department of Inland Fisheries and Wildlife (IFW) is submitting this incidental take plan (Plan) to the USFWS for a Section 10 permit to provide statewide protection to trappers in the event that Canada lynx (*Lynx canadensis*), a federally threatened species, are incidentally trapped in lawfully made sets during Maine's legal trapping season, animal damage control (ADC), or predator management (PM) activities. This permit will cover individuals that are licensed or otherwise authorized to trap including fur trappers, animal damage, and predator management trappers. Annually this constitutes approximately 6,000 individuals based on data from 2000-13. Trappers incidentally catching a lynx in traps that are illegally set are not covered and are liable for take under the ESA.

The incidental take authorized within the scope of the Section 10 permit issued to IFW will cover lynx that are incidentally trapped and not injured, lynx receiving minor or major trap related injuries, and lynx killed in traps. Canada lynx are the only species proposed for coverage through the incidental take permit (ITP), as no other federally listed species are anticipated to be affected by the State's trapping programs. Species that may be listed in the future will be handled through permit amendment, as necessary and appropriate. Data from Maine suggests that the majority of lynx caught in traps should be released with little or no injury. However, occasionally a lynx may die or have a trap related injury that requires veterinarian care. Therefore, IFW is requesting a permit to cover the incidental trapping of up to 195 lynx during the next 15 years that includes the lethal take of up to 3 lynx and major injury of up to 9 lynx. The duration of the permit was based on IFW's species planning period, where management objectives and plans are reviewed and updated through a public planning process approximately every 15 years.

The proposed take of lynx in this Plan will have no adverse impacts to habitat and will not affect lynx population growth rates during the permit period. Throughout the Plan, IFW provides data from more than 12 years of tracking lynx and incidental take in Maine that demonstrates that trapping in Maine does not pose a risk to Maine's lynx population and may only directly impact a few individuals ($\leq$12 lynx in a 15 year period). Since the late 1990s, Maine's lynx population increased to historic high numbers in areas where fur trapping, ADC, and PM effort occurred. If Maine's lynx population declines during the permit period in response to changes in habitat quality and prey densities, IFW expects that lynx incidental capture rates will also decline.

Although lynx are found primarily in WMDs 1-11, 14, 18, and 19, IFW is committed to adjusting trapping regulations if lynx expand into other areas of the state, and thus seeks statewide coverage for the incidental take of lynx. To minimize the incidental trapping of lynx in Maine, this Plan includes measures that

1. requires killer-type traps (<8 inch jaw spread) set on land in WMDs 1-11, 14, 18, and 19 to be set, on the ground as a blind set (i.e., only traps with jaw spreads ≤ 5 inches) or with an approved lynx exclusion device;
2. restricts the placement of visible bait near foothold and killer-type traps statewide;
3. requires the use of 3 swiveling points on foothold traps statewide;
4. requires the mandatory reporting of any lynx caught in traps prior to releasing the lynx, unless an IFW official cannot be reached in time to prevent injury to the lynx;
5. requires IFW personnel, when it is safe to do so, to release lynx from traps to evaluate and treat any trap related injury and insure compliance with trapping regulations;
6. requires periodic staff training and evaluation of 15 lynx by a licensed veterinarian over the permit period;
7. provides care to lynx if injured;
8. provides eight outreach and education efforts to inform new and experienced trappers of measures to avoid or minimize lynx captures;
9. commitments to investigate compliance with trapping regulations that minimize lynx capture; and
10. provides 6,200 acres of lynx habitat as mitigation for permitted lethal take.

"During the 2014-2015 trapping season, two lynx were killed in legally set killer-type traps on leaning pole sets. Therefore, IFW is promulgating regulatory changes to ensure no additional lynx are killed. By committing to the use of exclusion devices in lynx zones for all killer-type traps (except those described in Section 3 Table 3, Regulation/Action 7 D 1-3, PLAN) IFW will eliminate the risk to lynx posed by killer-type traps set on leaning pole sets. The requirement to implement lynx exclusion devices on killer-type traps within lynx WMDs is a condition of the ITP, based on the triggering of changed circumstance number 3. As such, any future change or modification to that commitment requires following the permit amendment process established in Section 8. However, outside of established lynx WMDs, IFW is not required to implement such devices on killer-type traps, or can establish the parameters for such requirements based on its sole discretion, since the risk of catching lynx in traps in non-lynx WMDs is extremely low.

As part of this permit, IFW proposes rescinding current foothold trap size restrictions that do not reduce lynx capture rates and permitting the use of cage traps where risk of injury to lynx is low. Lethal snares set under water for beaver or other aquatic furbearers will continue to be permitted statewide as they do not pose a risk to lynx. Although currently not permitted, trappers that have been certified through an IFW training course may also be allowed to set non-lethal cable restraints for coyotes in the future. However, lethal snares set on land will not be allowed under this permit.

This Plan is divided into 8 sections that describe Maine's data on the risk of foothold, non-lethal cable restraints, cage, and killer-type traps to lynx, and IFW's plans to minimize, monitor, and mitigate impacts of Maine's furbearer trapping season, ADC,

and PM activities on lynx as required by the ESA. Each section of this Plan will include a summary providing an overview of IFW's current knowledge and the key elements of the section.

1.0 Introduction and Background

1.1 Permit Coverage

This Incidental Take Plan (Plan) is prepared in conjunction with an application from IFW to the USFWS for a Section 10 permit under the federal Endangered Species Act (ESA). Incidental capture of lynx during trapping activities is anticipated during implementation of the Maine's regulated recreational furbearer trapping, predator management (PM) and the animal damage control programs (ADC). Therefore, IFW is seeking an ESA incidental take permit to cover legal trapping activities that occur through these programs.

The entities covered by the incidental take authorizations include the following:

- All licensed trappers (non-resident, resident, alien, junior (resident and non-resident), and apprentice resident and non-resident trappers, complimentary over 70 year old trappers, lifetime trapping licenses including Native Americans that trap off tribal lands, ADC agents and PM trappers.

- Other people permitted to trap without a trapping license: IFW full-time employees (e.g., district game wardens, and wildlife biologists) and landowners trapping on their own land.

Annually this constitutes approximately 6,000 individuals based on data from 2000-13. Further descriptions of these entities are provided in Title 12 Subsections 12201 and 12202. All IFW staff, including contractors and veterinarians that are designated as an "Agent of the Department" implementing this Plan are covered by IFW's Section 6 agreement with the USFWS.

1.2 Permit Duration

IFW is seeking incidental take coverage via the Section 10 permit for 15 years from permit issuance by the USFWS in accordance with IFW's species planning process. Approximately every 15 years, IFW reviews the status of wildlife species to identify species management goals and objectives from public input. Although IFW recognizes that the benefits of some management actions may take longer than 15 years, this Plan duration allows IFW and the public to respond to new information or concerns.

1.3 Regulatory/Legal Framework for Plan

The ESA of 1973, administered by the Interior Department's USFWS, is regarded as one of the most comprehensive wildlife conservation laws in the world. The purpose of the ESA is to conserve "the ecosystems upon which endangered and threatened species depend" and to recover listed species.

Section 9 of the ESA, as amended, prohibits the "take" of any fish or wildlife species listed under the ESA as endangered, and "take" of fish or wildlife species listed as

threatened is also prohibited, unless specifically authorized by a Section 10 permit. Take, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

In the 1982 amendments to the ESA, Congress added a provision in Section 10 that allows for the "incidental take" of endangered and threatened species of wildlife by non-federal entities. Incidental take is defined by the ESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Prior to 1982, parties that undertook projects involving federal funding or approval could obtain incidental take coverage through ESA Section 7 consultations, but had no recourse under the law for exemption. Up to that time, only take occurring during scientific research and other conservation actions could be authorized under the ESA. The "incidental take permit" (ITP) process was established under Section 10(a)(1)(B) of the ESA precisely to resolve this difficulty.

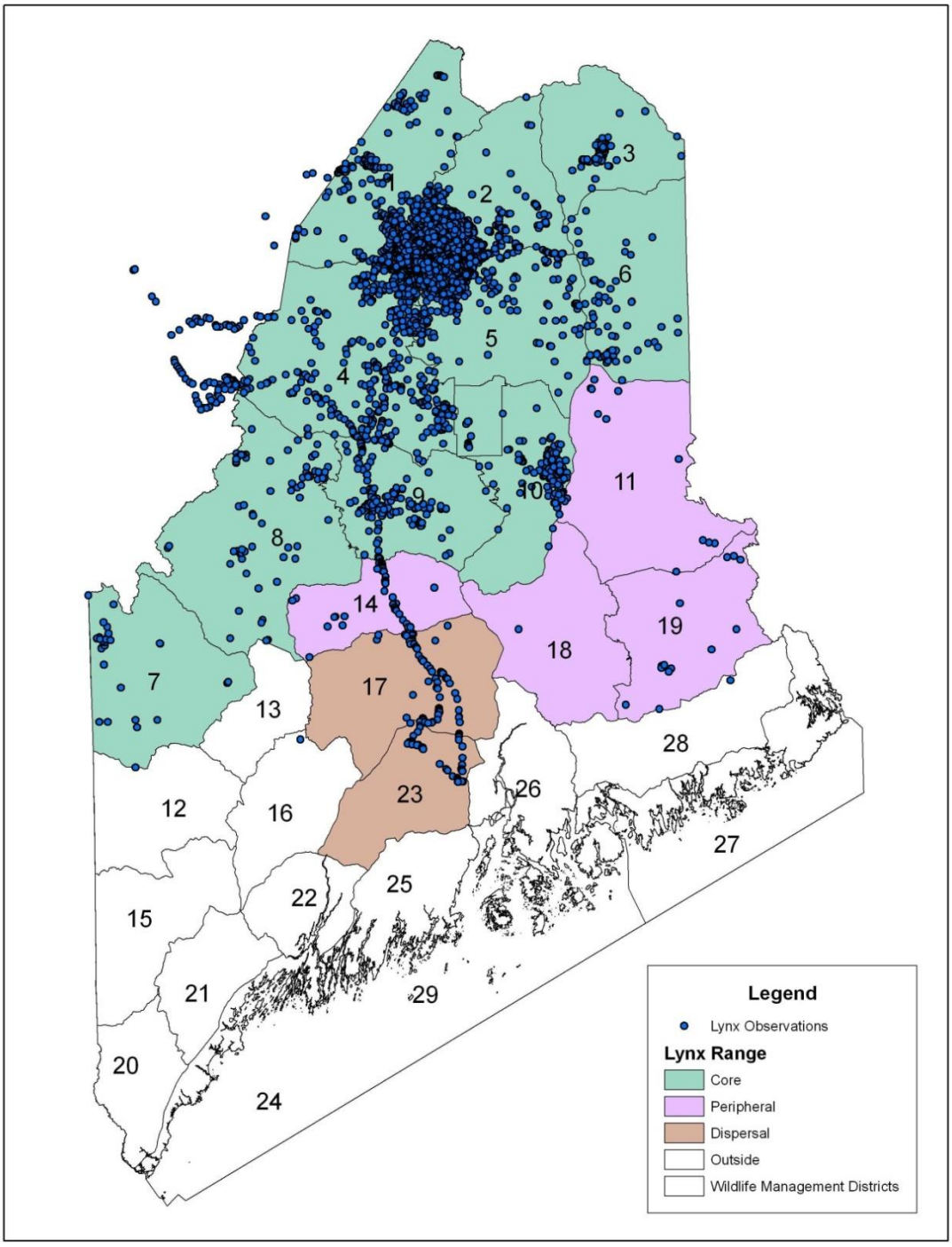
Section 10(a)(2)(A) of the ESA requires an applicant for an ITP to submit an Incidental Take Plan (also known as a habitat conservation plan, Plan, or HCP) that specifies, among other things, the impacts that are likely to result from the taking, and the measures the applicant will undertake to minimize and mitigate such impacts.

The federal HCP program has grown rapidly in recent years. In the first 10 years of the program (1983-1992), 14 ITPs were issued. By May 2006, 448 HCPs had been approved and over 718 ITPs had been issued. In a little over a decade, the HCP process has been transformed from a relatively little used option under the ESA to one of its most important and innovative conservation programs.

1.4 Plan Area

The currently defined lynx range is wildlife management districts (WMDs) 1-11 and 14, 18, and 19 (Figure 1.1). Trapping has been restricted in these WMDs to minimize lynx incidental capture and is where minimization measures in this Plan will be implemented. Lynx range in Maine is based on consistent presence of lynx as documented by verified observations described in Minimization Measure PI 1 (Section 5.2). Although lynx sometimes occur in other parts of the state (e.g., WMD 17 and 23), these areas are not currently considered part of lynx range in Maine, since the lynx did not remain in the area (Figure 1.1). Conversely, the single observation of a lynx incidentally trapped in WMD 18 meets the criteria for extending lynx minimization measures (Appendix 5). The Plan is statewide to the extent that it covers state-sanctioned trapping activities throughout Maine. Any lynx caught in a legally set trap is covered by the Plan. However minimization measures will apply to the currently defined lynx range unless otherwise specified. IFW will monitor lynx distribution and extend current trapping regulations if lynx distribution changes (See Minimization Measure PI1 – Section 5.2).

Figure 1.1 The distribution of Canada lynx in Maine from ecoregional snow track surveys, sightings of lynx (primarily tracks) by IFW biologists, incidental takes, and telemetry data from 2000 until 2011. Points in WMD 17 and 23 are from telemetry over a 26 and 9 day period by two radiocollared lynx that did not remain in the area. Conversely, the single observation in WMD 18 was a lynx caught in a trap that meets the criteria for extending lynx minimization measures.



1.5 Species to be Covered by Permit

IFW is seeking a Section 10 permit for Canada lynx (*Lynx canadensis*), which is a federally threatened species (but see Appendix 12) and a species of special concern[2] in Maine. There are no other federally listed species that will be impacted by the covered activities and therefore IFW is not seeking permit coverage for other listed species. The risk of take for other federal trust species (e.g., migratory birds or bald and golden eagles) is low therefore IFW is not seeking coverage for non-listed species.

[2] The special concern status is an IFW administrative designation given to species of fish or wildlife whose populations are vulnerable to various threats but do not meet the criteria for state endangered or threatened status.

2.0 Environmental Setting / Biological Resources

Summary

IFW is requesting a permit to cover the incidental take of Canada lynx, a federally threatened species, from trapping activities described in Section 1.1. No other federally threatened or endangered species are likely to be caught in traps. The USFWS must also consider the impact of the permitted activity (i.e., trapping) on other protected species before issuance.

Also in this section, IFW provides data on the status of Maine's lynx population based on 12 or more years of monitoring lynx in Maine. These data demonstrate that Maine's lynx population increased between 1995 and 2010 in areas where fur trapping, ADC, and PM activities occurred. The recent increase in lynx numbers in Maine is attributed to high densities of snowshoe hares, the primary prey item for lynx. Consistent with population dynamics of lynx elsewhere, the population may have plateaued in Maine over the last several years. Data collected from IFW's telemetry study were incorporated into a population model that indicate that the level of lethal take requested in this Plan will not affect lynx population growth rates during the 15-year permit period (Appendix 7).

2.1 Environmental Setting

Located at the northeast tip of the United States, the State of Maine is approximately 320 mi (515 km) long and 210 mi (338 km) wide and is about halfway between the equator and the North Pole. Among the states, it is the 39th largest (33,315 mi^2 [86,286 km^2]), but it is almost as big as the rest of the New England states combined. The northern half of the state is sparsely populated, giving the state a relatively low human population (1.3 million people) or a density of approximately 39 people / mi^2 (16 people / km^2).

Maine is bounded on the northwest and northeast by the Canadian provinces of Quebec and New Brunswick, respectively, and on the west by New Hampshire. The famed rocky coastline of the state is angled from southwest to northeast along the Atlantic Ocean.

The western half of Maine is part of the Warm Continental Mountain ecoregion (i.e., high mixed forests, coniferous forests, and tundra), while the eastern half of the state is divided into the Warm Continental Division (i.e., mixed deciduous and coniferous forests) and the Hot Continental Division (i.e., broadleaved forests – oceanic; Bailey 1997). The Warm Continental Mountain ecoregion extends into New Hampshire, Vermont, and into the Adirondacks of New York. The mixed deciduous and coniferous forests of the Warm Continental Division continue to the east into New Brunswick and Nova Scotia and to the west into Quebec; finally ending in Minnesota (Bailey 1997).

Maine abounds in natural assets. Over 90% of the state (17.5 million acres [7.1 million hectares]) is forested, giving Maine the distinction of being the most heavily forested state in the nation. Maine has nearly 6,000 lakes and ponds, 5,000,000 acres (2,023,500 ha) of wetlands, 31,800 mi (51,179 km) of rivers and streams, 4,100 mi (6,599 km) of coastline, and more than 3,000 coastal islands and ledges.

Climate

The National Weather Service separates Maine into three distinct climatological divisions – coastal, southern interior, and northern interior. The southern and coastal regions are influenced by air masses from the south and west. North of the land dividing the St. John and Penobscot River basins, air masses moving down the St. Lawrence River Basin tend to prevail. Mean annual temperatures range from 37^{o}F to 39^{o}F (3^{o}C to 4^{o}C) in the north and from 43^{o}F to 45^{o}F (6 to 7^{o}C) in the southern interior and coastal regions. Mean temperatures are about 62^{o}F (17^{o}C) throughout the state during the summer and 20^{o}F (-7^{o}C) during the winter. Cloudy days average 222 per year in the south to 206 in the north. Annual precipitation averages 36 in to 48 in (91 cm to 122 cm). Snowfall averages more than 100 in (254 cm) in the north and higher elevations.

Topography / Geology

The Appalachian Mountain chain extends into Maine from New Hampshire, terminating at Mount Katahdin, at 5,268 ft (1,606 m) the state's tallest peak. The western and northwestern borders adjoining New Hampshire and Quebec are characterized by rugged terrain with numerous glacier-scoured peaks, lakes, and valleys. South and east of mountain areas lay rolling hills, smaller mountains, and broad river valleys.

Maine's coastline consists of long sand beaches interrupted intermittently by rocky promontories in the southwest and a series of peninsulas, narrow estuaries, bays, fjords, and coves located north and east of Portland, the state's largest city. The tides along Maine's coast are among the highest in the world, running between 12ft and 24ft (4m and 7m). More than 3,000 islands dot the coast, some no more than rock ledges; others are vegetated and are home to a variety of marine wildlife and people.

Geologically, Maine is something of a youngster; the oldest rocks, found in the Chain of Ponds area in the western part of the state, are only 1.6 billion years old – more than 2 billion years younger than the world's oldest rocks. The state has experienced several episodes of glaciation. The most recent was about 18,000 years ago when Maine was covered by glacial ice about a mile thick (Gawler et al. 1996). The present-day biological diversity in Maine is the result of post-glacial movements of plants, animals, and microorganisms into the state.

Hydrology / Streams, Rivers, Drainages

Maine has more than 5,000 rivers and streams comprising 31,800 mi (51,179 km) of flowing waters that provide nearly half of the watershed for the Gulf of Maine. More of these rivers and streams are undeveloped and free flowing than in any other state in the northeastern United States (Bennett 1988). The major rivers are the Penobscot (350 mi [906 km]), the St. John (211 mi [546 km]), the Androscoggin (175 mi [453 km]), the Kennebec (150 mi [388 km]), the Saco (104 mi [269 km]), and the St. Croix (75 mi [194 km]).

Maine also has nearly 6,000 lakes and ponds, most of which can be linked to a single cause -- glaciation. The state has the second largest number of natural glaciated lakes of any state east of the Mississippi River – 3,000 lakes and ponds more than 10 acres (4 ha) in size and another 2,000 between 1 and 10 acres (0.4 to 4 ha; Bennett 1988).

Northwestern Maine's Moosehead Lake, covering about 117 mi^2 (303 km^2), is the state's largest lake; in fact, the largest lake in New England to lie wholly within the boundaries of a single state. Sebago Lake in southern Maine is second to Moosehead in size, with a surface area of over 44 mi^2 (114 km^2). However, it holds the distinction of being the deepest at 316 ft (96 m), and its deepest point is 40 ft (12 m) below sea level.

Vegetation

Sixty-seven woody plant species reach their range limits in south-central Maine, and an additional 44 woody plant species define a coastal-inland transition zone, reaching their western range limits in a southwest-northeast belt bisecting the state (McMahon 1990).

There are approximately 1,432 native and 643 introduced species of vascular plants in Maine. The state's vascular plants include both typically Appalachian representatives at the northern edge of their range and typically boreal representatives at the southern limit of their range (Gawler et al. 1996). Seventeen percent of Maine's native flora (254 species) are considered rare, threatened, or endangered (Gawler et al. 1996).

Wildlife

Maine's geographical location, physical relief, and present and past land-use practices result in a diversity of vegetation and climatic conditions and a diverse and unique assemblage of wildlife. The state is a transition area and its wildlife resources represent a blending of species that are at or approaching the northern or southern limit of their range.

Invertebrates are the most diverse group of organisms in Maine, exceeding vertebrate species by several orders of magnitude. Yet, knowledge even of which species occur in Maine is very incomplete. Only basic information on the distribution and general habitat preferences for a few taxonomic orders such as butterflies (Lepidoptera), mayflies (Ephemeroptera), and dragonflies (Odonata) are available (Gawler et al. 1996).

Presently, seven invertebrates are listed as endangered under the Maine Endangered Species Act (MESA): Roaring Brook mayfly (*Epeorus frisoni*), Hessel's hairstreak (*Satyrium edwardsii*), Clayton's copper (*Lycaena dorcas claytoni*), Edwards' hairstreak (*Callophrys hesseli*), Katahdin arctic (*Oeneie polixenes katahdin*), Juniper hairstreak (*Callophrys gryneus*), and Rapids clubtail (*Gomphus quadricolor*). Likewise, 10 species are listed as threatened: tidewater mucket (*Leptodea ochracea*), yellow lampmussel (*Lampsilis cariosa*), Brook floater, (*Alasmidonta varicosa*), Ringed boghaunter (*Williamsonia lintneri*), Tomah mayfly (*Siphlonisca aerodromia*), twilight moth (*Lycia rachelae*), Pine barrens zanclognatha (*Zanclognatha martha*), Purple lesser fritillary (*Boloria chariclea grandis*), Sleepy duskywing (*Erynnis brizo*), and Boreal snaketail (*Ophiogomphus colubrinus*) (§12803; Appendix 1).

There are 34 amphibian and reptile species (18 and 16 respectively) in Maine, and their distribution in the state is relatively well known. Maine lists the eastern box turtle (*Terrapene Carolina*), Blanding's turtle (*Emydoidea blandingii*), and black racer (*Coluber constrictor*) as endangered, and the spotted turtle (*Clemmys guttata*) and loggerhead turtle (*Caretta caretta*) as threatened (§12803; Appendix 1).

Boone and Krohn (1998) listed 56 mammal species as extant in Maine. Only one mammal, the northern bog lemming (*Synaptomys borealis*), is listed as state threatened under MESA. Although its range overlaps with Canada lynx, trapping does not threaten this species. Even though Canada lynx are listed as threatened under the federal ESA, the species does not meet the listing criteria for a threatened or endangered species under MESA. Rather, Canada lynx are listed as a species of special concern in Maine. The New England cottontail rabbit (*Sylvilagus transitionalis*) is Maine's only state endangered mammal (§12803; Appendix 1). The USFWS considers the species to be warranted but precluded from listing under the federal ESA (U. S. Department of Interior 2006). The USFWS must make a final determination on the federal listing status of New England cottontail by 2015 as the result of a court settlement (2011 Multi-District Litigate Agreement). New England cottontail are only found in southern Maine (Cumberland and York Counties) and their range does not overlap with Canada lynx (Litvaitis et al. 2003).

There are more than 218 species of birds that have been documented as breeding regularly in Maine (Gawler et al. 1996). Of these, 198 species breed at inland sites in upland, wetland, or aquatic habitats (Gawler et al. 1996). Maine lists 10 species as endangered: golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), piping plover (*Charadrius melodus*), roseate tern (*Sterna dougallii*), least tern (*Sterna antillsrum*), black tern (*Chlidonias niger*), sedge wren (*Cistothorus platensis*), American pipit (*Anthus rubescens*), grasshopper sparrow (*Ammo dramus savannarum*), and least bittern (*Ixobrychus exilis*). An additional 11 species are listed as threatened in Maine: razorbill (*Alca torda*), Atlantic puffin (*Fratercula arctica*), Harlequin duck (*Histrionicus histrionicus*), bald eagle (*Haliaeetus leucocephalus*), arctic tern (*Sterna paradisaea*), upland sandpiper (*Bartramia longicauda*), black-crowned night heron (*Nycticorax nycticorax*), Common moorhen (*Gallinula chloropus*), great cormorant (*Phalacrocorax*

carbo), short-eared owl (*Asio flammeus*), and Barrow's goldeneye (*Bucephala islandica*). (§12803; Appendix 1).

Existing Land Use

Maine's present land use is characterized by extensive forests interspersed with agricultural areas in northeast Maine, scattered farms throughout the rest of the state, and many small towns. Maine's human population is densest in the southern part of the state and become less populated in the north. The human population lives primarily in small towns and in a handful of urban areas. Despite the large tracts of forestland in the state, only 5% of the land in Maine is in public ownership. For the most part, wildlife habitat is confined within large commercial forests in northwest, western, and eastern Maine, and within smaller private landholdings in southern, coastal, and central Maine.

2.2 Biological Resources

2.2.1 Canada Lynx

Description and Natural History

The Canada lynx is a medium-sized cat that averages 25 lb (11 kg) for males and 19 lb (9 kg) for females. Its general appearance is similar to the bobcat. The most notable difference between a lynx and a bobcat is paw size. Lynx paws are about twice the size of bobcat paws. Lynx also can be distinguished from bobcats by the tip of their tail, which is completely black (bobcat tail tips are only black on the upper side [dorsal side]). Lynx have more prominent ear tufts, paler coloration, less spotting, and longer legs than bobcats.

Lynx are specialized predators on snowshoe hare (*Lepus americanus*), although they will opportunistically take other small mammals. Lynx are adapted to living in areas with deep fluffy snow, where they have a competitive advantage over other predators (e.g., bobcat, coyote, and fisher). The large size of a lynx's paws distributes the animal's weight over a large surface area and enables it to walk on snow. Thus, lynx have more mobility on deep snow than other predators with smaller paws (or higher foot loading), and expend less energy acquiring food in winter than more generalist predators.

In North America, lynx occur in Alaska and Canada and extend south into the northern contiguous states. They live in subarctic forests, boreal forests, mixed deciduous and coniferous forests (immediately south of the boreal forests), and in alpine forests in the Rocky Mountains, Cascades, Great Lakes, and Northeast. Maine, New Hampshire, Washington, Montana, Minnesota, Wyoming, Idaho, and Colorado are the only states, outside of Alaska, that currently have resident lynx populations in the US.

Lynx are highly mobile and can move long distances (>60 mi [100 km]) when dispersing; Slough and Mowat 1996, and Vashon et al. 2012). They prefer to make their reproductive dens in forests with high stem densities and high amounts of woody

debris (downed logs; Organ et al. 2008). These conditions may provide some protection to kittens, and may provide ready access to snowshoe hare, which are also attracted to this type of forest structure.

Research Efforts

IFW included a description of the lynx research efforts in Maine, prior to describing Maine's lynx population, to acquaint the reader with the scope of information collected during this study. We reference the results of this study throughout this document and based many of our conclusions on the results from this research.

From 1999-2011, IFW, in cooperation with the USFWS, conducted a radiotelemetry study of Canada lynx in a 4-township area of northwestern Maine. The original objectives of this study were to 1) determine if there was a viable, self-supporting population of lynx in Maine, or if lynx occurring in Maine were simply transients from the lynx population in Canada; 2) document mortality factors affecting lynx in Maine; 3) identify habitats used by lynx in Maine and how they relate to snowshoe hare distribution and abundance; 4) investigate how lynx distribution in Maine is affected by sympatric populations of bobcats, coyotes, and foxes; and 5) test the efficacy of various survey methods used to determine the status of lynx.

Between 1999 and 2011, 85 of 88 lynx captured were equipped with radiocollars[3] including a lynx that had been initially caught by a fur trapper and radiocollared[4]. IFW biologists used #3 foothold traps with padded offset jaws, cage traps, and hounds to capture lynx. Most lynx were captured more than once; 59 lynx were caught in foothold traps 122 times and 52 lynx were captured in cage traps 339 times. Only one lynx was captured with the use of hounds. Reproduction of radiocollared adult females was monitored by visiting dens and capturing kittens. Between 1999 and 2011, 113 kittens were handled at 43 den sites. IFW biologists have worked closely with faculty at the University of Maine in Orono (U Maine) on several graduate projects related to lynx and lynx /snowshoe hare interactions. Scientific manuscripts on lynx home range size, habitat use, and den site characteristics have been published (Organ et al. 2008, Vashon et al. 2008a and b). In addition, IFW continues to work closely with the USFWS on lynx surveys and habitat management recommendations. Numerous entities have supported the study both financially and technically.

Population in Maine

Maine's lynx are part of a large lynx population that includes the Quebec's Gaspé Peninsula and northern New Brunswick (Hoving 2001, Vashon et al. 2012). In contrast to western states, most of Maine's lynx range occurs on privately owned woodlands managed for timber production. Lynx are attracted to the regenerating forests that occur on these lands, as the high stem densities of these forests provide snowshoe hare with ideal habitat. In Maine, snowshoe hare are associated with regenerating

[3] Three lynx were caught at the end of the study and released without a radiocollar.
[4] To date, six lynx have been caught by fur trappers and equipped with radiocollars.

forest (15 to 35 years of age) and are negatively associated with recent clearcuts and mature forest (>40 years old and <80 years old; Litvaitis et al 1985, Monthey 1986, Lachowski 1997, Fuller 1999, Hoving et al. 2004, Robinson 2006). Hoving (2001) suggests that good lynx habitat in the Northeast consists of complexes of regenerating forest with relatively few deciduous trees and a high annual snowfall (>105 in [268 cm]).

The age structure of Maine's forests has changed considerably since European settlement, which likely changed the abundance and distribution of lynx in the state. Seymour et al. (2002) suggested that there has been a shift from a predominately mature forest to younger forest in Maine, based on past and current disturbance factors. During pre-settlement times, Maine's forests experienced frequent but small natural disturbance events (wind, ice, and insect outbreaks) resulting in an older forest system and regenerating forests comprised approximately 3% to 5% of the pre-settlement coniferous forests in northern Maine (as cited in Vashon et al. 2012). Spruce budworm epidemics occur periodically in Maine. The most recent and widespread epidemic in 1972-1986 resulted in extensive clearcutting to salvage diseased trees. By 1995 and 2010, between 38% and 48%, respectively, of Maine's northern forest was classified as early regenerating stands. Many of these stands (50%) currently have a physical structure (stem density and height) that provides optimal cover for snowshoe hare (Vashon et al. 2012). These regenerating forests, and the subsequent high snowshoe hare densities, influenced the current abundance and distribution of lynx (Figure 1.1).

Data on the historic and present distribution of lynx comes from historical records as compiled by Hoving (2001), radiotelemetry data from the IFW/USFWS study, snow track surveys from IFW's various ecoregional surveys, snow track sightings and visual observations reported by IFW regional biologists, and incidental takes of lynx (Figure 1.1).

Population Size and Status

Lynx are found primarily in western and northern Maine's spruce/fir forest (Figure 1.1). Overall, Maine's lynx population appears to have increased dramatically since 1995. For example, IFW personnel searched for lynx tracks each winter from 1994 to 1996. For those years, a total of 4,118 km of transects in 82 townships in northwestern Maine were searched for lynx tracks (Jakubas 1997). Of the 82 townships that were surveyed, lynx were found in only 9 townships (11% of the townships searched). In 2003, 20 townships, located in the same area of the state as the 1994 to 1996 surveys, were resurveyed for lynx. In 2003, IFW observed lynx tracks in 75% and 73% of areas with a high/moderate and low probabilities of having lynx, respectively. Survey efforts were extended to eastern and western Maine. By 2008, lynx tracks were detected in 83% of the survey areas with a moderate or high probability and half the towns with a low probability of lynx occurrence (Vashon et al. 2012). These data are consistent with other indices of population change including the number of lynx struck by vehicles, number of lynx sightings, and number of incidentally trapped lynx in Maine (Figure 4.1.4). Recent estimates suggest that there were between 750 and 1,000 adult lynx in Maine in 2006 and may have reached a plateau or peaked in 2010 (Vashon et al. 2012).

Similar patterns in lynx numbers have been reported by neighboring jurisdictions (e.g., New Brunswick; Cade Libby, New Brunswick Department of Natural Resources and Energy, personal communication) and in a recent habitat model for Maine (Simons 2009).

Limiting Factors in Maine

Lynx habitat in Maine is not currently threatened with destruction or fragmentation due to agriculture, urbanization, recreational development, or by high volume/high speed roadways. Recreational development and agricultural fragmentation have not occurred in most of northwestern Maine. Human activity in WMD 1-11, 14, 18, and 19 has increased since the early 1900s, but it remains low with few permanent residences or organized towns in the region. Major development in the future (e.g., wind power, mineral exploitation, highway expansion, and building development) would require USFWS consultation.

Although a network of unpaved, private roads with low traffic volumes crisscrosses the habitat of lynx in Maine, only one radiocollared lynx has been hit by a vehicle since the start of the lynx radiotelemetry project. However, the public has reported 44 lynx struck and killed by vehicles between 2000 and 2014 (Table 2.1). A similar number of lynx have been struck by vehicles on high speed paved roads (n=17) as unpaved roads (n=15).

Maine's lynx population level is dependent on forest management practices that determine the amount and distribution of regenerating conifer stands in the state. Regenerating conifer stands that are 15 to 40 years of age provide the habitat structure (i.e., dense cover) preferred by snowshoe hare (Litvaitis et al 1985, Robinson 2006, Scott 2009), which are the principal prey of lynx. A decrease in the amount of regenerating conifer stands in Maine may reduce snowshoe hare numbers and the amount of habitat suitable for lynx to live in (Scott 2009, Simons 2009). These changes may come about if less forest is cut or if current forest harvesting techniques (e.g., partial harvesting techniques) do not produce understory cover that is as dense and as long lived as that produced by past forest harvesting techniques, such as large scale clearcutting (Vashon et al. 2012, and Simmons-Legaard et al. 2013). Additionally, hare populations may fluctuate independently of forest conditions (Scott 2009).

Table 2.1 Chronology of Canada lynx recovered after being hit by vehicles in northern Maine from listing (2000) to 2014.

Year	Number of lynx killed by vehicles
2000	1
2001	0
2002	1
2003	1
2004	3
2005	3
2006	2
2007	4
2008	3
2009	4
2010	1
2011	4
2012	5
2013	7
2014	5

Most of Maine's forests are privately owned and managed for timber production. These working forests have provided the habitat necessary to allow Maine's lynx population to expand their range and numbers (Vashon et al. 2012). However, a major shift in forest cutting practices has occurred. In 1989, 44% of all timber harvesting was done using clearcutting (Maine Forest Service 1995) and, in 2005, 94.8% of all the timber harvesting in Maine was done using partial harvesting techniques (Maine Forest Service 2006). Although a model suggest that optimal hare habitat could start to decline in 2023 (Simons 2009), the extent of the recent change in forest harvesting techniques on hare and lynx numbers is not yet known.

Competition from other predators has been hypothesized in the past as being capable of limiting the distribution and growth of lynx populations (e.g., Parker et al. 1983, Buskirk et al. 2000). In Maine, interspecific interactions have been observed between lynx, bobcat, and fisher. Over the course of Maine's radiotelemetry study on lynx, fisher have killed at least 18 lynx and are suspected to have killed 9 others (Vashon et al. 2012, and McLellan et al. *in prep*). While the data show that fisher kill lynx, there is insufficient information to show that fisher may exclude lynx from habitats used by fisher or in any way limit the range of lynx.

Bobcats and lynx are usually spatially separated by snow depth, which limits competition between the species (Aubry et al. 2000). However, Parker et al. (1983) speculated that interspecific competition may have occurred between lynx and bobcat on Cape Breton Island, Nova Scotia where the distribution of lynx shrank considerably after bobcats immigrated to the Island. Twenty-five years later, lynx were restricted to highland areas where snow depths were greater and provided spatial separation from bobcats. However, no conclusive evidence was presented for interference competition between bobcat and lynx in Parker et al.'s (1983) study.

At the periphery of lynx range in Maine, where both lynx and bobcats tracks were observed, simulated home ranges around track observations suggest that bobcats were found in the best habitat for snowshoe hare (Robinson 2006). Based on this simulation, Robinson (2006) suggests that the presence of bobcats in an area could be used as a variable to predict the presence or absence of lynx on the landscape. In addition to the potential for bobcats to limit the range of lynx through competition, several lynx-bobcat hybrids have been found in the region where the ranges of the two species overlap (Homyack et al. 2008).

One factor that cannot be controlled, but may influence extent of the lynx range in Maine, is climatic change (Carroll 2007). Hoving (2001) modeled climatic changes and their potential impact on snow depth and lynx habitat. This model indicates that decreased snow depths may cause the southern boundary of the lynx range to shift to the north; thus, decreasing the extent of the lynx range in Maine.

From 1999 to 2011, IFW's radiotelemetry study documented annual mortality rates for radiocollared animals and cause of death, when possible (Tables 2.2 and 2.3). For lynx of all ages, the most common sources of mortality were starvation and predation (Table

2.3). Approximately, 11% of the lynx mortalities in the radiotelemetry study resulted from lynx traveling into Canada and being caught incidentally in lethal snares set for coyotes. Although poachers killed 3 radiocollared lynx using unknown methods, to our knowledge, trappers have not killed a radiocollared lynx in Maine. IFW documented that trappers captured 2 radiocollared lynx and neither required veterinarian care.

Table 2.2 Annual mortality rates for Canada lynx (> 1 yr) that were radiocollared in Maine from one year prior to the federal listing of lynx as a threatened species until 2012. Annual mortality rates were corrected for staggered entry of radiocollared animals into the sample (i.e., Kaplan-Meier staggered entry approach; Pollack et al. 1989).

Year[a]	Total[b]	Dead	Mortality[c]
1999-00[d]	6	3	45%
2000-01	16	5	36%
2001-02	19	2	12%
2002-03	19	4	23%
2003-04	24	5	24%
2004-05	23	5	23%
2005-06	33	4	17%
2006-07	31	13	48%
2007-08	18	1	6%
2008-09	26	8	39%
2009-10	25	9	45%
2010-11[d]	7	2	29%
2011-12[d]	1	n/a	n/a

[a] Year is defined by birth pulse(i.e., May 1, 1999 to May 1, 2000).
[b] Total = number of lynx monitored (start of the year + new captures).
[c] Mortality of radiocollared lynx >1 year old is the inverse of Kaplan-Meier survival rates.
[d] Sample size low (start or end of study (i.e., removing collars)).

Table 2.3 Mortality factors for Canada lynx tagged or radiocollared for IFW's radiotelemetry study. Data are from 1999 until 2011.

Cause of mortality	Number of mortalities	Proportion of total mortalities	Sex ratio of lynx that died
Starvation	17	26%	9M:84F
Predation	18	28%	6M:12F
Suspected Predation	9	14%	4M:5F
Disease	1	2%	1M
Illegal harvest	3	5%	1M:2F
Canada harvest	7	11%	6M:1F
Unknown	8	12%	4M:4F
Vehicles	2	3%	2F
Total	65	N/A	31M:34F

2.2.2 Wolves (Canis lupus, Canus lupus lycaon)

The gray wolf (*Canis lupus*) is listed in the Northeast as a federal endangered species and is currently being considered for delisting in the northeastern U. S. (USFWS; http://www.fws.gov/northeast/graywolf.html). The nearest wolf population to Maine is in Quebec, but is effectively separated from Maine by Quebec City, the St. Lawrence Seaway, and heavy trapping pressure in rural Quebec. Very few wolves have been reported south of the St. Lawrence Seaway, and those wolves were killed in Quebec (Villemure and Jolicoeur 2004). For a historical perspective of wolves in Maine see Krohn and Hoving (2010).

Although one gray wolf and one wolf/coyote hybrid were killed in Maine, stable isotope analysis of DNA collected from these animals indicates they were of domestic origin. In 1993, a gray wolf was killed near Caucomgomoc Lake. Although positively identified as a gray wolf (National Wildlife Forensic Laboratory, Ashland, OR), its behavior around people and human dwellings (found sleeping outside a tent and drinking from a dishpan) was more typical of captive wolves that have either escaped or have been released. Stable isotope analysis ($\delta^{13}C$) of this wolf's fur indicated that it had a history of eating domestic food with corn based products in it (Kays and Feranec 2011). The second animal, killed by a trapper in Aurora in 1996, was a wild canid with a genetic profile (National Wildlife Forensic Laboratory, Ashland, OR) similar to wolves in eastern Canada (*Canus lupus lycaon*), which have hybridized with eastern coyotes (Wilson et al. 2000). Although the genetic profile of this animal again suggested a wild origin, stable isotope analyses of the animal's bones or hair indicated that it also had a history of feeding on foods with corn in them (e.g., dog food) and was likely held in captivity at some point (Kays and Feranec 2011).

IFW is not seeking a Section 10 permit for wolves because they currently do not exist in the state. If wolves were to become established in Maine, IFW would consider specific measures to protect those animals from incidental take. For approximately 16 years, IFW has made efforts to help detect wolves that might immigrate to Maine that include:

1) Distributing wolf identification information (track measurements, size, and physical characteristics) to every licensed trapper in the state in the annual Trapper Information Booklet.
2) Conducting and participating in genetic and morphological research on eastern coyotes and eastern Canadian wolves to determine whether these animals can be readily distinguished from each other (e.g., Wilson et al. 2004; Kays et al. 2010).
3) Requesting that hunters or trappers notify IFW if any coyote over 48 inches in total length is harvested.
4) Investigating credible sightings of large canids.

2.2.3 Migratory Birds

Federal Laws

The Migratory Bird Treaty Act of 1918 has provisions in its statutes that make it a federal crime to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention…for the protection of migratory birds…or any part, nest, or egg of any such bird." (16 U.S.C. 703). Through regulation, the USFWS can permit the take of migratory birds for a variety of purposes, such as rehabilitation, scientific collection, raptor propagation, falconry, and depredation. USFWS has no explicit regulatory mechanism to authorize the incidental take of migratory birds. In Maine, except for ADC activities that can operate year round, trapping is limited to the fall and winter months when most breeding migratory birds are not present. Although there was some potential for American crows (*Corvus brachyhynchos*), common ravens (*Corvus corax*), and gray jays (*Perisoreus canadensis*) to be attracted to baited traps, regulatory changes instituted in 2007 in Maine that require bait to be covered has minimized the incidental capture of migratory birds. IFW is submitting a separate memorandum to the USFWS containing background information about the take of migratory birds to aid the USFWS response to public comments.

Bald and golden eagles are also protected under the federal Bald and Golden Eagle Protection Act (BGEPA, 16 U.S.C. 668-668c). This act prohibits the "taking" of bald or golden eagles, including body parts, nests, or eggs. The Act's definition of "take" is similar to the ESA but not the same. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb". Similar to the ESA, the BGEPA allows a limited number of eagles to be incidentally taken through a similar

permitting process. Historically through 2006, a total of 37 bald eagles have known to have been trapped, injured, or killed as a result of licensed trapping activities. However, since implementing statewide covered bait regulations in 2007, no eagles are known to have been taken in legally set traps in Maine. The only documented incident since 2006 was the live capture and release of an eagle in an illegal trap on March 21, 2010 in Alna (Lincoln County), Maine. The case was referred to Maine Warden Service and USFWS law enforcement. If IFW detects an issue with take of bald or golden eagles, IFW can pursue a permit under the BGEPA.

2.2.4 Plant Species of Concern

There are 3 federally listed plant species in Maine. The eastern prairie fringed orchid (*Platanthera leucophaea*; federally threatened species) and the Furbish lousewort (*Pedicularis furbishiae*; federally endangered species) occur in northern Maine; within geographical are where lynx occur. The small whorled pogonia (*Isotria medeoloides*), a federally threatened plant, occurs in southern Maine. The range of this plant lies outside of the lynx range. None of the trapping activities referred to in this request for a Section 10 permit will impact any of these plant species because traps are commonly set on road, road edges, fields, or in elevated sets (e.g. killer-type traps set on leaning polses) where protected plant species do not occur.

3.0 Project Description / Activities Covered by Permit

Summary

This section describes IFW's current trapping program and new capture techniques that will be allowed with the implementation of the Plan. IFW is seeking an ESA Section 10 permit to cover the incidental take of lynx that may occur in trap sets that are lawfully made by trappers, as described in Section 1.1 of the Plan, during IFW's regulated fur trapping season and ADC and PM Programs. Although the risk is lower for some traps, IFW is seeking incidental take coverage for all lawful trapping activities in Maine in the event that a lynx is caught. To date, lynx have been incidentally captured in traps set on land by trappers targeting coyote/fox, marten, and fisher during Maine's regulated fur trapping season and by PM trappers targeting coyotes. Most lynx caught in foothold traps can be released with little or no injury, and no lynx have been captured in marten and fisher sets that were lawfully made following the requirements established under a Federal Court Settlement US District Court of Maine, Case 1:06-cv-00128-JAW Document 132-2 Filed 10/03/2007 (Consent Decree). Throughout this document, we state that no lynx were captured in marten and fisher traps that were lawfully set. During the 2014-15 trapping season that followed the orginal Plan, two lynx were killed in killer-type traps that were lawfully set on leaning poles.

The main difference between the three trapping programs is the time of year when the activity occurs and the species that are allowed to be trapped. ADC trappers are permitted to set traps anywhere in the state throughout the year for wildlife causing damage to property (except protected species, including lynx, unless the USFWS permits the activity under Section 10 of the ESA). Alternatively, fur trappers are restricted to setting traps for legal furbearing animals within current furbearer season framework (currently mid-October – December 31 except as allowed for under Rule 09-137 Chapter 4.01 Section G2A), and PM trappers are only permitted to set foothold traps for coyotes during the first 45 days of Maine's trapping season (mid-October to end of November). All trappers are required to follow Maine laws governing trapping, including legal trap types. PM trappers are further limited to setting foothold traps because the intent of this program is to capture coyotes near deer winter areas (DWA). If a permit is issued, PM and ADC trappers that have met the requirements for setting non-lethal cable restraints may be permitted to use these devices to capture coyotes as described in Section 3.1. Each of the programs specifically covered by this permit request are described below in more detail and in Appendices 1, 9, and 10.

Table 3.0 provides a complete summary of trapping regulations or actions in lynx range to limit the incidental take of lynx as defined in current regulations, agreed in the Consent Decree, and implement in this Plan. Under the original Plan, the following trapping regulations established in the Consent Decree were to remain in effect in lynx areas (currently WMDs 1-11, 14, 18, and 19) if a permit was issued:

1) Bait cannot be placed near traps or if visible from above.
2) Chains on foothold traps will have at least one swivel.

3) Killer-type traps (jaw spread <8 inches) must be set 4 feet off the ground on leaning poles ≤ 4 inches in diameter and set at ≥ 45 degrees.
4) Killer-type traps with a jaw spread ≤ 5 inches will be permitted on the ground as a blind set.
5) Snares set completely underwater for beaver and aquatic furbearers will be permitted.
6) Foot snares, a type of non-lethal cable restraint, and cage traps will be permitted for black bears.

In addition to regulations currently in place in lynx areas, IFW through the rule making process will recommend that baited killer-type traps set on the ground would only be permitted if set with a lynx exclusion device, wooden based rat traps for weasel and red squirrel would be permitted if set in a recessed wooden box with a hole no larger than 2 inches, and foothold traps with teeth or auxiliary teeth would only be permitted if set underwater. IFW would rescind current foothold trap size and cage trap restrictions in lynx areas. ADC and PM trappers that obtain the necessary training (see Appendix 13) will be allowed to set non-lethal cable restraints for coyotes. Following an evaluation of non-lethal cable restraints set by ADC or PM trappers, fur trappers may also be allowed to use non-lethal cable restraints after completing the appropriate training. Although non-lethal cable restraints may be permitted, killer-type snares will not be allowed under this permit, unless set completely underwater for aquatic furbearers. IFW will continue to monitor take of lynx in Maine's trapping programs and make adjustments when necessary to avoid future takes (See Changed Circumstance in Section 5). The rationale for trapping regulatory changes in this Plan is provided below.

Table 3.0. Summary of current regulations/actions in lynx range to limit the incidental take of lynx as agreed in Consent Decree, under current regulations, as implemented in this Plan, and in place following amendment to this Plan.

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
1. Restricts trapping in WMD 1-6, 8-11 (as described below) to avoid incidental take of lynx	Yes	Yes	Yes	Yes
2. Restricts trapping in WMD 7, 14,18, 19 (as described below) to avoid incidental take of lynx	No	Yes	Yes	Yes
3. Restricts use of visible bait near traps statewide				
A. Prohibits use of exposed bait or visible attractor on covered floats-(Rule 09-137 Chapter 4.01 G 1a).	No	Yes	Yes	Yes
B. Prohibits exposed bait or visible attractor during Early Fox and Coyote Season-(Rule 09-137 Chapter 4.01 G 2A-d).	No	Yes	Yes	Yes
C. Prohibits exposed bait or visible attractor during Early Muskrat Trapping Season-(Rule 09-137 Chapter 4.01 G 2B-b).	No	Yes	Yes	Yes

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
D. Prohibits the setting of foothold or killer-type traps within 50 yards of bait that is visible from above (Rule 09-137 Chapter 4.01 K).	Yes, In WMDs 1-6 and 8-11 only	Yes, statewide	Yes, statewide	Yes, statewide
4. Restricts use of foothold traps >5 3/8" jaw spread in WMD 1-6, 8-11 (Rule 09-137 Chapter 4.01 J)	Yes	No	No, Note: Although the accepted plan included eliminating the size restriction, IFW has not implemented this measure at this time	No, Note:Although the accepted plan included eliminating the size restriction, IFW has not implemented this measure at this time
5. Requires use of at least 1 swivel on trap chains in WMD 1-6, 8-11 (Rule 09-137 Chapter 4.01 J)	Yes	No	Yes, and it was extended to include WMDs 7,14,18,19 - See #19	Yes, however new rules require three swiveling points on all land based foothold traps statewide[5] See #27
6. Wooden based rat traps set for weasels and squirrels recessed within a wooden box with a hole no larger than 2" in diameter are prohibited in WMD 1-6 and 8-11 (Rule 09-137 Chapter 4.01 J)	No	Yes	No, Note: This was rescinded August 2015 – See #22	No, See #22

[5] These restrictions do not apply to foothold traps that when set, placed, or tended are fully or partially covered by water, those that are set on a muskrat "float", or dog-proof traps (also know as Duffer traps).

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
7. Restrict the use of killer-type traps to leaning poles, aquatic sets, as blind, or stream banks				
A. Prohibits killer type traps during Early Fox and Coyote Season-(Rule 09-137 Chapter 4.01 G 2A-b).	No	Yes	Yes	Yes
B. Requires traps set during Early Muskrat Trapping Season in WMD's 1-6,8,10,11 to be set at or below ground level or water and killer type traps to have a jaw spread of 5 inches or less- (Rule 09-137 Chapter 4.01 G 2B-a,c).	No	Yes	Yes	Yes
C. Traps set for beaver are restricted to killer-type traps and drowning sets (Rule 09-137 Chapter 4.01 G 1a) October-April.	Yes, In WMD 1-6 and 8-11 only	Yes, IFW added WMDs 7, 14, 18, 19 voluntarily to the regulation with a provision for exclusion devices in these additional	Yes	No, this was rescinded in August of 2015 and replaced with #28
D. Prohibits killer-type traps in WMD 1-11, 14, 18, and 19 unless set completely underwater or at least 4 ft above the ground or snow so long as such traps are affixed to a pole or tree that is at an angle of 45 degrees or				

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
greater to the ground and that is no greater than 4 inches in diameter at 4 feet above the ground or snow level (Rule 09-137 Chapter 4.01 K) except that killer-type traps within an inside jaw spread not to exceed 5 inches can be used when: 1. Set as to be partially covered by water at all times or, 2. Set under overhanging stream banks, or 3. Used as blind sets. (Rule 09-137 Chapter 4.01 K).(Blind set defined on page 29 of 09-137 Chapter 4).		WMDs as described in #8		
8. Permits use of lynx exclusion device (as described on page 29-30 Rule 09-137) on killer-type traps with a jaw spread not to exceed 7 ½ inches set on or abovethe ground in WMD 7, 14, 18, and 19 (Rule 09-137 Chapter 4.01 K).	No	Yes	Yes	Yes. Killer-type traps allowed to be set on the ground Statewide when used with Exclusion Devices,see #28 for a description of the rule and the exceptions where an exclusion device is not required

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
9. Prohibits use of cage traps > 13 X13 inches (WMD 1-6 and 8-11) except for wildlife research, animal damage, or to capture black bears. Cage traps including suit-case style cage traps (i.e. Hancock Traps).(Rule 09-137 Chapter 4.01 J).	Yes	Yes	No, Note: Although the accepted plan included allowing the use of cage type traps, IFW has not implemented this measure at this time see #20	No, Note: Although the accepted plan included allowing the use of cage type traps, IFW has not implemented this measure at this time see #20. In addition, language was added to the rule stating Hancock traps must be set with the bottom portion of the trap in the water and the opening of the trap facing away from land.
10. Restricts the use of snares: A. In WMD 1-6, and 8-11, prohibit the use of snares for any purpose other than to catch beaver and bear. B. Statewide, Title 12 § 12252 2A.Restrict types of snares for the purpose of trapping any wild animal or bird except as provided in section 10105, subsection 1 and section 12259.	Yes No	No Yes	Yes Yes	Yes Yes
11. Maintain 24hr/7 day a week phone line to report incidental catch of lynx	Yes	Yes	Yes	Yes

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
12. Mandatory reporting of any incidental lynx capture-(Rule 09-137 Chapter 4.01 2)	No	Yes	Yes	Yes
13. IFW assist with release of incidentally captured lynx	Yes	Yes	Yes	Yes
14. Veterinarian provides training on injury assessment and treatment and evaluates injuries on at least 3 lynx	No	No	Yes	Yes
15. Implement guidelines for care of lynx injuries, maintain network of veterinarians and rehabilitators to care for lynx, treat and rehabilitate any injured lynx	Yes	Yes	Yes	Yes
16. Trap tending requirements A. Foothold and cage traps: visit once every 24 hours B. Killer-type traps organized or incorporated place: visit once every 3 days C. Killer-type traps unorganized place: visit once every 5 days Title 12 §12255 1A, 1B	No	Yes	Yes	Yes
17. It is illegal to disturb or take a trap or wild animal from a trap. Title 12 §12256	No	Yes	Yes	Yes

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
18. Restricts the use of traps with teeth				
A. A person may not use auxiliary teeth on any leg-hold trap when set on land (Title 12 §12252 1).	No	Yes	Yes	Yes
B. In WMD 12, 15-17, 20-26, unlawful to use any trap with teeth on the jaws unless completely covered by water from the opening day of the trapping season to the opening day of the deer firearm season (Rule 09-137 Chapter 4.01 J).	No	Yes	Yes, See #25	Yes, See #25
19. Requires use of at least 1 swivel on foothold trap chains in WMD 7, 14, 18, 19 (proposed rule)	No	No	Yes	Yes, and has been modified to require 3 swiveling points statewide as described in #27
20. Permit the use of cage traps statewide without size restrictions, except suitcase style cage traps (e.g. Hancock Traps) will continue to be prohibited for use during the beaver season, unless set for wildlife research, surveys, or removal of animals causing damage to property. (Proposed Rule).	No	No	Yes	Yes

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
21. Foothold trap size will not be restricted whether set on land or underwater (Proposed Rule)	No	No	Yes Note: Although the accepted plan included removing the trap size restriction, IFW has not implemented this measure at this time.	Yes Note: Although the accepted plan included removing the trap size restriction, IFW has not implemented this measure at this time.
22. Allow the use of wooden based rat traps set for weasels and squirrels recessed within a wooden box with a hole no larger than 2" in diameter statewide. Currently legal only in WMDs 7, 12-29. (Proposed Rule)	No	No	Yes, Implemented statewide August 2015	Yes, Implemented statewide August 2015
23. Permits the use of non-lethal cable restraints statewide (Proposed Rule).	No	No	Yes	Yes
24. Regulations to implement non-lethal cable restraints A. Tending time will be 24 hrs (Proposed rule) B. Require a cable diameter of 1/8 inch or 3/32 inch, a relaxing mechanical lock of a reverse-bend washer with a minimum diameter of 1¼ inches, at least one swivel, & two stops (Proposed Rule).	No	No	Yes Note: Although the accepted plan included implementing non-lethal cable restraints, IFW has not implemented this measure at this time.	Yes Note: Although the accepted plan included implementing non-lethal cable restraints, IFW has not implemented this measure at this time.

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
C. Require cable restraints to be staked and free of woody vegetation ≥ ½ inch in diameter within reach of the restrained animal (Proposed Rule). D. Require cable restraints to have two stops : IFW will initially evaluate specification that include: One restricts loop size to no larger than 12" loop when fully open and one restricts loop size to no smaller than 2 ½ " loop when fully closed (Proposed Rule). The specifications regarding the maximum and minimum loop opening sizes will be developed in consultation with the Service, based on the best available scientific information, at the time the proposed rule is developed.				

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
25. Restricts the use of traps with teeth A. In all WMDs it will be unlawful to use any trap with teeth on the jaws unless completely covered by water from the opening day of the trapping season to the opening day of the deer firearm season.	No	Yes	Yes	Yes
26. In WMDs 1-11, 14, 18 and 19, prohibit the use of drags on foothold traps set at or below ground level and require the catch circle be clear of woody vegetation or other obstructions.	No	No	No	Yes
27. Requires, statewide, that the chain on foothold traps set at or below ground level have a chain that is mounted within the central portion of the base of the trap and must have three swiveling points, with one swiveling point at the base of the trap, one midway in the chain, and one at the trap's anchoring point.	No	No	No	Yes

Regulation/Action Description	Required by Consent Decree	Regulations/Actions Implemented Voluntarily by IFW	Regulations or Actions once Plan is accepted and Permit is Issued	Regulations or Actions in place following the approval of the September 2015 amendment to the Plan
28. Prohibits killer-type traps statewide unless set completely underwater or on or above the ground with an approved lynx exclusion device (Rule 09-137 Chapter 4.01 K) except that killer-type traps within an inside jaw spread not to exceed 5 inches can be used without an exclusion device when: A. Set as to be partially covered by water at all times or, B. Set under overhanging stream banks, or C. Used as blind sets. (Rule 09-137 Chapter 4.01 K).(Blind set defined on page 29 of 09-137 Chapter 4).	No	No	No	Yes

3.1 Project Description

Regulated Furbearer Trapping Program

IFW was given authority to establish open trapping seasons for furbearing animals in 1973 (Title 12, Chapter 301, §1960A). Furbearing animals include all mammals harvested primarily for their pelts. In Maine, these include coyote (*Canis latrans*), red (*Vulpes vulpes*) and gray fox (*Uracyon cinereoargenteus*), bobcat (*Lynx rufus*), fisher (*Martes pennanti*), marten (*Martes americana*), raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), short- (*Mustela erminea*) and long- (*Mustela frenata*) tailed weasels, mink (*Mustela vison*), otter (*Lontra canadensis*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), and opossum (*Didelphis virginiana*). Black bears are considered big game animals under IFW's current regulations. As such, trapping of bears is governed by a different set of regulations than the furbearer trapping program. Therefore, this incidental take permit will not address IFW's big game program or, more specifically, the black bear trapping regulations. In addition, the capture of a lynx in a foot snare set for bears in Maine has never been reported. IFW does not believe there will be incidental take of lynx related to bear trapping because the trap configuration includes a stop that prevents the cable from closing beyond 2 ½ inches (i.e., a lynx could pull its foot through the 2 ½ inch loop).

Maine's furbearer trapping season generally runs from mid-October through the end of December. Beaver have an extended trapping season and can be trapped statewide (Figure 3.1.1) through the end of March, and, in some parts of the state (primarily northern Maine), through the end of April. Trappers are allowed to continue trapping for muskrat, past the end of the general trapping season, in any area of the state where the beaver trapping season is open.

Furbearer trapping is a highly regulated activity and is governed by the laws and rules promulgated by Maine's legislature and IFW, respectively (Appendix 1 and 2). These regulations require all trappers (except a junior license holder) to attend a state-approved trapping education course, or show proof they have held a trapping license from another jurisdiction, before they can obtain a Maine adult trapping license for the first time (Appendix 1, Title 12, Chapter 917, §12201). Maine's trapper education course instructs students on the use of traps including, Best Management Practices for trapping, responsible trapping, and techniques to avoid the take of endangered and other non-target species, including lynx (Appendix 3). IFW's trapping education program was updated in 2008 and follows recommendations established by the Association of Fish and Wildlife Agencies (AFWA). The course is taught by experienced trappers (volunteers) and IFW staff who follow a predetermined course outline (Appendix 3).

IFW's regulations that govern the size of traps that can be used for a particular application (e.g., use of conibear "killer-type traps" over 5 inches is restricted; Appendix 2, 4.01 J), where traps can be set (Appendix 2, 4.01 K), and the methods by which traps can be set (Appendix 2, 4.01 J; Appendix 1, Title 12, Chapter 917, §12252) are

reinforced through efforts to educate trappers on proper trapping techniques. To minimize injury of individual animals caught in traps, all trappers must tend restraining-type traps (e.g., foot-hold traps) within 24 hours. Killer-type traps must be tended every 3 days when set in an organized town, and every 5 days when set in an unorganized town (Appendix 1, Title 12, Chapter 917, §12255). Trappers must identify all traps they set with their name and address (Appendix 1, Title 12, Chapter 917, §12254). Wildlife populations that are trapped are monitored using pelt-tagging records. All raw pelts must be tagged by an IFW agent or staff with the exception of weasel, raccoon, muskrat, skunk, and opossum (Appendix 2, 4.01 H). For all species except marten and fisher, there is no limit on the number of animals a trapper can take during a trapping season. Trappers are limited to harvesting only 25 marten and 10 fisher per year (Appendix 2, 4.01 G - 3).

Description of Traps Currently Allowed for Use in Maine

Trappers are currently allowed to use ordinary foothold traps (Figure 3.1.2), killer-type traps of the body-gripping variety (Figure 3.1.3), duffer-type foothold traps designed for raccoons (Figure 3.1.4), cage-type live traps (Figure 3.1.5), cage-type colony-traps designed for muskrats, snares set underwater for beaver only, suitcase-type cage traps for beaver (Figure 3.1.6), mouse-type snap-traps for weasel and red squirrel, and foot snares (cable restraints) for black bears. The jaw spread of killer-type traps varies by manufacturer. In general, most 110 and 120 killer-type traps have a 4½ inch jaw spread, 155 killer-type traps have a 5 inch jaw spread, 160 killer-type traps have a 6 inch jaw spread, 220 killer-type traps have a 7 inch jaw spread, 280 killer-type traps have an 8 inch jaw spread, and 330 killer-type traps have a 10 inch jaw spread. Killer-type snares are not permitted on land in Maine. With implementation of this Plan, the existing restrictions on foot-hold trap size could be rescinded through the rule making process.

Currently, trappers are not permitted to set lethal snares or non-lethal cable restraints on land in Maine. With implementation of this Plan, regulations could be promulgated that would allow trappers to use non-lethal cable restraints after a phased in process has been evaluated (See Appendix 13). However, lethal snares set on land would not be permitted or covered by this permit. Non-lethal cable restraints consists of a cable with a mechanical relaxing lock -- designed to hold and not kill the animal, stops, an in-line swivel, and are set so that a captured animal cannot be entangled in surrounding vegetation (Olson and Tischaefer 2004).

Description of Maine's Furbearer Harvest

Annually, approximately 22,400 furbearers -- not including weasel, raccoon, muskrat, skunk, and opossum – are caught and tagged (Table 3.1.1). Bobcat, coyote, and fox are also hunted; therefore, the harvest numbers for this species overestimate the number of animals taken by trappers (Table 3.1.1).

Maine's furbearer harvest occurs in 29 WMDs (Figure 3.1.1), with the highest number of tagged pelts coming from WMD 17 (1,833) and the fewest from WMD 27 (241 [Table 3.1.2]). Annually, approximately 6,000 licensed or otherwise authorized individuals could trap in Maine based on data from 2000-13. We assume under this permit a similar number would be authorized to trap (Table 3.1.3). We note that only a proportion of those actually trapped and not everyone is successful in capturing animals. Based on fur tag records, on average a minimum of 1,272 of these individuals trapped.

Table 3.1.1 Statewide harvest rates for Maine furbearers (2006-2012 trapping seasons). Mean harvest rates were calculated from pelt-tagging records for an even number of years (6 yr) in order to accurately portray marten and fisher harvest rates. Marten, and to a lesser extent fisher, have large annual fluctuations in their harvest rates; therefore, an equal number of good and poor years is needed to calculate their mean harvest rates. Bobcat, coyote, and fox can be hunted as well as trapped. Coyote and fox harvests include both trapped and hunter killed animals.

Furbearer	Average Annual Harvest
Bobcat	331 (120[a])
Fisher	1,271
Marten	2,401
Red Fox	1,002
Grey Fox	220
Coyote	1,774[b]
Beaver	10,270
Mink	1,866
Otter	782

[a] Average annual number of bobcat trapped in Maine. The remainder are taken by hunters.
[b] Unknown proportion trapped vs. taken by hunters.

Figure 3.1.1 Maine's Wildlife Management Districts (WMDs).

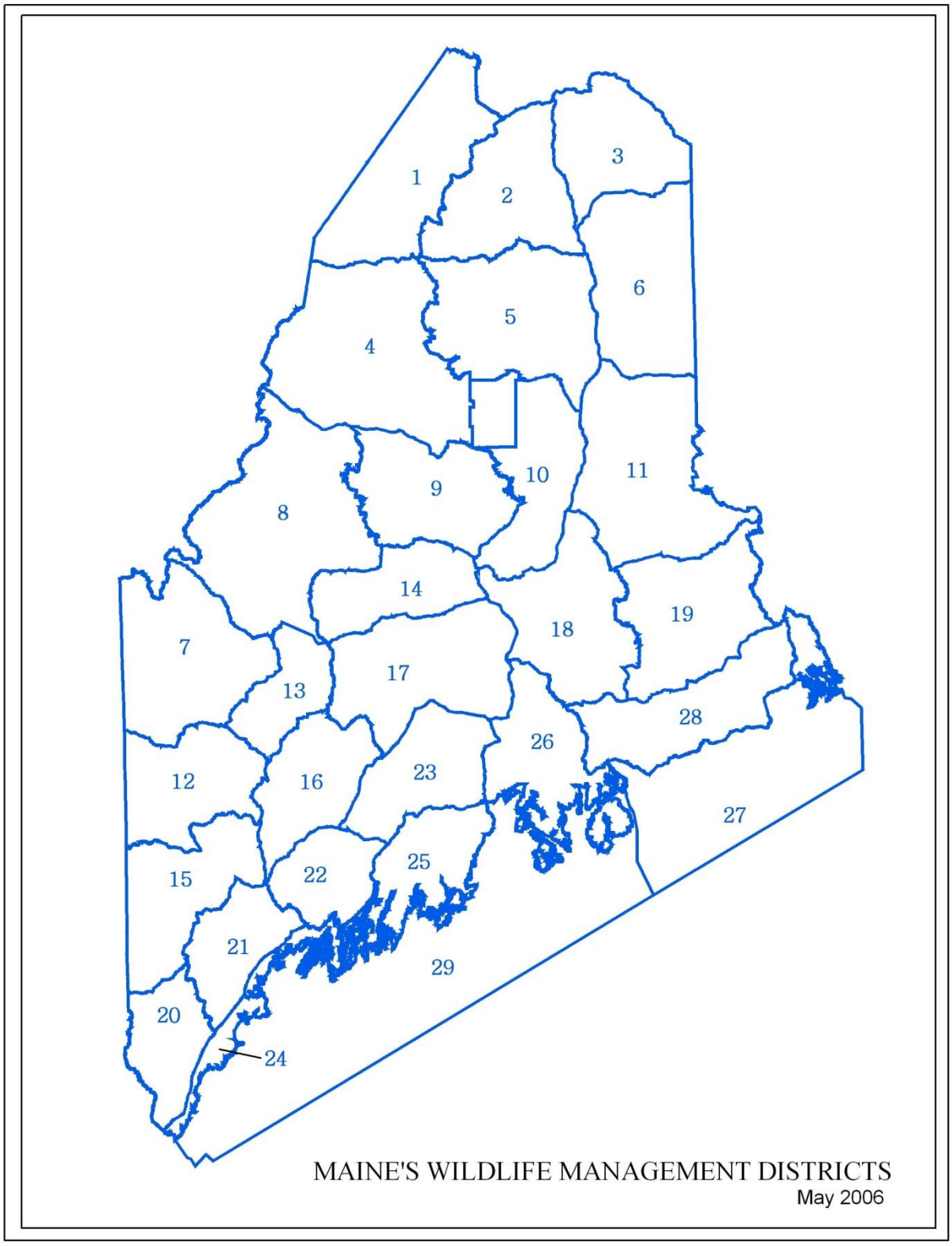
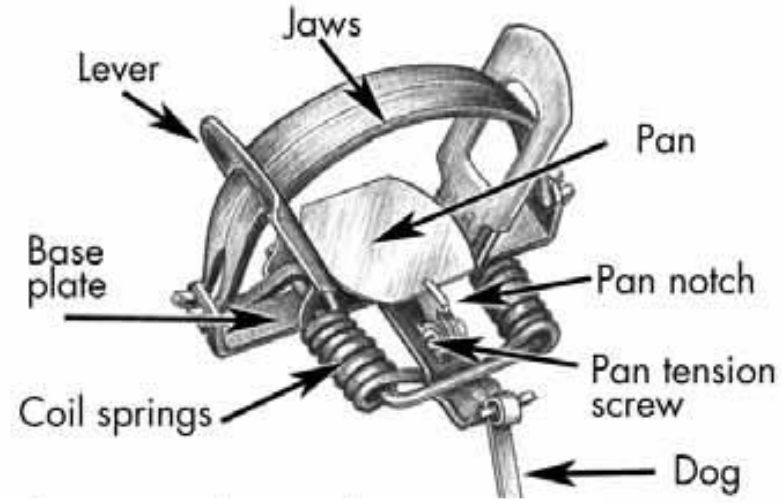
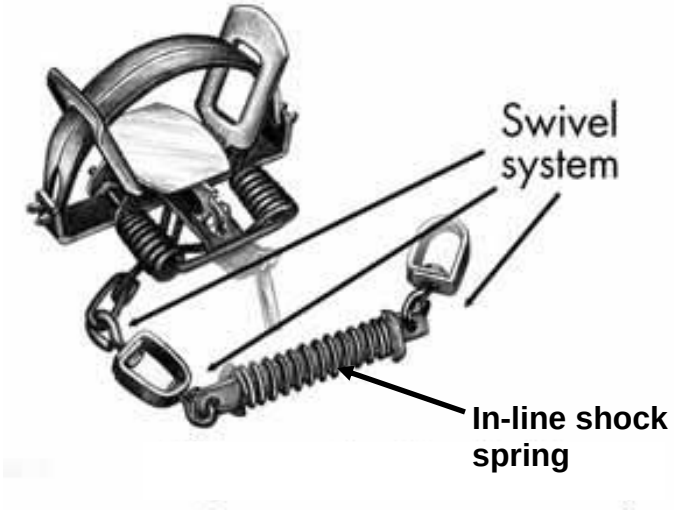


Figure 3.1.2 Diagram of a foothold trap and its various parts (AFWA 2006a).

a.



b.



c. Foothold trap anchored with stakes (AFWA 2006a).

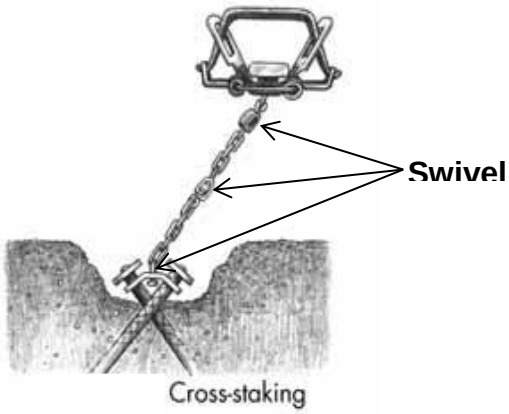


Figure 3.1.3 Diagram of a standard killer-type trap and its various parts (AFWA 2006a).

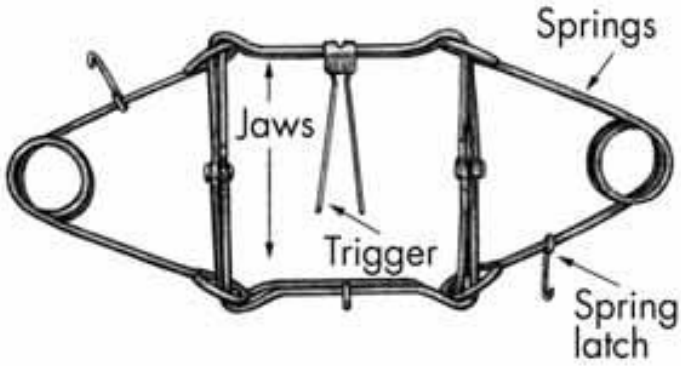


Figure 3.1.4 Diagram of a duffer trap designed for raccoons (AFWA 2006c).

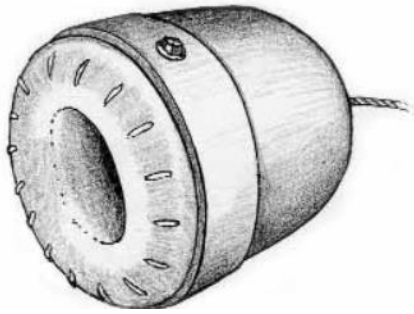
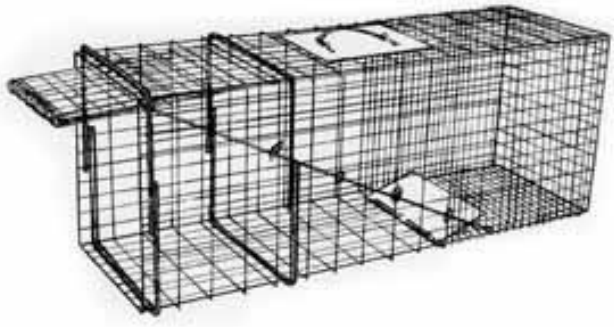


Figure 3.1.5 Diagram of a wire box or cage trap (AFWA 2006a).



Cage trapping system

Figure 3.1.6 Hancock, suitcase type live trap for beaver (AFWA 2007).

Table 3.1.2 Mean harvest rates for furbearers for each of Maine's Wildlife Management District (WMD). Mean values are calculated using pelt-tagging records from the 2006-07 to 2011-12 trapping seasons. Marten, and to a lesser extent fisher, have large annual fluctuations in their harvest rates; therefore, an equal number of good and poor years is needed to calculate their mean harvest rates. Bobcat, coyote, and fox can be hunted as well as trapped. Bobcat, coyote and fox harvests include both trapped and hunter killed animals.

WMD	Beaver	Otter	Mink	Bobcat	Coyote	Grey Fox	Red Fox	Fisher	Marten
1	186	3	1	0	12	0	3	15	138
2	99	3	4	0	17	0	4	30	194
3	247	3	16	0	30	0	26	66	83
4	153	10	19	0	39	1	13	28	252
5	251	13	29	0	36	0	10	53	311
6	543	23	98	2	71	0	40	109	173
7	155	13	43	18	126	4	47	51	142
8	291	25	33	11	70	1	19	57	237
9	136	24	47	2	48	1	14	23	173
10	243	25	58	2	32	0	15	30	141
11	861	56	115	19	84	0	53	56	187
12	414	17	115	17	120	10	55	22	9
13	188	13	66	8	60	1	30	24	10
14	154	16	60	8	46	0	21	40	97
15	569	33	91	21	120	64	81	61	2
16	396	30	127	17	65	5	32	65	2
17	1191	70	203	26	162	2	122	110	19
18	813	63	69	27	90	1	37	27	54
19	487	58	44	23	84	0	25	19	165
20	229	16	30	9	55	46	64	64	0
21	242	21	53	5	35	30	32	80	1
22	328	23	98	9	41	9	32	72	0
23	610	40	154	28	105	3	50	47	2
24	116	14	62	4	39	27	44	56	0
25	207	28	69	7	18	0	16	31	4
26	446	46	62	20	73	0	37	20	3
27	116	16	15	16	41	0	29	6	1
28	396	55	20	19	56	0	35	17	14
29	137	24	28	11	38	0	10	1	0

Table 3.1.3. Summary of ~6,000 licensed or otherwise authorized trappers covered by this Plan based from IFW's 2000-13 license data.

Entities Covered by Permit	Average number
Resident Trappers	2,123
Non-residents Trappers	73
Junior Resident Trappers	204
Resident Apprentice Trappers	25
Non-resident Apprentice Trappers	1
Over 70 year old Complimentary License	42
Native American Complimentary Lifetime License[1]	1,712
Lifetime Trapping License[2]	1,655
Game Wardens	106
Wildlife Biologists	38
Total	5,977
ADC Agent[3]	85
PM Trappers[3]	27
Landowners	Unknown[4]

[1]Sum of lifetime license (started in 2009) that allows Native American's to hunt, fish, or trap off tribal lands and likely includes individuals that although they are licensed to trap, do not.
[2]Sum of lifetime trapping licenses sold between 2000 and 2013 but excludes anyone who is 90 years or older based on date of birth.
[3]Required to have a trapping license, so these individuals are already included in the categories and total above.
[4] Landowners as defined in Title 12 § 12201 Part 2. are permitted to trap on their own land without a license. Although currently unknown, IFW estimates that there are less than 100 trappers in this category. IFW will collect names and addresses of these individuals when they register their fur, so outreach materials can be sent to them in the future.

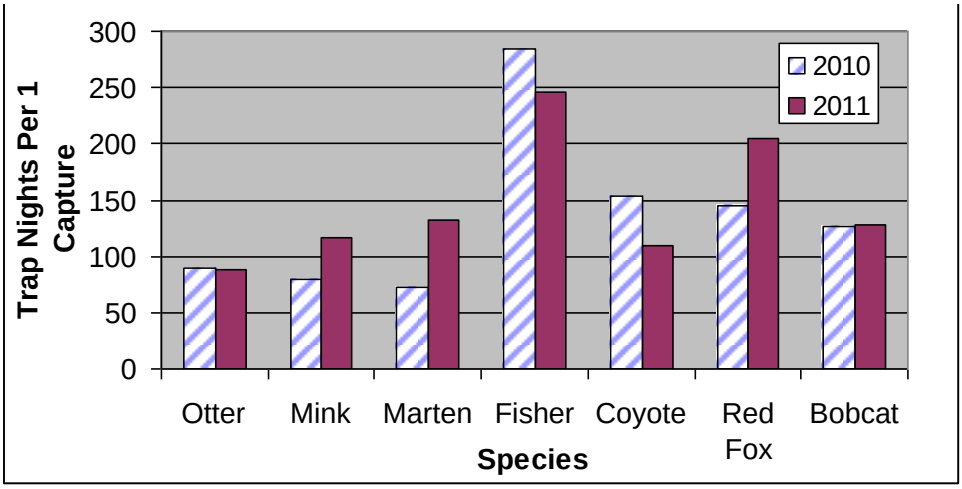
Trapper Effort

In 2010, IFW renewed its collection of trapper effort information. Since 2010, IFW annually mails data collection forms to trappers prior to each trapping season and asks that they mail in completed forms at the end of the season. This is a voluntary effort by the trappers, and, over the past two trapping seasons (2010-2012), approximately 10% of all licensed trappers have returned their completed forms. IFW requests that each trapper record the number of traps and days set for each species for each Wildlife Management District, and the number of each species captured. From the reports, IFW tracks a number of trapper-effort metrics, including the number of trap-nights (e.g., 2 traps set for 1 night = 2 trap nights) needed to catch specific furbearers (Figure 3.1.7). In general, traps set for marten and fisher are killer-type sets and those set for coyote, fox, and bobcat are foothold traps.

Based on fur registration data collected between 2005-13, on average there are 396 trappers that set killer-type traps for marten and fisher, 318 trappers that set foothold traps for coyote, fox, and bobcats in WMDs 1-11, 14, 18 and 19 (lynx range in Maine).

However, some trappers target all 5 species, on average 613 trappers set traps for marten, fisher, coyotes, bobcat, and fox. From voluntary trapper effort surveys, IFW estimates that there are approximately 110,000 foothold trap nights and 150,000 killer-type trap nights set each year in lynx WMDs.

Figure 3.1.7 Statewide trapper effort, expressed as the number of traps nights spent to capture the target species. Trap nights are defined as one trap set for a 24-hour period. Data are from the fall trapping season in Maine (mid-October through December 31) in 2010 and 2011.



3.2 Incidental Take of Lynx from Furbearer Trapping Program

Aquatic Sets

Although lynx have not been reported in traps set for aquatic furbearers, IFW provides a summary of the methods permitted to capture aquatic furbearers below. IFW has a contingency plan to address any potential future take of lynx in aquatic sets in the Changed Circumstance Section 5.4 of this Plan (see Changed Circumstance #2 and #3).

*Beave*r

To date, trappers have not reported the capture of a lynx in traps set for beaver in Maine. Beavers are Maine's most frequently trapped mammal (Table 3.1), and most traps for beaver are set under water or under ice. These traps pose little risk of incidental capture of lynx. Beaver sets may incorporate foothold traps (# 3 or #4), large killer-type traps (e.g., 330), or cable snares set underwater in a manner to quickly kill beaver. Hancock traps are a suitcase style cage-type traps set in the water to live

capture beaver (Figure 3.1.6). Traps set for beaver are commonly baited with aspen or other hardwood branches and set so as to be approached from the water.

Otter

Otter trapping does not pose a risk of incidental capture to lynx. Otter are caught by trappers setting traps specifically for otters or incidentally captured by beaver trappers; Trapping equipment and techniques used to capture otters is similar to that used in beaver trapping where traps are set under water. Therefore, lynx are not likely to be caught in traps set for otter; to date no lynx have been reported as an incidental capture in traps set for otter.

Muskrat

Muskrat trapping poses little risk of incidental capture to lynx. Muskrat are very common aquatic furbearer in Maine and are frequently trapped. Small foothold traps (e.g., #1 or #1½), 110 killer-type traps, and occasionally colony box traps are used to capture muskrats. These trap sets are not attractive to lynx because they are baited with vegetation and the size of the foothold trap used may be too small to hold a lynx. To our knowledge, no lynx have been caught in traps set for muskrats in Maine.

Mink

Mink trapping poses little risk of incidental capture to lynx. Mink are trapped using small foothold traps and killer-type traps. As with other semi-aquatic furbearers, underwater and drowning sets are often used for mink. On land, mink sets are made in runways, expected travel paths (e.g., along a stream bank), and with or without scent or bait for attractants. In WMDs where lynx occur, current trapping regulations (Appendix 2, 4.01 K) require that all killer-type traps be set 4 feet above the ground, except killer-type traps with openings 5 inches or less (e.g., $\#_S$ 120, 110, or 155) can be set on the ground if partially covered by water at all times, under overhanging stream banks, or in blind sets that use no bait, lure, or visible attractor except animal droppings or urine.

Killer-type traps set on land for mink are unlikely to capture a lynx, since these traps are set in runways along stream banks without attractors (e.g., lures, feathers, meat). If a lynx was to encounter these traps, a lynx would be more likely to step over the trap, since the trap is less than 5” off the ground and is set without an attractor. However if this changes or new information becomes available, IFW has a contingency plan to address any potential future take of lynx in the Changed Circumstance section of this Plan (see Changed Circumstance #2 and #3).

Upland sets

Fox and Coyote

Most of the incidentally trapped lynx in Maine have been captured during fox and coyote trapping. Fox and coyote are caught using foothold traps (e.g., #1.75 and #2 coil spring traps; Figure 3.1.2) and are primarily attracted to these traps with scent or food based lures. These traps are commonly attached by chain to stakes driven into the ground, or by chain attached to a drag (typically a large double hook meant to become entangled in trees or brush). Lynx captured in these trap sets are usually released with little or no injury (see Section 4.0). Cage traps are not used by trappers targeting red fox and coyotes, because most will not enter cage traps.

Bobcat

Bobcat trapping could result in the incidental capture of lynx due to the similarity in bobcat and lynx behavior and trapping techniques; however a lynx capture in a trap set for bobcats has not been reported. The geographical distributions of lynx and bobcat overlap at the southern-most extensions of the lynx's range in Maine. It is in this area where lynx have the greatest chance of incidental capture in traps set for bobcats. Although, killer-type traps and foothold traps can be used to catch bobcats, only a few trappers target bobcats. Most bobcats are caught incidentally by canid trappers that set foothold traps. Approximately 44% of bobcats harvested from 1999 to 2005 were harvested by trappers and the rest were killed by hunters. Lynx could also be captured in cage traps set for bobcats (Figure 3.1.5); however, most lynx caught in cage traps should be able to be released without injury. In 339 captures of lynx in cage traps during IFW's lynx study, the majority (337 out of 339 captures) of lynx examined by biologists had no trap related injuries; the other two lynx had minor injuries.

In 1999 and 2002, two trappers targeting canids caught a lynx/bobcat hybrid. At the time, lynx/bobcat hybrids were unknown. Biologists that examined the animals concluded they had the general appearance of a bobcat, but some features (e.g., white hairs under the tail, long ear tufts) indicated that the animal might be a hybrid. Genetic analyses latter confirmed that these were hybrid animals resulting from the mating of female lynx with a male bobcat (Homyack et al. 2008, Schwartz et al. 2004).

Marten and Fisher

Lynx may be captured in traps set for marten and fisher. In Maine, marten and fisher are most often trapped using killer-type traps (e.g., 120 or 220; Figure 3.1.3) baited with meat and/or scent lures. To prevent the incidental capture and lethal take of non-target species, such as lynx and migratory birds, current furbearer regulations require trappers to cover the bait so that is it is not visible from above. In addition, IFW agreed as part of the Consent Decree to modify marten and fisher trapping regulations in WMDs 1-11 to further avoid the incidental capture of lynx. In these WMDs, killer-type traps with an

inside jaw spread ≤ 8 inches[6], if set on land, must be set at least 4 feet off the ground or snow level (except as described under mink trapping) on small diameter (< 4 in [10 cm]) leaning poles (≥45°) set 4 feet away from any bank, in an area that is free of objects greater than 4 inches in diameter within 4 feet of the trap (Appendix 1). In 2010, IFW extended killer-type trapping regulations to WMDs 14, 18, and 19 where lynx were recently documented, and in 2011 allowed killer-type traps (<8" jaw spread) to be set on the ground in a lynx exclusion device (Figure 5.2.1). Following regulatory changes, no lynx have been caught in a killer-type trap that was legally set in Maine. If a permit is issued, IFW will maintain these regulations and will also allow killer-type traps (<8" jaw spread) to be set on the ground in any WMD where lynx occur, if set with an approved lynx exclusion device. During the 2014-15 trapping season that followed the orginal Plan, two lynx were killed in killer-type traps that were lawfully set on leaning poles.

None of the 74 lynx equipped with radiocollars and monitored during the trapping seasons were captured in a killer-type trap set for marten or fisher; also none of the collar signals were lost during the trapping season. Prior to regulatory changes that restricted the placement of killer-type traps for marten and fisher (1999-2006), 51 radiocollared lynx were monitored during the trapping season in 46 different towns (Figure 3.2.1). In the 12 towns where the majority of lynx locations occurred (Figure 3.2.1 – towns marked in green), 1,607 marten and 87 fisher were harvested without capturing any of the 51 radiocollared lynx. After regulatory changes to killer-type traps (2007-2011), 23 radiocollared lynx were exposed to killer-type traps in 58 towns (Figure 3.2.2). In the 22 towns where the majority of lynx locations occurred (Figure 3.2.2 - towns in green), 424 marten and 53 fisher were harvested without capturing any of the 23 radiocollared lynx (Table 3.2.1). On average, a marten is captured every 103 trap nights (i.e., 1 traps set for 2 nights = 2 trap nights). Thus, none of the radiocollared lynx were captured despite an estimated 209,193 trap nights that marten traps were sets in a subset of the area occupied by 74 radiocollared lynx during the trapping season. These data further supports IFW's assertion that most incidental lynx captures are reported and that the risk of capture in killer-type traps set for marten and fisher is low.

[6] Statewide, killer-type traps with an inside jaw spread >8 inches (e.g. 330) is only allowed when trapping beaver.

Figure 3.2.1 Locations of 51 radiocollared lynx in northern Maine during the 1999 to 2006 regular trap season when killer-type traps were set for marten and fisher. The area in green was used to estimate exposure of lynx to traps (i.e., number of marten and fisher harvested and number of trappers).

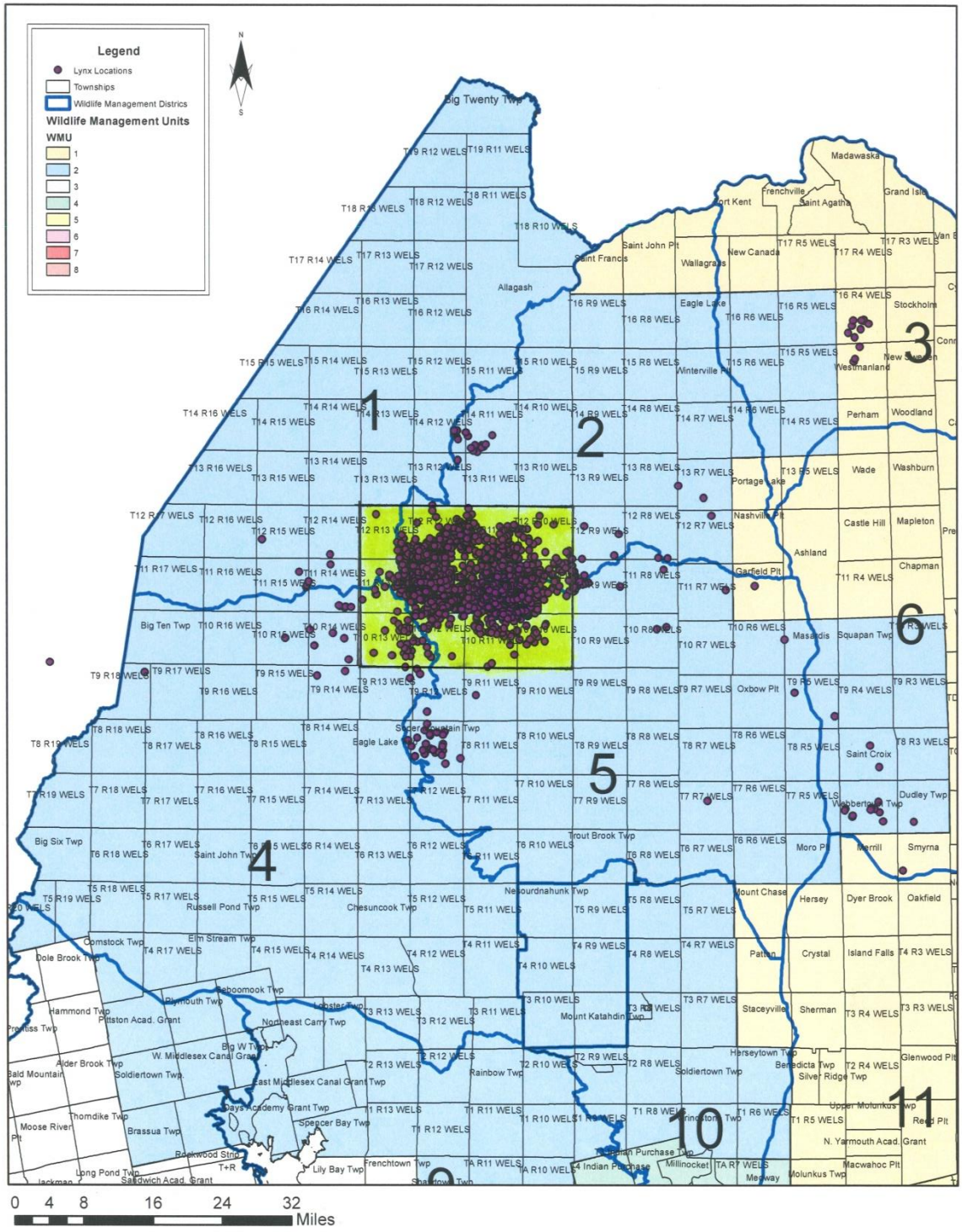


Figure 3.2.2 Locations of 23 radiocollared lynx in northern Maine during the 2007 to 2011 regular trap season when killer-type traps were set for marten and fisher. The area in green was used to estimate exposure of lynx to traps (i.e., number of marten and fisher harvested and number of trappers).

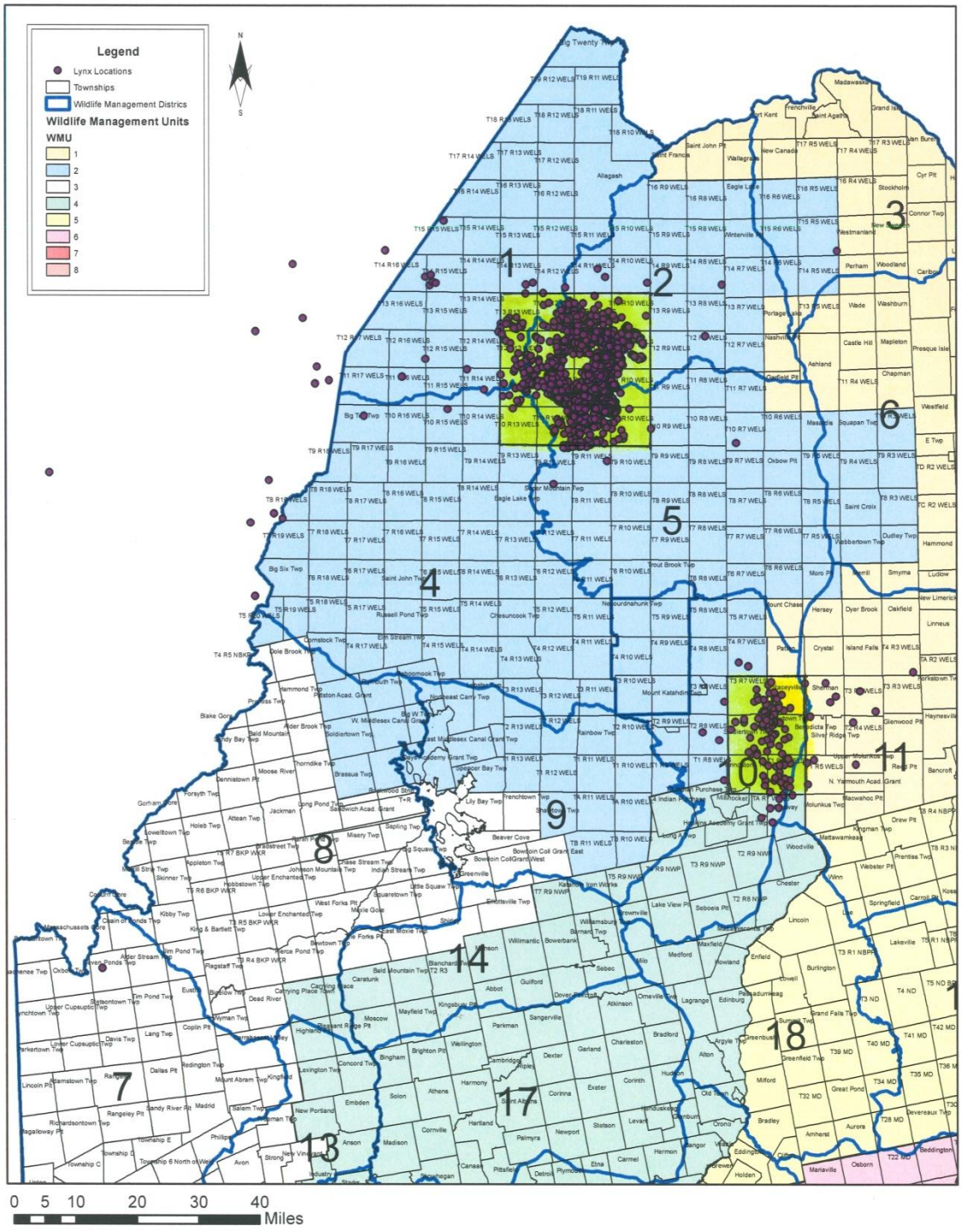


Table 3.2.1 Summary of the exposure of 74 radiocollared lynx in Maine monitored during the regular trapping season (end of October to end of December) to killer-type traps set for marten and fisher without being captured in a killer-type trap.

Time Period	Number of radioed lynx	Number of radioed lynx captures in killer-type traps or lost	where the majority of lynx locations occurred [a]		
			# marten harvested	# fisher harvested	Estimated trap nights
1999-2006	51	0	1,607	87	165,521
2007-2011	23	0	424	53	43,672

[a] A subset of towns with radiocollared lynx was used to estimate lynx exposure to traps (i.e., 12 of 46 towns prior to regulatory changes and 22 of 58 towns after regulatory changes).

Weasels

Weasel trapping poses little risk of incidental capture to lynx. Long and short tailed weasels are very common furbearer in Maine and are frequently trapped. Weasels are trapped using a killer-type rat-trap recessed in a wooden box (Appendix 2). Lynx are unable to access the trap in the wooden box, thus unable to be caught in a trap set for weasels. Trappers have not reported the capture of a lynx in traps set for weasels.

Raccoon

Raccoon trapping poses little risk of incidental capture to lynx because raccoon densities are relatively low in areas where lynx occur and raccoons are seldom specifically targeted by trappers. Raccoon densities are often higher in semi-urban settings. In these settings, they are frequently targeted as pests by ADC trappers who use cage traps to remove them. Lynx may be caught in large cage traps; however, traps set to remove nuisance animals are normally set near human dwellings and are seldom set in areas frequented by lynx. Raccoons are trapped using small foothold traps, enclosed foothold traps (e.g., egg-trap or duffer; Figure 3.1.4), killer-type traps (e.g., 220; Figure 3.1.3), and cage traps (e.g., Havahart® cage traps; Figure 3.1.5). During the first 8 years of trapping in the lynx study (1999 to 2007), only 2 raccoons were caught in foothold traps. Given their low densities in areas where lynx occur, the lack of interest in trapping raccoon in northern Maine, and the high species specificity of some raccoon traps (e.g., enclosed foothold traps), lynx are highly unlikely to be caught in a trap set for a raccoon in Maine.

<u>Animal Damage Control (ADC) Program</u>

IFW is authorized under Maine's statutes (e.g., MRSA §10053.8) to coordinate and administer an ADC program (Appendix 10). The objective of this program is to resolve conflicts between people and wildlife using strategies and methods which offer the best chance for a permanent or long-term solution, and, in the process, conserves wildlife

resources when practical and possible. IFW encourages the use of preventive measures to reduce the occurrence of human/wildlife conflicts. However, selective removal of wildlife that pose a significant threat to other wildlife, fisheries, human health, safety, or property is used when preventive measures are not sufficient.

ADC trappers are only permitted to set traps to remove wildlife causing damage to property if they hold a valid Maine trapping license. ADC trappers are permitted to set traps throughout the year and are only permitted to use traps allowed during Maine's regulated trapping season, with the exception that ADC trappers can set cage and Hancock traps anywhere in the state. ADC trappers are not permitted to set lethal snares unless completely submerged underwater for aquatic furbearers.

There is very little overlap between trapping activities conducted under IFW's ADC trapping and fur trapping. The potential for incidental capture of lynx by ADC trappers is low. Much of IFW's ADC efforts in the lynx range are centered around beaver trapping. As explained earlier, beaver trapping poses few risks to lynx. Box traps set for raccoons near people's residences could potentially catch a lynx, but it seems unlikely lynx would frequent residential areas or farms and risk encountering dogs. A lynx has never been incidentally caught in IFW's ADC program as it is currently structured. Although IFW does not anticipate any lynx to be incidentally caught as a result of trapping conducted under its ADC program, IFW is seeking coverage in the event that a take occurs and will address any future take as described in the Changed Circumstance Section of this Plan (see Changed Circumstance #2 and #3).

Predator Management (PM) Program

IFW's PM program was initiated in 2010 by the Commissioner of IFW to reduce the impact of predation by coyotes on wintering deer in deer winter areas (DWA). IFW Regional Biologists identify areas currently supporting deer for coyote reduction. Some of these areas (see below for discussion) may overlap with areas used by lynx in WMDs 1-11, 19, and 28 and northern sections of WMDs 12-14 and 18 (Appendix 9). There are three components to the PM program, but trapping is the only component that will be covered by this permit. As previously described for the furbearer trapping program, most lynx that are incidentally caught in foothold traps are caught by coyote and fox trappers. Trappers are restricted to using only equipment and methods currently authorized by IFW's trapping regulations. This program involves contracts between IFW and qualified licensed trappers to trap coyotes in or adjacent to DWAs within the current season framework.

Although approved in 2010, the trapping component was first implemented in 2011 with 13 trappers participating. In 2012, 27 trappers were permitted to set traps from October 17 through November 30 in 26 priority wintering areas and 18 trappers actually set traps. The trapping component of the PM program was intentionally kept shorter in lynx areas than the normal coyote trapping season, which runs from mid-October to December 31. IFW did not want to direct its contractors to trap coyotes in December, which could increase the overall trapping effort for coyotes above that of the regular

trapping season, and, in turn, incrementally increase the possibility of catching a lynx. During the regular furbearer trapping season, trappers often pull their foothold traps for coyotes when the ground starts to freeze and trapping becomes more challenging.

Trappers enrolled in the PM program are generally trappers that currently trap in these areas. The intent of the PM is not to increase overall coyote trapping effort, but rather to redirect current coyote trapping efforts to DWAs. These DWAs consist of mature forests where snowshoe hare often occur at low densities (Robinson 2006, Fuller et. al. 2007). Lynx, which rely on snowshoe hare as their primary prey item, may not be as common in mature forests. PM trappers likely have a lower probability of incidentally catching a lynx than when they normally trap for coyotes. Alternatively, the probability of catching a lynx will also be influenced by the amount of favorable snowshoe hare habitat in the landscape surrounding a particular DWA and the distance traps are set away from DWAs. If snowshoe hare are abundant in the landscape surrounding a deer wintering area, lynx may be present in these areas.

Because coyote trapping effort is not expected to increase through implementation of this program, IFW does not anticipate incidental capture (i.e., take) of lynx beyond what is anticipated in the furbearer trapping program. In fact, the number of incidental lynx captures in 2011 and 2012 was within the range reported before the PM program was implemented (Table 4.1.4). In addition, the number of coyote trappers and number of coyotes tagged declined in 2011 and 2012. Prior to Maine's PM program (1999-2010), an average of 514 trappers tagged 2,000 coyotes each year versus an average of 437 trappers tagging 1,730 coyotes in 2011 and 2012. However, if monitoring of lynx take indicates that this has changed, this Plan incorporates a strategy to address any increase in incidental take of lynx attributed to its PM program (See Change Circumstance #3 and #4 in Section 5.4).

3.3 How Legal and Illegal Trapping Action are Covered by the Plan

IFW acknowledges that there are a variety of factors that determine whether a trap or trapper complies with trapping regulations. IFW is seeking coverage for any legally set trap where a lynx is captured. IFW has put forth a Plan which outlines a number of actions and regulations to minimize the incidental take of lynx in traps (see Table 3.0). Any lynx caught in a trap that complies with regulations and measures outlined in Table 3.0 shall be considered legal for purpose of calculating and mitigating take.

IFW's intent is for the permit authorization to apply to all licensed or otherwise authorized trappers who comply with trapping regulations and this Plan. However, if lynx are captured, injured, or killed in traps or trap sets due to key regulations not being followed, then IFW does not intend permit authorization to extend to those captures. Rather, those trappers would be subject to prosecution for violation of State and Federal law. For example, IFW should not be held accountable for flagrant violations such as a person intentionally trapping and killing a lynx, clearly in violation of State regulations and law. We note, however, that not all violations of trapping regulations will increase the risk of capture, injury, or fatality of lynx. In those cases, if lynx are captured and a

relatively small infraction (that did not contribute to catching the lynx) of the trapping regulations is documented (e.g., failure to properly label a trap), the permit authorization would still apply and the capture event would count towards the authorized take under the Plan. However, if lynx are captured and a violation of rule or law (Table 3.0) is found to have caused or contributed to the capture or subsequent injury or fatality, then the permit authorization would not apply and the capture will not count towards authorized take under the plan. Several different scenarios are provided below as illustrations:

- A lynx is captured in a legally set trap and subsequently shot - the capture would count towards IFW's take allocation for capture events, but the mortality would not count towards IFW's lethal take allocation.
- A lynx caught in a legal set by a trapper who failed to sign his license or label his traps – the capture would count towards IFW's take allocation for capture events.
- A trapper fails to report a lynx capture and the lynx subsequently dies or sustains a severe injury due to the capture event - the capture would count towards IFW's take allocation for capture events, but the injury or mortality would not count towards IFW's lethal or severe injury take allocation. The rationale is that had the trapper reported the incidental capture, IFW staff would have assessed and treated any injuries prior to release such that the lynx would not have died or sustained a severe injury. Therefore, lack of reporting was a violation that ultimately increased the probability of the lynx dying or sustaining a severe injury.
- A trapper fails to check his trap within the mandatory 24-hour tending time and the trap captured a lynx that subsequently dies or sustains a severe injury - the capture would count towards IFW's take allocation for capture events, but the injury or mortality would not count towards IFW's lethal or severe injury take allocation. The rationale is that had the trapper properly checked the trap, the lynx may have survived and could have been released. Therefore, lack of compliance with the tending times was a violation that ultimately increased the probability of the lynx dying or sustaining a severe injury.

Every capture event will be evaluated by IFW as described in Section 5.2 IM2, PI2, PI3. This information will be used to determine whether the incidental capture counts towards the incidental take permitted in this Plan. Capture events resulting from violations of state law (i.e., those proposed not to count against IFW's incidental take authorization) will be independently evaluated for concurrence by USFWS within 30 days of receiving the final report. Disputes will be resolved at the annual meeting with the USFWS.

If anytime during the permit period IFW adds or modifies existing regulations or actions to further minimize or avoid take, IFW will update Table 3.0 to reflect changes.

4.0 Potential Biological Impacts / Take Assessment

Summary

The majority of the anticipated incidental take of lynx from IFW's 3 programs will be from capture events related to legally set foothold traps. Lynx may also be captured using other techniques such as non-lethal cable restraints and cage traps. Results from IFW's radiotelemetry study of lynx demonstrate that the majority of lynx caught in cage traps or foothold traps will experience minor injuries that do not affect subsequent survival and reproduction. In addition, IFW has examined lynx caught by fur trappers, including several that were equipped with radio collars. Data from these examinations also supports the low injury and high post release survival of lynx from foothold traps. Based on other studies, IFW anticipates non-lethal cable restraints will also only result in minor injuries. Given the minimization measures put in effect with this ITP, IFW anticipates a low level of lethal take of lynx in traps.

IFW is requesting a permit to cover the incidental take of up to 195 lynx over the next 15 years that may occur as the result of otherwise lawful trapping activity in Maine. Take is defined by the ESA as activities that harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect federally protected wildlife within the United States. Of the 195 lynx that may be captured in legally set traps, IFW anticipates that most can be released with little or no injury; therefore, IFW is requesting a permit to cover potential severe injury of up to 9 lynx and the potential death of up to 3 lynx (lynx that are injured and cannot be released into the wild would be considered a mortality) over the next 15 years.

To evaluate the population impacts for the potential lethal take (i.e., 3 lynx over 15 years), IFW ran a demographic model (Program Vortex) using data from lynx in Maine. The results showed that the level of lethal mortality anticipated in this Plan will not affect population growth. In fact, the Vortex model showed that an annual lethal take 5 times higher than anticipated did not cause Maine's lynx population to decline (Appendix 7).

Maine's lynx population is likely at a record high number. A recent population estimate indicates between 750 and 1,000 adult lynx occupied northern and western Maine (WMDs 1-11) in 2006 (Vashon et al. 2012). The surge in lynx numbers is attributed to record levels of optimal habitat for lynx provided by the regrowth of spruce and fir forest following the 1980s spruce budworm infestation and subsequent clearcutting of affected trees. A recent habitat model for a portion of lynx range (WMDs 4, 5, 8, 9, and 14) indicates that the amount of high quality hare habit (HQHH) peaked in 2009 and will remain relatively stable through 2022. Although the model predicts a decline in HQHH as budworm stands mature, this decline will be offset by increases in HQHH due to recent heavy partial harvesting activity. However, the model predicts future HQHH may occur in smaller more isolated patches that may support lower lynx densities (Simons 2009). This could change if the major spruce budworm defoliation event expected by 2022 occurs at the anticipated level.

4.1 Direct and Indirect Impacts

Impacts from Proposed HCP Covered Activities

IFW is requesting incidental take coverage for lynx incidentally captured during lawful trapping activities that occur through the state-authorized furbearer trapping, PM, and ADC Programs. As previously explained, the majority of anticipated incidental take will likely occur as the result of trapping efforts using foothold traps that target capture of coyotes, foxes, and bobcats by fur trappers, but some may occur through other activities such as the ADC and PM programs. The impacts of these trapping techniques on lynx are explained below.

Impacts anticipated from fur trapping: Any incidental take of lynx from the fur trapping program could occur from mid-October to the end of December. Trappers would be permitted to use foothold traps, killer-type traps, and cage traps to capture furbearers. Non-lethal cable restraints will be permitted only after IFW reviews the impacts of this device in the ADC/PM program. The potential impacts from cable restraints are described below.

Impacts anticipated from the ADC program: Any incidental take of lynx from ADC activities could occur year round. ADC trappers are permitted to use foothold traps, killer-type traps, and cage traps. Most ADC activities in lynx areas occur where the probability of capturing a lynx is low (i.e., aquatic traps primarily set for beaver or near dwellings). To date, no lynx have been caught by trappers during ADC activities. Although IFW does not anticipate any additional take by ADC trappers during the permit period, IFW is requesting coverage for ADC trappers in the rare event that a lynx is captured. ADC trappers may be permitted to set non-lethal cable restraints for coyotes; the potential impacts of non-lethal cable restraints are described below.

Impacts anticipated from the PM in Maine's ADC program: Any incidental take of lynx from PM activities could occur from mid-October to November 30th. We do not anticipate any take from killer-type traps in the PM program since killer-type traps are not permitted. However, foothold traps and non-lethal cable restraints (described below) will be permitted. We anticipate the take of lynx in foothold traps by PM trappers to be similar to current levels. If new information becomes available or circumstances change, this Plan includes contingencies in the Changed Circumstance Section.

Impacts from non-lethal cable restraints: IFW would implement the use of non-lethal cable restraints with a phase-in approach by first training and evaluating their use by PM or ADC trappers prior to allowing their use by fur trappers during the regular trapping season. IFW would require a 24-hour tend on cable restraints which is consistent with trapping regulations governing other non-lethal restraining devices in Maine. Furthermore, IFW would stipulate that cable restraints could only be set by certified trappers (i.e., pass an IFW training course on how to properly set a cable restraint and avoid lynx captures; See Appendix 13).

IFW does not anticipate more lethal take or severe injuries by permitting this device since ISO scores from other studies are low (Olson and Tischaefer 2004, Munoz-Igualada et al. 2010). Although there is the potential for trapping levels to increase by allowing the use of cable restraints, requiring trappers to check their sets every 24 hours may limit the use of cable restraints especially in December when trappers generally shift to killer-type traps that have a longer tend time. In addition, some trappers may simply replace one device (e.g. foothold traps) for the other (e.g. non-lethal cable restraints). Regardless, IFW's take request should be sufficient to account for any increase in trapper effort from cable restraints. However, if new information becomes available or circumstances change regarding trapper effort or injuries, this Plan includes contingencies in the Changed Circumstance Section (Section 5.4).

Non-lethal cable restraints are currently legal to use in several states (e.g., WI, NJ, PA). Data from these jurisdictions indicate that cable restraints are a safe and efficient capture tool that minimizes injuries to target and nontarget animals (i.e., injury scores met the Association of Fish and Wildlife Agencies Best Management Practices standards; see Olson and Tischaefer 2004, Munoz-Igualada et al. 2010). During the WI study, several nontarget mammals were released unharmed (Olson and Tischaefer 2004), and 2 incidental captures of European wildcats (*Felis silvestris,* about the size of a house cat) monitored for 5 weeks post release had only minor injuries and survived (Munoz-Igualada et al. 2010).

Impacts from rescinding foothold trap size: Prior to the consent decree, coyote trappers would have used traps with an inside jaw spread ≤ 6 ¾ inches. IFW does not anticipate additional lynx captures or more severe injuries by rescinding the regulation that requires foothold traps in lynx WMDs to have an inside jaw spread less than 5 3/8 inches, based on our experience monitoring incidental take. The number of lynx captures per year did not decrease after size restrictions were put in place in 2008 (30 in 8 years vs. 33 in 5 years). In addition, the number of injuries requiring veterinarian care was similar prior to and after foothold trap size restrictions. Of the 8 lynx examined by biologists prior to size restrictions, one lynx had an injury requiring veterinarian care. Follow-up interviews with trappers that caught and released the other 22 lynx suggest that lynx injuries where mild and similar to those examined by biologists (e.g., swollen capture foot). After size restrictions, trappers were also required to report lynx captures prior to releasing the animal. Therefore, IFW biologists examined 24 of 33 lynx caught in foothold traps and 1 lynx had an injury requiring veterinarian care. IFW does not anticipate additional lynx captures or more severe injuries by rescinding foothold trap size regulation. If new information becomes available or circumstances change, IFW's Plan includes contingencies in Changed Circumstance (Section 5.4).

Effects of Non-lethal Trapping

Most of the trapping related take anticipated to occur through this ITP will be non-lethal. Data from IFW's 12-year radio telemetry study on Maine lynx described below illustrates that foothold trapping did not influence lynx ability to survive and reproduce. While lynx may be captured in foothold traps, IFW anticipates that they will be released with only

minor injuries that do not affect their long-term survival. Although IFW anticipates that some lynx may have injuries that require additional care, IFW's data shows that these animals can be treated by a veterinarian and released. Any lynx that cannot be released after treatment of trap related injuries is addressed under lethal take. In addition to 12 years of telemetry data, IFW has examined lynx caught by fur trappers, including several that were equipped with radio collars. Data from these examinations also supports the low injury and high post release survival of lynx from foothold traps.

IFW's 12-year telemetry study demonstrates that majority of lynx (i.e., 54 of 57 lynx) released from foothold traps following 111 captures are not adversely affected by the capture as these animals survive and reproduce post capture. Although Withey et al. (2001) recommended allowing several days to weeks to account for the effects of capture and tagging before collecting data from radiocollared animals, IFW waited 30 days before assessing survival. Therefore, a lynx caught in a trap that lived at least 1 month was considered to have died of factors not related to the capture event (e.g., old age, predation, vehicle collisions, etc.). During IFW's study, 81 lynx were captured by IFW biologists and radiocollared; 59 lynx were captured in foothold traps during 122 capture events (i.e., some lynx were caught more than once in foothold traps), and the fate of 57 lynx following 111 capture events[7] was known. Lynx lived greater than 1 month following 108 of 111 captures (97%). In addition, there is no evidence that the mortality of 3 lynx that died within one month of capture was directly related to trapping. Although sample size is small for fur traps, a comparison of lynx survival estimates from research and fur traps provides further evidence that foothold traps does not affect long-term survival of lynx (Table 4.1.1).

Table 4.1.1 Proportion of lynx in Maine that lived more than 1 month after captured in a trap. Foothold traps were set during IFW's 12-year radiotelemetry study; while both foothold and killer-type traps are used by trappers during Maine's furbearing trapping season.

Type of Trap	Number captures examined by IFW	Number of mild/no injury	Number captures of radiocollared lynx	Number lived $\geq$ 1 months after capture
Research-Foothold	122[7]	119	111	108/111 (98%)
Fur trappers-Foothold	32	30	6[a]	5 /6 (83%)
Fur trappers-Killer-type	7		2	0/2 (0%)

[a] Four lynx caught by fur trappers were equipped with radiocollars when release and 2 trappers reported capturing lynx that were already wearing radiocollars.

[7] During the last year of the study, we removed collars following 9 captures and 2 lynx were released without functioned collars, therefore fate is known for 111 of 122 captures.

IFW has compared injury rates from IFW's 12-year telemetry study to injury rates of lynx captured during the fur trapping program. Study animals were captured using #3 Victor soft-catch traps that were staked on short chains whereas fur trappers used a variety of foothold traps and staking mechanisms. The majority of captures in research (119 out of 122 captures) and fur traps (30 out of 32 lynx) indicated that captured lynx had no visible or minor injuries from foot-hold traps (Table 4.1.1). Therefore, the rate of injury for lynx was low and not different between foothold traps set by biologists and fur trappers.

IFW acknowledges that injury scores described above were from external exams conducted by IFW biologists. Other studies have been conducted by AFWA where trapped animals that were killed were then necropsied to examine animals for injuries; the majority of animals had acceptable injury scores (see Table 7.3.2). Although IFW external examination of live lynx may have not detected all injuries, data from IFW's monitoring of lynx and AFWA's study indicates that any undetectable injury would not likely impact their ability to survive and reproduce after capture.

In addition to IFW's telemetry study, IFW's policy is to radiocollar any lynx incidentally trapped near IFW's study area or that had an injury that required veterinarian care. Data from these trapper caught lynx also show that lynx survive after release from foothold traps (n=3) or after treatment of injuries (n=1). Three of the 4 lynx lived more than 1 month after release. The one that died shortly after release had no visible signs of injury when captured and died from unconfirmed causes. However, we suspect predation was the cause of death based on evidence collected at the mortality site. In addition, 2 trappers reported capturing lynx that were already wearing radiocollars. Both lynx lived more than 6 months after being released from these traps (Table 4.1.1).

Capture of lynx in foothold traps does not appear to affect their ability to reproduce and raise young. Twenty-seven of 57 lynx captured in foothold traps set by IFW biologists in the fall, and 2 of the 4 radiocollared lynx captured in foothold traps set by fur trappers, were females. The majority of females (70%) gave birth to kittens the spring following their capture. However, litter production was high (14 of 16 female lynx) when snowshoe hares were common. Conversely, fewer female lynx (5 of 13) gave birth to kittens when hares were less common (Table 4.1.2). Several adult females were caught multiple times in foothold traps during the fall and produced kittens the next spring. In fact, one female lynx was caught in a foothold trap 4 times over a 16-day period and subsequently produced a litter of kittens the next spring.

Data from IFW's 12-year radio telemetry study and monitoring incidental captures of lynx illustrate that foothold trapping does not likely affect a lynx's post-capture chances of survival or ability to reproduce (Tables 4.1.1 and 4.1.2.).

Table 4.1.2 Reproductive success of adult female lynx that were radiocollared in Maine following fall capture in foothold traps set by biologists in IFW's radiotelemetry study or by licensed fur trappers during the fall fur trapping season (incidental captures). Snowshoe hare densities, which varied considerably over time and which influence lynx reproduction, are also given.

	≥ 2 hares/ha		≤ 1hare/ha	
	# Fall captures	# litters	# Fall captures	# litters
Fur trappers	2	2 (100%)	0	0
Biologists	14	12 (86%)	13	5 (38%)

Cage traps: Through implementation of this Plan, there could be an increase in use of cage traps by trappers targeting bobcats. IFW anticipates that take from cage traps will be non-lethal and risk of injury is low. During IFW's 12-year study, 52 lynx were caught in cage traps multiple times (339 captures) without any injuries requiring veterinarian care.

Effects of Lethal Take

As described above, most of the trapping related take anticipated to occur through this incidental take permit will be non-lethal. While most lynx captured in non-lethal cable restraints, foothold, and cage traps will be released with minor injuries, some may have more severe injuries. Those that cannot be rehabilitated and released back into the wild will be considered as lethal take. In the original Plan, IFW believed that minimization measures implemented (e.g., existing regulations restricting visible bait and requiring exclusion devices on some ground sets, and leaning pole set for non-exclusion traps,) would be effective at precluding lynx from being caught in killer-type traps. If, however, lynx were caught in killer-type traps, IFW anticipated that it would result in a mortality. In the past, prior to regulatory changes, two of four lynx caught in killer-type traps died; the two that lived were caught by the foot in killer-type traps set on the ground without an exclusion device. Since regulatory changes implemented in December of 2008, 1 lynx has been killed in a killer-type trap that was not legally set. Although a few individuals may die, the level of lethal take anticipated in this plan (n=3) will not affect Maine's lynx population (Appendix 7). Despite the original Plan's minimization measures, two lynx were killed in killer-type traps that were lawfully set on leaning poles during the 2014-15 trapping season, thus triggering a response under the changed circumstance portion of the ITP.

Lynx Vulnerability to Trapping

Although other North American studies that reported capture rates of lynx may be of interest, these studies report on lynx that were legally harvested for their fur where trapper effort was driven by lynx pelt price and trappers targeting lynx could use visible bait and other attractors (Brand and Keith 1979, Bailey et al. 1986, Quinn and

Thompson 1987, Parker et al. 1983). Data recently collected in Maine is more relevant to IFW's application and is presented here.

Over the 12 years of IFW's radio telemetry work, an equal number of male (n=28) and female (n=31) lynx were caught in foothold traps; however, male lynx were more likely to be recaptured (122 foothold captures, 71 males and 51 females) and only 1 kitten was captured in 122 captures events (IFW, unpublished data). Although the gender and age was not known for all lynx captured in foothold traps set by fur trappers in Maine, none of the 32 examined by IFW biologists were kittens, and the sex ratio (21 males and 11 females) was skewed towards males (Table 4.1.3). Quinn and Thompson (1987) observed a similar low capture ratio for kittens.

IFW does not believe kitten mortalities will result from adult females or kittens being incidentally caught in foothold traps and subsequently released. Over the course of Maine's lynx study, kittens were rarely captured (n=1) and radiocollared females that were traveling with kittens (n=17), and were subsequently trapped, always reunited with their young (IFW, unpublished data). The 1 kitten that was captured and released from a trap, reunited with its mother. In addition, when Maine's fur trapping season opens, kittens are between 5 and 7 months old, weaned, and consuming meat and capable of surviving on their own. Literature on available data to date indicates that kittens are weaned and no longer dependent on their mother by 12 weeks of age (McCord and Cardoza 1982, Tumlison 1987, Fernandez et al. 2002). Although data is sparse, Fernandez et al.'s (2002) observation of an orphaned 3 month old kitten that survived until at least 11 months of age on its own suggests that kittens can survive without their mother after they are weaned. Because of uncertainty as to the fate of orphaned weaned kittens, IFW will monitor kittens orphaned from trapping (if it occurs) and adapt procedures as necessary (Section 5.2- Minimization Measure IM 8). Any kittens that are incidentally captured in traps in Maine will be treated similarly to adult lynx for the purpose of incidental take calculations. Despite the fact that IFW does not believe that kitten fatalities will occur from the incidental capture of female lynx or kittens, the mitigation in this Plan will also support additional lynx and their progeny (Section 5.3).

Specific Causes of Mortality

Over the 12 years of IFW's radiotelemetry study, radiocollared lynx experienced roughly a 20% annual mortality rate[8] (Table 2.2). Starvation and predation were the leading causes of mortality (Table 2.3; Vashon et al. 2012). The mortality rate for lynx observed in IFW's study area was similar or lower than reported for other lynx populations (See Vashon et al. 2012); however, small sample sizes and high variability in other studies make it difficult to make direct comparisons.

[8] This is for a pooled sample of adults, juveniles, and both sexes during period where hare densities ranged from <1.0 to >2.0 hares/ha (Vashon et al. 2012).

Table 4.1.3 Description of lynx incidental trapping incidents in Maine from 1999 to 2012.

Date incident	Age Class	Sex	Type of Trap	Securing method	Response type	ISO Score (applied as reference)[1]	Type of Injury
10/18/1999	Subadult	Male	Foothold	Staked	IFW released	5	Tiny bit of blood on 3rd toe, no cut on toe was evident; minor injury
10/1 /2000	Unknown	Unknown	Foothold	-	Trapper released	-	-
10/26/2000	Adult	Male	Foothold	Drag	IFW released	100/50	Broken leg (ulna and radius), x-rayed in Presque Isle; rehab at Tufts; released back to wild
10/21/2001	Adult	Female	Foothold	Drag	IFW released	5	small laceration on one toe
10/26/2002	Adult	Unknown	Foothold	-	Trapper released	-	-
10/22/2003	Unknown	Unknown	Foothold	-	Advised trapper release	-	-
11/1 /2003	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
11/2 /2003	Adult	Female	Foothold	Drag	IFW released	10	Small puncture above capture; Slight swelling; caught high just below wrist
11/22/2003	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/21/2004	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/21/2004	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/23/2004	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/23/2004	Adult	Unknown	Foothold	Staked	Trapper released	-	-
10/25/2004	Unknown	Unknown	Foothold	Staked	Trapper released	-	-
10/27/2004	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/28/2004	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
11/7/2004	< 1 yr	Female	Killer-type	set on ground in box	IFW released	5	Possible injury but no broken bones, just a lot of swelling.
11/12/2004	> 1 yr	Female	Foothold	Staked	Trapper released	-	-
11/14/2004	Unknown	Unknown	Foothold	-	Trapper released	-	-
11/16/2004	Adult	Female	Foothold	Drag	IFW released	5	Slight cut on bottom of foot

Date incident	Age Class	Sex	Type of Trap	Securing method	Response type	ISO Score (applied as reference)[1]	Type of Injury
10/1 /2005	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/18/2005	Adult	Male	Foothold	Staked	IFW released	5	Small cut inner left toe, small cut top of foot
10/26/2005	Adult	Male	Foothold	Drag	IFW released	5	Small puncture middle two toes. Small amount of blood
11/1 /2005	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
11/1 /2005	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
11/19/2005	< 1 yr	Male	Killer-type	set on ground in box	IFW released	5	Four frozen toes, but blood flow restored at vet hospital, swelling, bone chipped on leg bone.
11/22/2005	< 1 yr	Male	Killer-type	secured to tree	IFW retrieved carcass	-	-
12/6 /2005	Adult	Male	Killer-type	set on ground in box	IFW retrieved carcass	-	-
10/15/2006	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/19/2006	Unknown	Unknown	Foothold	Staked	Trapper released	-	-
10/20/2006	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/26/2006	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
11/7 /2006	Unknown	Unknown	Foothold	-	Trapper released	-	-
11/16/2006	Adult	Male	Foothold	Staked	IFW released	0	no blood or cut on foot; applied normal weight to capture foot
10/15/2007	Adult	Female	Foothold	Staked	IFW released	5	superficial laceration <1/8" wide and just through top layer of skin
10/17/2007	Unknown	Unknown	Foothold	Drag	Advised trapper release	-	-
10/18/2007	Adult	Male	Foothold	Staked	IFW released	0	no swelling, cuts, blood, broken teeth
10/23/2007	Unknown	Unknown	Foothold	Staked	Trapper released	-	-

Date incident	Age Class	Sex	Type of Trap	Securing method	Response type	ISO Score (applied as reference)[1]	Type of Injury
10/25/2007	Subadult > 1 yr	Male	Foothold	Drag	IFW released	5	noticed a drop of blood, but couldn't find the source; no laceration or breaks observed
10/26/2007	Unknown	Unknown	Foothold	Staked	Trapper released	-	-
11/8 /2007	Subadult > 1 yr	Male	Foothold	Drag	IFW released	0	no broken bones or teeth, bleeding, lacerations, punctures, dislocation observed.
11/13/2007	Adult	Male	Foothold	Staked	IFW released	10	shallow, small laceration; Capture foot and toes were cold but tissue soft (not frozen).
10/27/2008	Unknown	Unknown	Foothold	Drag	Trapper released	-	-
10/30/2008	Unknown	Unknown	Foothold	secured to tree	Trapper released	-	-
11/17/2008	Adult	Male	Killer-type	secured to tree	IFW retrieved carcass[2]	-	-
12/4 /2008	Adult	Male	Killer-type	-	IFW retrieved carcass[3]	-	-
10/21/2009	Subadult > 1 yr	Male	Foothold	Drag	IFW retrieved carcass[4]	-	-
11/9 /2009	Subadult > 1 yr	Female	Foothold	Staked	IFW released	5	only minor edema on capture foot
11/11/2009	Adult	Female	Foothold	Staked	IFW released	5	small laceration on capture ft <1/2 cm; put wt on capture ft at release; no tooth injuries
10/22/2010	Adult	Male	Foothold	Staked	IFW released	10	small shallow laceration 1 mm long, slight edema on capture foot
10/22/2010	Adult	Female	Foothold	Staked	IFW released	5	shallow small puncture on middle digit of rt front paw
11/4 /2010	Adult	Female	Foothold	Drag	IFW released	5	some swelling of the trap foot; walked away on all 4 feet with slight limp on capture foot

Date incident	Age Class	Sex	Type of Trap	Securing method	Response type	ISO Score (applied as reference)[1]	Type of Injury
11/14/2010	Adult	Male	Foothold	Staked	IFW released	5	very minor swelling capture foot; looks similar to other feet; no chipped/broken teeth
10/18/2011	Unknown	Unknown	Foothold	Staked	Trapper released	-	-
10/22/2011	Unknown	Unknown	Foothold	Staked	IFW released	0	lynx appeared uninjured when assessed and released by WS at direction of biologist
10/22/2011	Adult	Male	Foothold	Drag	IFW released	5	Minor shallow laceration on capture foot
10/23/2011	Adult	Unknown	Foothold	Staked	Trapper released	-	-
10/25/2011	Subadult > 1 yr	Male	Foothold	Staked	IFW released	5	swelling of capture foot
11/19/2011	Adult	Male	Foothold	Drag	IFW released	10	small shallow laceration and swelling on capture foot.
11/29/2011	Unknown	Unknown	Killer-type	secured to tree	IFW retrieved carcass[5]	-	Lynx died from capture in a illegal killer-type trap, animal was scavenged and could not identify age or sex, or assess trap related injuries.
10/18/2012	Adult	Female	Foothold	Staked	IFW released	0	No injury observed during exam
10/18/2012	Unknown	Unknown	Foothold	Staked	Trapper Reported	-	Lynx escaped trap when approached by trapper
10/21/2012	Adult	Male	Foothold	Staked	IFW released	5	Small shallow laceration on capture foot
10/21/2012	Adult	Female	Foothold	Drag	IFW released	0	No injury observed during exam
10/26/2012	Adult	Male	Foothold	Staked	IFW released	5	Two small shallow lacerations on capture foot
10/26/2012	Adult	Male	Foothold	Drag	IFW released	10	Small shallow laceration and minor swelling on capture foot; veterinarian on site concurred with injury assessment and treatment.

Date incident	Age Class	Sex	Type of Trap	Securing method	Response type	ISO Score (applied as reference)[1]	Type of Injury
11/1/2012		Female	Foothold	unknown	IFW responded	50	Fracture on capture foot, animal shot by bird hunter.
11/4/2012	Adult	Male	Foothold	Staked	IFW released	5	Small laceration on capture foot; vet concurred
11/5/2012	Adult	Male	Foothold	Drag	IFW released	5	small laceration on capture foot
11/7/2012	Adult	Male	Foothold	Drag	IFW released	5	Two small laceration on capture foot; vet concurred

[1] Mild injuries were those that would be assigned a trauma score ≤ 10 under ISO (International Standards Organization) standard (ISO/TC 191) ISO 10990-5:1999. ISO standard 10990-5:1999 is same standard used to evaluate injuries caused by restraining traps during the development of Best Management Practices for trapping in the United States. The incidental capture on 1/19/2005 would not be scored as a severe trauma under ISO standards; however, IFW was unsure of the severity of frostbite at the time and treated it as a severe injury. Later examination indicated the animal had not sustained any permanent tissue damage from frostbite.

[2] Trap not set in compliance with new laws related to killer-type sets; law was clarified to prevent future catches.

[3] Illegal take; trapper did not report capture and lethal take of a lynx; unable to determine if the trap met current regulations because trap was removed by trapper.

[4] Illegal take; lynx shot by bird hunter while in a foot-trap; trapper reported the dead lynx; hunter charged. Trap was legally set.

[5] Trap not set in compliance with new laws related to killer-type sets.

Overall, Maine's lynx population has increased since the 1990s (Simons 2009, Vashon et al. 2012). The growth of Maine's lynx population, at a time when trapping occurred and annual mortality was approximate 20%, underscores that Maine's lynx population can readily sustain low levels of mortality that might occur from incidental trapping (see Appendix 7). Maine has not had an open season on lynx since 1967; therefore, any lynx takings have either been accidental (e.g., road mortality), illegal (e.g., poaching), or incidental to trapping (Table 4.1.4.). Only 5 lynx deaths have been reported and directly attributed to trapping in the 14 years since lynx were federally listed as a threatened species (Table 4.1.4). IFW estimates that there are roughly 750 to 1,000 adult lynx in Maine (i.e., northern and western Maine; Vashon et al. 2012). Using this population figure, the highest percentage of the lynx population killed incidentally by Maine trappers during any given year was 0.6%. Consequently, the small number of lynx killed by incidental trapping has not impacted Maine's lynx population growth or stability (see Appendix 7).

Table 4.1.4 Incidents of lynx takings recorded by the Maine Department of Inland Fisheries and Wildlife since the start of IFW's lynx project in 1999.

		Number in Foothold Traps		Number in Killer-type Traps			
Date	Number Trapped	Alive	Dead	Alive	Dead	Vehicle Mortalities	Poaching
1999	1	1	0	0	0	0	1
2000	2[a]	2	0	0	0	1	0
2001	1	1	0	0	0	0	0
2002	1	1	0	0	0	1	0
2003	4	4	0	0	0	1	0
2004	11	10	0	1[b]	0	3	0
2005	8	5	0	1[b]	2[c]	3	2
2006	6	6	0	0	0	2	1
2007	8	8	0	0	0	4	1
2008	4	2	0	0	2	3	0
2009	3	2	1[f]	0	0	4	0
2010	4	4	0	0	0	1	0
2011	7	6	0	0	1[d]	4	0
2012	10[e]	9	1[f]	0	0	5	0
2013	14	13	1[f]	0	0	7	0
2014	20	18	0	0	2	5	0
Totals	104	92	3	2	7	44	4

[a] One trapped lynx had a broken leg from the entanglement of a trap chain around a tree. The #3 foothold trap was set for coyote using a drag chain as an anchor. The lynx was treated, rehabilitated and released back into the wild.

[b] One lynx had its foot caught in a killer-type trap (#120) set for marten on the ground was examined by a veterinarian, rehabilitated, and released back into the wild.

[c] Two animals were killed in killer-type traps. One set (#120) was made on the ground for marten, and another set (#220) was made on a leaning tree (>4 dbh and <45 degree angle) for fisher.

[d] Trap was not set in compliance with trapping regulations; regulations clarified in 2008.

[e] Includes 4 lynx captured by trappers enrolled in IFW's PM Program.

[f] Lynx shot illegally in a trap by a bird hunter.

The incidental trapping rate of lynx in Maine is significantly lower than trapping rate in jurisdictions where lynx trapping is legal, because trappers were targeting lynx in those areas (Brand and Keith 1979, Bailey et al. 1986, Poole 1991, McKelvey et al. 2000, and Poole 2003). Although these studies have been informative for shaping regulations to sustain populations in areas where lynx are harvested for their fur, these studies are not relevant to IFW's application, since the majority of lynx caught in traps in Maine are released and are able to survive and produce offspring after their capture.

4.2 Anticipated Incidental Take: Canada Lynx

IFW is requesting a permit to allow the incidental trapping of up to 195 lynx over a 15-year period (Table 4.2.2). The majority (183) will be incidentally trapped and handled and released, some (9) may have trap related injuries that require medical attention (as outlined in Section 5.2), and few (3) may die from trap related injuries that may include animals that could not be released back to the wild. IFW explains how these estimates are derived below. While the estimates for the take request were developed by considering each covered activity, the accounting for the actual take will be the total of all covered activities during the 15-year permit period.

Methods for Calculating Incidental Take

Categories of Take and Predictions

IFW's incidental take request was calculated for the full 15-year time span of the requested Section 10 permit (i.e., 2013-2028; Table 4.2.2). Assumptions and calculations used to arrive at IFW's request are presented below:

1. Incidental Capture:

Baseline: Between 1999 and 2012, 70 lynx were incidentally captured by trappers at a reported annual rate of 1 to 11 (Table 4.1.4). IFW believes that data on incidental capture rates since 2008 best represent projected take during the Plan period because minimization measures were in place, trappers were more knowledgeable about lynx and efforts to minimize their capture, and reporting of lynx captures was mandatory. Since 2008, the number of lynx captures has ranged from 4 to 10 per year (Table 4.1.4) including those caught by PM trappers. Without PM trappers, the number of lynx incidental trapping ranged from 3 to 7 per year. IFW only has two years of experience with implementing the PM program (2011 and 2012) and 0 and 4 lynx were captured in foothold traps, respectively. For the purposes of the projected take calculations for this Plan, the maximum capture rate was used for both programs (Table 4.2.1).

Take Request: This Plan incorporates a number of minimization measures to reduce and avoid capture of lynx in traps through fur trapping, ADC, and PM programs. Captured lynx are rarely severely injured or killed (Table 4.1.3 and Table 4.1.4). IFW is requesting coverage for the potential incidental trapping and capture of 195 lynx during the 15-year period. IFW's take request is based on historic patterns. Given projected

stable to declining population trend, IFW assumes that incidental capture rate should not exceed 11 lynx per year (combining take from fur trapping and ADC/PM programs) during the 15-year period (Table 4.2.1). IFW is requesting an additional 20% allowance for the number of lynx trapped over the 15-year permit to allow for increased trapping effort and change that may affect susceptibility of lynx to trapping (e.g., lynx population trend, permitting cage traps and cable restraints).

Table 4.2.1. Requested allowances for incidental captures, trapping related injuries, and trapping related mortalities of Canada lynx by the Maine Department of Inland Fisheries and Wildlife (IFW). Major injuries will be injuries that required veterinarian care before the animal could be released back to the wild (e.g. broken bone, etc.).

Capture Event	Projected Annual Take	Projected Take Over Life of Permit (15 yr)
Incidental Lynx Captures		
Fur Trapping	7	105
ADC/PM Program	4	60
20% allowance for changes in effort [a]	2	30
All Take of Lynx Incidentally Trapped	13	195[b]
Proportion of capture lynx released with no injuries	19%	37
Proportion of capture lynx released with minor injuries	75%	146
Proportion of capture lynx that require additional treatment from injuries	4.4%	9
Number of captured lynx that potentially killed or not released after vet care)	1.6%	3

[a] The 20% allowance includes the potential for increases from trapper effort, new types of traps, changing susceptibility to traps, and unreported lynx captures, if there are any. Note: the failure to report a lynx capture is illegal under Maine's trapping regulations.

[b] While the estimates for the take request were developed by considering each covered activity, the accounting for the actual take will be the total of all covered activities during the 15-year permit period.

Table 4.2.2 The number of lynx incidentally trapped in Maine between 1999 and 2012 categorized by the animal's injury status.

					ISO Injury Score			
Trap Type	Number of Captures	Number Released and Not Examined	Number IFW examined	Illegal Trapping Mortality	No visible	Mild [a]	Moderate[b]	Moderate Severe to Severe[c]
Foot-hold	63	31	32	2[d]	6	24	0	2
Killer-type ≤2008	6	0	6	4[e]	0	0	2[f]	0
Killer-type >2008	1	0	1	1[e]	0	0	0	0
Total	70	31	39	7	6	24	2	2

[a] International Standards (ISO) mild traumas for animals are defined as pathological observations with an injury score between 2 and 10 points (e.g. swelling, minor cutaneous laceration, etc.).
[b] International Standards (ISO) moderate and moderately severe traumas for animals are defined as pathological observations with an injury score between 25 and 30 points (e.g. major laceration on tongue or foot pads, etc.).
[c] International Standards (ISO) moderately severe to severe traumas are defined as pathological observations with an injury score of between 50 and 55 points (e.g. simple fracture at or below the carpus) and 100 points (e.g. fracture above the carpus, etc.), respectively.
[d] Two lynx were shot illegally by a bird hunters, although these lynx were killed an injury score for trap related injuries was recorded.
[e] Lynx were killed in killer-type traps that do not comply with current regulations.
[f] These lynx were caught by the foot in killer-type traps that do not comply with current regulations.

2. Non-lethal Take:

Baseline: Of the 70 lynx caught in traps between 1999 and 2012, IFW's biologists examined 32 lynx caught in foothold traps and all 7 lynx caught in killer-type traps for injuries. The majority (30 out of 32) caught in foothold traps had no visible or mild injuries, specifically 19% (6) had no visible injury, 75% (24) had mild injuries (e.g., small laceration) that could be treated in the field, and 6% (2) had an injury requiring veterinarian care. Of the 7 lynx that were caught in killer-type traps, 2 had injuries requiring veterinary care (Table 4.2.2). However, these 2 lynx were caught in killer-type traps set on the ground without exclusion devices, which is no longer permitted. Therefore, IFW does not anticipate any injuries in killer-type traps.

Take Request: Based on the number of lynx that may be incidentally captured (195), we anticipate that 19% will have no discernible injury (37), 75% will have mild injuries (146), and 6% will have severe injuries that will require veterinarian care (12). The 6% injury rate is broken down into a non-lethal (4.4%) and a lethal component (1.6%) which is further described below. Therefore, IFW assumes that 4.4% (9) of lynx incidentally captured will be releasable after treatment of severe injuries and have survival rates commensurate with other lynx and 1.6% (3) may either die or may not be releasable. Lynx that cannot be released will be considered part of the lethal take estimate described below. IFW is requesting coverage for the non-lethal take of up to 192 lynx during the 15-year period, which may include up to 9 lynx with injuries that require veterinary care before being released (Table 4.2.2).

3. Lethal Take:

Baseline Killer-type Traps: Between 1999 and 2012, 7 lynx were caught in killer-type traps; five died from trap related injuries and two lived (Table 4.2.2). Six of the 7 were caught prior to regulatory changes. Since regulatory changes, one lynx has been killed in a killer-type trap. Although the trap did not comply with all aspect of the current regulations, it is used to project potential future lethal take for the purpose of this Plan.

Baseline Foothold Traps: No lynx fatalities have been reported from injuries that occurred from foothold traps. However, two lynx caught in foothold traps were shot and killed by bird hunters. It is illegal in Maine to disturb traps or take any wild animals from traps without the trapper's permission (Title 12 §12256). Therefore, these mortalities resulted from an illegal activity. IFW is committed to avoiding future lethal takes of this nature. In the minimization section of this plan, IFW describes additional outreach to hunters to avoid future illegal shooting of lynx in traps (i.e. lynx regulation page in IFW's annual Hunting and Trapping Regulations book).

Take Request: Although the level of lethal take has been low from trapping in Maine, IFW is including the potential for three mortalities from incidental capture events over the 15-year permit period. These mortalities may result from severe injuries from foothold traps, non-lethal cable restraints, cage traps or killer-type traps. Although 7 of 70 lynx incidental caught in traps between 1999 and 2012 died, 4 lynx were caught in killer-type traps that are no longer legal in Maine and 2 mortalities were not directly related to the trap set (i.e., illegally shot by bird hunters). Thus, these 6 lynx were excluded from lethal take calculations; the remaining 64 lynx incidentally caught in traps was used to project potential lethal take. Thus for the purpose of this Plan, IFW estimated the proportion of total potential take (i.e., 195 lynx) that may be lethal as 1.6% (i.e., up to 3 lynx may die).

Potential Biological Impacts of the Request Level of Incidental Take

IFW acknowledges that incidentally trapping a lynx is a form of take (kill, capture, harm, and harassment) as defined in the ESA. However, in the vast majority of incidental trapping incidents, there is no biological impact. IFW defines biological impact as an activity that would significantly alter the potential survival or reproductive rates of an animal. In IFW's Plan, IFW minimizes the impact of activities that kill, harm, and harass lynx and mitigates for unavoidable take.

To illustrate the effect that 3 lynx mortalities might have on Maine's lynx population, IFW used VORTEX 9.99 software to simulate lynx population dynamics. Inputs for this model came from lynx demographic data collected in Maine between 1999 and 2010 when hare densities ranged from <1 to 2 hares/hectare (Vashon et. al. 2012). This VORTEX model was built because it offered a similar platform for comparing modeling results generated by the USFWS in their review of IFW's earlier application. The purpose of the simulation was to: 1) update the inputs used in the population model presented in Maine's 2008 Incidental Take Plan, and 2) to determine if Maine's lynx

population would decline with minor losses that might result from the incidental capture of lynx in traps set for other furbearing animals. Without the incidental capture of lynx over the 15-year permit period, the Vortex model indicated a slightly increasing population growth rate (r = 0.0595; Appendix 7).

To test the assumption that Maine's lynx population size would not decline if lynx mortalities resulted from incidental trapping occurred, IFW ran simulations using a level of lethal take of 3 lynx as requested in IFW's Plan. The model indicated that Maine's lynx population could maintain a positive growth rate (r = 0.0473) with the low level of lethal take requested in the Plan. A full explanation of the model inputs, assumptions, and results is given in Appendix 7.

At this time, there is insufficient evidence to conclude whether human-related mortality in lynx populations is density dependent (i.e., greater proportion of the population trapped when population is high) or independent (i.e., proportion of population trapped is not influenced by population size; Steury and Murray 2004). Brand and Keith (1979) suggest that lynx vulnerability to trapping is dependent on prey rather than lynx numbers; when prey is scarce, lynx may increase their movements to search for food and/or become more attracted to baited traps. However, other studies indicate there was not a consistent pattern in lynx becoming more vulnerable to baited traps as snowshoe hare densities declined (Slough and Mowat 1996).

To test whether Maine's lynx population could tolerate more lethal incidental trapping, if lynx became more vulnerable to capture in traps at low population levels, IFW varies lethal incidental take rates from 1 every 5 years (i.e., 3 lethal takes over permit period) to 3 every year (i.e., 45 lethal takes over permit period). Simulations indicate little change in population growth rates (r = 0.0343; Appendix 7).

Beneficial Impacts of Trapping:

In Maine, predation by fisher is a major source of mortality for lynx. If killer-type traps are not permitted in Maine, fisher densities are likely to increase without a means to harvest fisher. During IFW's 12-year radiotelemetry study on lynx, biologists observed that 42% of lynx mortalities were due to either fisher predation or suspected fisher predation. Using a weighted average of the Kaplan-Meier annual adult mortality rates, IFW calculated that lynx in the study area had an overall annual mortality rate of 27% (Vashon et al. 2012). Therefore, if the annual mortality rate of lynx (27%) is multiplied by the proportion of radiocollared lynx killed by fisher (42%), it can be shown that approximately 10% of the radiocollared lynx are killed by fisher each year. The high number of lynx mortalities being caused by fisher raises the question: what would happen to the lynx mortality rate in Maine if fisher trapping were eliminated?

IFW estimated the potential benefit of fisher trapping to the lynx population using the following data and assumptions:

1. IFW has data indicating that across the lynx range in Maine, there are approximately 2 fisher for every lynx (fisher densities from Fuller et al. [2001], and lynx densities [Adult & Juvenile] from Vashon et al. [2008a]);
2. IFW assumes that overall lynx mortality rates and mortality attributed to fisher in IFW's study area are similar to mortality rates in other parts of the lynx range in Maine;
3. IFW has data showing that approximately 578 fisher were harvested annually from WMDs 1-11 (i.e., 5-year mean fisher harvest rate from 2006 to 2010);
4. IFW assumes every fisher has an equal chance of killing a lynx;
5. IFW assumes, if trappers removed 20% of the fisher population, the fisher population would either stabilize or decrease.

Because fisher densities are twice that of lynx in Maine, it follows that in this scenario there would be 2,000 fisher living sympatrically with1,000 lynx. If the same mortality rate for lynx killed by fisher in IFW's lynx study (i.e., 10%) was used, then 100 lynx would die from fisher predation each year. IFW records show that on average 578 fisher were trapped annually out of the lynx range from 2006 to 2010. If every fisher has approximately a 1 in 20 chance (5%) of killing a lynx and harvest 578 fisher from the lynx range each year, trappers would hypothetically reduce mortalities by 29 lynx in one year.

If that increase in annual survival is extended over the 15-year period of the permit, an additional 435 lynx may survive because fisher trapping is allowed (as opposed to being banned). Even if these calculations overestimate the increase in lynx survival by half, the additional number of lynx surviving (218) is still far greater than IFW's lethal take request (3).

5.0 Conservation Program / Measures to Minimize and Mitigate for Impacts

5.1 Biological Goals and Objectives

IFW is charged with protecting and enhancing Maine's wildlife for future generations to enjoy. As such, IFW's biological goals are directed at maintenance or enhancement of Maine's lynx population (IFW 2005) and are broader than the biological goals for this Plan. At a minimum, IFW's overall biological goal for lynx will be to ensure the persistence of its population in Maine (IFW 2005), which is similar to Objective 4 in the USFWS' Recovery Outline for Canada Lynx. More specific management goals for lynx may be given to IFW in the future by public working groups as part of IFW's Strategic Planning Process (Appendix 6) and in a future federal recovery plan. Specific goals and objectives to address incidental take of lynx in traps for this Plan is described below.

Biological Goals

1. Conduct Maine's trapping program in a manner that does not alter the natural fluctuations of Maine's lynx population.
2. Maintain Maine's trapping program as an effective wildlife management tool.

Biological Objectives

1. Implement measures to minimize the potential for injuries of lynx from all traps and trap set types.
2. Implement a systematic approach to assessing all captured lynx and treating injured lynx to avoid trap related fatalities.
3. Implement measures that are effective in avoiding capture of lynx in killer-type traps.
4. Implement mitigation commensurate with the permitted lethal take that maintains or creates high quality habitat that would support lynx in the BPL Seboomook Unit.

5.2 Measures to Minimize Impacts

Since closing the State's lynx trapping and hunting season in 1967, IFW has evaluated and restricted furbearer trapping activities with the intent of minimizing incidental take of Canada lynx (Table 5.2.1). In this Section, IFW describes its minimization and monitoring commitments and implementation plan (who will do them and when they will be done). Minimization measures include regulatory (RC), incidental capture response (IM), outreach and education (O&E), and plan implementation (PI) commitments (Table 5.2.2). When IFW references all licensed trappers this includes fur (including junior trappers and trappers with complimentary licenses), ADC, and PM trappers. Although it is difficult to distribute outreach material in this Plan to landowners permitted to trap without a license, they are required to follow all trapping regulations, which can be found on IFW's website and in printed form at IFW offices throughout the State. Additionally,

IFW will provide the opportunity for landowners permitted to trap without a license to receive lynx avoidance and minimization outreach materials when they tag their fur. IFW has expanded the use of the Gov-Delivery system to provide trappers the opportunity to receive trapping information electronically via email.

Table 5.2.1 Chronological list of measures that were implemented by the Maine Department of Inland Fisheries and Wildlife prior to submission of this Plan.

Measure	Year	Measure	Year
Ending the bounty on lynx and instituting a closed season on lynx trapping and hunting	1967	Customization of 2003 brochure for Maine trappers. Brochure distributed to all licensed trappers.	2005
Conferring with trappers about incidentally caught lynx	1970's	Conferring with other jurisdictions on incidental take issues	2006
Annual trapper mailing included information on how to distinguish between a lynx and bobcat	1991	Restricting use of visible bait while trapping[a]	2007
Annual trapper mailing included an offer to help trappers release incidentally caught lynx	1996	Requiring killer-type traps to be set on leaning poles within the lynx range	2007
Annual trapper mailing included lynx track descriptions	1997	Guidelines developed for evaluating lynx injuries including contact list for veterinarian and rehabilitators.	2007
Lynx Hot Line established in annual trapper mailing	1999	New emphasis in trapper education on how to avoid incidental lynx captures	2008
Standard operating procedures developed for handling incidentally caught lynx	1999	Mandatory reporting of lynx incidental catches	2008
Recognition of trappers voluntarily reporting incidentally trapped lynx	2000	IFW implements an emergency rule that clarifies trapping regulations for setting killer-type traps in WMD 1-11.	2008
Helped develop "How to avoid the incidental take of lynx..." USFWS, IAFWA brochure"	2003	IFW permits the use of killer-type traps set on the ground if used in conjunction with an exclusion device in WMD 14,18 and 19.	2010

[a] In 2007, IFW promulgated a trapping rule to restrict the use of visible bait by trappers. The objective for this rule was to reduce the incidental trapping of eagles and lynx in killer-type or foothold traps by limiting the use of attractants (e.g., meat, bone, feathers, etc.) that a trapper might use near traps.

Table 5.2.2. Summary of the Maine Department of Inland Fisheries and Wildlife's commitments for minimizing the incidental take of Canada lynx under its furbearer trapping, ADC, and PM programs through the 15-year period of its Incidental Take Permit.

Measures that minimize incidental capture

Regulatory -- Commitments

RC 1 Restrict placements of killer-type traps on land in lynx zones

IFW will continue regulations that require killer-type sets that have a jaw spread greater than 5 inches to be set as water sets or less than 5 inches as blind sets. **NEW -** IFW will allow killer-type traps with an inside jaw spread that does not exceed 7 ½ " to be set on or above the ground as long as used with an approved exclusion device. Exclusion devices will not be required on blind sets (not to exceed 5" jaw spread).

RC 2 Mandatory Reporting-Statewide

IFW will continue to require all licensed or otherwise authorized trappers that incidentally catch a lynx, to report the incidental capture to IFW before releasing the lynx unless an IFW official cannot be reached in time to prevent injury to the lynx. Any lynx released under this provision must be reported to IFW within 24 hours.

RC 3 Restrict the Use of Visible Bait-Statewide

IFW will continue to prohibit the use of exposed bait or attractors during the early coyote, fox, and muskrat seasons. During the regular trapping season, bait that is visible from above must not be set within 50 yards of a foothold or killer-type trap. These measures make traps less attractive to lynx.

RC 4 Restrict the type and configuration of foothold traps set on land.

In the lynx zones, IFW will require trap chains to be mounted within the central portion of the base of the trap with at least 3 swiveling points on trap chains and require traps to be staked with a catch circle clear of woody vegetation or other obstructions. IFW will continue to prohibit the use of foothold traps with teeth when set on land statewide.

Measures that minimize injury and mortality

Incidental Capture Response -- Commitments

IM 1 Trapped Lynx Hotline

IFW will continue to maintain and publicize a telephone number that licensed or otherwise authorized trappers can call, anytime during the trapping season, to report a lynx that has been incidentally trapped. IFW wildlife biologists will monitor the hotline 24 hours-7 days a week during the fur trapping season. ADC trappers that catch a lynx outside the fur trapping season will be instructed to contact an IFW Warden or Biologists through the 24/7 State Police call center.

IM 2 Responding to Lynx Incidental Captures-Statewide

IFW will continue to have wildlife biologists respond to lynx incidental captures (anywhere in the state) to release lynx, to assess the animal for injuries, and to transport the animal if veterinary care is warranted. Except in an extreme circumstance, as explained on page 92.

IM 3 Use Standard Operating Procedures

IFW will continue to implement standard operating procedures for responding to lynx captures (see Appendix 8) and will update these procedures with a veterinarian, every 3 years or as necessary. **NEW** - IFW will also develop and implement a field based injury scoring system for evaluating incidentally captured lynx within 1 year of permit issuance and update every 3 years or as necessary.

IM 4 Maintain List of Cooperating Veterinarians

IFW will continue to maintain a list of cooperating veterinarians who are willing to care for lynx injured by incidental trapping. This list will be updated by IFW biologists prior to the start of each trapping season.

IM 5 Rehabilitate Injured Lynx

IFW will transport lynx injured from incidental trapping (when warranted) to the nearest cooperating veterinarian, cover the costs of rehabilitating the animal, and if possible, release the animal back into the wild. As a component of effectiveness monitoring, IFW will equip rehabilitated lynx with radio-collars to determine whether the treated injury contributed to the mortality of the animal post-release.

IM 6 Injury Evaluation Training for Staff NEW

Every 3 years, IFW biologists will be trained by a veterinarian on how to evaluate injuries of incidentally captured lynx. Any new biologists will not respond to lynx captures until they have received such training unless they accompany trained biologists.

IM 7 Veterinary Oversight NEW

IFW will have a veterinarian accompany staff on at least 3 lynx incidental captures within each 3-year period of the permit for a minimum of 15 evaluations to ensure affective injury evaluations.

IM 8 Response to orphaned kittens NEW

If an adult female lynx with kittens is killed or held for treatment of capture related injuries, IFW may capture and radiocollar or hold kittens in captivity until the female can be released or until the kitten reaches dispersal age (i.e., 1 year old) as described in Section 5.2.1.

Table 5.2.2. Summary of the Maine Department of Inland Fisheries and Wildlife's commitments for minimizing the incidental take of Canada lynx under its furbearer trapping, ADC, and PM programs through the 15-year period of its Incidental Take Permit.

Measures to educate trapper to avoid or minimize incidental captures

Outreach and Education -- Commitments

O&E 1 Reinforce Compliance
IFW biologists and wardens will continue to promote compliance with trapping regulations when lynx are incidentally captured, at annual Maine Trappers Association meetings, in annual trapper mailings, at fur rendezvous events, and during casual interactions with licensed or otherwise authorized trappers.

O&E 2 Publish a Regulation Booklet
IFW will continue with annual publication of the summary law book that describes all current laws that govern hunting and trapping including a lynx regulation page.

O&E 3 Trapper Information Booklet
IFW will annually distribute the lynx avoidance measures in the Trapper Information Booklet to all licensed and otherwise authorized trappers. These materials will be updated as needed and would also be available on the website.

O&E 4 "How to avoid the incidental take of lynx" Booklet
IFW will update and distribute this booklet to all licensed and otherwise authorized trappers within1 year after the permit is issued, every 5 years thereafter, and any time new regulations or information may affect the methods the trappers use to avoid incidentally trapping lynx. IFW will maintain a copy on the website.

O&E 5 Maintain Website Information
IFW will maintain a webpage that contains information on lynx biology, avoiding lynx incidental captures, and trapping regulations. The webpage will be updated as needed by IFW Information and Education staff in consultation with wildlife biologists.

O&E 6 Trapper Education Course
IFW will provide the materials and oversight needed to keep students in IFW's trapping education course up-to-date on techniques and regulations that minimize the incidental trapping of lynx. IFW's wildlife biologists and Safety Officers will annually review regulations, laws, research results, and to determine if additional information needs to be presented to students.

O&E 7 Trapper Video NEW
IFW will produce and distribute two videos, the first one is to all licensed or otherwise authorized trappers that demonstrates techniques for reducing incidental lynx captures and injuries within 2 years after a permit is issued. This video will be produced by IFW Information and Education staff in consultation with wildlife biologists and will be used in trapper educational courses (by students and instructors). ADC and PM trappers will be required to review this video during their certification/recertification training. Upon completion, this video will remain on IFW's website. The second video will demonstrate how to build an exclusion device and will also be distributed to all trappers, included in the trapper education program, and posted on our website.

O&E 8 Continued Education for Instructors
IFW will ensure instructors are informed of current measures to minimize lynx captures through annual staff meeting with IFW's Regional Safety Coordinators, biannual instructors training sessions and periodic newsletters to instructors.

Measures related to monitoring, reporting, or implementation.

Plan Implementation -- Commitments

PI 1 Extending lynx measures
If lynx establish residence in new areas of the state, IFW will modify trapping regulations to ensure that trapping regulations offer the same level of protection for lynx in these new locations.

PI 2 Investigate all lynx incidental captures
IFW Warden Service will continue to investigate all lynx incidental captures in traps.

PI 3 Cooperate with USFWS on Investigations
IFW biologists or wardens will continue to inform USFWS special agents of any lynx incidental captures or other takings when they occur.

PI 4 Conduct compliance monitoring NEW
Each year, IFW Wardens will check 20 percent of active trappers setting killer-type traps on land in the lynx WMDs as part of their routine activies and record the number of traps set in compliance with lynx minimization measures. IFW biologists will analyze the data to inform IFW's changed circumstances plan.

PI 5 Consult with trappers
Wildlife biologists and game wardens will continue to consult with trappers on ways to minimize lynx injuries and avoid trapping lynx at annual MTA meetings, fur rendezvous events, and during casual interactions.

5.2.1 Minimization Measures Commitments, Implementation, Monitoring, and Reporting

The USFWS's addendum to the HCP handbook (FR 65(106):35242-35257; the "5-point policy) focuses on the expanded use and integration of monitoring as an integral part of habitat conservation plans. Biological goals and objectives provide a framework for developing a monitoring program that measures progress toward meeting those goals and objectives. Monitoring is also integral to detecting changed circumstances and guiding management. Monitoring programs assess the implementation and effectiveness of the ITP by determining the level of incidental take after minimization measures are in place. This monitoring strategy has been designed to ensure the biological goals (Section 5.1) are being achieved by: 1) minimizing the number of Canada lynx incidentally trapped in Maine; 2) minimizing the injury severity and mortalities to captured Canada lynx, and 3) providing effective mitigation for any trapping related mortalities (Section 5.1) are being met.

The monitoring strategy incorporates both implementation and effectiveness monitoring. Implementation monitoring ensures implementation of IFW's conservation commitments throughout the ITP term by tracking, reporting, and evaluating whether the covered activities are being performed in compliance with the HCP requirements (Sections 5.2; 5.3). Implementation will be documented through checklists maintained in a database for compilation into annual updates and 5-year monitoring reports to the USFWS. The objectives of this database are to 1) determine whether all commitments are being appropriately implemented, 2) identify areas for potential improvement, and 3) verify that any required communications with or approval from the USFWS were executed.

IFW will also monitor the effectiveness of minimization measures to reduce incidental trapping of lynx and injury or mortality to lynx if caught in traps. ***Effectiveness monitoring*** will include investigating, documenting, and evaluating the circumstance and severity of injury (injury assessment or mortality) of each incidental lynx capture whether a lynx is caught in a legal or illegal set. These data will help the USFWS and IFW assess whether our minimizations efforts are effective. If circumstances have changed, these data can be used to identify any relationship between the circumstance (e.g., trap type, set type, weather, disturbance, trapper effort, etc.) and the incidental trapping of a lynx to identify an appropriate management response if it becomes necessary (Section 5.4).

<u>Regulatory Measures</u>

Rationale: As a state wildlife agency, IFW makes its most significant contribution towards Canada lynx conservation through its regulatory authority, management procedures, and public outreach efforts. Regulations (rules) and laws (statutes) are the most common tools used by state wildlife agencies to communicate with the public and modify an individual's behavior when they are trapping, hunting, or using public or private lands. IFW can use rulemaking to reduce injuries (e.g., requiring 1 swivel on trap chains) and the number of lynx being incidentally caught by trappers (e.g.,

restricting use of visible bait, leaning pole set for killer-type traps), and to assist in the monitoring of the number of lynx that are incidentally caught in traps (e.g., mandatory reporting). Regulations are widely distributed in print form and on the internet and can be packaged for target audiences. IFW enforces laws and regulations through the Maine Warden Service.

IFW's lynx management efforts include a proven record of using proactive management to decrease the number of lynx being incidentally caught in killer-type traps. Killer-type traps are the only furbearer trap type that has killed lynx in Maine. To address the mortality risk from these traps, IFW worked with the USFWS and AFWA to develop and improve leaning-pole sets.

This Plan incorporates several minimization measures aimed at avoiding capture of lynx. These largely rely on regulatory changes that were made since 2008, clarification made to trappers, and measures implemented for this Plan.

RC 1 Restrict Placement of Killer-type Traps Set on Land in All WMDs That Have Resident Lynx

Rationale: Both leaning pole sets and lynx exclusion devices (Figure 5.2.1) are effective at minimizing lynx captures in killer-type traps set for marten and fisher. IFW has been implementing the leaning pole measure since 2007 and it was also incorporated into the Consent Decree for WMDs 1-6 and 8-11. Since a rule clarification in 2008, trappers have used leaning-pole sets in WMDs 1-6 and 8-11 for over 750,000 trap nights without catching a lynx in a legal set. However, during that time period the Warden Service recorded 1 lynx capture in a killer-type trap set illegally. During the 2014-15 trapping season that followed the original Plan, two lynx were killed in killer-type traps that were lawfully set on leaning poles. This change resulted in a minor amendment to this Plan in September 2015 that eliminates leaning pole sets without exclusion devices in lynx WMDs.

IFW had previously allowed killer-type traps ($\leq$7 ½ inch inside jaw spread) to be set on the ground when the trap is set in an exclusion device in WMDs where lynx are found and that are not covered by the Consent Decree (currently WMDs 7, 14, 18, and 19) or set on the ground as blind sets (< 5 inch inside jaw spread) for mink without an exclusion device (statewide). To date, lynx have not been incidentally captured in blind sets for mink or killer-type traps set on the ground for marten and fisher with a lynx exclusion device. However, if this changes or new information becomes available, IFW's changed circumstance section of the Plan will address this (Section 5.4).

Commitment: Under this plan, IFW will prohibit the setting of killer-type traps when they are set on or above ground in the lynx zone, unless they are are set with an exclusion device or as described in Rule 09-137 Chapter 4.01 K page 29.

Figure 5.2.1 An example of a lynx exclusion device for killer-type traps. Note the opening for a fisher or marten to enter the trap is located on the end panel near the bottom of the photograph. The killer-type trap (shown) is set near the opposite end of the exclusion device, and the bait would be placed behind the trap in the exclusion device. Specifications for a lynx exclusion device are described in Maine's trapping rules (as described in Appendix 2).

Implementation: IFW will require that killer-type traps to be set on or above the ground in WMDs 1-11, 14, 18, 19 be used in conjunction with an approved lynx exclusion device that covers the trap.

Compliance monitoring: Killer-type traps are currently restricted, so compliance has already been met. However, IFW will notify the USFWS when regulations go into effect that extend the use of killer-type traps set on or above the ground, with the use of an approved lynx exclusion device that covers the trap, in WMDs 1-11, 14, 18 and 19.This would not change the current regulation that allows killer-type traps with an inside jaw-spread less than or equal to 5 inches to be set on the ground. These are often used for trapping mink and other aquatic species.

Effectiveness monitoring: IFW will track and report annually on the number of lynx caught in killer-type traps. IFW will immediately notify the USFWS if changed circumstance #2 and 3 are triggered (Section 5.4).

Reporting: In addition to reporting described in monitoring section, IFW will inform the USFWS of any rule changes annually.

RC 2 Mandatory Reporting

Rationale: In 2008, IFW made it mandatory for trappers to report lynx caught in traps before releasing the lynx (Table 5.2.1). This rule-change increased the likelihood that all lynx caught in traps would promptly be reported to IFW, permitting IFW staff the opportunity to assess and treat any injuries prior to releasing the lynx from the trap and investigate compliance with trapping regulations. Additionally, mandatory reporting ensures the level of incidental take that occurs during IFW's trapping programs is documented (i.e., take does not exceed 195 lynx in 15 years).

Commitment: IFW will continue to require any lynx caught incidentally, dead or alive, during any trapping season to be reported to an IFW official as soon as possible and prior to releasing the lynx from the trap, unless an IFW official cannot be reached in time to prevent injury to the lynx. Any lynx released under this provision must be reported to IFW within 24 hours of the time it was discovered.

Implementation: N/A

Compliance monitoring: Mandatory reporting is currently required, so compliance has already been met.

Effectiveness monitoring: IFW will track the number of reported lynx incidental captures in a database and annually review this information to evaluate compliance with reporting requirements.

Reporting: Data on reporting rate will be compiled by IFW biological staff and reported to the USFWS in an annual report.

RC 3 Restrict the Use of Visible Bait

Rationale: In 2007, IFW restricted the use of bait to reduce the incidental take of lynx and other non-target species. During the early coyote and fox (2 weeks before the start of the general trapping season), and muskrat seasons (1 week before the start of the general trapping season) it is illegal to use any exposed bait or visible attractor (Rule 09-137 Chapter 4.01 G 1a, 2A-d, 2B-b). During the regular trapping season, foothold traps and killer-type traps may not be set within 50 yards of bait that is visible from above. Bait may be used for trapping if it is completely covered in such a way to withstand wind action or other natural elements. Bait is defined as animal matter, skin, bones, feathers, hair or any solid substance that used to be part of an animal or fish. Bait does not include animal droppings or urine, or an animal held in a trap (Rule 09-137 Chapter 4.01 K). These measures were put in place to make traps less attractive to lynx and other non-targets. In addition to lynx, during the early coyote and fox season, bobcats, fisher, and marten must also be released from traps.

Commitment: IFW will continue to restrict the use of visible bait (e.g., meat, bones, feathers, hair) that may attract a lynx to a set.

Implementation: N/A

Compliance monitoring: Visible bait is currently prohibited, so compliance has already been met.

Effectiveness monitoring: IFW will document whether visible bait was used at each lynx incidental capture to ensure compliance with this regulation. Any use of visible bait by trappers will be tracked in a database. Additional information may come from IFW's evaluation of data collected through IFW's Warden Service check commitment in lynx WMDs (see minimization measure PI4).

Reporting: IFW biological staff will compile data on use of visible bait, if any, and provide in an annual report to the USFWS.

RC 4 Restrict Foothold Traps Types and Configurations When Set on Land

Rationale: IFW, in an agreement with plaintiffs in the Consent Decree, restricted the size of foothold traps in WMD 1-6 and 8-11 (areas where lynx had been caught by trappers) to traps with an inside jaw spread < 5 3/8 inches and required at least one swivel on trap chains. Prior to the consent decree, coyote trappers would have used traps with an inside jaw spread $\leq$ 6 ¾ inches. IFW's data shows that trap size has not affected the rate of lynx captures, injury, or injury severity. The number of lynx incidentally captured in foothold traps did not decrease after the size restriction was put in place and the type and severity of injuries did not change. Therefore, restricting foothold trap size is not expected to minimize the number of lynx captured or the severity of injury during the permit period.

Commitment: On land in lynx WMDs, IFW will require trap chains to be mounted within the central portion of the base of the trap and have at least three swiveling points:one at the base of the trap, one midway in the chain, and one at the anchoring point (except as described in Appendix 2). Traps will be required to be staked with a catch circle clear of woody vegetation or other obstructions (Appendix 2). IFW will prohibit the upland use of foothold traps with teeth statewide.

Implementation: Within 1 year after the permit is issued, through the rule making process, IFW will clarify the language in rule to prohibit the use of foothold traps with teeth statewide when set on land[9] and will implement new regulations to rescind the restriction of foothold traps with an inside jaw spread of greater than 5 3/8" in lynx WMDs.

Compliance monitoring: IFW will notify the USFWS when regulations go into effect that prohibit the use of foothold traps as described in the commitment, and the restriction of foothold traps with an inside jaw spread of 5 3/8" in lynx WMDs is rescinded. At least one swivel is currently required on foothold traps set in lynx WMDs.

Effectiveness monitoring: IFW will immediately notify the USFWS if changed circumstance #2 (i.e., injury rate increases) is triggered.

Reporting: IFW will notify the USFWS in annual reports of when regulatory changes occurred.

<u>Measures that minimize injury and mortality - Incidental Capture Response Commitments</u>

Rationale and Background: The ESA protects endangered and threatened species, including individual animals, populations, and the ecosystems on which they depend. While IFW may not be able to prevent lynx from being caught in foothold traps, IFW can evaluate and treat most injuries a lynx might receive after being held in a foothold trap. Such actions contribute towards "minimizing the impact[10]" of IFW's trapping program and address IFW's Biological Goal for this Plan.

Since 1999, IFW has publicized a telephone number that trappers can call 24-hours a day, 7 days a week, during the trapping season, to report lynx that have been incidentally trapped. Wildlife biologists monitor the hotline; coordinate their response with regional biologists, Wardens, and USFWS special agents; travel to the trapping site to sedate the animal; examine it for injuries; treat minor wounds; collect biological information; and release the animal back into the wild. If the animal has an injury that cannot be treated in the field, biologists will transport the lynx to the nearest cooperating

[9] Since this application was submitted, IFW established a rule prohibiting use of any trap with teeth on the jaws unless when set, placed and tended, the trap is completely covered with water.

[10] The USFWS' handbook on Habitat Conservation Planning and Incidental Take Permit Processing (1996) lists "minimizing the impact" as one of the five forms of mitigation action.

veterinarian, and, if necessary, arrange for further treatment or rehabilitation. IFW maintains a list of cooperating veterinarians who are willing to care for lynx injured by incidental trapping. IFW has a goal of examining 90% of the lynx that are incidentally trapped. To date, IFW wildlife biologists and trappers have successfully released 63 out of 70 lynx (90%) that were incidentally caught by trappers. IFW biologists have examined 39 of 70 (56%) lynx caught in traps. Three lynx were taken to a veterinarian because of incidental trapping injuries. All were successfully rehabilitated and released into the wild. Since mandatory reporting of lynx captures has been in place, IFW biologists have examined 24 of 28 lynx (86%) caught by trappers.

IFW is committed to continuing its response to lynx that are incidentally trapped. Implementation of IFW's response to lynx incidental captures includes the following components.

IM 1 Trapped Lynx Hotline

Rationale: The overall objective of IFW providing a hotline for reporting lynx captures is to insure a quick response to lynx incidental captures by IFW staff and minimize any injuries that may occur to lynx as the result of incidental trapping or other accidents. Given the remote nature of areas where lynx occur, it may not always be possible for trappers to contact IFW staff in a timely manner. Although we may strive for 100%, IFW's goal is for at least 90% of the trappers to call prior to releasing a lynx. Regardless, IFW Game Wardens will investigate all incidental captures to determine if traps were set in compliance with trapping regulations designed to reduce lynx takes.

Commitment: IFW will continue to maintain and publicize a telephone number that all licensed or otherwise authorized trappers or the general public can call anytime during the trapping season to report a lynx that has been incidentally captured in a trap. IFW wildlife biologists will monitor this number 24-hours a day, 7-days a week, during the fur trapping season. In the event that an ADC trapper captures a lynx outside the fur trapping season, ADC trappers are instructed to contact an IFW warden or biologist through the 24-hour/7-day a week State Police Call Center for assistance with the release and care of trapped lynx.

Implementation: Each trapping season, several wildlife biologists will carry cell phones, linked through call forwarding, to ensure that anyone calling the lynx hotline can contact a biologist 7 days a week, 24-hours a day. These biologists will be trained to collect the appropriate information from the caller, advise the caller, and initiate IFW's response to the incident.

Compliance monitoring: IFW will track in a database the number of confirmed lynx reports, and whether the report was received prior to the animal's release. Data from each lynx capture will be entered into a database annually.

Effectiveness monitoring: IFW biologists will analyze the data to determine whether the goals were achieved.

Reporting: IFW will summarize data in annual reports.

IM 2 Responding to Lynx Incidental Captures

Rationale and Background: Since 1999, IFW's game wardens and biologists have responded and/or assisted with the release of lynx caught in traps to: 1) document the number of incidental takes each year, 2) investigate compliance with trap laws, 3) identify and correct any problems with current trapping regulations (see Minimization Measures PI2 and PI3), and 4) assess, treat, and release lynx from traps or seek veterinarian care, when necessary.

Although a goal of responding to 100% of lynx captures is desirable, given the remote nature of areas where lynx occur, it may not always be possible for IFW staff to respond in a timely fashion. Although we may strive to respond to every lynx incidental trapping event, IFW's goal is for IFW biological staff to go to at least 90% lynx captured in traps to evaluate, treat, and release lynx. Game wardens will investigate all incidental captures to determine if traps were set in compliance with trapping regulations designed to reduce lynx takes.

Commitment: IFW will continue to have biologists respond to lynx incidental captures (anywhere in the state) to release or assist in the release of the animal, to assess the animal for injuries, treat injuries, and to transport the animal if veterinary care is warranted. Exceptional circumstances that may prevent a wildlife biologists from releasing and examining a lynx include insufficient time to travel to the trapping site before nightfall, prior release of the lynx by a warden or trapper out of safety concerns for the animal (e.g., disturbance from a busy road), or inclement weather that would make traveling hazardous (Appendix 8).

Implementation: No further details are required (see commitment).

Compliance monitoring: IFW will track in a database the number of confirmed incidental lynx takes, whether the report was received prior to the animal's release, who released the lynx, the animal's fate (i.e., released with no or minor injuries, treated by veterinarian and released, treated by veterinarian but not able to release, died from injuries), whether the trap or trap set was legal, and the trap configuration (type of trap, set type, etc.). Data from each lynx capture will be entered into a database annually.

Effectiveness monitoring: IFW will summarize the data tracked in the database to assess whether the goals of the Plan have been met (i.e., that the majority of lynx are released after incidental capture with no more than 9 lynx requiring veterinarian care for a severe injury, and no more than 3 lynx dying from trap related injuries during the 15-year permit period).

Reporting: IFW will summarize data on lynx incidental captures in traps in annual reports and will include information on whether the goals were achieved or changed circumstance was triggered.

IM 3 Use Standard Operating Procedures and NEW- Develop Injury Score System

Rationale and Background: Since 2007, IFW has used standard operating procedures for responding to incidental lynx captures (Appendix 8). For the purposes of this Plan, IFW assigned ISO injury scores as a point of reference for lynx examined by IFW biologists. However, this score system relies upon the result of a pathologist necropsy to assign a score. Having a practicable field based scoring systems that can be used by responders on live animals may improve injury assessment and treatment (i.e., minimize injury rates) for incidentally captured lynx. In 2012, Dr. Stuart Sherburne, DVM[11] provided guidance in updating capture response protocols, datasheets, and standardizing injury assessment (see SOAP-procedures Appendix 8).

Commitment: IFW will continue to implement standard operating procedures for responding to lynx captures (see Appendix 8) and will update these procedures in consultation with a veterinarian, every 3 years or as necessary. Any changes to these protocols will be communicated to the USFWS in annual reports.

Within 1 year of permit issuance, IFW, in consultation with a veterinarian, will develop an injury score system that is appropriate for live animals. IFW will work with a licensed veterinarian to update the score system every 3 years or as necessary during the permit period.

Implementation: No further details are required (see commitment).

Compliance monitoring: Standard operating procedures for assessing and treating lynx injuries have already been developed (Appendix 8), so compliance has already been met. IFW will notify the USFWS when the procedures are updated (at least every 3 years). IFW will notify the USFWS when an injury scoring system for live animal has been developed for lynx caught in traps.

Effectiveness monitoring: None

Reporting: IFW will provide a copy of updated standard operating procedures and injury scoring system in annual reports.

IM 4 Maintain List of Cooperating Veterinarians

Rationale: This measure insures that an injured lynx receives adequate care as soon as possible to facilitate its release back to the wild.

Commitment: IFW will continue to maintain a list of cooperating veterinarians who are willing to care for lynx injured by incidental trapping.

[11] Sherburne Veterinary Services, P. O. Box 711, Winterport, ME 04496. Dr. Sherburne also provides veterinary oversight for the Department's chemical immobilization program, and was contracted to conduct the initial training session on injury evaluation for IFW staff.

Implementation: This list will be updated annually prior to the start of the trapping season.

Compliance monitoring: A list of cooperating veterinarians has already been developed (Appendix 8) and is updated annually, so compliance has already been met.

Effectiveness monitoring: None.

Reporting: IFW will provide the list of cooperating veterinarians in annual reports.

IM 5 Rehabilitate Injured Lynx

Commitment: IFW will transport lynx injured from incidental trapping (when warranted as described in Appendix 8) to the nearest cooperating veterinarian, cover the costs of rehabilitating the animal, and, if possible, release the animal back into the wild. If a veterinarian determines that a lynx requires special medical attention or rehabilitation, the animal will be transported to a facility that can provide these services. This may include transporting the lynx out-of-state (e.g., Tufts University). As a component of effectiveness monitoring, IFW will equip rehabilitated lynx released back to the wild with radio collars to assess whether the treated injury contributes to the mortality of the animal post release.

Implementation: If after following established procedures a lynx requires veterinarian care, IFW wildlife biologists or contractors as "Agents of the Department" will transport the lynx to an appropriate facility, consult with veterinarians on treatment options, and establish a contract with the veterinarian and rehabilitation facility to cover the cost of the treatment and post treatment care. Following rehabilitation, and if the lynx can be released back into a wild environment, IFW biologists will equip the lynx with a radio collar prior to releasing the animal. If the lynx dies post release, IFW biologists and game wardens will immediately investigate and submit the carcass (if available) for necropsy by a wildlife pathologist. Only mortalities where there is direct evidence that the animal died from a trap related injury will be considered a lethal take.

If veterinarians advise IFW that the animal cannot be released back into the wild but could thrive in a captive environment, IFW will try to place the animal with an organization that would use it to either provide environmental education to the public or further lynx conservation. IFW will notify the USFWS if the attending veterinarian determines that euthanasia is the most humane option for the animal.

Compliance monitoring: IFW will notify the USFWS of lynx requiring veterinarian care.

Effectiveness monitoring: IFW will track in a database and report annually on the number of lynx that require veterinarian care, the outcome of the treatment (i.e., released, held in captivity, euthanized), and post-release monitoring. If the number of severe injuries increases and triggers changed circumstances, IFW will implement a contingency plan that is described in change circumstance #2 (see Section 5.4).

Reporting: IFW will provide a summary of any lynx treated for capture related injuries in annual reports.

IM 6 Injury Evaluation Training for Staff NEW

Rationale and Background: In the fall of 2012, IFW, with a local veterinarian, established a one-day training session on injury detection and evaluation to ensure that all wildlife biologists[12] receive similar training on lynx injury assessment. The first class was held in 2012 and again in 2013. All staff currently approved to respond to lynx captures attended this training.

Commitment: IFW wildlife biologists will be required to attend this course at least once every 3 years if their responsibilities include responding to incidentally trapped lynx. Any new biologists will not be permitted to respond to lynx captures until they have received such training, unless they accompany trained biologists.

Implementation: No further details are required (see commitment).

Compliance monitoring: Initial training on injury assessment of captured lynx was provided to IFW biological staff in 2012, therefore initial compliance has been met. IFW will notify the USFWS of additional staff training, scheduled to occur every 3 years during the permit period. IFW will develop a database to track training dates and a list of personnel receiving trainings.

Effectiveness monitoring: None.

Reporting: IFW will provide summary of trainings in annual reports (Table 5.4.3).

IM 7 Veterinary Oversight NEW

Rationale and Background: In the fall of 2012, IFW established a contract with a local veterinarian to oversee animal care procedures provided by IFW. The veterinarian accompanied IFW wildlife biologists on 3 incidental capture events and concurred with IFW's injury assessments, each of which were minor.

Commitment: IFW will have a veterinarian accompany staff on at least 3 lynx incidental captures within each 3 year period for a minimum of 15 evaluations of captured lynx during the permit period to ensure injury evaluations by IFW staff are assessed correctly.

Implementation: No further details are required (see commitment).

[12] As of 2012, only IFW wildlife biologists are trained to sedate animals. All lynx removed from traps are first chemically immobilized to allow biologists to thoroughly evaluate the animal for injuries. If in the future Wardens are allowed to sedate animals, they will receive the same training as wildlife biologists.

Compliance monitoring: IFW will provide confirmation of a veterinarian visit in incidental lynx capture reports.

Effectiveness monitoring: None.

Reporting: IFW will provide summary of veterinarian oversight in annual reports.

IM 8 Radiocollar Orphaned Lynx Kittens or Hold Kittens in Captivity Until Their Mother is Released from Rehabilitation Facility NEW

Background: Maine's furbearer trapping season occurs at a time when female lynx may be accompanied by kittens. If adult female lynx are captured incidentally in traps, most will be released from the traps with no or only minor injuries. Data from IFW's 12-year radio telemetry study shows that the adult females released from traps are not separated from their kittens. However, there may be some instances when an adult female lynx with kittens is more severely injured (therefore taken by IFW for treatment at a rehabilitation center) or killed. In these rare cases, although the kittens are orphaned they could survive on their own.

IFW anticipates that the instances of orphaned kittens from trapping will be low and that orphaned kittens could survive. When Maine's trapping season occurs, lynx kittens are between 5 and 7 months old, weaned, and consuming meat. Although no longer dependent on their mother for milk, the survival of kittens may be lower if she dies, since the family group normally remains intact until kittens disperse at 9 to 10 months of age (Parker et al. 1983, Koehler 1990). Data on the survival of kittens that are orphaned after they are weaned is limited since direct observation of most wild felids is almost impossible (Fernandez et al. 2001). Improvements in radiocollar technology has facilitated some study of lynx breeding behavior (see Fernandez et al. 2001, Olsen et al. 2011), however data remains limited. More knowledge may be gleaned from studies of other wild felids since kitten development is similar among felids (as cited by Fernandez et al. 2001). For example, in a study of Iberian lynx, a 3 month old orphaned kitten lived for at least 11 months (Fernandez et al. 2001) suggesting that weaned lynx are capable of surviving to dispersal age without their mother.

As part of this Plan, IFW will use any instances of kittens orphaned from trapping activities as an opportunity to gain new information on the fate of these animals and to inform development of future orphan kitten response options. Since some kittens will die even if they remain with their mother until dispersal age (e.g., in Maine 22% of kittens still traveling with their mother did not survive (Vashon et al. 2012)), it may be difficult to assess whether the loss of the adult female led to the death of kittens. Additionally, the sample size of kittens orphaned from trapping activities will likely be so low that it will be difficult to compare survival rates between orphaned and unorphaned kittens to ultimately understand the impacts of trapping mortality on kittens. However, information collected from orphaned kittens could be useful in adapting procedures for future responses. For example, if all orphaned lynx kittens die, even if the number of orphaned kittens is low, then IFW could require, until new information becomes

available, that all orphaned kittens be held in captivity until they reach maturity. Conversely, if they all survive, IFW may not capture orphaned kittens in the future. These options will be assessed at the end of the permit period.

Commitment: If an adult female with kittens is killed in a trap or taken by IFW for treatment at a rehabilitation center, IFW will work to capture the kittens if they are still in vicinity of the capture site (unless as described below). Captured kittens will either be equipped with radio collars to document their survival or held in captivity until the female can be released. In the event that rehabilitated females cannot be released back to the wild, kittens that are captured will be equipped with radio collars and released near the capture site.

Specifically, IFW staff will:

1. Examine the animal captured in the trap to identify sex and age;
2. Examine adult females for evidence that she raised kittens this year;
3. Interview individuals at the location and search the capture site for sign of kittens;
4. If kittens were observed at the capture site, IFW will estimate how many kittens were present. If the family group includes more than 1 kitten, it may be difficult to capture every kitten. Reducing the size of the family group may further influence survival of uncaptured kittens. Therefore, IFW staff will not attempt to capture kittens from family groups of 2 or more kittens, unless circumstances suggest capture of all kittens is likely (e.g., behavior of kittens and affinity to capture site);
5. If capture of kittens is appropriate, cage traps will be set near the capture site;
6. Any kitten that is captured will be examined as described in Appendix 8:
    a. If the adult lynx was killed in a trap, then kittens will be equipped with radiocollars and released at the capture site;
    b. If the adult lynx is at a rehabilitation facility, the kittens will be transported and held at the facility until the female can be released;
    c. If the adult female cannot be released, the kittens will be equipped with radiocollars and released near the capture site.

Note: If kittens are later observed near the capture site of an adult female that is killed or taken to a rehabilitator, IFW will not attempt to capture these kittens because they may not be related and separating kittens from healthy females could impact additional lynx.

Implementation: No further details are required (see commitment).

Compliance Monitoring: IFW will track in a database the number of orphaned kittens and their fate.

Effectiveness Monitoring: None.

Reporting: IFW will continue to immediately notify the USFWS of any incidental lynx captures (see minimization measure PI 3 in Section 5.2). IFW will annually report to

USFWS any activities involving orphaned kittens including the number, response, and outcome (e.g., collared, held in captivity).

Outreach and Education Commitments (O&E 1 - 8)

Rationale and Background: IFW has multi-pronged outreach and education approaches that address the informational needs of the general public and the concerns of trappers. IFW is committing to 8 outreach and education measures to minimize the effects of incidental lynx trapping on lynx (Table 5.2.2). Of these 8 commitments, 1(O&E 7) contains new activities that IFW will undertake. The other activities IFW has proactively undertaken to minimize the effects of incidental trapping on lynx (Table 5.2.1).

Maine trappers are passionate about ensuring that their avocation (i.e., furbearer trapping) continues into the future, and are concerned about how the incidental trapping of lynx may affect state regulations and future trapping opportunities. When IFW wildlife biologists work with trappers, they are committed to making the experience a positive one. This is especially true when a trapper incidentally catches a lynx. This positive experience spreads by word of mouth throughout the trapping community.

When appropriate, IFW uses an informational approach for solving problems. Problem solving through the use of information and education is effective in achieving compliance and promotes a sense of cooperation between the public and IFW. Such an approach allows resource users a chance to help resolve the problem, lessens the chance that an adversarial response will develop between the resource user and the regulatory agency, does not overburden the regulatory or legal process with matters that could have been resolved in a less restrictive way, and maintains a greater degree of trust and respect between the resource user and the regulatory agency.

Outreach and Education (O&E; Table 5.2.2) includes Trapper Relation Commitments (O&E 1), Publications and Website Commitments (O&E 2-7), and Trapper Education Course Commitments (O&E 8-10). The objective of IFW's outreach and education measures are to keep new and experienced trappers informed of current trapping regulations to insure compliance with IFW's laws and reduce incidental trapping of lynx. IFW will provide the USFWS brief summaries of activities conducted under these minimization measures in its annual report. In addition to keeping new and experienced trappers informed of current trapping regulations to reduce incidental trapping of lynx, IFW's participation in trapper meetings and casual interactions with trappers are also expected to facilitate discussions on any alternative methods for reducing lynx captures or injuries.

Trapper Relation Commitments and Implementation (O&E 1)

O&E 1 Reinforce Compliance

Commitment: IFW wildlife biologists and game wardens will continue to promote compliance with trapping regulations through interactions with trappers at annual Maine Trappers Association (MTA) meetings, at fur rendezvous events, and during casual interactions with trappers (i.e., responding to incidental lynx captures, investigating compliance with trapping laws).

Implementation: IFW is not proposing any changes to interactions with all licensed or otherwise authorized trappers. No further details are required (see commitment).

Compliance monitoring: This is an ongoing activity where the furbearer biologist and wardens interact with all licensed or otherwise authorized trappers at meetings or when investigating compliance with trapping regulations, therefore compliance has already been met.

Effectiveness monitoring: None.

Reporting: IFW will notify the USFWS of meetings with the MTA and other significant interactions with licensed or otherwise authorized trappers in annual reports.

Publications and Website Commitments and Implementation (O&E 2- O&E 5)

O&E 2 Update the Annual Regulation Booklet

Commitment: Each year, IFW will update a summary booklet that describes the current laws and regulations that govern hunting and trapping in Maine. This booklet includes a special lynx regulation page that describes all the current regulations to minimize and report lynx captures. IFW's Information and Education Division will annually produce the Regulation Booklet (i.e., State of Maine Hunting and Trapping Laws and Rules). Wildlife biologists will work with the Information and Education Division to annually review and update regulations that may affect the incidental take of lynx. The regulation booklet will be distributed to the public via printed copies at IFW offices and on the internet.

Implementation: No further details are required (see commitment).

Compliance monitoring: This is an ongoing activity and IFW is not proposing any changes to publication of IFW's annual regulation booklet. Thus, compliance has been met. IFW will notify the USFWS when updates are available.

Effectiveness monitoring: None.

Reporting: IFW will provide a web link to the regulation booklet in annual reports.

O&E 3 Update Annual Trapper Information Booklet

Commitment: IFW will annually update the Trapper Information Booklet (Appendix 4) and will include the section of the booklet (approximately 4 pages) that pertains to lynx avoidance in its annual trapper mailing (i.e. letter) to all licensed or otherwise authorized trappers. For landowners that trap on their own land, IFW will gather contact information through IFW's fur registration system and include these individuals in the annual mailing. The booklet, in its entirety, will be available on IFW's website, emailed through Gov-Delivery, or a printed copy will be mailed upon request.

Implementation: Wildlife biologists in the Research and Assessment Section will annually review and update, if necessary, information in the Annual Trapper Information Booklet on recognizing lynx, lynx sign, and how to avoid incidentally capturing a lynx.

Compliance monitoring: None.

Effectiveness monitoring: None.

Reporting: IFW will confirm that the mailing occurred and provide a copy of the section of the booklet mailed to all licensed or otherwise authorized trappers in annual reports.

O&E 4 "How to Avoid the Incidental Take of Lynx" Brochure

Background: In 2003, the USFWS and state partners developed a general brochure describing recommendations to avoid or minimize the incidental take of lynx throughout lynx geographic range. In 2005, IFW customized the brochure for Maine trappers and mailed a copy to all licensed fur trappers.

Commitment: Within 1 year after the permit is issued and every 5 years thereafter, or anytime when trapping regulations change that affect the methods trappers use to avoid incidentally trapping lynx , IFW will update, print, and distribute the brochure "How to avoid the incidental take of lynx", to all license or otherwise authorized trappers. This brochure will include a description of the avoidance and minimization measures described in this Plan and will also be available on IFW's website.

Implementation: No further details are required (see commitment).

Compliance monitoring: IFW will notify the USFWS when the brochure has been updated and will track the distribution of the booklet in a database.

Effectiveness monitoring: None.

Reporting: IFW will provide information on any updates and the distribution of brochures to licensed trappers in annual reports.

O&E 5 Maintain Website Information

Commitment: IFW will maintain and update one or more webpages on IFW's website that presents information on lynx biology, avoiding lynx incidental captures, and current trapping regulations during the 15-year permit period.

Implementation: The website will be updated as necessary by IFW Information and Education staff in consultation with IFW wildlife biologists.

Compliance monitoring: This is an ongoing activity and is updated annually as needed; thus, compliance has been met. IFW will notify the USFWS when updates have been made.

Effectiveness monitoring: None.

Reporting: IFW will provide a web link to IFW's lynx page in annual reports.

Trapper Education Commitments and Implementation (O&E 6-8)

Rationale and Background: Since 1978, a person who applies for a state license to trap, (with other than a junior trapping license), must submit proof of having successfully completed a trapper education course or satisfactory evidence of having previously held an adult license to trap in Maine or any other state. When proof or evidence cannot be provided, the applicant must complete the required trapper education course before receiving a Maine trapping license.

IFW's trapping education course is targeted at individuals that have little trapping experience, but who are interested in trapping furbearers in Maine. IFW's trapper education course provides students a structured approach for learning about trapping methods, safety while trapping, furbearer management, regulations governing trapping, and furbearer utilization (Appendix 3). Instructors and students use a standardized instruction manual to insure that all students are exposed to the same material. This manual is periodically updated to reflect new methods (e.g., Best Management Practices [AFWA 2006a]) and laws. Periodic updates to this manual provide IFW the opportunity to modify or enhance sections on incidental take and selective trapping, including providing information on how to avoid the incidental take of lynx. Currently, written materials are given to trappers on how to avoid incidental lynx captures. This includes the booklet, "How to Avoid Incidental Take of Lynx, while Trapping or Hunting Bobcats and other Furbearers", and flyers on how to handle lynx incidental catches (Appendix 3).

The objectives of IFW's trapper education commitments are to ensure that new trappers are informed of lynx avoidance and minimization measures by updating trapper education course material and providing training to trapper instructors.

O&E 6 Trapper Education Course

Rationale and Background: Existing trappers are very familiar with lynx avoidance measures in Maine based on years of outreach activities (see Table 5.2.1). In addition, other I&E measures in this plan will target all trappers on annual basis. This measure is intended to get new trappers up to speed on lynx avoidance measures. Therefore this measure will apply to new trappers, which is a small subset of trappers covered by this permit.

Commitment: IFW will continue to require trappers that have not previously attended a trapper education course or held a trapping license to attend a trapper education course before being licensed to trap in Maine. IFW will provide the materials and oversight needed to keep instructors in IFW's mandatory trapping education course up-to-date on techniques and regulations that minimize or avoid incidental trapping of lynx throughout the permit period as described in O&E8. Maine's trapper training course will continue to be developed in consultation with professional wildlife biologists and use the national standards developed for trapper training programs by AFWA. All trapping instructors will continue to teach from the same manual.

Implementation: IFW will update trapper education manual within 1 year after the permit is issued and as necessary thereafter to reflect current regulations and minimization measures for avoiding the incidental trapping of lynx.

Compliance monitoring: Within 1 year after the permit is issued and anytime thereafter, IFW will notify the USFWS on updates to trapper education course material in annual reports.

Effectiveness monitoring: None.

Reporting: IFW will provide a copy of trapper education course material that addresses lynx avoidance and minimization measures in the initial annual report to the USFWS. Any updates to course material will be included in annual reports when they occur.

O&E 7 Trapper Video NEW

Rationale and Background: IFW currently provides information on lynx avoidance and minimization measures, including how to identify a lynx, procedures for reporting a lynx that is incidentally trapped, what to expect when biologists and wardens respond to an incidental catch, and methods for releasing a live lynx from a trap if a biologist or warden cannot respond in various printed forms (e.g., annual regulation books, trapper information booklet, IFW's website).

Commitment: In addition to printed materials, IFW will produce and distribute two videos, the first one is to all licensed or otherwise authorized trappers that demonstrates techniques for reducing incidental lynx captures and injuries within 2 years after a permit is issued. IFW will consult with the USFWS on the content of the video in

advance of filming and producing. This video will be used in trapper educational courses (by students and instructors). ADC and PM trappers will be required to review this video during their certification/recertification training. Upon completion, this video will remain on IFW's website. The second video will demonstrate how to build an exclusion device and will also be distributed to all trappers, included in the trapper education program, and posted on our website.

Implementation: These videos will be produced by IFW Information and Education staff in consultation with wildlife biologists experienced in responding to lynx incidental captures. Within 2 years of issuances, IFW will distribute videos to all licensed or otherwise authorized trappers, trapper education instructors, and the MTA. Thereafter, it will be available to trappers attending trapper education courses, on IFW's website, or upon request.

Compliance monitoring: IFW will inform the USFWS of the availability and distribution of the DVD to all licensed trappers.

Effectiveness monitoring: None.

Reporting: IFW will provide the USFWS with a copy of the trapper DVD in IFW's 2nd annual report.

O&E 8 Continued Education for Instructors

Rationale and Background: IFW relies on volunteer instructors to teach hunter and trapper education safety courses. This program is overseen by IFW's Hunting and Trapping Education Administrator working with a staff of regional safety coordinators. IFW's Regional Safety Coordinators attend staff meetings twice a year. To become a volunteer instructor, applicants must have completed a trapper education course within the last 5 years and an instructor training session given by a Regional Safety Coordinators. Every year, instructor training updates are held throughout the State. Volunteer instructors are required to participate at least every other year. In addition, instructors receive periodic newsletters and targeted mailings as needed on specific topics related to hunter and trapper education.

Commitment: IFW will ensure instructors are informed of current regulations and recommendations to minimize lynx captures at IFW's Regional Safety Coordinators staff meetings held before the start of the trapping season each year, volunteer instructors training sessions held every other year, and periodic newsletters to instructors. Wildlife biologists will attend the first staff meeting of IFW's Regional Safety Coordinators following issuance of the permit to review and discuss regulatory changes in Maine's trapping laws, protocols for reporting incidental captures, and techniques for releasing trapped lynx. Any updates to lynx avoidance and minimization measures will be distributed to volunteer instructors through periodic newsletters or targeted mailings and at biannual trainings. These updates would also be incorporated into the new instructor training program.

Implementation: No further details are required (see commitment).

Compliance monitoring: Every other year, all trapper education instructors participate in an instructor training update session on changes to IFW's trapping regulations that includes information on lynx avoidance and minimization measures.

Effectiveness monitoring: None.

Reporting: IFW will report trainings and communications with trapper education instructors in annual reports.

Plan Implementation Commitments

PI 1 Extend Lynx Avoidance and Minimization Measures to New Areas Occupied by Lynx

Rationale and Background: IFW is requesting incidental take coverage for any lynx incidentally captured through legally set traps in the state. However, avoidance and minimization measures primarily apply to WMDs that are currently known to have consistent presence of lynx since that is where incidental capture may occur. Through this Plan, however, IFW will extend avoidance and minimization measures to new WMDs when information suggests there is consistent presence of lynx as described in Appendix 5. For example, in December of 2010, IFW's Advisory Council extended trap restrictions currently in place in WMDs 1-6 and 8-11, to WMDs 14, 18, and 19 in response to IFW's observations of lynx tracks during 2 or more consecutive winters in WMDs 14 and 19, and the incidental catch of a lynx in WMD 18.

Commitment: IFW will document credible lynx observations to determine changes in the lynx range in Maine including evidence that lynx have become established in a new WMD (e.g., repeated observations, presence of kittens, etc.). To ensure that trapping regulations will offer the same level of protection for lynx in these new areas, IFW will adjust trapping regulations by WMD when verified observations are sufficient to indicate a consistent presence.

Implementation: No further details are required (see commitment).

Compliance monitoring: IFW biological staff will document confirmed tracks, sightings, and takes (including road mortality) as described by the survey commitments in Appendix 5. This information will be used to extend/rescind lynx avoidance and minimization measures by adjust trapping regulations in these areas. IFW will notify USFWS of any trapping regulatory changes during the permit period.

Effectiveness monitoring: None.

Reporting: IFW will include in annual reports any new information on areas used by lynx and when regulatory changes to avoid or minimize lynx captures were put in effect.

PI 2 Investigate All Lynx Incidental Captures

Rationale and Background: Trapping seasons for lynx have been closed since 1967. However, sometimes lynx are incidentally captured in traps set for other legal furbearers. IFW Wardens investigate all incidental captures of lynx to document take, whether traps where set in compliance with Maine laws, and identify outreach and education or regulatory changes that may minimize future lynx incidental captures.

Commitment: IFW Warden Service will continue to investigate all lynx incidental captures throughout the 15-year permit period to document take levels and compliance with trapping regulations.

Implementation: No further details are required (see commitment).

Compliance monitoring: At each incidental capture of lynx, Maine Wardens and/or USFWS special agents will investigate compliance with Maine's trapping regulations and the circumstances related to the take of a listed species. IFW will track compliance with trapping regulations at lynx incidental captures in a database.

Effectiveness monitoring: If compliance decreases, IFW will implement contingency plan described in Changed Circumstance # 1-3 and #5 (Section 5.4).

Reporting: Data will be compiled annually by IFW biological staff and reported to the USFWS in an annual report.

PI 3 Cooperate with USFWS on Investigations

Background: Since lynx were listed as Threatened by the USFWS in 2000, IFW has notified USFWS Special Agents of lynx incidental captures or other takings when they have occurred.

Commitment: IFW will continue to inform USFWS Special Agents of lynx incidental captures.

Implementation: IFW's wildlife biologists monitoring the "lynx hotline" will notify USFWS Special Agents immediately after the Warden Service and other IFW biologists, who may respond to the incidental capture, receive the initial report. This immediate notification provides USFWS special agents the opportunity to participate in the investigation.

Compliance monitoring: IFW currently notifies USFWS law enforcement of lynx incidental captures before responding to captures; therefore, compliance has already been met. IFW will immediately notify USFWS law enforcement of lynx captures throughout the 15-year permit period.

Effectiveness monitoring: None.

Reporting: IFW will report in annual reports.

PI 4 Conduct Targeted Compliance Monitoring NEW

Rationale and Background: IFW wardens currently enforce Maine's trapping laws; although violations are recorded, the number of traps set in compliance with Maine's laws are not recorded. Therefore, IFW agreed to undertake compliance monitoring (RC 6; Table 5.2.2) to address concerns expressed by the USFWS (personal communication, June 18, 2012 meeting between USFWS and IFW) regarding trapper compliance with regulations on the use of leaning pole sets for killer-type traps. However, killer-type traps on or above ground will not be allowed without an exclusion device beginning with the 2015-16 trapping season unless set as described in Appendix 2. Thus compliance monitoring to address the USFWS concern with leaning pole sets is no longer necessary. However, IFW has agreed to check compliance on the use of lynx exclusion devices as part of normal Warden Service activities. Compliance monitoring is not directed to foothold traps because they are concealed sets that are completely buried with no visible bait that can't be checked without disturbing them.

The overall goal of compliance monitoring is to document and minimize take (i.e., $\leq$195 takes, $\leq$9 lynx with severe injuries that require veterinarian care, $\leq$3 lynx mortalities, during the 15-year permit period). The immediate objective for monitoring killer-type traps will be to determine regulatory compliance over the 15-year permit period and implement measures to increase compliance, if needed. IFW's goal is to demonstrate an increase in compliance through trapper interactions, education and outreach, and enforcement of trapping regulations during the 15-year permit period. For the purpose of this commitment, a trapper will be considered to be in compliance if all of their traps are set in compliance with visible bait and exclusion device regulations for killer-type traps in lynx areas. Any trap that is not in compliance will result in the trapper being provided a warning or summons depending on the type and severity of the violation according to rule or law. This interaction between IFW and trappers is expected to increase compliance over the permit period.

During the 2012 marten and fisher season, Maine Wardens checked 786 killer-type traps set for marten and fisher in lynx WMDs. The majority (87%) of traps checked were set in compliance with Maine's trapping regulations for leaning pole sets. Although the number of trappers checked was not recorded, Wardens checked compliance with killer type traps on at least 128 occasions.

Commitment: During their routine activities, IFW Warden Service will check 20% of active trappers setting killer-type traps for fisher and marten in the lynx range each trapping season during the permit period for compliance with current regulations on exclusion devices[13]. IFW expects the number of trappers setting killer type traps for fisher and marten to decline based on the expense and difficulty in using exclusion devices. Therefore, IFW expects that number of trappers to be checked for compliance to be about one half of the number (40), that IFW anticipated checking on for compliance with the regulations governing leaning pole sets. The fur tagging record

[13] *Study Limitations:* There is no way to sample specific trappers without their knowledge. Maine trappers have no legal requirement to disclose the location of their traps or trap lines. Wardens often put more effort on checking past or suspected violators; therefore, the rate of non-compliance may be higher than from a random sample of trappers.

books used to record harvested fur will be modified prior to the 2015-16 trapping season to gather information from the trapper on whether or not the fur was taken by foot hold traps or killer type traps with exclusion devices. This information will be used to calibrate whether or not IFW has met the target for compliance monitoring. IFW biologists will analyze these data and use information from compliance monitoring to inform IFW's contingency plans (Section 5.4).

Implementation: Any violation of existing regulations will be recorded (e.g., visible bait, trap size, animals caught out of season, incorrectly designed exclusion device, etc.). Data on the nature of the violation or specific problems that rendered the trap sets non-compliant (i.e., bait not adequately covered, specifications for exclusion devices not met (e.g., size of opening, distance from opening to trap, placement of baffles)) will be gathered to assist IFW in addressing specific problems. In addition, wardens will collect data on incidental take of migratory birds. All the data collected by the Wardens will be entered into a database and summarized by a wildlife biologist. For traps in violation, IFW will determine whether any particular violation is more common than others and whether there is a trend in the frequency of certain violations. This information will be used to target messaging to trappers and to examine the effectiveness of current regulations or regulatory language.

Compliance monitoring that occurs during the first 2 years of implementation of the Plan will be used to identify the baseline rate of compliance of killer-type traps. Every year thereafter, IFW will determine the proportion of trappers and killer-type traps checked that were set in compliance with existing regulations. If the proportion of trappers that set legal killer-type traps (i.e., complying with visible bait, and exclusion device regulations) drops below the average of the first 2 years, IFW will follow the procedures outlined in Section 5.4 Changed Circumstance #5. At no time, will compliance drop below 90% without triggering Changed Circumstance #5.

Compliance monitoring: In 2012, IFW Wardens checked a sample of killer-type traps for compliance with trapping regulations on leaning poles in lynx areas. Additional compliance checks are scheduled annually during the permit period for compliance with current regulations. IFW will notify USFWS of additional compliance checks in annual reports.

Effectiveness monitoring: IFW will track compliance in a database and notify the USFWS if the contingency plan in the changed circumstance section of the Plan is triggered (Section 5.4).

Reporting: IFW will track and report annually on compliance with killer-type trap regulations in lynx WMDs. IFW will summarize and report trapping compliance data annually to include such items as how many illegal sets, how many instances of non-reporting, what type of non-compliance, different categories (warnings, summons, etc) and frequencies. IFW will summarize trapper effort data from voluntary trapper surveys and generated from license numbers and furbearer harvest data in annual reports.

PI 5 Consult with Trappers

Rationale and Background: Trapper relations can be strengthened by working with trappers to improve trapping techniques for minimizing lynx take. For example, IFW wildlife biologists have worked with trappers to develop and test lynx exclusion devices for killer-type traps.

Commitment: IFW will continue to consult with trappers on ways to minimize lynx injuries and the incidental trapping of lynx at annual IFW / MTA meetings, monthly MTA chapter meetings, MTA board meetings, bi-annual fur rendezvous events, and casual encounters. IFW is committed to continuing this outreach to trappers throughout the year for the 15 years of its incidental trapping permit.

Implementation: No further details are required (see commitment).

Compliance monitoring: This is an ongoing activity where IFW staff interacts with trappers at meetings or when investigating compliance with trapping regulations, therefore, compliance has already been met.

Effectiveness monitoring: None.

Reporting: IFW will report annually in reports.

Table 5.2.3 Timeline for implementing and reporting lynx avoidance and minimization measures in this Plan.

	Compliance		Implementation		
	Met	Ongoing[a]	After Issuance[b]	Thereafter	Reporting
RC 1 Restrict killer-type traps-LYNX WMDs	X	X	X		After regulatory change[c]
RC 2 Require mandatory reporting-STATEWIDE	X	X		Annually	
RC 3 Restrict use of bait-STATEWIDE	X	X		Annually	
RC 4 Restrict foot-hold traps-LYNX WMDs	X	X	X		After regulatory change[d]
IM 1 Maintain lynx hotline	X	X		Annually	Annual
IM 2 Respond to lynx captures-STATEWIDE	X	X		Annually	Annual
IM 3 Standard operating procedures and injury scores	X	X	X	Every 3 years as needed	Annual
IM 4 Maintain list of cooperating veterinarians	X	X	X	Annually	Annual
IM 5 Rehabilitate injured lynx		X		As needed	Annual
PI 1 Extend lynx avoidance/minimization measures		X		As needed	Annual
PI 2 Investigate all lynx captures		X		Annually	Annual
PI 3 Cooperate with USFWS on investigations		X		Annually	Annual
PI 5 Work with trappers on minimization measures		X		Annually	Annual
O&E 1 Reinforce regulatory compliance		X		Annually	Annual
O&E 2 Publish regulation book		X		Annually	Annual
O&E 3 Update trapper information booklet		X		Annually	Annual
O&E 4 Update, publish, distribute lynx brochure		X	X	Every 5 yrs or as needed	Every 5 yrs.
O&E 5 Update website information		X		Annually as needed	Annual
O&E 6 Update trapper education course		X	X	Every 5 years or as needed	Every 5 yrs.
O&E 8 Train safety coordinators/instructors		X	X	Annually	Annual
IM 6 Conduct injury evaluation training NEW			X	Every 3 years	Every 3 yrs.
IM 7 Obtain veterinarian oversight NEW			X	3 lynx during 3 yr period	Annual
IM 8 Respond to orphaned kittens (if it occurs) NEW		X		Annually as needed	Annual
PI 4 Conduct compliance monitoring-LYNX WMDS NEW			X	Annually	Annual
O&E 7 Make Trapper/Instructor video NEW			Within 2 yrs.		One-time

[a] Ongoing measures are measures that are currently in place and will be maintained throughout the permit period.
[b] Within 1 year after the permit is issued, unless otherwise specified.
[c] IFW through rule making will permit the use of killer-type traps set on the ground using a lynx exclusion device in lynx WMDs (currently WMD 1-11, 14, 18,19).
[d] Rescind foothold trap size restrictions.

5.3 Measure to Mitigate Unavoidable Impacts

The USFWS' Habitat Conservation Planning Handbook (p. 3-19) describes mitigation as usually taking one of the following forms: 1) avoiding the impact (to the extent practicable), 2) minimizing the impact, 3) rectifying the impact, 4) reducing or eliminating the impact over time, or 5) compensating for the impact. Furthermore, the USFWS states that, "mitigation programs should be based on sound biological rationale; they should also be practicable and commensurate with the impacts they address" (USFWS 1996).

As previously described (section 4), IFW anticipates the incidental trapping of up to 195 lynx over the requested 15-year permit period from fur, ADC, and PM trapping. Several minimization measures in this Plan are anticipated to reduce the incidental trapping of lynx, particularly from killer-type traps that are most often lethal to lynx if they occur. The majority of minimization measures in the Plan are designed to reduce injury and or fatality of captured lynx. However, IFW anticipated some lynx (up to 9 lynx) could have severe injuries from traps and a few (up to 3 lynx) could either die or not be able to be released back into the wild.

While, for the purposes of this Plan, IFW considers take to include all components of the incidental capture of lynx (i.e., trapping, capture, handling, treatment, release, mortality, etc.), HCP regulations under the ESA require applicants to minimize and mitigate for the impacts of the take. As explained in Section 4, IFW's data shows that lynx captured with no or minor injuries are released and have no demonstrated impacts from the capture event. Lynx more severely injured can be treated and released and have no permanent or long-term impacts that change the behavior or survivorship in the wild. However, lynx fatalities or injured lynx that cannot be released result in individual lynx being removed from the population in Maine. While IFW's demographic analysis shows this does not have population level consequences (Appendix 7), it is an impact that the USFWS wants IFW to mitigate for in this Plan.

IFW's mitigation plan relies on maintaining and enhancing high quality foraging habitat (i.e., habitat that provides high snowshoe hare density) that would otherwise be declining over the permit period because of lack of or incompatible forest management activities. The anticipated benefits are to maintain the lynx that may currently use this area over the permit period and to provide enhanced habitat to support additional lynx. In addition, IFW's research shows that by providing the amount and quality of foraging habitat that is in this Plan, lynx will also likely have increased fecundity rates that may produce even more lynx through the permit period.

To accomplish this, IFW worked with the Bureau of Parks and Land (BPL) to identify an area of state ownership where habitat improvements could support lynx over the permit period. The Seboomook Unit was chosen due to its current condition and forest types (i.e., conifer forest) and its proximity to other areas that provide habitat to support lynx.

Maine's Department of Agriculture, Conservation, and Forestry (DACF) has a policy of cooperating with IFW, USFWS, and other agencies concerning habitat management on state lands for endangered, threatened, or candidate species. For the purpose of this Plan, IFW entered into a Memorandum of Understanding (MOU) with the Bureau of Parks and Land (BPL), a Bureau within DACF (Appendix 11a and 11b), to manage an area for lynx for mitigation for this Plan. The parties recognize that disputes concerning implementation of the ITP or the permit may arise from time to time. The procedures to resolve any disputes should they arise between the State of Maine and USFWS are outlined in Appendix 11c. BPL's Integrated Resource Policy reads (p. 44):

> The U. S. Fish and Wildlife Service and the National Marine Fisheries Service are the lead agencies in matters pertaining to federally listed threatened and endangered species, and IFW and MNAP (*Maine Natural Areas Program*) are the lead agencies for state listed species. The Bureau will cooperate with those agencies in activities such as the delineation of critical habitat and recovery plans on Bureau lands.
>
> In cooperation with IFW and consistent with the purposes of the Endangered Species Act (16 USC 1531 et. seq.) and the Maine Endangered Species Act, the Bureau will identify and promote the conservation of all state and federally listed, endangered, threatened, or candidate species of plants and animals and their critical habitats within the boundaries of lands managed by the Bureau. As necessary, the Bureau will control visitor access to and uses of critical habitats, and it may close such areas to entry for other than official purposes. Active management programs will be conducted as necessary to perpetuate the natural distribution and abundance of threatened or endangered species and the ecosystems on which they depend. The Bureau also will identify all state and federally listed threatened and endangered species and their critical habitats that are native to and present on its lands. Protection and management of endangered and threatened species and their critical habitats will be integrated into all levels of management planning activities, and new information on these species will be incorporated as it becomes available.

Continuing on page 74:

> Threatened & Endangered species - Timber harvesting will comply with all Federal and State regulations concerning listed threatened and endangered species, and species of special concern. Compartment exams/prescriptions and any subsequent timber sale planning will research the presence of these species and manage accordingly.

Basis for Calculating Mitigation Requirements for Take of 3 Lynx

To estimate how many lynx may currently and are likely to occupy the HMA following mitigation, IFW used data from a 12-year telemetry study to estimate the amount of HQHH in a lynx home range. This analysis indicates that lynx share some of the same resources (Vashon et al. 2008a, Figure 5.3.1). Across all 5 groups of lynx, 2 or more lynx shared more than 2,000 acres of HQHH (Table 5.3.1). This equates to 1,595 acres of HQHH per lynx. Therefore, to determine the amount of HQHH to provide for mitigation, IFW multiplied 1,595 by 3 which results in providing 4,785 acres of HQHH on the 10,411 acre HMA. This is further supported by the fact that the average amount of HQHH shared by a breeding group was 4,147 acres and the breeding group sizes ranged from 2-4 adult lynx. Therefore, the 4,785 acres of HQHH provided in the mitigation proposal included in the July 29, 2013 submission is more than sufficient mitigation to support at least 3 adult lynx (Table 5.3.1).

The USFWS Request for Mitigation

The USFWS acknowledges that forest management is an acceptable means to offset the take of lynx killed (or not releasable) from trapping. The USFWS requested that IFW use the Service's lynx forest management guidelines and Simons-Legaard et al. (2013) recommendation of maintaining 27% of HQHH in 100 km^2 areas to promote landscape hare densities >0.5 hares/ha. The Service's 2007 guidelines acknowledge lynx management can be readily incorporated into forest management plans for multiple use including harvesting forest products, providing for wildlife habitat, and outdoor recreation. These guidelines state that creating or maintaining 7,000 acres of HQHH on a 35,000 acre parcel could support 8 adult lynx and their offspring. Simons-Legaard et al. (2013) does not model the potential number of lynx that could be supported in landscapes with >0.5 hares/ha. It is reasonable to expect that these landscapes will support at least one breeding group of 3 or more adult lynx.

Although IFW proposed 4,785 acres on 10,411 acres to mitigate for the lethal take of up to 3 lynx during the 15-year permit period, IFW and BPL have agreed to provide 6,200 acres of HQHH on 22,046 acres of BPL's Seboomook Unit. IFW contends that 6,200 acres of HQHH should more than mitigate for the lethal take requested in this Plan.

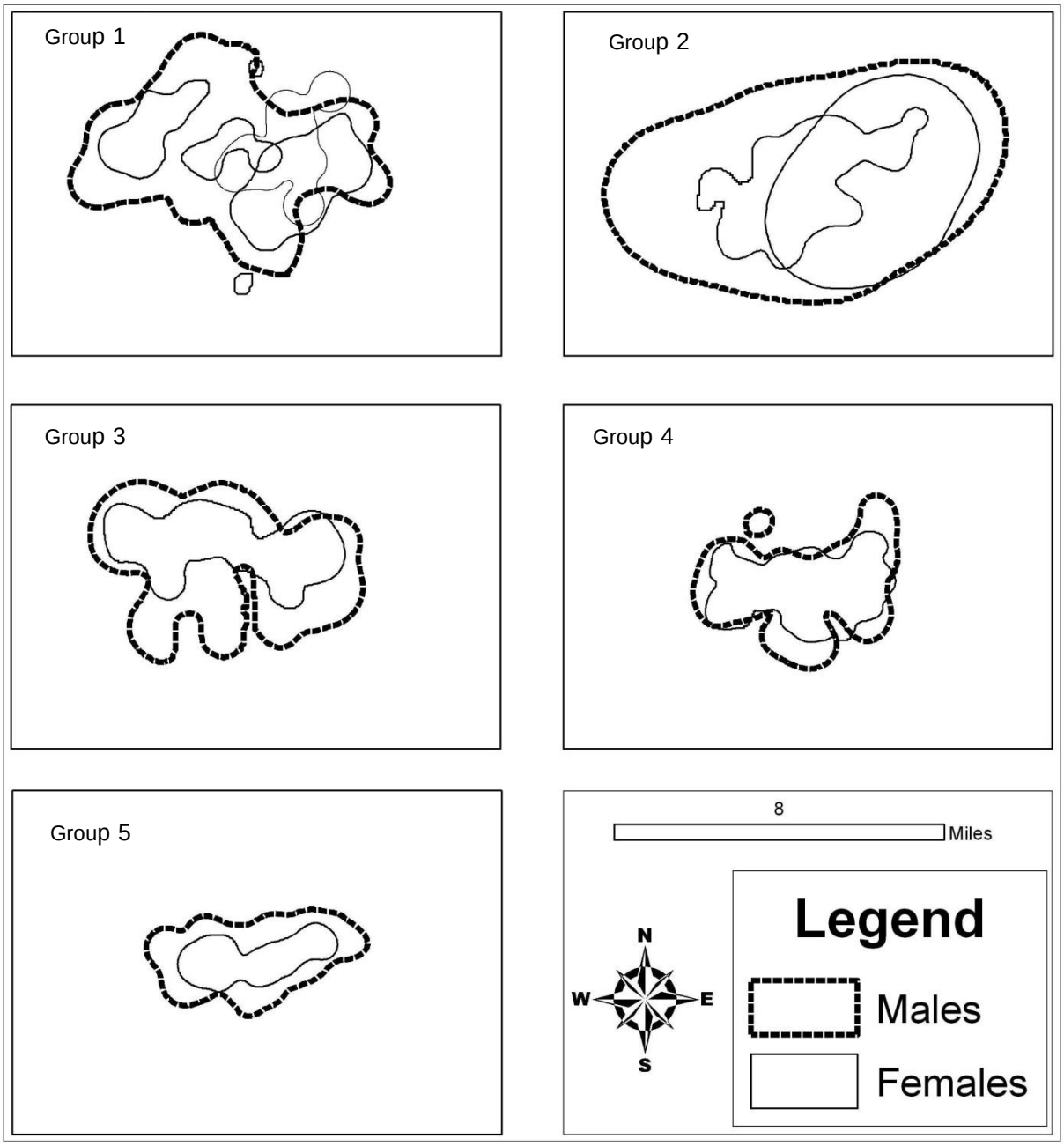
Table 5.3.1 To estimate the amount of high quality hare habitat (HQHH) to provide as mitigation for lethal take of incidental capture of lynx in Maine's trapping program, IFW estimated the amount of HQHH in an area completely shared by 2 or more lynx during IFW's 12-year radio telemetry study. To offset the take of a lynx IFW proposes providing 1,595 acres of HQHH for each lethal lynx take on the HMA.

Space Sharing Lynx	# Adult Males	# Adult Females	Total # lynx	Acres of HQHH shared by 2 to 4 lynx	Average acres/lynx
Group 1	1	3	4	5,245	1,311
Group 2	1	2	3	7,257 [b]	2,419
Group 3	1	1	2	3,701	1,851
Group 4	1	1	2	2,433	1,217
Group 5	1	1	2	2,100	1,050
Total	5	8	13	20,736	
Average				4,147	1,595[a]

[a] Average number of acres per lynx for all group arrangements calculated by dividing the total acres shared by the total number of lynx.

[b] Although the male in this group moved and occupied a new area to the east, we used the entire area he used to estimate the amount of HQHH, which likely overestimates the amount of HQHH used by this group (see Figure 5.3.1).

Figure 5.3.1 This figure shows how the five groups of radiocollared lynx used the same areas and the appropriateness of IFW estimates of high quality hare habitat (HQHH) as mitigation for lethal take of incidental capture of lynx in Maine's trapping program.



Location and Site Condition

The proposed site for mitigation (22,046 acres) is located within the BPL managed 40,000 acre Seboomook Unit just north of Moosehead Lake in north-central Somerset County near the eastern boundary of Seboomook Township (TWP) and Little W TWP. The HMA proposed for this Plan is owned by the State of Maine and is permanently protected from development by legislative statute and forest management is mandated that benefits, among other things, Maine's wildlife.

It is within an area bounded on the east by the Little W/Northeast Carry town line, on the south and west by Moosehead Lake, and on the north by the Golden Road (see Figures 5.3.2 and 5.3.3). The area is commercial forest land with no development except for some seasonal camps located along the shore of Moosehead Lake.

The proposed Habitat Management Area (HMA) is accessed by gravel logging roads that receive low use and minimal maintenance unless there is an active timber harvest. The roads are suitable for low speed travel and are used primarily by hunters, trappers, camp owners, and snowmobilers. Although BPL may maintain interior roads in the HMA to facilitate forest management, BPL will not construct new high speed/high traffic volume roads or pave dirt or gravel roads that traverse lynx habitat on the HMA during the 15-year permit period.

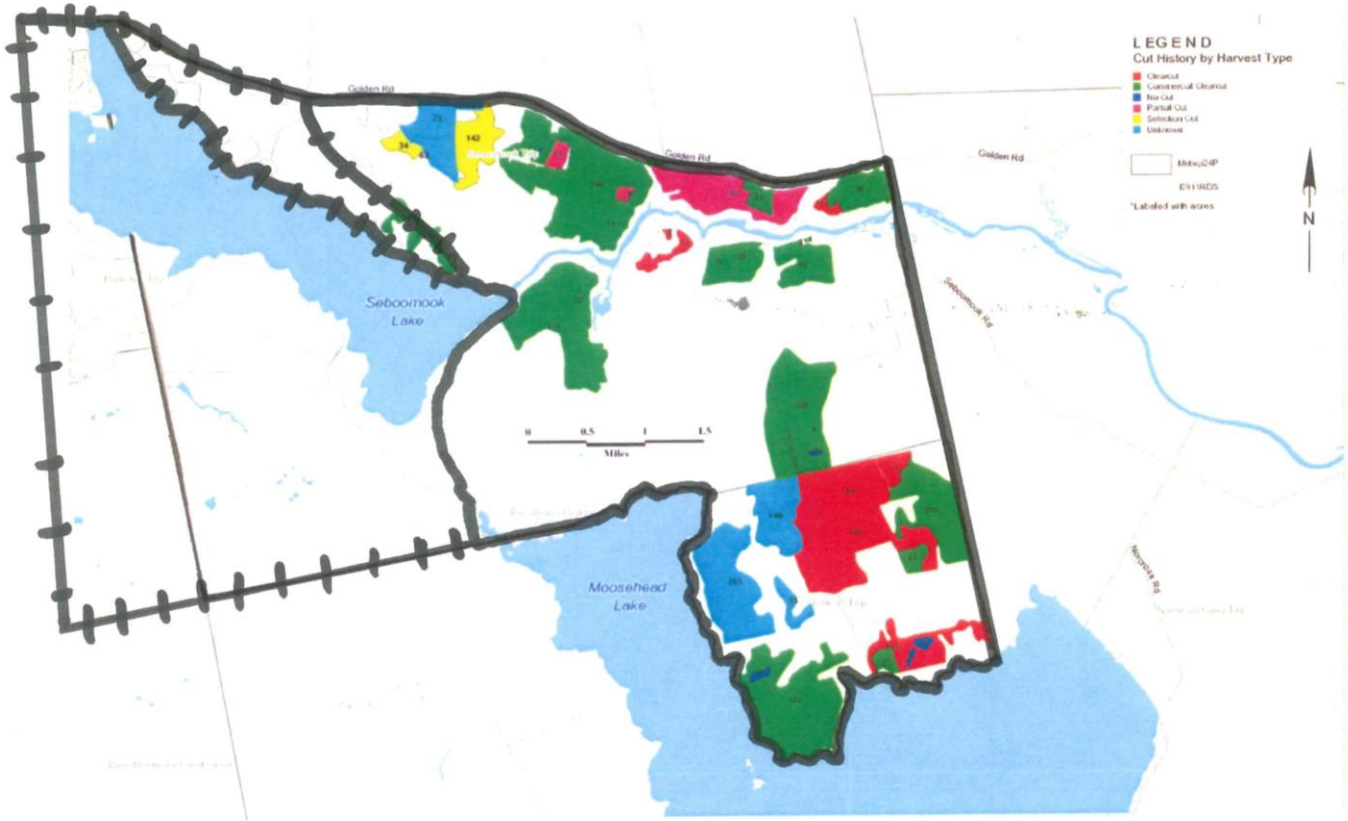
The state acquired this land from Merriweather Limited Liability Company (LLC) in 2004. The area was extensively harvested by a previous owner, Great Northern Paper Company / Bowater, in response to the 1970s to 1980s spruce budworm outbreak. Most harvests were clearcuts that removed all merchantable timber. The natural regeneration resulting from the clearcutting was sprayed with herbicide to reduce the proportion of hardwood in the new forest and was never thinned to promote growth as is sometimes done (e.g., pre-commercial thinning [PCT]).

Due to variations in site quality and drainage, the area now supports many young, diverse, coniferous forest stands composed primarily of red spruce and balsam fir that are about 25 years-old. This seral stage of regenerating conifer supports maximum snowshoe hare densities according to numerous research studies done in Maine (Scott 2009). Within this area, forest conditions range from regenerating stands that are very dense to stands that are interspersed with areas of more mature trees. This range of forest conditions contains the structure and resources that can benefit both hare and Canada lynx at the southern extent of its range (Organ et al. 2008, Murray et al. 2008, Vashon et al. 2008b, Berg et al. 2012).

Past harvest maps (Bowater ownership), aerial photos, and a recently completed BPL forest-inventory of 25 plots in the Seboomook Unit were used to provide a preliminary description of current conditions. The recent forest inventory indicates that currently at least 3,798 acres in the HMA is comprised of moderate to densely stocked coniferous or mixed seedling/saplings (i.e., S1A, M1A, Table 5.3.2 and Figure 5.3.4). Although some stands may not provide optimal cover for hares (i.e., either too young or too old),

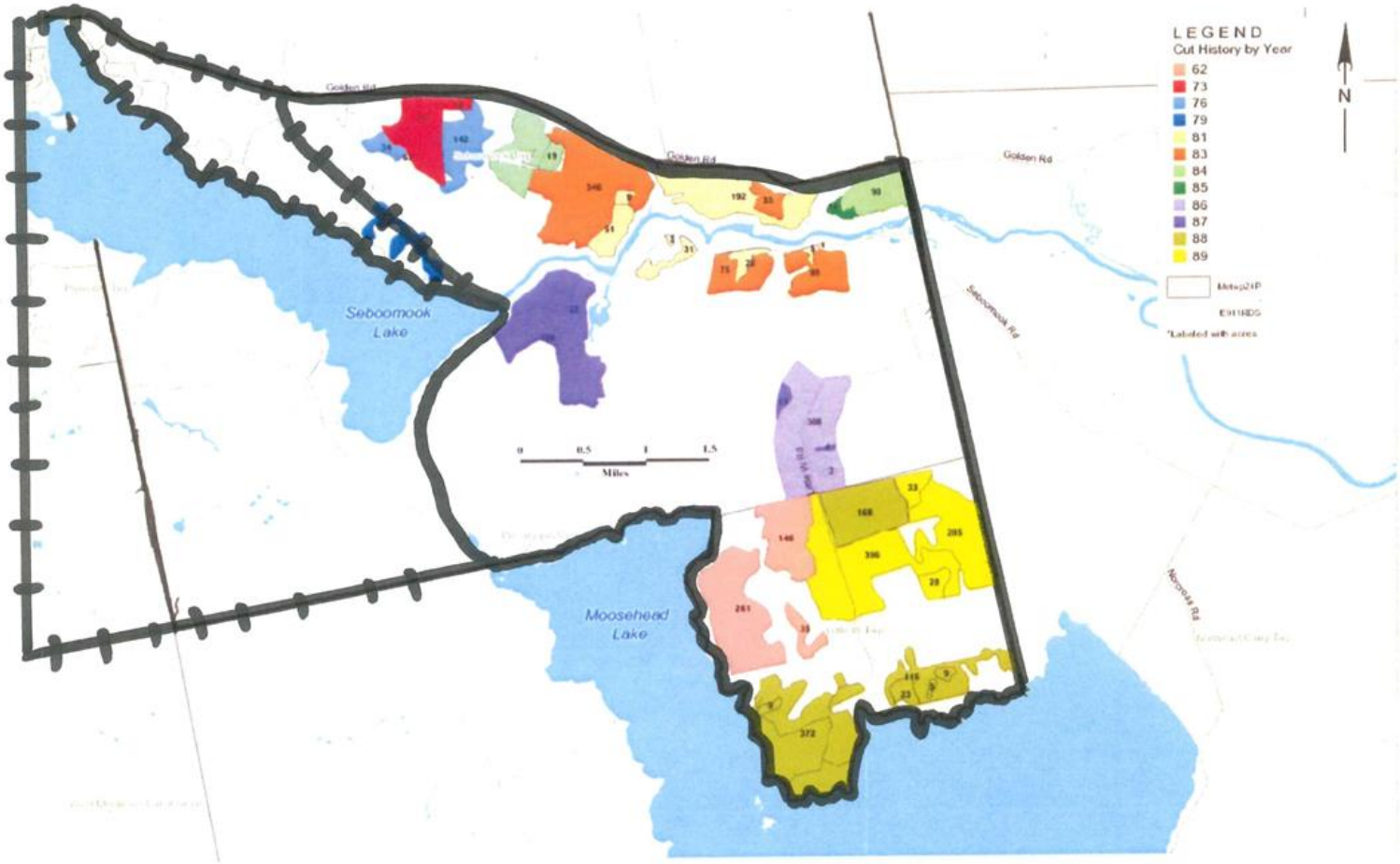
harvest maps for the areas clearcut by Bowater between 1986 and 1989 (Figures 5.3.2 and 5.3.3) indicates most of these stands are within the age range identified by the USFWS as providing optimal hare cover and lynx foraging habitat (i.e., 12–35 years-old post-harvest; McCollough 2007). In July of 2013, BPL visited the proposed HMA described in the July 29, 2013 Plan to insure that the area is sufficient for meeting the obligations in this Plan and MOU (i.e., provide at least 4,785 acres of habitat for lynx). By July 31st of 2015, BPL will finalize the western boundary of the additional mitigation area and insure that the entire 22,046 acre mitigation area can meet the 6,200 acre HQHH requirement. Updated maps will be provided to the USFWS by July 31st 2015.

Figure 5.3.2 Provisional map[14] of the proposed 22,046 acre HMA (black dashed line; original 10,411 acre HMA solid black line in IFW's July 29, 2013 Plan) for Canada Lynx in Maine showing the year in which stands were commercially cut. The harvest treatment for each stand is given in Figure 5.3.3.



[14] Final map to be provided to the USFWS by July 31st 2015.

Figure 5.3.3 Provisional map[15] of the proposed 22,046 acre HMA (black dashed line; original 10,411 acre HMA solid black line in IFW's July 29, 2013 Plan) for Canada Lynx in Maine showing the harvest treatment each forest stand received. The year in which the stand was cut is given in Figure 5.3.2.



[15] Final map to be provided to the USFWS by July 31st 2015.

Figure 5.3.4. Current forest type map of the 22,046 acre proposed habitat management area (HMA) for lynx on the State of Maine Bureau of Parks and Land's Seboomook Unit in northern Maine. The dark black line marks the boundaries of the 22,046 acre HMA.

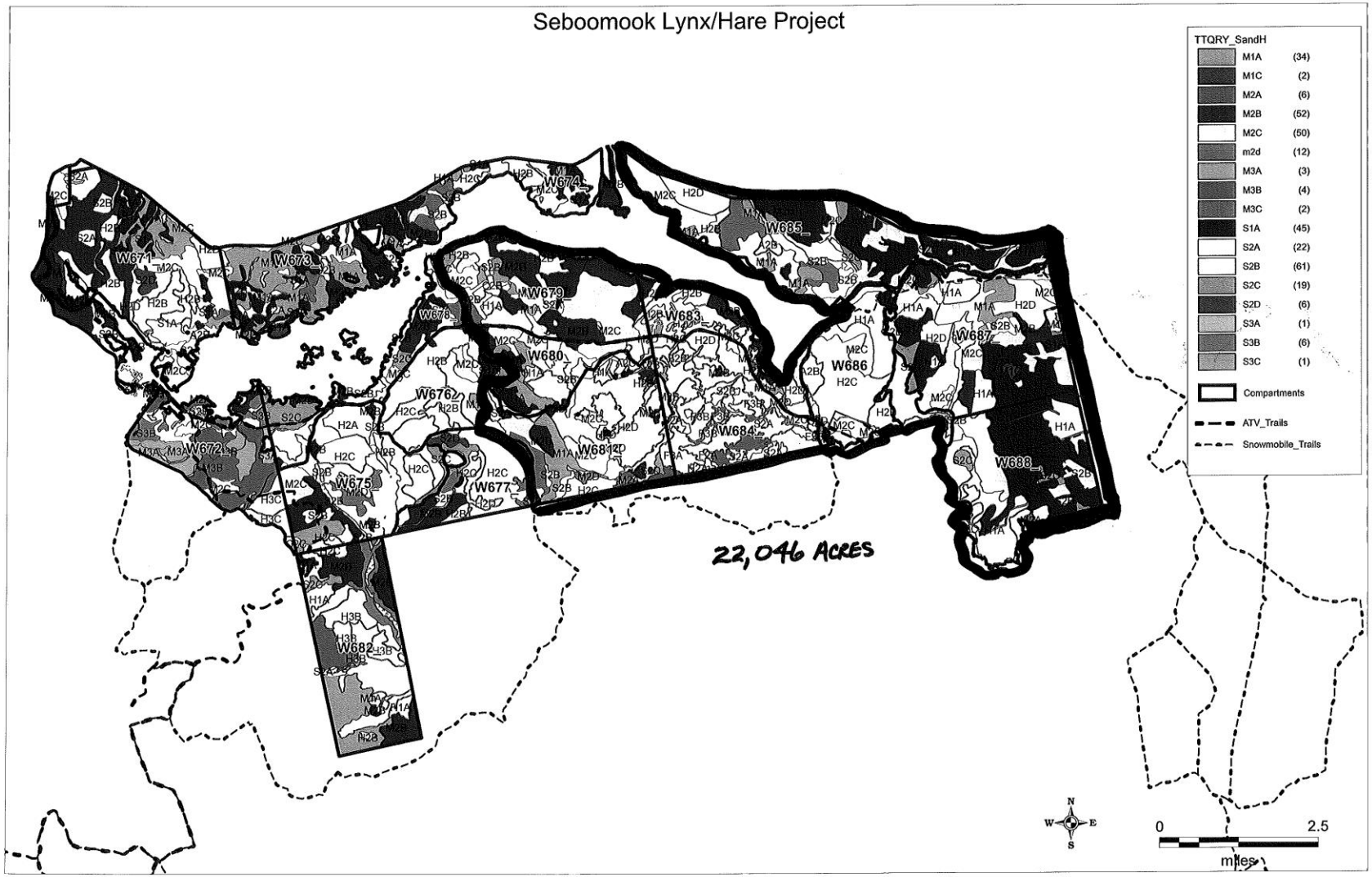


Table 5.3.2 Summary of stand types classified from fall aerial photo in the lynx habitat management area described in MDIFW July 29, 2013 plan of the BPL Seboomook Unit that currently supports optimal lynx foraging habitat [16].

Timber types	Cover-type	Size class[a]	Age class	Density	Acres
S1A	Softwood	<4.5 in	Seedling-Sapling	84-100%	3,483
M1A	Mixed[b]	<4.5 in	Seedling-Sapling	84-100%	315

[a] Stand average size class is measured in inches at 4.5 feet or diameter breast height (DBH).
[b] Mixed is identified as stands that are not dominated by softwood or hardwood (i.e., 50% softwood and 50% hardwood).

It is also important to recognize that, although the state does not have management authority over the adjacent townships, the HMA is not an isolated area of lynx habitat. These adjacent areas also contain patches of regenerating spruce and fir including one of the state's largest budworm impacted areas (i.e., the Ragmuff clearcut). This area is privately owned and remains in active forest management that will likely provide habitat for lynx in the future. In addition, the mitigation area is part of the 40,000 acre Seboomook Unit owned by DACF and maintained as forest. The proximity of the HMA to other areas supporting lynx habitat conditions improves the chances that lynx will occupy or continue to occupy the HMA during the permit period.

Proposed Mitigation

The proposed mitigation plan will offset the potential take of up to 3 lynx (Appendix 11a). In this plan, BPL will conduct forest management on a 22,046 acre habitat management area (HMA) to provide habitat for lynx. The habitat management goal will be to maintain or create at least 6,200 acres in HQHH over the 15-year permit period. As a result of this mitigation, there will be at least 3 additional lynx on the HMA by 2029 (Table 5.3.3).

To calculate the amount of HQHH needed per lynx on the HMA, we used information on lynx habitat use from IFW's 12-year telemetry study (see p. 108 of this Plan). This study found that 13 lynx shared areas with an average of 1,595 acres of HQHH per lynx. This estimate of HQHH needed per lynx is likely an over estimate because it includes data from a group of 3 lynx (Group 2, Table 5.3.1) for which the amount of HQHH was influenced by the male shifting his home range to the east. This home-range shift inflated the estimate of the size of the area this group used, by including both the male's previous home range and new home range. If we exclude this group of 3 lynx, this study indicates that 10 lynx used areas with an average of 1,350 acres of HQHH per lynx (Table 5.3.1).

[16] By July 31st 2015, the USFWS will be provided with an update based on the new mitigation (6,200 acres HQHH) on 22,046 acre HMA.

Without the proposed mitigation plan, BPL estimates that there will be approximately 2,000 acres of HQHH on the HMA by 2023. This amount of HQHH should be capable of supporting at least 1 lynx. BPL has committed to providing at least 6,200 acres of HQHH on the HMA by 2029 that should support between 4 and 5 lynx (i.e., 6,200 acres/1,595 acres per lynx) and (6,200 acres/1,350 acres per lynx, respectively; Table 5.3.3). Therefore, IFW's mitigation commitments exceed the USFWS' forest management guidelines for Maine. These guidelines state that 7,000 acres of HQHH on a 35,000 acre parcel could support up to 8 adult lynx and their offspring (McCollough 2007). Under these guidelines, only 875 acres of HQHH would be provided per lynx compared to a minimum of 1,350 acres of HQHH that IFW's mitigation plan would provide. Based on estimates in our Plan and the USFWS guidelines, IFW feels confident that BPL's commitment of creating an additional 4,130 acres of HQHH on the HMA by 2029 will result in at least 3 more lynx.

For mitigation, IFW and BPL selected an area where lynx habitat already exists and lynx likely occur. Harvest maps and aerial photos indicate that baseline (current) conditions on the 10,411 acres on the HMA include at least 3,798 acres of sapling conifer dominated forest. Without mitigation, BPL would have managed for mature conifer with pre-commercial or commercial thinning to promote shorter time to mature forest conditions (Eickenberg et al. 2007). Future trends in lynx habitat are therefore expected to decrease during the 15-year permit period as stands mature from natural succession (Table 5.3.3). This management would reduce the amount and quality of foraging habitat for lynx. By the end of the permit period without active forest management, lynx may no longer use this area. Therefore, this provides the opportunity for BPL to maintain and improve current habitat quality for lynx on the HMA (i.e., at least 6,200 acres) over the permit period. Within 3 years of issuance of the permit, a forestry plan with the specific forest management activities will be submitted to the USFWS.

Table 5.3.3 Baseline and projected future amounts (acres) of high quality hare habitat (HQHH; dense conifer dominated sapling stands or understories) on the proposed 22,046 acre HMA with and without mitigation[17].

	Preliminary Baseline (2013)	2018 (acres)	2023 (acres)	2029 (acres)
Without Mitigation[a]				
Acres	3,798	3,798	2,070	2,070
Adult lynx	≥2	≥2	≥1	≥1
With Mitigation[b]				
Acres	3,798	3,798	≥4,785	≥6,200
Adult lynx	≥2	≥2	≥3	4-5

[a] Management goal is to promote shorter time to mature forest conditions through harvest (e.g., pre-commercial or commercial thinning).

[b] Management goal is at a minimum no net loss of HQHH and increased by 4,785 acres in IFW's July 29, 2013 plan, the commitment has increased to 6,200 acres HQHH.

Currently, the amount of HQHH on the HMA likely supports at least 2 adult lynx. However, as the forest matures and foraging habitat quality declines, IFW anticipates the number of lynx using the area and their reproductive rates to decline. With the proposed mitigation, IFW anticipates that those 2 lynx will not be lost, additional lynx willuse this area, and that their reproductive rates will be higher. IFW's 12-year telemetry study shows that lynx produced smaller litter sizes when hare densities were lower, whereas higher litter size occurred when hares were more abundant (Vashon et al. 2012). As described below, BPL commits to creating additional HQHH on the HMA by removing the overstory on at least 4,130 additional acres to release existing softwood regeneration. These stands are younger and less developed than HQHH established by clearcuts; these areas will become optimal HQHH in 3 to 7 years after the overstory is removed. BPL's management of wintering areas for deer starts with well-established softwood stands resembling HQHH and is compatible with management for lynx. HQHH transitions into secondary winter shelter for deer over time. Forest management practices such as PCT and commercial thinning could potentially accelerate the transition between HQHH and secondary deer winter shelter. PCT and commercial thinning are common practices used by other landowners in the region to shorten time between regeneration and commercial harvest. BPL has committed to conduct forest management practices compatible to maintaining HQHH for 3 or more lynx for the duration of the permit.

[17] By July 31st 2015, the USFWS will be provided with an updated table of the new mitigation acreage (6,200 acres HQHH) on 22,046 acre HMA.

Mitigation Plan and Timeline:

The Seboomook Unit is a relatively recent acquisition for BPL and a management plan has been written for the unit (Eickenberg et al. 2007). However, the Seboomook Unit has not been cruised by a forester; therefore, this plan does not contain the detail necessary for outlining the timing and spatial arrangement of specific future forest management practices. Additional detail regarding forest management planning in the Seboomook Unit will be available when BPL cruises the land and develops a harvest schedule and proposed treatments. It typically takes 6 to 9 months to cruise forest compartments of 1,000 to 2,000 acres. Therefore, it is expected to take 3 years to cruise and develop a forest management plan for the 22,046 acre HMA. This plan may include future timber harvest to maintain optimal hare habitat (6,200acres) in the HMA.

Lynx habitat on the HMA is a legacy of past spruce budworm harvesting and is projected to decline on the HMA without active management activities starting in 2023. BPL intends to manage this area using the appropriate forest harvest prescription for the stand (e.g., overstory removals, shelter woods) that will foster understory conditions (i.e., dense conifer dominated regenerating sapling size class) that will benefit snowshoe hare and lynx.

In addition to providing the 6,200 acres as mitigation, BPL will implement the following additional measures (which are consistent with the USFWS' *Canada lynx habitat management guidelines for Maine)*:

1) Avoid upgrading or paving dirt or gravel roads traversing lynx habitat. Avoid construction of new high speed/high traffic volume roads in lynx habitat;
2) Employ silvicultural methods that will create regenerating conifer-dominated stands 12-35 feet in height with high stem density (7000-15,000 stems/acre) and horizontal cover above the average snow depth that could support >1.1 hares/ha;
3) Maintain land in forest management. Development and associated activities should be consolidated to minimize direct and indirect impacts. Avoid development projects that occur across large areas, increase lynx mortality, fragment habitat, or result in barriers that affect lynx movements and dispersal;
4) Encourage coarse woody debris for den sites by maintaining standing dead trees after harvest. Where windthrow occurs, the Bureau will leave randomly distributed ¾ acre patches sufficient for den sites for 3 female lynx.

Implementation Plan:

- By July 31st 2015, BPL will finalize the western boundary of the additional mitigation area and insure that the entire 22,046 acre mitigation area can meet the 6,200 acre HQHH requirement. Updated maps will be provided to the USFWS by July 31st 2015.
- BPL will inventory the 22,046 acre HMA and cross-walk the inventory to HQHH within 3 years of issuance;

- BPL does not currently have forest models for their ownership. However, BPL expects this capability will be available in the next few years and will implement a forest model to assess the trajectory of the existing habitat and demonstrate when, where, and how sufficient HQHH habitat will be maintained and or created when it becomes available.
- BPL will provide an updated table 5.3.3 for the 22,046 acre area demonstrating how the mitigation will achieve the net conservation benefit to compensate for the loss of at least three lynx by July 31st 2015.
- BPL will develop a detailed forest management plan (compartment exam and harvest prescription) for at least the HQHH portion of the HMA with the assistance of IFW RAS staff within 3 years of issuance of an ITP. This plan will include provisions for avoiding take of northern long-eared bats in the event that it is listed under ESA or MESA[18]. IFW and BPL will meet at least every 3 years to review the status of the forest management plan for the HMA;
- USFWS (Maine Field Office) will review and comment on the forest management plan within 90 days of receipt of the plan;
- Within 15 years of issuance of an ITP (~2029), BPL will have implemented harvest prescriptions (e.g., overstory removal) to maintain or create forest conditions that will lead to HQHH on the HMA; and
- By the end of the permit period (~2029), BPL will have increased the acreage of HQHH on the HMA to at least 6,200 acres.

Monitoring Plan:

- Each year, for the first 5 years and every 5 years thereafter, IFW will conduct winter snow track surveys (e.g., MDIFW lynx ecoregional surveys-Vashon et al. 2010) to monitor whether lynx are present and estimate the number of lynx on the HMA. For the first 5 years, ensure surveys are conducted to estimate hare densities in HMA (e.g., participation in Continental Hare Survey).
- BPL will annually provide an update to IFW on the forest management activities conducted on the HMA and every 5 years provide an estimate of HQHH on the HMA.
- BPL will complete compartment exams (i.e., timber cruises) to update forest maps and management plans every 15 years. This inventory will be used by IFW to calculate the acreage of HQHH on the HMA at the end of the permit period to ensure the mitigation objectives are achieved. The IFW wildlife biologist assigned to BPL will be the primary contact between BPL and IFW, and the person responsible for communicating developments on the HMA to IFW's Research and Assessment Section (RAS).

Although the specifics regarding future forest management activities are not currently available, BPL does not typically employ clearcutting in its forest management. If harvest plan(s) are developed as part of the forest management plan to meet the

[18] Examples of measures that may be taken to avoid adverse effects include but are not limited to pre-survey of harvest areas or time of year restrictions on harvest activities.

mitigation goal (i.e., increase from 3,798 to at least 6,200 acres of moderately to densely stocked conifer dominated saplings), it is likely that other even-age silvicultural techniques (i.e., shelterwood and overstory removal systems) would be used, where forest stand conditions permit, that would be expected to create large blocks of regenerating conifer stands for future hare habitat within the HMA (Simons 2009). The BPL will not thin regenerating conifer stands within the HMA during the time period that these stands meet the criteria for optimal hare cover. By policy, the BPL maintains wildlife trees and large woody material on their lands for a variety of wildlife including denning sites for lynx (Organ et al. 2008).

Trapping will be allowed in the proposed HMA, since the chance of capturing a lynx in a trap is low and the benefits from reducing fisher are high. Each year, less than 12 lynx are caught (and the majority released unharmed) by more than 600 trappers that have more than 260,000 traps set in lynx range in Maine (~7 million acres). Thus the risk of capture is low on the 22,046 acre HMA. If an incidental lynx capture occurred on the HMA, IFW has no evidence that suggests the incidental trapping of lynx is detrimental to the lynx population or would reduce recruitment rates in the proposed HMA. In addition, BPL land is managed for multiple use according to legislative direction , "in a manner consistent with the principles of multiple use and shall produce a sustained yield of products and services in accordance with both prudent and fair business practices and the principles of sound planning" (12MRSA 1833.1,1847.1). Additionally, Public Reserved Lands are to be managed "to demonstrate exemplary land management practices, including silvicultural, wildlife and recreation management practices, as a demonstration of state policies governing management of forested and related types of lands" (12 MRSA 1833.1).

5.4 Changed Circumstances

Adaptive Management vs. Changed Circumstances

IFW considered whether an adaptive management plan was appropriate for Maine's Plan. As stated in the USFWS Five Point Policy, adaptive management is a strategy to address uncertainty in the conservation of a species covered by a Habitat Conservation Plan or Incidental Take Plan (Plan). Furthermore, adaptive management is essential for Plans that would otherwise pose a significant risk to the species due to significant data or information gaps. This is not the case with IFW's data. IFW has more than 12 years of data on the rate of lynx incidental captures, trap-type and configuration, and degree of harm to lynx captured in traps. In addition to information collected from traps set for other furbearing animals that sometimes capture lynx, IFW biologists have captured lynx in foothold traps over the course of a 12-year radiotelemetry study. Collectively, these data indicated that, if caught in a foothold trap[19], most lynx can be released with little or no harm and most survive to produce offspring (see Section 4). IFW believes that an information gap does not exist on the fate of lynx caught in foothold traps and

[19] Lynx were caught in foothold traps during October and November when temperatures did not drop substantially below freezing overnight.

that incidental captures in foothold traps do not represent a significant risk to the species population.

Although foothold traps pose little risk to lynx, lynx can also be caught in killer-type traps set by trappers to capture marten and fisher. In the 13 years since lynx were listed, 7 lynx have been caught in killer-type traps in Maine. A regulatory change by IFW in 2007 made it illegal to set a killer-type trap on the ground (except in terrestrial blind sets or water sets) in WMDs 1-6 and 8-11 (Appendix 2). In 2008, following the capture of two lynx in killer-type traps, the rule was clarified. These regulatory changes have reduced the number of lynx caught in killer-type traps to the point where no lynx have been caught during the past 4 trapping seasons (2009-2012) in a legal set. However, during this time, 1 lynx was caught in an illegal set trap. In addition, none of the 74 radiocollared lynx monitored during 13 fur trapping season were caught in a killer-type trap. These lynx lived in an area where more than 2,000 marten were caught in killer-type traps set for more than 210,000 trap nights.

IFW is not pursuing an adaptive management plan because data from IFW's telemetry study and monitoring incidental take indicates that probability of a lynx being caught in a killer-type trap (even illegally) is low. Further, the potential lethal take requested in this Plan does not pose a significant risk to individual lynx or the species population.

Changed Circumstances

As part of IFW's Plan, IFW developed contingencies that provide the flexibility to implement alternative minimization and mitigation measures should circumstances change. The USFWS addresses two types of changed circumstances: 1) those that can be anticipated and planned for (i.e., changed circumstances) and 2) those that cannot be anticipated (i.e., unanticipated or extraordinary circumstances; USFWS 1996). We address both types of circumstances in Sections 5.3 and 5.5 with an emphasis on changed circumstances.

IFW has identified seven changed circumstances that may require changes in the conservation strategy for this Plan. In the event, a changed circumstance is triggered and IFW implements a response that proves to be effective then the modified measure(s) will be considered as an amendment to the Plan. Implementation for any actions that are triggered in response to a changed circumstance, IFW will provide written documentation that explains the action that will be implemented, including the rationale and how it will be subsequently evaluated for compliance. USFWS would then concur or not with that written document. These are outlined below and discussed individually, in detail, throughout the rest of this section.

IFW acknowledges that incidental lynx trapping and injury rates may be influenced by a variety of natural and human-related factors. However, IFW believes that the seven Changed Circumstances it has outlined in this Plan covers the contingencies that might occur with these other factors (Table 5.4.1)

Changed Circumstances

1) Incidental trapping of lynx increases;
2) The rate of severe injuries to lynx caught in traps increases;
3) The rate which lynx are incidentally killed in legally set traps increases;
4) There is new information on lynx or trapping or technological advances in trap design or monitoring;
5) The proportion of trappers setting killer-type traps in compliance with Maine's leaning pole regulations falls below the 90%;
6) Mitigation acreage is not achieved; and
7) Population of lynx declines.

Changed Circumstance #1: Lynx are being caught in traps at a higher rate than expected

There are a number of potential reasons that may lead to more lynx than expected being caught in traps (Table 5.4.1). IFW previously stated that lynx cannot be excluded from foothold traps that are set to catch canids or bobcat. However, these traps pose little risk to lynx in terms of injuries that would significantly affect their behavior or ability to survive and reproduce in the wild. Nevertheless, IFW proposes to continue to collect data on trap sets at lynx captures and trapper effort (i.e., voluntary trapper effort cards, license sales, fur harvest) to identify the probable cause of any increase in the rate of lynx incidental catches during the 15-year period of its permit. These data may also inform any trends in lynx injury rates.

IFW is seeking coverage for the incidental trapping of up to 195 lynx by licensed Maine trappers during the 15-year permit period. These 195 lynx could include up to 9 lynx with severe injuries and 3 lynx mortalities resulting from trapping or lynx with severe injuries that cannot be released (see Section 4.2 for details).

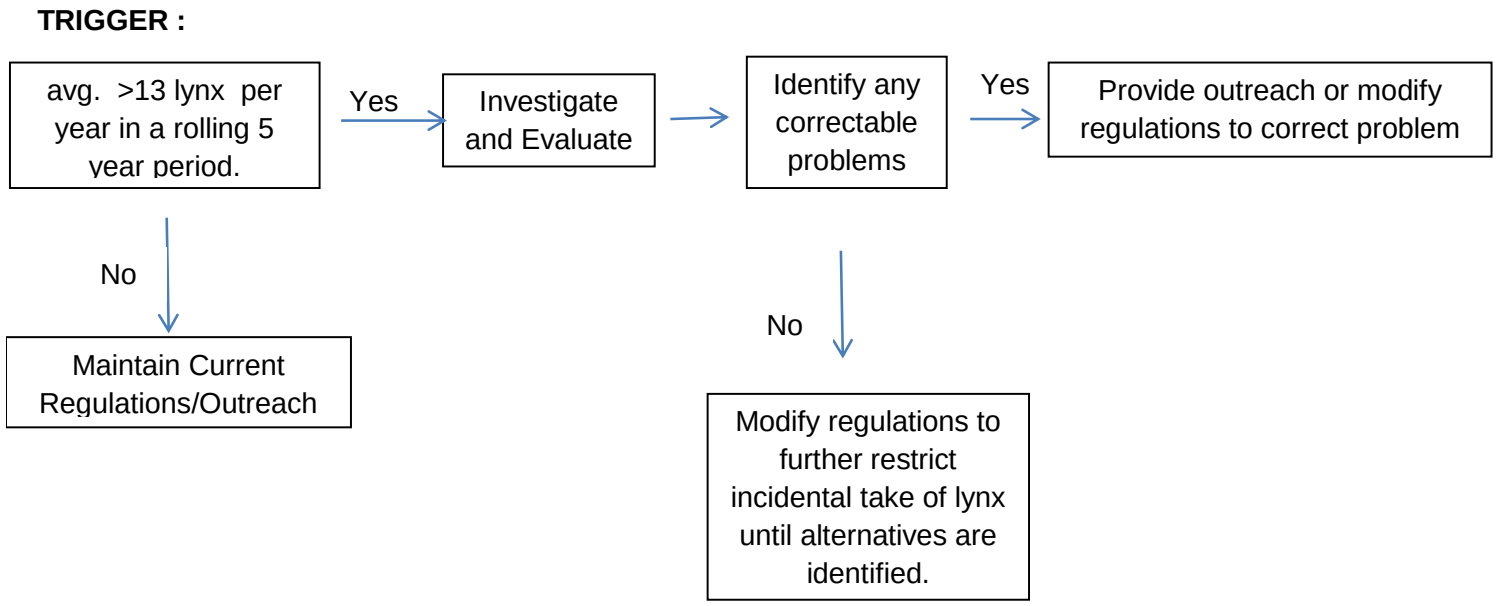
Trigger 1: IFW documents more than an average of 13 lynx incidentally captured per year in legal traps over a rolling 5-year period (Figure 5.4.1) for the permit duration.

Response:

1. In consultation with the USFWS, IFW will implement additional minimization measures to reduce capture rates of lynx prior to the trapping season that follows the trigger being tripped. Options may include identifying non-regulatory (e.g., increased outreach or incentives) or regulatory options (e.g., adjusting trapping season dates or durations, restricting trapping in higher density lynx WMDs, restricting traps or trap sets that are particularly prone to catching lynx, and/or limiting the number of trappers or traps in lynx WMDs). IFW would identify and implement the least restrictive option that is anticipated to reduce lynx captures.
2. The implemented measure will be evaluated within the following year and if found to be ineffective in reducing the capture of lynx, further measures will be implemented.

Rationale: IFW does not believe that trappers are going to capture more than 195 lynx over the 15-year permit period. As part of IFW's commitments to avoid and minimize lynx captures, IFW wildlife biologists and/or wardens will continue to investigate and evaluate each incidental lynx capture (Section 5.2). If during this process, IFW identifies a problem involving the manner in how traps were set or configured, IFW will correct the problem through regulatory changes and/or outreach to trappers. However, if trappers are catching more than an average of 13 lynx per year, that would suggest that the rate of capture is on pace to exceed the requested take authorization. A variety of factors (weather conditions, pelt or gas prices, lynx and trapper number, etc.) may influence the incidental capture rate of lynx. We note that even, if this is the case, the majority would have no or minor injuries. However, IFW will have to take measures to reduce the rate of capture to ensure compliance with the take authorization on the permit.

Figure 5.4.1 Decision Tree Changed Circumstance #1: Lynx are being caught in traps at a higher rate than expected.



Changed Circumstance #2: Lynx are being severely injured in traps at a higher rate than expected.

Trigger 1: IFW documents more than 3 lynx in any rolling 5-year period during the permit duration having severe injuries.

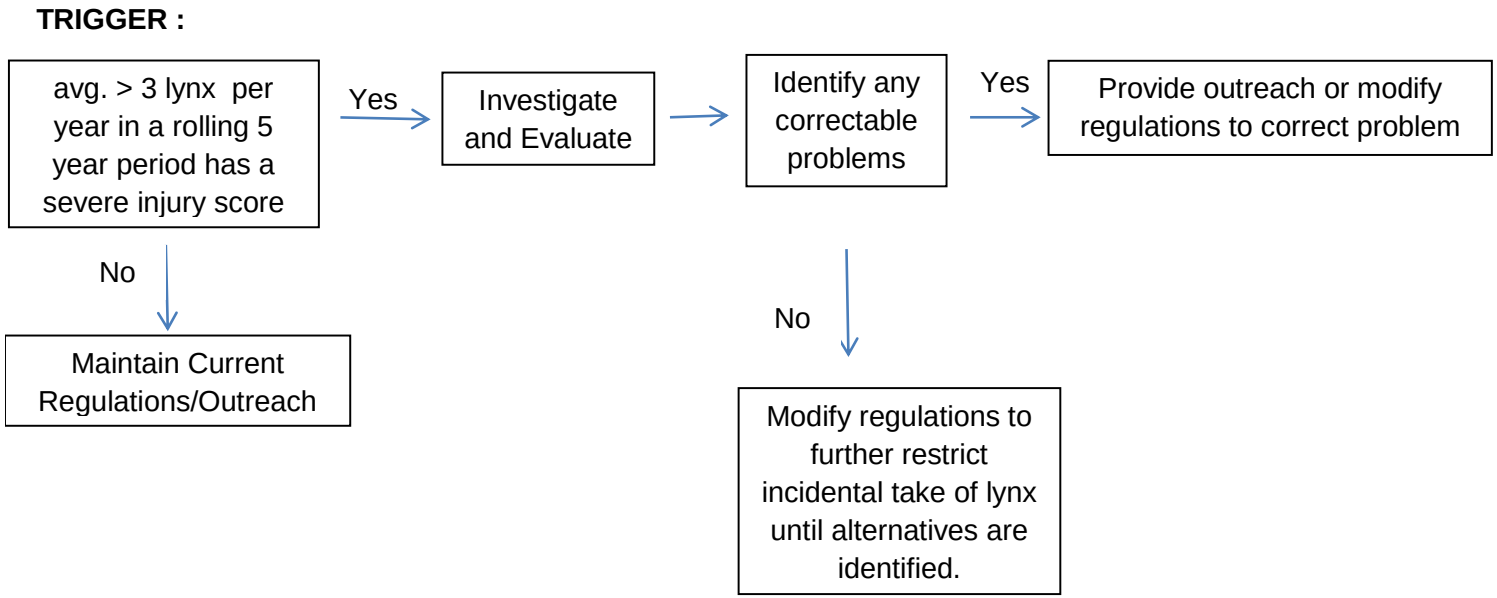
Response:

1. In consultation with the USFWS, IFW will implement additional minimization measures to reduce lynx injury rates prior to the trapping season that follows the trigger being tripped. Options may include non-regulatory or regulatory measures (e.g., outreach, restricting traps or trap sets that are particularly prone to injuring lynx, and/or instituting emergency area closures).

Rationale: IFW does not anticipate more than 9 lynx (not to include 3 anticipated mortalities) to be severely injured in traps over the 15-year permit period. However, if more than 3 lynx are injured in 5 years, that would suggest that the rate of injury is on pace to exceed the requested take authorization. Therefore, IFW will take measures to reduce the rate of injury. If the severe injuries can be related to a particular type of trap or trap configuration, IFW will modify trapping regulations to correct the problem. For instance, if all of the severe injuries occur in foothold traps with an inside jaw spread greater than 5 3/8" with no other contributing factors identified, IFW would restrict the size of foothold traps.

This trigger is based on the rate of severe injuries to lynx that are incidentally trapped. If the proportion of lynx with minor injuries remains the same, (i.e. injury from incidental trapping has not increased) and a problem was not identified during the investigation of the incident, IFW will continue its current regulations and outreach. However, if the rate of severe injuries increases (i.e., >3 lynx in 5 years has a severe injury), IFW will take additional steps to identify and correct the problem before the next trapping season.

Figure 5.4.2 Decision Tree Changed Circumstance #2: Lynx are being injured in traps at a higher rate than expected.



Changed Circumstance #3: Lynx are being killed in traps at a higher rate than expected

Trigger 1: One lynx is killed in a legally set trap (foothold, killer-type, or non-lethal cable restraints [if implemented]) or cannot be released after treatment of a severe injury.

Response: If the fatality or severe injury where the animal can't be released is attributed to either:

1. An aspect of the trap type or trap set that can be corrected and implemented more broadly with a practicable solution by other trappers to prevent additional incidences. In consultation with the USFWS, IFW will address the problem through regulatory changes and/or outreach to trappers prior to the trapping season following the trigger being tripped. In making such changes, IFW will work with stakeholders (e.g., trappers) to evaluate potential measures to better avoid future lethal take. This may include researching or evaluating other traps or trap sets. An example of this is when IFW required killer-type traps to be set on leaning poles in lynx areas. OR
2. A low probability or random event (i.e., fluke), no additional regulatory or non-regulatory measures will be implemented.

Rationale: Although the capture of 1 lynx in a killer-type trap does not exceed IFW's permit request and may be a rare and inexplicable occurrence, IFW is committed to investigating each capture and correcting problems with trap sets or regulations when there is a practicable solution.

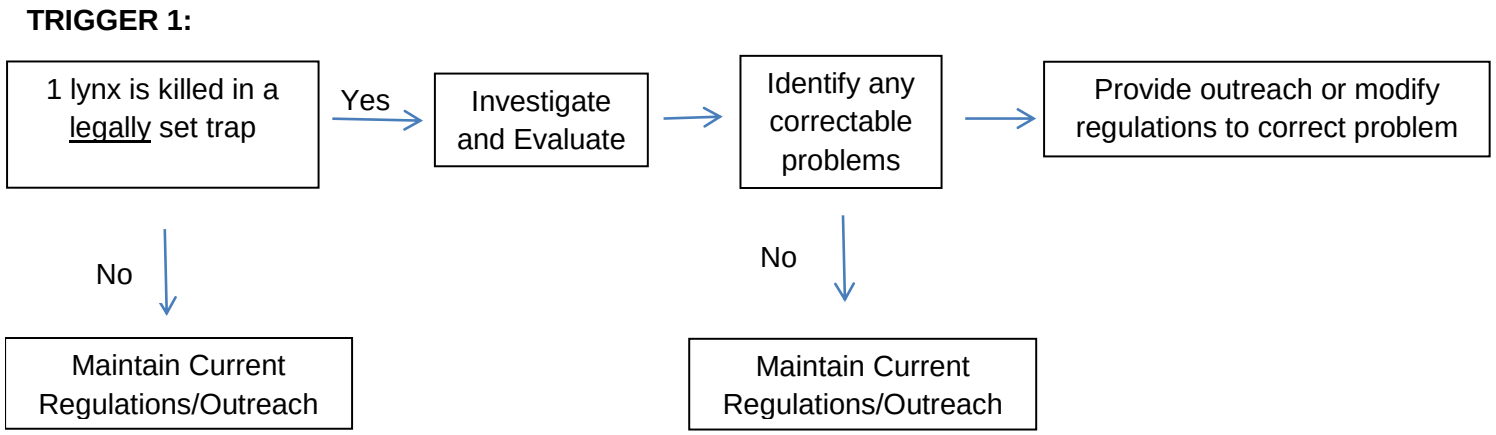
Stakeholders are individuals or groups that can provide information on ways to minimize the incidental trapping of lynx in killer-type traps that are also easy to use and effective for catching fisher and marten. Possible stakeholders include Maine trappers or MTA (primary stakeholder), AFWA, Northeast Furbearer Resources Technical Committee, and the Maine Chapter of The Wildlife Society (wildlife professional organization).

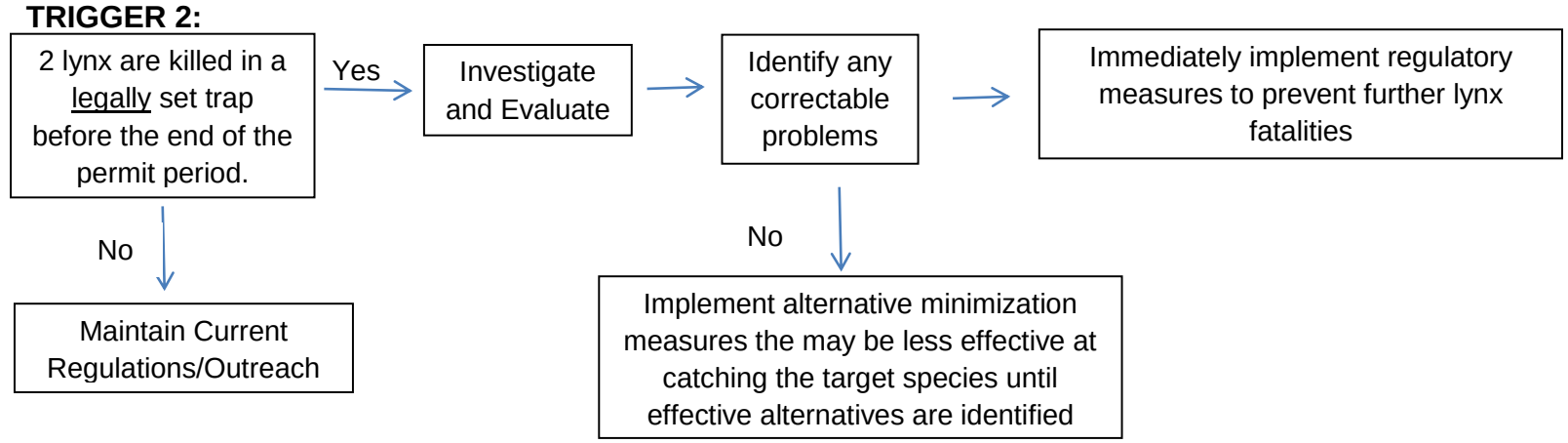
Trigger 2: Two lynx are killed in legally set traps (foothold, killer-type, or non-lethal cable restraints [if implemented]) or cannot be released after treatment of a severe injury.

Response: In consultation with the USFWS, IFW will immediately implement regulatory measures to prevent further lynx fatalities (e.g., require the use of exclusion devices on all killer-type traps, or equally effective measure).

Rationale: IFW does not anticipate more than 3 lynx will be killed or removed from the population from trapping over the 15-year permit period. If 2 lynx die before the end of the permit period, lethal take could exceed the requested take authorization. Therefore, IFW will take measures to reduce the rate of mortality until the permit can be amended.

Figure 5.4.3 Decision Tree Change Circumstance #3: Lynx are being caught in traps at a higher rate than expected.





Changed Circumstance #4: Use of New Information or Technological Advances

Over the course of the ITP term, new information on Canada lynx and trapping may become available (e.g., additional exclusion devices), new methods for monitoring, or technological advances may be developed to avoid or minimize capture of lynx from trapping. IFW may wish to apply some of these new developments into the operations and/or monitoring outlined in IFW's Plan. IFW may choose to use such measures should they be demonstrated, based on the best available science, to be as or more effective than the methods described in this Plan. IFW will work with USFWS to ensure that any new information or techniques that are planned to be used are compatible with the biological goals and objectives of IFW's Plan. Any new method, information, or technology will only be considered if it has been demonstrated in an acceptable scientific study and will not require an increase in the take authorization for the Plan.

Changed Circumstance #5: Trapper compliance with lynx exclusion devices for killer-type trap regulations is less than 90%.

Trigger: This changed circumstance will be triggered if less than 90% of the trappers checked are in compliance with the regulations. For the purpose of this commitment, a trapper will be considered to be in compliance if all of their traps are set in compliance with visible bait, and exclusion devices specifications (e.g., size of opening, distance from opening to trap, placement of baffles) for killer-type traps in lynx areas.

This trigger is going to be assessed by the annual monitoring commitments described in Section 5.2 (PI 4).

Response: If after the initial 2 years of monitoring, the percentage of trappers checked in compliance is less than 90% as described above then IFW will meet with stakeholders (e.g., game wardens and trappers), prior to the next trapping season, to identify and correct the problem through outreach and education. If subsequent years of monitoring do not show improvement, IFW will implement measures such as increased law enforcement details or increased penalties before the start of the next trapping season. If after 5 years of monitoring, trapper compliance with the four lynx avoidance measures listed above has not reached the target levels, IFW in consultation with the USFWS will implement additional corrective measures to improve compliance. Measures may include additional outreach, increased penalties for trapping violations, or restricting traps or trap sets that are particularly difficult for trappers to achieve compliance with or restricting the use of these traps in lynx areas.

Changed Circumstance #6: Mitigation acreage is not achieved

Background: To mitigate the potential lethal take of up to 3 lynx during the 15 year permit period, IFW and BPL have entered into an agreement to create or maintain a minimum of 6,200 acres of high quality hare habitat for lynx on the BPL Seboomook Unit by the end of the 15-year permit period.

Trigger: Mitigation acreage is not achieved by the end of the 15-year permit period. Although there are several different circumstances that could lead to the mitigation not being achievable, the triggers and responses would be the same.

Response: BPL will either increase the size of the mitigation area (currently 23,000 acres) to achieve the mitigation acreage or extend the MOU period beyond 2029.

Changed Circumstance #7: Population of lynx declines.

If there is a catastrophic decline in the number of lynx in Maine (e.g., below 100 lynx), we expect the level of incidental take to decline. If lynx take does not decline, IFW will consult with the USFWS to discuss additional minimization measures that may be necessary to avoid take.

5.5 Unforeseen Circumstances

Unforeseen circumstances are defined as changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by plan developers and the USFWS at the time of the negotiation and development of the plan and that result in a substantial and adverse change in the status of the covered species (50 C.F.R. § 17.3).

The USFWS bears the burden of demonstrating that unforeseen circumstances exist using the best available scientific and commercial data while considering certain factors (50 C.F.R. §§ 17.22(b)(5)(iii)(C)). In deciding whether unforeseen circumstances exist, the USFWS will consider, but not be limited to, the following factors (50 C.F.R. §§ 17.22(b)(5)(iii)(C)):

1. The size of the current range of the affected species;
2. The percentage of the range adversely affected by the covered activities;
3. The percentage of the range that has been conserved by the HCP;
4. The ecological significance of that portion of the range affected by the HCP;
5. The level of knowledge about the affected species and the degree of specificity of the conservation program for that species under the HCP; and
6. Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the species in the wild.

In negotiating unforeseen circumstances, the USFWS will not require the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the HCP without the consent of the permittee (50 C.F.R. §§ 17.22(b)(5)(iii)(A)). If additional conservation and mitigation measures are deemed necessary to respond to unforeseen circumstances, the USFWS may require additional measures of the permittee, where the HCP is being properly implemented, only if such measures are limited to modifications within conserved habitat areas, if any, or to the

HCP's operating conservation program for the affected species, and maintain the original terms of the plan to the maximum extent possible (50 C.F.R. §§ 17.22(b)(5)(iii)(B)). Additional conservation and mitigation measures will not involve the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan without the consent of the permittee.

Notwithstanding these assurances, nothing in the No Surprises Rule "will be construed to limit or constrain the USFWS, any federal agency, or a private entity, from taking additional actions, at its own expense, to protect or conserve a species included in a conservation plan" (50 C.F.R. §§ 17.22(b)(6))

6.0 Funding

One of the five issuance criteria for an ITP states that the applicant will ensure that adequate funding is available for implementing all components of their Plan, including minimization measures, mitigation measures, and unforeseen circumstances ((50 C.F.R. §§ 17.22(b) (2)); 10-1-06 edition). To meet these criteria, the following section describes IFW's funding structure and budget process, how the Plan will be funded, and the costs associated with Plan implementation.

6.1 Funding for Plan Measures

IFW obtains its revenues from license sales (e.g., hunting and fishing licenses), federal matching dollars (Pitman-Robertson (PR) funds), general funds from the Maine Legislature, federal threatened and endangered species funds (i.e., Section 6 funds from the USFWS), sale of state conservation license plates, the USFWS' State Wildlife Grant program, and grants from a variety of private and governmental organizations. Funds that will be used for the minimization measures in IFW's Plan (Section 5) are collectively administered by three Bureaus within IFW: Information and Education, Warden Service, and Resource Management. In addition, the Department of Conservation, Bureau of Parks and Public Lands, will provide logistical support and personnel time for overseeing the management of the proposed mitigation area. IFW recognizes that PR funds have limitations on what activities they can be spent on (e.g., cannot be spent on law enforcement). IFW will ensure that PR funds are only used on eligible minimization activities in its Plan. IFW will make funding activities that are not PR eligible a priority and obtain those funds from its General Fund account.

IFW's spending authority is granted through the biennial legislative process, with fiscal years beginning on July 1. Therefore, IFW cannot guarantee State funds for future activities to administer the requirements set forth in the ITP, which are not yet appropriated by the State legislature. Additionally, IFW cannot guarantee acceptance of grant monies unless it has received authorization from the Maine legislature to apply for and accept these monies. However, as a commitment of this Plan, IFW will incorporate in its biennial budget request to the Maine State Legislature a budget that will be adequate to fulfill its obligations under the ITP. IFW will provide evidence that the Legislature has appropriated sufficient funding to implement this plan by July 15th each year. IFW recognizes that failure to annually ensure adequate funding to implement the Plan may be grounds for suspension or partial suspension of the ITP. Incidental take authorization under the permit is contingent on demonstrating adequate annual funding for plan implementation, including both IFW and MBPL (as pertaining to implementation of the mitigation).

6.2 Plan Implementation Costs

While developing the conservation commitments in this Plan, IFW worked to incorporate existing program resources, to the extent practicable, to meet the biological goals and objectives of the Plan. This approach allows IFW to implement much of the Plan within

its existing programs. Table 6.2.1 identifies the costs for implementing the Plan (other than mitigation measures), which are anticipated to average up to $69,000 annually. These costs do not reflect personnel costs associated with implementing this Plan, which will be covered by existing staff. The diversion of personnel time to IFW's Incidental Trapping Plan will come at the expense of other wildlife programs or law enforcement activities. The amount of personnel time needed to implement IFW's Plan will be fairly high, especially for the first couple of years. For example, the lead wildlife biologist for responding to lynx incidental trapping incidents spent 50% of her time preparing for and responding to lynx incidental catches in 2012 (over an 8 week period). This does not include the time that other staff supported her in this effort. In the event that staff positions critical for ITP implementation are lost or eliminated, IFW will be committed to reassigning staff resources to ensure effective implementation of all ITP commitments. In addition to costs provided in Table 6.2.1, IFW estimates the cost of training for the use of non-lethal cable restraints described in Appendix 13 to be $500/year.

Table 6.2.1 Proposed minimization activities for the incidental catch of lynx by Maine trappers and the approximate additional costs of these activities. With the exception of differential pay, the personnel costs associated with implementing these activities are not included. Personnel time spent on implementation of the Plan does divert time away from other wildlife management and law enforcement activities.

Activity		FTE workdays[b]	Frequency of Activity	Ongoing Activity Cost	New Activity Cost	Total Cost[c]
RC 1	Restrict placements of killer-type sets		Annually	N/A	N/A	
RC 2	Mandatory Reporting		Annually	N/A	N/A	
RC 3	the Use of Visible Bait		Annually	N/A	N/A	
RC 4	Restrict Foothold Traps		Annually	N/A	N/A	
IM 1	Trapped Lynx Hotline Standby Salary Deferential Phone line		Annually	 $3,600/yr $600.00/yr	N/A	 $54,000 $9,000
IM 2	Responding to Lynx Staff time Equipment	10%	Annually	Included in staff base salary $300/year	N/A	$4,500
IM 3	Update Standard Operating Procedures	0.4%	Every 3 years	$300/update	N/A	$1,500
IM 4	Maintain List of Cooperating Veterinarians	0.4%	Annually	Included in staff base salary	N/A	
IM 5	Rehabilitate Injured Lynx Collars		As needed	N/A	$2,000/lynx $2,500/lynx	Up to $18,000 Up to $22,500
IM 6	Injury Evaluation Training for Staff	3%	Every 3 years	N/A	$1,000/session	$5,000
IM 7	Veterinary Oversight		3 lynx in 3 year period	N/A	$500/lynx	$7,500
IM 8	Orphaned Kittens		As needed	N/A	$1,200/kitten	~$4,800
O&E 1	Reinforce Compliance with trapping regulations		Annually	Included in staff base salary	N/A	
O&E 2	Publish a Regulation Booklet		Annually	$54,000	N/A	$810,000
O&E 3	Trapper Information Booklet Letter and Lynx Portion Mailed	0.4%	Annually	N/A	$5,453	$81,795

Activity		FTE work days[b]	Frequency of Activity	Ongoing Activity Cost	New Activity Cost	Total Cost[c]
O&E 4	"How to avoid the incidental take of lynx" Brochure Printing Cost Additional postage	0.1%	once every 5 years	N/A	 $2,700[a] $825	 $8,100 $2,475
O&E 5	Maintain Website Information	0.4%	Annually	Included in staff base salary	N/A	
O&E 6	Trapper Education Program		Annually	N/A	N/A	
O&E 7	Trapper video	3%	One Time		$5000 video $4,700 postage	$5,000 $4,700
O&E 8	Continued Education for Instructors	0.4%	Every 2 years		N/A	
PI 1	Extend Lynx Regulations		Annually	Included in staff base salary	N/A	
PI 2	Investigate all lynx incidental captures	5%	Annually	Included in staff base salary	N/A	
PI 3	Cooperate with USFWS on Investigations	5%	Annually	Included in staff base salary	N/A	
PI 4	Conduct targeted compliance monitoring	15%	Annually		Included in staff base salary	
PI 5	Consult with trappers		Annually	Included in staff base salary	N/A	
Total		**44%**				**$1,038,537**

[a] The brochure would be mailed with the annual letter to Maine Trappers and would not have the cost of an individual mailing.

[b] Percentage of a full-time employees (FTE) annual work day to complete activity is based on 260 work days/year. For some activities, more than 1 FTE is involved. The percentage of a FTE work days was calculated as the number of FTEs x the number of days involved in activity/260 annual work days. For example, 23 biologists will attend IM6 training every 3 years, thus % FTE work days=(23 FTE X 1 day/3 years)/260 work days.

[c] Does not include FTE cost. The daily salary for a FTE is $325; the annual cost of 44% of a FTE annual work days to carry out the minimization measures in this plan is estimated at $36,031.67.

6.2.2 Plan Mitigation Costs

An MOU exists between the BPL and IFW for the management of the mitigation area (Appendix 11a). The majority of the cost of mitigation will be covered by BPL and are not expected to exceed the costs of the normal operations that would occur on the proposed Habitat Management Area (i.e., no additional cost to IFW). However, BPL may incur a financial loss if it has to harvest forest stands to meet habitat management goals prior to the time a stand would normally be harvested for its timber value. IFW's costs for implementing the mitigation plan are estimated at approximately $16,000 for 3 lynx surveys on the mitigation area (Table 6.2.2).

Table 6.2.2 Estimated costs of implementing mitigation measures (Section 5.3) that IFW will incur.

Activity	Frequency	Total Cost for Activity
Lynx Surveys	Three times in 15 years	
Personnel		$3,140
Transportation		$810
Snowmobiles		10,000
Equipment Repairs		$1500
Misc. Equipment		$400
Total for Surveys		$15,850
BPL Mitigation		
Cruising Mitigation Area		
Personnel		$4,428
Transportation		$504
Food and Lodging		$600
Develop Forest Management Plan		
Personnel		$11,138
Transportation		$1,232
Food and Lodging		$1,600
Stand typing and modeling		$10,437
Harvest planning and execution		$21,000[1]
Total BPL Mitigation Costs		$50,939

[1] Profits from harvest will off-set cost of harvest

6.3 Plan Monitoring Costs

The Plan's monitoring costs will primarily consist of personnel costs, which are covered under the agency's existing annual budget. Minor expenses will occur for activities such as compliance monitoring for killer-type traps (RC-6, Section 5.2; Table 6.2.1). Other monitoring activity cost (e.g., responding to incidentally caught lynx) are covered in the plan's minimization costs (Table 6.2.1) or mitigation costs (Table 6.2.2).

7.0 Measures Considered but Not Implemented

The USFWS considered five alternatives, each with an increasing number of minimization measures, in its Draft Environmental Assessment (EA) for the 2008 submission of IFW's Plan. The USFWS' HCP Handbook (Chapter 3, p. 35) requires a description of at least two alternative actions to the proposed taking. IFW discusses three alternative actions in its Plan: 1) Discontinue Trapping Statewide, 2) Discontinue Trapping Selectively, and 3) Other Minimization and Mitigation Measures. The rationale for incorporating or not incorporating alternative actions into the Plan follows. In addition, in a separate memorandum to the USFWS, IFW provides additional information or data on the validity of other measures for minimizing lynx captures recommended in the USFWS Draft EA or by the public.

7.1 Alternative I. Discontinue Trapping Statewide

The alternative action considered was to discontinue trapping statewide.

This alternative would result in no take of Canada lynx by trapping. The benefit of any reduced take from this action would be relatively minor relative to other sources of human related mortality (e.g., animal-vehicle collisions) that have a greater impact on lynx populations. Furthermore, if fisher trapping were eliminated, fisher predation on lynx would likely increase (Section 4.2) and have a greater impact than any incidental trapping might have on Maine's lynx population.

Trapping cannot be replaced with an alternative activity that effectively harvests furbearing animals and provides a similar outdoor recreational experience. In 1973, Maine's legislature directed IFW's Commissioner to establish open seasons for the trapping of furbearing animals (Title 12, Chapter 301, § 1960 A). Discontinuing trapping statewide would be contrary to the legislature's original directive. Although lynx have been caught in trapping sets suitable for fox, coyote, bobcat, marten, and fisher, to our knowledge, no lynx have been caught in traps set for beaver, raccoon, mink, skunk, or weasel. Discontinuing trapping for species that have not been associated with incidental capture of lynx would be unreasonable and would not, in itself, help reduce the incidental take of lynx.

Given these considerations, IFW did not consider this an acceptable alternative.

7.2 Alternative II. Discontinue Trapping Selectively

Another alternative action considered would be to discontinue trapping for species that have been associated with the incidental capture of lynx in areas where lynx occur.

This alternative would likely result in no Canada lynx being taken by trappers.

Lynx are distributed primarily in the northern half of the state (essentially WMDs 1 – 11, 14, 18, and 19; Figure 1.1); have been taken in traps set for coyotes, marten, and fisher;

and would be vulnerable to traps set for bobcat and fox. Discontinuing trapping in all lynx WMDs for these species would reduce the statewide trapping harvest for these species accordingly: marten -- (84%), fisher -- (40%), coyote -- (< 31%), red fox -- (< 24%), and bobcat -- (< 16%; Table 3.2). Coyote and fox are hunted as well as trapped; therefore, the reduction in harvest, if trapping were to cease in these WMDs, would be somewhat less than 31% (unknown amount). IFW does not believe it is practicable to ask the public to incur a significant loss of fur trapping opportunity on the outside chance that a lynx may incidentally be taken in a trap set for upland furbearers, especially when the mortality allowance requested in Maine's Plan is not detrimental to Maine's lynx population (Section 4). Additionally, eliminating the harvest of upland furbearers could negatively impact the lynx population indirectly through increase competition of prey and directly by increased mortality by fisher (Section 3.3).

Consequently, IFW is not recommending trapping be discontinued for upland furbearers in the core lynx range and does not consider this an acceptable alternative.

Limit Upland Foothold Trapping Seasons to October and November

There have been no lynx reportedly caught in foothold traps in December in Maine. Many trappers in northern Maine stop using foothold traps when the ground becomes frozen or covered with snow because it is difficult to keep traps operating properly in freeze, thaw, and snowy conditions. In 2011, only 2% of the total coyote harvest and 0.5% of the red fox harvest in WMDs 1-11 was taken in December. IFW does not believe limiting the foothold trapping season to October and November would reduce lynx take or harm to lynx. However, if IFW detects an increase in foothold trapping in December, IFW will follow the protocol outlined in the Changed Circumstances section of this document (Section 5.5).

7.3 Alternative III. Other Minimization and Mitigation Measures

The USFWS' National Environmental Policy Act (NEPA) considered five alternatives, each with an increasing number of minimization measures. Measures suggested by the USFWS or public that would significantly reduce lynx take or harm were included in IFW's Plan. The minimization measures in this Plan are effective at reducing lynx captures and injuries to incidentally captured lynx, while maintaining a furbearer trapping program in Maine.

The public, and the USFWS in its EA, suggested additional minimization measures for inclusion in IFW's Plan. Those that are practicable and have scientific justification were included. The following two measures (require exclusion devices on all killer-type traps and require the use of BMP traps) are assumed to benefit lynx by reducing incidental trapping and injury; however, IFW did not find sufficient scientific justification to include these measures in the Plan. The rational for not including these measures is presented below.

Require Effective Lynx-excluding Devices for All Upland Killer-type Traps in WMDs 1-11, 14, 18, and 19 and Rescind Leaning Pole Regulations

IFW contends that there is no evidence to warrant the mandatory use of exclusion devices for killer-type traps, when these traps are set on leaning poles. IFW's current leaning pole regulations deter lynx from being caught in killer-type traps. No lynx have been caught in legally set killer-type traps since IFW's leaning pole regulations were implemented in 2007 and clarified in 2008. In terms of measuring risk as incidental catch per unit effort, no lynx have been caught in legally set killer-type traps for over 600,000 trap nights[20] on leaning poles in WMDs 1-11 from 2008-2011 (Table 7.3.1). In addition none of the 74 radiocollared lynx exposed to killer-type traps during 13 trapping seasons were captured in killer-type traps.

Table 7.3.1 The estimated number of trap nights (TN) where trappers targeted marten in WMDs 1-11 from 2008 to 2011.

Trapping Season	Trap Nights/ 1 marten in WMDs 1-11	Number of Marten Harvested in WMDs 1-11	Total # TN in WMDs 1-11
2008-09	67	1,988	133,196
2009-10	67	2,048	137,216
2010-11	67	3,003	201,201
2011-12	128	1,112	142,336
		Total	613,949

The lynx-exclusion device IFW developed with trappers was tested for the efficiency of excluding lynx from reaching the trap within the device when set on the ground. The results of this testing indicated that the lynx-exclusion device would prevent lynx from being caught in killer-type traps; however, the efficacy of catching marten and fisher in these devices has not been determined. Currently, trappers are not permitted to set killer-type traps on the ground in lynx WMDs (except killer-type traps $\leq$ 5 inches when set as blind sets or under overhanging stream banks (Appendix 2). This exclusion device was effective at excluding lynx from killer-type traps and provides trappers the opportunity to set baited killer-type traps for marten and fisher on the ground in lynx WMDs without catching lynx. The lynx-exclusion device that IFW approved is different than devices required in other states that were developed to exclude dogs.

Lynx exclusion devices are large, cumbersome, and more difficult to set than killer-type traps on leaning poles. These devices may also be less effective at catching the target

[20] From 2010 to 2011 trapper effort reporting and harvest data were collected from trappers trapping in WMDs 1-11. The average number trap nights (one trap night is equal to one trap set for one night e.g., 2 traps set for 1 night = 2 trap nights) it took a trapper to catch 1 marten were multiplied by the number of marten tagged in WMDS 1-11. Because trapper effort data were only available for 2010 and 2011 IFW used the conservative number of trapper nights required to catch a marten (67) from 2010 to estimate the number of trap nights in WMDs 1-11 for 2008 and 2009 therefore is likely an underestimate of the number of trap nights in those years.

species. If IFW were to require trappers to use exclusion devices when trapping with killer-type traps, it would be a disincentive for most trappers and would reduce fisher and marten trapping in Maine. In addition, the risk of capturing lynx on leaning pole sets is low, since regulatory changes have been put in place. If circumstances change, IFW has a contingency plan to address increased take (Section 5.4).

Require All Trappers to Use Only Foothold Traps Meeting BMP Standards for Fox, Coyote, and Bobcat and Rescind Existing Foothold Trap Size Regulations Once BMP Traps are Fully Implemented.

Determine the Extent that BMP Foothold Traps are Used.

The purported benefits of reducing lynx take or injuries by requiring all trappers to use only traps meeting Best Management Practices (BMP) standards is not supported by National BMP data or BMP data collect in Maine. BMP traps were tested and approved for specific species. It is inappropriate to require trappers to use traps meeting BMP standards for fox and coyote in the hope that these traps would be less injurious to lynx. Many of the traps tested and approved for foxes, coyotes, and bobcats were not tested during BMP trap testing for lynx in Alaska (AFWA 2011). Therefore, it is unknown if lynx would be injured in a trap approved for other species. Trappers in Maine are not targeting lynx; therefore, requiring canid trappers to use BMP traps approved for lynx may lead to more frequent or severe injuries for smaller furbearers (e.g., red fox).

Prior to and after the Consent Decree, that limits the size of foothold traps that can be used in the lynx range but did not require BMP approved traps, injuries to incidentally captured lynx were similar to or lower than injuries report for coyotes and bobcats caught in BMP approved traps (Tables 4.2.2, 7.3.2 and 7.3.3). Data collected in Maine from 1999 through 2012 show that 94% (n=32) of the incidentally caught lynx in foothold traps set by trappers and examined by IFW biologists had no injury or only a minor injury (minor injury= ISO score ≤ 10 [see Table 4.2.1]). Again, these injury scores are lower or similar to injury scores observed for coyotes and bobcats caught during BMP trap testing (Tables 7.3.2 and 7.3.3) and lynx caught by IFW biologists using BMP approved traps for lynx (Table 4.1.1); therefore, IFW does not believe requiring the use of BMP traps would further reduce injuries or incidental take by trappers. However, if circumstance change, IFW has a contingency plan to address increase take or injury (Section 5.4).

Table 7.3.2 Injury (welfare) scores for 20 restraining devices evaluated for coyotes during Association of Fish and Wildlife Agencies' Best Management Practices (BMP) trap research, 1998-2005. BMP criteria for welfare, efficiency and selectivity were met for 16 devices evaluated for coyotes. Those traps not meeting BMP criteria are shaded in gray. The most commonly used trap in the United States is the No. 2 coil-spring (Responsive Management 2005). This trap met all BMP criteria.

			Cumulative Injury Score			% animals classed by worst injury					
Trap Code	States Tested	Sample Size	Mean	Median	SE	None	Mild	Moderate	Mod. Severe	Severe	Dead
15P	AL, GA, NM, NY, VT	28	16.2	8.5	3.2	25.0	39.3	35.7	0	0	0
NPCD	WI	57	19.3	5.0	25.1	0	80.1	10.5	1.7	7.0	0
BEL	KS, ME, NM, PA, VT,	49	22.7	10.0	4.2	4.1	65.3	26.5	0	4.1	0
134FO	ME, NY, PA	27	25.6	20.0	4.8	11.1	44.4	44.4	0	0	0
3PM	KS, ME, NE, NY, OR, PA, VT	105	25.7	10.0	2.5	1.0	59.0	38.1	1.0	1.0	0
15PM	AR, GA, KS, ME, NY, OK, OR, PA, SD, VT, WA, WY	92	28.9	10.0	4.1	0	53.3	41.3	3.3	2.2	0
2OLM	KS, ME, NE, NY, OK, OR, PA, VT, WA	74	30.1	20.0	2.9	1.4	52.7	43.2	1.4	1.4	0
2C	AR, KS, MI, NY, OH, OK, VT	25	37.0	40.0	7.9	20.0	24.0	48.0	4.0	4.0	0
175OL	GA, ME, NM, NY, OK, OR, PA, SD, WA, WY	72	37.1	35.0	4.1	4.2	43.1	48.6	4.2	4.2	0
175	GA, ME, NM, NY, OK, OR, PA, SD, WA, WY	84	39.5	42.5	3.3	3.6	34.5	56.0	1.2	4.8	0
MJ600	GA, KS, OK, OR, SD, TX, WY	49	40.2	35.0	4.5	0	49.0	49.0	0	2.0	0
MB650	GA, KS, OK, OR, SD, TX, WY	67	42.6	20.0	5.9	1.5	52.2	38.8	1.5	6.0	0
22CC	OR, SD, WA	39	49.8	45.0	6.7	2.6	35.9	53.8	2.6	5.1	0
3MSM	PA, SD	30	50.7	47.5	5.3	0	40.0	50.0	0	10.0	0
33CC	OR, SD, WA	49	52.6	45.0	7.4	0	42.9	44.9	6.1	6.1	0
2FOJ	PA, SD	24	54.3	60.0	6.17	0	41.7	41.7	0	16.6	0
175FOJ	PA, SD	28	54.8	55.0	4.9	0	35.7	50.0	0	14.3	0
3OL	GA, NM, OK, OR, WA	23	60.9	45.0	8.7	4.3	13.0	60.9	4.3	17.4	0
3S	GA, KS, OK, OR, SD, TX, WY	56	71.7	50.0	7.7	1.8	21.4	62.5	0	14.3	0
3O	GA, NM, OK, OR, SD, WA	41	98.2	80.0	9.1	0	7.3	63.4	2.4	26.8	0

Abbreviations

FO = flat offset, P = padded, PM = padded modified (4 coiled), FOJ = flat offset jaw, OL = offset laminated, CC = Coyote Cuff brand, OLM = offset laminated modified (4 coiled), O = offset PM = padded modified (4 coiled), S = longspring, MSM = Montana Special Modified, NPCD = non-powered cable device, BEL = Belisle foot snare, MB650 = Minnesota Brand 650, and MJ600 = Sterling 600

Table 7.3.3 Injury (welfare) scores for 16 restraining devices evaluated for bobcats during the Association of Fish and Wildlife Agencies' Best Management Practices (BMP) trap research, 1998-2006. BMP criteria for welfare, efficiency, and selectivity were met for all 16 devices evaluated for bobcats. The most commonly used trap type in the United States for capturing bobcats is the No. 3 coil-spring (Responsive Management 2005). The standard No. 3 coil-spring trap met all BMP criteria, as did the same trap size with modifications including padded jaws, offset jaws, laminated jaws, and jaws with both offset and lamination.

			Cumulative Injury Score			% animals classed by worst injury only					
Trap Code	States Tested	Sample Size	Mean	Median	SE	None	Mild	Moderate	Mod. Severe	Severe	Dead
Cage 109.5 (Tomahawk)	CA, GA, KS	22	0.3	0	0.3	95.5	4.5	0	0	0	0
#1.5 coil-spring (WOV)	GA, KS, NC, OK, PA, SC, VT	42	9.4	5.0	1.5	4.8	83.3	11.9	0	0	0
#1.75 coil (WOV)	GA, NM, OK, PA	23	9.8	5.0	4.6	13.0	74.0	8.7	0	4.3	0
#3 padded, 4 coil (WOV)	PA, KS, OR	27	10.1	5.0	1.9	0	55.6	44.4	0	0	0
# 3 coil, offset (BRI)	GA, NM, OK, OR	22	11.2	5.0	2.7	4.5	76.3	19.2	0	0	0
#1.75 offset, laminated (WOV)	NY, GA, PA, NM, OK, OR	38	12.8	5.0	4.2	18.4	52.7	23.7	0	5.3	0
# 3 coil, offset, lam (BRI)	GA, NM, OK, OR, WA	31	15.8	5.0	4.1	3.2	71.0	22.6	0	3.2	0
MJ 600 (Sterling)	GA, KS, OK, OR, TX	37	16.8	10.0	2.9	2.7	81.1	16.2	0	0	0
Belisle Foot Snare	KS, NM, PA	18	17.3	5.0	5.3	0	72.2	22.2	5.6	0	0
# 2 coil (WOV)	KS, NC, NY, OK	30	20.1	7.5	3.9	0	76.7	23.3	0	0	0
MB 650 (Minnesota)	GA, KS, OK, OR, TX	29	20.9	5.0	4.8	0	75.9	20.7	0	3.4	0
#2 offset, laminated, 4 coil (BRI)	KS, OK, PA, OR, WA	21	21.2	10.0	4.4	0	66.7	33.3	0	0	0
#1.5 padded, 4 coil (WOV)	GA, KS, OK, PA, VT	43	23.0	15.0	4.6	4.8	72.1	16.3	2.3	4.7	0
# 3 longspring (SC)	GA, KS, OK, TX	45	25.8	5.0	5.9	4.4	66.6	22.2	0	6.7	0
# 3 coil, lam (BRI)	GA, KS, OK	20	25.9	10.0	11.8	0	80.0	10.0	5.0	5.0	0
# 3 coil (BRI)	KS, OK, NE, MI	30	37.7	20.0	9.3	0	70.0	16.7	3.3	10.0	0

Abbreviations

FO = flat offset, P = padded, PM = padded modified (4 coiled), FOJ = flat offset jaw, OL = offset laminated, CC = Coyote Cuff brand, OLM = offset laminated modified (4 coiled), O = offset PM = padded modified (4 coiled), S = longspring, MSM = Montana Special Modified, NPCD = non-powered cable device, BEL = Belisle foot snare, MB650 = Minnesota Brand 650, and MJ600 = Sterling 600

8.0 Future Amendments

An HCP and/or ITP (in IFW's case Plan and/or ITP) may be modified in accordance with the ESA, the USFWS's implementing regulations, the implementation agreement (IA), and this chapter. HCP and permit modifications are not anticipated on a regular basis; however, modifications to the HCP and/or ITP may be requested by either IFW or the USFWS. The USFWS also may amend the ITP at any time for just cause, and upon a written finding of necessity, during the permit term in accordance with 50 C.F.R. § 13.23(b). The categories of modifications are administrative changes, minor amendments, and major amendments.

8. 1 Administrative Changes

Administrative changes are internal changes or corrections to the HCP that may be made by IFW, at its own initiative, or approved by IFW in response to a written request submitted by the USFWS. Requests from the USFWS will include an explanation of the reason for the change, as well as any supporting documentation. Administrative changes on IFW's initiative do not require preauthorization or concurrence from the USFWS.

Administrative changes are those that will not: a) result in effects on a HCP species that are new or different than those analyzed in the HCP, environmental assessment (EA), or the USFWS's biological opinion (BO), b) result in take beyond that authorized by the ITP, c) negatively alter the effectiveness of the HCP, or d) have consequences to aspects of the human environment that have not been evaluated. IFW will document each administrative change in writing and provide the USFWS with a summary of all changes, as part of its annual report, along with any replacement pages, maps, and other relevant documents for insertion in the revised document.

Administrative changes include, but are not limited to, the following:

- Corrections of typographical, grammatical, and similar editing errors that do not change intended meanings;
- Corrections of any maps or exhibits to correct minor errors in mapping; and
- Corrections of any maps, tables, or appendices in the HCP to reflect approved amendments, as provided below, to the ITP or permit.

8.2 Minor Amendments

Minor amendments are changes to the HCP, the effects of which on HCP species, the conservation strategy, and IFW's ability to achieve the biological goals and objectives of the HCP, are either beneficial or not significantly different than those described in this HCP. Such amendments also will not increase impacts to species, their habitats, and the environment beyond those analyzed in the HCP, EA, and BO or increase the levels of take beyond that authorized by the ITP. Minor amendments may require an amendment to the ITP or the IA. A proposed minor amendment must be approved in

writing by the USFWS and IFW before it may be implemented. A proposed minor amendment will become effective on the date of the joint written approval.

IFW or the USFWS may propose minor amendments by providing written notice to the other party. The party responding to the proposed minor amendment should respond within 30 days of receiving notice of such a proposed modification. Such notice shall satisfy the provisions of 50 C.F.R. § 13.23, as well as include a description of the proposed minor amendment; the reasons for the proposed amendment; an analysis of the environmental effects, if any, from the proposed amendment, including the effects on HCP species and an assessment of the amount of take of the species; an explanation of the reason(s) the effects of the proposed amendment conform to and are not different from those described in this HCP; and any other information required by law. When IFW proposes a minor amendment to the HCP, the USFWS may approve or disapprove such amendment, or recommend that the amendment be processed as a major amendment as provided below. The USFWS will provide IFW with a written explanation for its decision. When the USFWS proposes a minor amendment to the HCP, IFW may agree to adopt such amendment or choose not to adopt the amendment. IFW will provide the USFWS with a written explanation for its decision. The USFWS retains its authority to amend the ITP, however, consistent with 50 C.F.R. § 13.23.

Provided a proposed amendment is consistent in all respects with the criteria in the first paragraph of this section, minor amendments include, but are not limited to, the following:

- Changes to IFW's monitoring protocols to improve their effectiveness;
- Adding conservation or management measures to our mitigation plan to enhance its effectiveness;
- Updates to maps or to lynx species occurrence data;
- Minor changes to the biological goals or objectives;
- Modification of existing or adoption of new performance indicators or standards if results of monitoring and research, or new information developed by others, indicate that the initial performance indicators or standards are inappropriate measures of success of the applicable conservation measures;
- Minor changes to survey or monitoring protocols that are not proposed in response to adaptive management and that do not adversely affect the data gathered from those surveys;
- Modifying the design of existing research or implementing new research;
- Conducting monitoring surveys in addition to those required by the HCP and ITP;
- Minor changes to the reporting protocol.

8.3 Major Amendments

A major amendment is any proposed change or modification that does not satisfy the criteria for an administrative change or minor amendment. Major amendments to the HCP and ITP are required if IFW desires, among other things, to modify the projects

and activities described in the HCP such that they may affect the impact analysis or conservation strategy of the HCP, affect other environmental resources or other aspects of the human environment in a manner not already analyzed, or result in a change for which public review is required. Major amendments must comply with applicable permitting requirements, including the need to comply with NEPA, the National Historic Preservation Act (NHPA), and Section 7 of the ESA.

In addition to the provisions of 50 C.F.R. § 13.23(b), which authorize the USFWS to amend an ITP at any time for just cause and upon a finding of necessity during the permit term, the HCP and ITP may be modified by a major amendment upon IFW's submission of a formal permit amendment application and the required application fee to the USFWS, which will be processed in the same manner as the original permit application. Such application generally will require submittal of a revised HCP, a revised IA, and preparation of an environmental review document in accordance with NEPA. The specific document requirements for the application may vary, however, based on the substance of the amendment. For instance, if the amendment involves an action that was not addressed in the original HCP, IA, or NEPA analysis, the documents may need to be revised or new versions prepared addressing the proposed amendment. If circumstances necessitating the amendment were adequately addressed in the original documents, an amendment of the ITP might be all that would be required.

Upon submission of a complete application package, the USFWS will publish a notice of the receipt of the application in the Federal Register, initiating the NEPA and HCP public comment process. After the close of the public comment period, the USFWS may approve or deny the proposed amendment application. IFW may, in its sole discretion, reject any major amendment proposed by the USFWS.

Changes that would require a major amendment to the HCP and/or ITP include, but are not limited to:

- Revisions to the covered lands or activities that do not qualify as a minor amendment;
- Increases in the amount of take allowed for covered activities;
- Adding new or additional covered species;
- A renewal or extension of the permit term beyond 15 years, where the criteria for a major amendment are otherwise met, and where such request for renewal is in accordance with 50 C.F.R. § 13.22;
- Extending the period of time covered by IFW's mitigation agreement with BPL to ensure habitat mitigation goals are met.

9.0 Literature Cited

Association of Fish and Wildlife Agencies (AFWA). 2006a. Best management practices for trapping in the United States introduction.

Association of Fish and Wildlife Agencies (AFWA). 2006b. Best management practices for trapping bobcats in the United States.

Association of Fish and Wildlife Agencies (AFWA). 2006c. Best management practices for trapping raccoon in the United States.

Association of Fish and Wildlife Agencies (AFWA). 2007. Best management practices for trapping beaver in the United States.

Association of Fish and Wildlife Agencies (AFWA). 2011. Best management practices for trapping Canada lynx in the United States.

Aubry, K. B., G. M. Koehler, J. R. Squires. 2000. Ecology of Canada lynx in southern boreal forests. Pp. 373 – 396 *in* L. F. Ruggiero, K. B. Aubry, S. W. Buskirk, G. M. Koehler, C. J. Krebs, K. S. McKelvey, J. R. Squires, (editors). Ecology and Conservation of Lynx in the United States. University Press of Colorado, Boulder, Colorado, USA.

Bailey, R. G. 1997. Map: Ecoregions of North America (rev.). Washington, DC: USDA Forest Service in cooperation with The Nature Conservancy and the U. S. Geological Survey. 1:15,000,000.

Bailey, T. N., E. E. Bangs, M. F. Portner, J. C. Malloy and R. J. McAvinchey. 1986. An apparent overexploited lynx population on the Kenai Peninsula, Alaska. Journal of Wildlife Management 50:279-290.

Bennett, D. B. 1988. Maine's natural heritage. For the Maine Critical Areas Program, State Planning Office, Augusta, ME. 285pp.

Berg, N. D., E. M. Gese, J. R. Squires, and L. M. Aubry. 2012. Influence of forest structure on the abundance of snowshoe hares in western Wyoming. Journal of Wildlife Management 76:1480-1488.

Boone, R. B. and W. B. Krohn. 1998. Maine Gap Analysis vertebrate data – Part I: distribution, habitat relations, and status of amphibians, reptiles, and mammals in Maine. Final contract report to the U. S. Geological Survey's Biological Resources Division, Gap Analysis Program, Moscow, Idaho. 175pp plus appendices.

Brand, C. J., and L. B. Keith. 1979. Lynx demography during a snowshoe hare decline in Alberta. Journal of Wildlife Management 43:827-849.

Buskirk, S. W., L. F. Ruggiero, C. J. Krebs. 2000. Habitat fragmentation and interspecific competition: implications for lynx conservation. Pp. 83-100 *in* L. F. Ruggiero, K. B. Aubry, S. W. Buskirk, G. M. Koehler, C. J. Krebs, K. S. McKelvey, J. R. Squires, (editors). Ecology and Conservation of Lynx in the United States. University Press of Colorado, Boulder, Colorado, USA.

Carroll, C. 2007. Interacting effects of climate change, landscape conversion, and harvest on carnivore populations at range margin: marten and lynx in the northern Appalachians. Conservation Biology 21:1092-1104.

Eickenberg,K., C. Bastey, P. Smith, M. LaRoche, T. Charles, J. Wiley, S. Ramasay,T. Desjardin, G. Powell, G. Denis. 2007**.** Seboomook Unit Management Plan.

Maine Department of Conservation Bureau of Parks and Lands. http://www.state.me.us/doc/parks/programs/planning/seboomook/

Fernandez, M., F. Palomares , and M. Delibes. 2002. The use of breeding dens and kitten development in the Iberian lynx (*Lynx pardinus*): implications for its conservation. Biological Conservation 94:51-61.

Fuller, A. K. 1999. Influence of partial harvesting on American marten and their primary prey in northcentral Maine. M. S. thesis, University of Maine, Orono, Maine. 141pp.

Fuller, A. K., D. J. Harrison, J. H. Vashon. 2007. Winter Habitat Selection by Canada Lynx in Maine: Prey Abundance or Accessibility? The Journal of Wildlife Management 71:1980-1986.

Fuller, T. K., E. C. York, S. M. Powell, T. A. Decker, R. M. DeGraaf. 2001. An evaluation of territory mapping to estimate fisher density. Canadian Journal of Zoology 79(9):1691-1696.

Gawler, S. C., J. J. Albright, P. D. Vickery, and F. C. Smith. 1996. Biological diversity in Maine – an assessment of status and trends in the terrestrial and freshwater landscape. Maine Natural Areas Program, Department of Conservation, Augusta, Maine. 80pp plus appendices.

Homyack, J. A., J. H. Vashon, C. Libby, E. L. Lindquist, S. Loch, K. L. Pilgrim, and M. K. Schwartz. 2008. Canada lynx-bobcat (*Lynx canadensis* 3 *L. rufus*) hybrids at the southern periphery of lynx range in Maine, Minnesota and New Brunswick. American Midland Naturalist 159:504–508.

Hoving, C. L. 2001. Historical occurrence and habitat ecology of Canada lynx (*Lynx canadensis*) in eastern North America. M. S. Thesis, University of Maine, Orono, Maine, USA.

Hoving, C. L., D. J. Harrison, W. B Krohn, W. J. Jakubas, and M. A. McCollough. 2004. Canada lynx, *Lynx canadensis*, habitat and forest succession in northern Maine, USA. Wildlife Biology 10:285-294.

Jakubas, W. J. 1997. Lynx in Maine. Report to U. S. Fish and Wildlife Service on lynx survey results and historic lynx records in Maine, April 16, 1997. Unpublished report. Maine Department of Inland Fisheries and Wildlife, Bangor, Maine. 18pp.

Kays, R., A. Curtis, and J. J. Kirchman. 2010. Rapid adaptive evolution of northeastern coyotes via hybridization with wolves. Biological Letters 6:89-93.

Kays, R. and R. S. Feranec. 2011. Using stable isotopes to distinguish wild from captive wolves. Northeastern Naturalist 18:253-264.

Koehler, G. M. 1990. Population and habitat characteristics of lynx and snowshoe hares in North Central Washington. Canadian Journal of Zoology 68:845-851.

Kreeger, T. J., P. J. White, U. S. Seal, J. R. Tester. 1990. Pathological responses of red foxes to foothold traps. Journal of Wildlife Management 54:147-160.

Krohn, W. B., and C. L. Hoving. 2010. Early Maine wildlife: historical accounts of Canada lynx, moose, mountain lion, white-tailed deer, wolverine, wolves, and woodland caribou, 1603-1930. The University of Maine Press, Orono, Maine.

Lachowski, H. J. 1997. Relationships among prey abundance, habitat, and American marten in northern Maine. M. S. thesis, University of Maine, Orono, Maine. 73pp.

Litvaitis, J. A., J. A. Sherburne, and J. A. Bissonette. 1985. Influence of understory characteristics on snowshoe hare habitat use and density. Journal of Wildlife Management 49:866-873.
Litvaitis, J. A., B. Johnson, W. Jakubas, K. Morris. 2003. Distribution and habitat features associated with remnant populations of New England cottontails in Maine. Canadian Journal of Zoology 81:877-887.
Maine Department of Inland Fisheries and Wildlife (IFW). 2005. Maine's Comprehensive Wildlife Conservation Strategy. Augusta, Maine. http://www.maine.gov/ifw/wildlife/groups programs/comprehensive strategy/table contents.htm
Maine Forest Service. 1995. 1994 Silvicultural activities report compiled from the 1994 landowner reports. Augusta, Maine. 4pp.
Maine Forest Service. 2006. 2005 Silvicultural activities report including annual report on clearcutting and precommercial activities compiled from the 2005 landowner reports and other survey instruments. Augusta, Maine. 6pp.
McCollough, M. 2007. Canada lynx habitat managament guidelines for Maine. U. S. Fish and Wildlife Service, Maine Field Office, Old Town, Maine.
McCord, C. M. and J. E. Cardoza. 1982. Bobcat and lynx. Pp. 728-766 *in* J. A. Chapman, G. A. Feldhamer (editors). Wild Mammals of North America. The Johns Hopkins University Press, Baltimore, Maryland.
McKelvey, K. S, Aubry, K. B., Ortega, Y. K. 2000. History and distribution of lynx in the contiguous United States. Pp. 207-254 *in* L. F. Ruggiero, K. B. Aubry, S. W. Buskirk, G. M. Koehler, C. J. Krebs, K. S. McKelvey, J. R. Squires, (editors). Ecology and Conservation of Lynx in the United States. University Press of Colorado, Boulder, Colorado, USA.
McMahon, J. S. 1990. The biophysical regions of Maine: patterns in the landscape and vegetation. Orono, Maine. 120pp.
Monthey, R. W. 1986. Responses of snowshoe hares, *Lepus americanus*, to timber harvesting in northern Maine. Canadian Field Naturalist 100:568-570.
Mowat, G, B. G. Slough, and S. Boutin. 1996. Lynx recruitment during a snowshoe hare population peak and decline in Southwest Yukon. Journal of Wildlife Management 60:441-452.
Munoz-Igualada, J., J. A. Shivik, F. G. Dominguez, L. M. Gonzalez, A. A. Moreno, M. F. Olalla, and C. A. Garcia. 2010. Traditional and new cable restarint systems to capture fox in centeral Spain. Journal of Wildlife Management 74:181-187.
Murray, D. L., T. D. Steury, and J. D. Roth. 2008. Assessment of Canada lynx research and conservation needs in the southern range: another kick at the cat. Journal of Wildlife Management 72:1463-1472.
Olson, J. F., and R. Tischaefer. 2004. Cable restriants in Wisconsin. A guide for responsible use. Wisconsin Department of Natural Resources, Madison, USA.
Olson, L.E., J.R. Squires, N.J. DeCesare, and J.A. Kolbe. 2011. Den use and activity patterns in female Canada lynx (*Lynx canadensis*). Northwest Science 85(3):455-462.
Organ, J. F., J. H. Vashon, J. E. McDonald, A. D. Vashon, S. M. Crowley, W. J. Jakubas, G. J. Matula, and A. L. Meehan. 2008. Within-stand selection of

Canada lynx natal dens in northwest Maine, USA. Journal of Wildlife Management 72:1514-1517.
Parker, G. R., J. W. Maxwell, L. D. Morton, and G. E. J. Smith. 1983. The ecology of the lynx (Lynx canadensis) on Cape Breton Island. Canadian Journal of Zoology 61:770-786.
Pollack, K. H., S. R. Winterstein, C. M. Bunck, and P. D. Curtis. 1989. Survival analysis in telemetry studies: the staggered entry design. Journal of Wildlife Management 53:7-15.
Poole, K. G. 1991. Lynx research in the NWT 1990-91. Manuscript Report 52, Department of Renewable Resources, Government of the Northwest Territories, Yellowknife, NWT. 48 pp.
Poole, K. G. 2003. A review of the Canada Lynx, *Lynx canadensis,* in Canada. Canadian Field-Naturalist 177:360-376.
Quinn, N. W. S., and J. E. Thompson. 1987. Dynamics of an expopulation in Ontario. Journal of Wildlife Management 51:297-305.
Responsive Management. 2005. Ownership and use of traps by trappers in the United States in 2004. A
Robinson, L. 2006. Ecological relationships among partial harvesting, vegetation, snowshoe hares, and Canada lynx in Maine. M. S. Thesis, University of Maine, Orono. 184pp.
Schwartz, M. K., K. L. Pilgrim, K. S. McKelvey, E. L. Lindquist, J. L. Claar, S. Loch, and L. F. Ruggiero. 2004. Hybridization between lynx and bobcats: Genetic results and management implications. Conservation Genetics 5:349-355.
Scott, S. A. 2009. Spatio-temporal dynamics of snowshoe hare density and relationships to Canada lynx occurrence in northern Maine. M. S. Thesis, University of Maine, Orono. 190 pp.
Seymour, R. S., A. S. White, and P. G. deMaynadier. 2002. Natural disturbance regimes in northeastern North America-evaluating silvicultural systems using natural scales and frequencies. Forest Ecology and Management 155:357-367.
Simmons-Legaard, E. M., D. J. Harrison, W. B. Krohn, J. H. Vashon. 2013. Canada lynx occurrence and forest management in the Acadian forest. Journal of Wildlife Management. DOI: 10.1002/jwmg.508.
Simons, E. M. 2009. Influences of past and future forest management on the spatiotemporal dynamics of habitat supply for Canada lynx and American martens in northern Maine. Ph. D. Thesis, University of Maine, Orono. 247pp.
Slough, B. G., and G. Mowat. 1996. Lynx population dynamics in an untrapped refugium. Journal of Wildlife Management 60:946-961.
Steury, T. D., and D. L. Murray. 2004. Modeling the reintroduction of lynx to the southern portion of its range. Biological Conservation 117:127-141.
Tumlison, R. 1987. Felis lynx. Mammalian Species. 269:1-8.
U. S. Department of Interior. 2006. Endangered and Threatened Wildlife and Plants -- Proposed Critical Habitat Designations; Proposed Rule. Fish and Wildlife Service. Federal Register 71:176 (Sept. 12, 2006).
U. S. Fish and Wildlife Service (USFWS). 1996. Habitat conservation planning and incidental take permit processing handbook. Washington, D.C. 88pp.

Vashon, J. H., A. L. Meehan, W. J. Jakubas, J. F. Organ, A. D. Vashon, C. R. McLaughlin, G. J. Matula, S. M. Crowley. 2008a. Spatial ecology of a lynx population in northern Maine. Journal of Wildlife Management 72:1479-1487.

Vashon, J. H., A. L. Meehan, J. F. Organ, W. J. Jakubas, C. R. McLaughlin, A. D. Vashon, and S. M. Crowley. 2008b. Diurnal habitat relationships of Canada lynx in an intensively managed private forest landscape in northern Maine. Journal of Wildlife Management 72:1488-1496.

Vashon, J. H., A. Starr, J. Seyfried, S. McLellan. 2010. Canada lynx and wolf. Pages 102-110 in T.P Hodgman and G.J. Matula Jr., editors. A survey of rare, threatened, and endangered fauna in Maine: Eastern Lowlands Eco-region (2005-2007). Maine Department of Inland Fisheries and Wildlife, Bangor, Maine.

Vashon, J. H., S. McLellan, S. M. Crowley, A. Meehan, and K. Laustsen. 2012. Canada Lynx assessment. Unpublished report, Maine Department of Inland Fisheries and Wildlife, Bangor, Maine. 107 pp.

Villemure, M., and H. Jolicoeur. 2004. First confirmed occurrence of a wolf, *Canis lupus*, south of the St. Lawrence River in over 100 years. Canadian Field-Naturalist 118:608-610.

Withey, J.C., T.D. Bloxton, and J. M. Marzluff. 2001. Effects of tagging and location error in wildlife telemetry studies *in* Radio tracking and animal populations edited by J.J. Millspaugh and J.M.Marzluff. Academic Press. San Diego, California, USA.

Wilson P J, S. K. Grewal, I. D. Lawford, J. N. M. Heal, A. G. Granacki, D. Pennock, J. B. Theberge, M. T. Theberge, D. R. Voigt, W. Waddell, R. E. Chambers, P. C. Paquet, G. Goulet, D. Cluff, B. N. White. 2000. DNA profiles of the eastern Canadian wolf and the red wolf provide evidence for a common evolutionary history independent of the gray wolf. Canadian Journal of Zoology 78: 2156-2166.

Wilson, P. J., W. J. Jakubas, S. Mullen. 2004. Genetic status and morphological characteristics of Maine coyotes as related to neighboring coyote and wolf populations. Unpublished final report to the Maine Outdoor Heritage Fund. 58pp.

10.0 Appendices

Appendix 1. Maine's Conservation Statutes Related to Department Authority, Trapping, and Threatened and Endangered Species as of February 2, 2012.

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 2: DEPARTMENT ORGANIZATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 903: DEPARTMENT OF INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: DEPARTMENT ESTABLISHED HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10051. Department established

IFW of Inland Fisheries and Wildlife is established to preserve, protect and enhance the inland fisheries and wildlife resources of the State; to encourage the wise use of these resources; to ensure coordinated planning for the future use and preservation of these resources; and to provide for effective management of these resources. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

IFW consists of the Commissioner of Inland Fisheries and Wildlife, a deputy commissioner, the Division of Licensing, Registration and Engineering, the Bureau of Resource Management and the Bureau of Warden Service. IFW also includes the Advisory Board for the Licensing of Guides and whatever state agencies that are designated. IFW is under the control and supervision of the commissioner. [2009, c. 652, Pt. A, §13 (RPR).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2009, c. 340, §1 (AMD). 2009, c. 369, Pt. A, §26 (AMD). 2009, c. 652, Pt. A, §13 (AMD).

§10052. Division of Licensing and Registration

The Division of Licensing and Registration is established within IFW of Inland Fisheries and Wildlife. The division is equal in organizational level and status with other major organizational units within IFW or its successors. The division is administered by a director who is immediately responsible to the deputy commissioner. The director possesses full authority and responsibility for administering all the powers and duties of the division, subject to the direction of the commissioner and except as otherwise provided by statute. The responsibilities of the division include, but are not limited to: [2011, c. 253, §1 (AMD).]

1. Financial accounting.
[2009, c. 340, §2 (RP) .]

2. Personnel activities.
[2009, c. 340, §2 (RP) .]

3. Licensing and registration. The administration and issuance of department licenses, stamps and permits and the registration of snowmobiles, watercraft and all-terrain vehicles.
[2011, c. 253, §1 (AMD) .]

4. Engineering.
[2011, c. 253, §1 (RP) .]

5. Land acquisition.
[2009, c. 340, §2 (RP) .]

6. Equipment inventory.
[2009, c. 340, §2 (RP) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B13 (AMD). 2003, c. 655, §B422 (AFF). 2009, c. 340, §2 (AMD). 2011, c. 253, §1 (AMD).

§10053. Bureau of Resource Management

The Bureau of Resource Management is established within IFW of Inland Fisheries and Wildlife. The bureau is equal in organizational level and status with other major organizational units within IFW or its successors. The bureau is administered by a director who is immediately responsible to the deputy commissioner. The director possesses full authority and responsibility for administering all the powers and duties of the bureau, subject to the direction of the commissioner and except as otherwise provided by statute. The responsibilities of the bureau include, but are not limited to:
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

1. Wildlife management. The management of the wildlife resources in the State for their preservation, protection, enhancement and use;
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Fisheries management. The management of the inland fisheries resources in the public waters of the State for their preservation, protection, enhancement and use;
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Propagation of fish. The propagation of fish for the effective management of inland fisheries resources in public waters of the State;
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Habitat management. The management of habitat for the protection, preservation, enhancement and use of inland fisheries and wildlife resources;
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Wildlife sanctuaries; wildlife management areas. The management of wildlife sanctuaries and wildlife management areas for the State as designated in chapter 925;
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Data collection. The collection of data for the effective management of inland fisheries and wildlife resources;

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §14 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

7. Research. Research activities for the effective management of inland fisheries and wildlife resources;

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §14 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

8. Animal damage control. The coordination of animal damage control functions throughout the State, including supplemental assistance for the control of coyotes and other nuisance wildlife that exceeds normal funding and staffing levels within IFW;

[2009, c. 340, §3 (AMD) .]

9. Rules. The development of rules governing the effective management of the inland fisheries and wildlife resources of the State; and

[2009, c. 340, §4 (AMD) .]

10. Land acquisition. The acquisition and development of land for the protection, preservation and enhancement of inland fisheries and wildlife resources.

[2009, c. 340, §5 (NEW) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B14 (AMD). 2003, c. 655, §B422 (AFF). 2009, c. 340, §§3-5 (AMD).

§10054. Bureau of Warden Service

The Bureau of Warden Service is established within IFW of Inland Fisheries and Wildlife. It is equal in organizational level and status with other major organizational units within IFW or its successors. The bureau is administered by a director who is immediately responsible to the deputy commissioner. The director is the Game Warden Colonel and is employed pursuant to section 10103, subsection 3 and Title 5, chapter 59, which are applicable to this position. The director possesses full authority and responsibility for administering all the powers and duties of the bureau, subject to the direction of the commissioner and except as otherwise provided by statute. The responsibilities of the bureau include, but are not limited to: [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

1. General enforcement. Enforcement of laws or rules as designated by this Part, or as specified;

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Wildlife and fisheries enforcement. Enforcement of laws and department rules pertaining to the management and protection of inland fisheries and wildlife resources as further designated by section 10353;

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §15 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Snowmobile, watercraft and all-terrain vehicle enforcement. Enforcement of laws and department rules pertaining to the registration and operation of snowmobiles, watercraft and all-terrain vehicles;

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §15 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

4. Search and rescue. The coordination and implementation of all search and rescue operations as specified under section 10105, subsection 4;

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Safety. Assistance with programs for hunter safety and for the safe operation of snowmobiles, watercraft and all-terrain vehicles;

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Data collection. The collection of data as needed for the management and protection of the inland fisheries and wildlife resources; and

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

7. Other. Such responsibilities as specified in state law.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §16 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B15,16 (AMD). 2003, c. 655, §B422 (AFF).

§10056. Division of Public Information and Education

The Division of Public Information and Education is established within IFW of Inland Fisheries and Wildlife and is responsible for the administration of programs to increase the public's knowledge and understanding of inland fisheries and wildlife resources and the management of these resources, including the administration of education programs for hunter safety and for the safe operation of snowmobiles, watercraft and all-terrain vehicles. The division's responsibilities include public education, promotion of inland fisheries and wildlife resources and the dissemination of information. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §17 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B17 (AMD). 2003, c. 655, §B422 (AFF).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 2: DEPARTMENT ORGANIZATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 903: DEPARTMENT OF INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 2: COMMISSIONER: POWERS AND DUTIES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10101. Appointment

The commissioner is appointed by the Governor, subject to review by the joint standing committee of the Legislature having jurisdiction over fisheries and wildlife matters and to confirmation by the Legislature. The commissioner serves at the pleasure of the Governor. Any candidate for the office of commissioner must have a record of demonstrated support for, and an understanding of, the basics of modern wildlife and fisheries management and have experience in hunting, fishing or trapping. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

§10104. Rule-making power

In addition to other powers granted in this Part, the commissioner has the following powers. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

1. Rules. The commissioner may, with the advice and consent of the advisory council and in conformity with Title 5, Part 18, and except as otherwise provided, adopt, amend and repeal reasonable rules, including emergency rules, necessary for the proper administration, implementation, enforcement and interpretation of any provision of law that the commissioner is charged with the duty of administering. These rules duly adopted have the full force and effect of law and are effective upon filing with the Secretary of State, unless a later date is required by statute or specified in the rule.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Filing of rules. The commissioner may file certified copies of all rules adopted by the commissioner and any and all amendments to the rules with the clerks of the District Court and Superior Court. These certified copies are considered official publications of the State for all purposes, including, but not limited to, the Maine Rules of Civil Procedure, Rule 44(a)(1) and the Maine Rules of Evidence, Rule 902 (5), and judicial notice must be taken accordingly. A facsimile of the signature of the commissioner imprinted by or at the commissioner's discretion upon any such certificate of true copy has the same validity as the commissioner's written signature.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§10105. Other powers

1. Authorize taking or destruction of wildlife. Whenever the commissioner determines it necessary for the accomplishment of the commissioner's statutory duties, the commissioner may authorize a person to assist the commissioner in the taking and destruction of any wildlife. The commissioner may place conditions or restrictions on any authorization granted under this subsection. A person who violates a condition or restriction placed on an authorization granted under this subsection invalidates that authorization and subjects that person to applicable laws under this Part.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §20 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

1-A. Authorize taking and destruction of fish. Notwithstanding sections 12454, 12456 and 12457 and chapter 923, subchapters 4 and 5, whenever an illegal introduction of invasive fish species occurs and the commissioner determines it necessary for resource protection and management, the commissioner may authorize licensed anglers to assist the commissioner in the taking and destruction or sale of that invasive fish species.

[2009, c. 340, §6 (AMD) .]

2. Commissioner's authority to terminate coyote season. The commissioner may terminate open season on coyote night hunting at any time in any area if, in the commissioner's opinion, an immediate emergency action is necessary due to adverse weather conditions or unlawful hunting activity.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §20 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Coyote control program.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §21 (RP); 2003, c. 655, Pt. B, §422 (AFF) .]

4. Search and rescue. Whenever the commissioner receives notification that any person has gone into the woodlands or onto the inland waters of the State on a hunting, fishing or other trip and has become lost, stranded or drowned, the commissioner shall exercise the authority to take reasonable steps to ensure the safe and timely recovery of that person, except in cases involving downed or lost aircraft covered by Title 6, section 303.

A. The commissioner may summon any person in the State to assist in search and rescue attempts. Each person summoned must be paid at a rate set by the commissioner with the approval of the Governor and must be provided with subsistence while engaged in these activities. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. The commissioner may enter into written agreements with other agencies or corporations, including commercial recreational areas, allowing partial search and rescue responsibility within specified areas. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. The commissioner may terminate a search and rescue operation by members of IFW when, in the commissioner's opinion, all reasonable efforts have been exhausted. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. The commissioner may recover all costs directly related to a specific search and rescue operation:

(1) From the person for whom the search and rescue operation was conducted; or

(2) If a person knowingly provided false information that led to a search and rescue operation, from the person who provided that false information. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §22 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §22 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

4-A. Search and rescue dogs. A person assisting the commissioner under subsection 4 with a search and rescue dog certified by or in training with an organization recognized by the Bureau of Warden Service may be accompanied by the search and rescue dog in a place of public accommodation without being required to pay an extra charge or security deposit for the search and rescue dog. The owner of the search and rescue dog is liable for any damages done to the premises by that animal. For purposes of this subsection, "place of public accommodation" has the same meaning as in Title 5, section 4553, subsection 8, paragraph A.

[2009, c. 543, §1 (NEW) .]

5. Boundary waters with New Hampshire and Canada. The commissioner may prescribe bag limits, size limits, open or closed seasons and methods of taking fish from the inland boundary waters between the states of Maine and New Hampshire and provinces of Canada. These rules must be mutually agreed upon by the commissioners of Maine and New Hampshire and the fishery authorities of Canada and approved by the Inland Fisheries and Wildlife Advisory Council.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Establishing line of demarcation. The commissioner, through an agent designated by the commissioner, may establish a line of demarcation between a lake or pond and its outlet or tributaries in areas where the commissioner determines it necessary.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

7. Sale or destruction of confiscated property. The commissioner may sell all property held or confiscated by the State for violation of laws relating to the protection of inland fisheries and wildlife that has been forfeited to the State pursuant to sections 10502 and 10503. A confiscated or forfeited handgun that was confiscated or forfeited because it was used to commit a homicide must be destroyed by the State, unless the handgun was stolen and the rightful owner was not the person who committed the homicide, in which case the handgun must be returned to the owner if ascertainable. For purposes of this subsection, "handgun" means a firearm, including a pistol or revolver, designed to be fired by use of a single hand. The commissioner shall transmit all money received from sales under this subsection to the Treasurer of State to be credited to IFW.

[RR 2003, c. 2, §18 (COR) .]

8. Employee discipline. The commissioner may dismiss, suspend or otherwise discipline any department employee for cause. This right is subject to the right of appeal and arbitration of grievances as set forth in Title 5.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §23 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

9. Possession and disposal of fish and wildlife. The commissioner may take possession of sick, injured or dead fish and wildlife that is not the property of another person. For any fish and wildlife possessed by the commissioner under this subsection, the commissioner may:

A. For sick or injured fish or wildlife, destroy that fish or wildlife when necessary in a manner consistent with the provisions of Title 17, section 1043; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. For dead fish or wildlife, dispose of that fish or wildlife in any manner considered appropriate by the commissioner. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

This subsection does not apply to fish or wildlife seized by the commissioner under section 10502.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

10. Taking and importing wildlife. The commissioner may:

A. For scientific purposes, take fish and wildlife and import fish and wildlife into the State or authorize others to do so; and [2003, c. 655, Pt. B, §24 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. Take or import wild animals or wild birds of any kind, dead or alive, for the purpose of inspection, cultivation, propagation or distribution or for scientific or other purposes considered by the commissioner to be of interest to the game industry of this State. [2003, c. 655, Pt. B, §24 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §24 (RPR); 2003, c. 655, Pt. B, §422 (AFF) .]

11. Take or import animals and birds.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §25 (RP); 2003, c. 655, Pt. B, §422 (AFF) .]

12. Purchase or sale of wildlife for use as evidence. An agent of the commissioner may buy or sell wildlife for use as evidence in the prosecution of a violation of this Part.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §26 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

13. Prevention of introduction of harmful pathogens into Maine's fish and wildlife population. To prevent the introduction of pathogens into the State that pose a significant risk to the health of Maine's unique fish and wildlife populations, the commissioner may prohibit or otherwise regulate the transportation of a fish or wildlife species or any part of a fish or wildlife species into or within the State. The commissioner may adopt rules to carry out the purpose of this subsection. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2005, c. 470, §1 (NEW) .]

SECTION HISTORY
RR 2003, c. 2, §18 (COR). 2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B20-26 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 470, §1 (AMD). 2007, c. 73, §1 (AMD). 2009, c. 340, §6 (AMD). 2009, c. 543, §1 (AMD).

§10106. Fish and wildlife restoration

1. Commissioner's authority. The State assents to the Federal Aid in Wildlife Restoration Act, Public Law, September 2, 1937, chapter 899, as amended, and the Federal Aid in Fish Restoration Act, Public Law, August 9, 1950, chapter 658, as

amended. The commissioner is authorized, empowered and directed to perform such acts as may be necessary to the conduct and establishment of cooperative wildlife and fish restoration projects, as defined in those Acts of Congress, in compliance with those Acts and with rules and regulations promulgated by the United States Secretaries of Agriculture and Interior under those Acts.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Control of distribution and conservation of hares and rabbits. The commissioner may at any time take and transport live hares or rabbits by purchasing them from local trappers whenever the commissioner determines it necessary for the proper distribution and conservation of hares and rabbits.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §27 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B27 (AMD). 2003, c. 655, §B422 (AFF).

§10108. Programs

7. Trapper education program established. The commissioner shall establish a program for training individuals in safe and responsible trapping skills and behavior. This program must include instruction in the applicable laws and rights and in the appropriate principles of wildlife management. The commissioner may charge an enrollment fee of up to $10 per person to help defray the costs of this program. For the purpose of establishing the program, the commissioner may cooperate with any public or private association having similar goals.

In establishing the program, the commissioner shall:

A. Prescribe the qualifications of instructors; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Provide for insurance. Each instructor authorized by the commissioner to conduct training under the program must be covered by liability insurance protecting that person from liability for damages during the time when instruction is being given. The cost of this insurance must be borne by the State and must be a charge against the funds credited to IFW; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Prescribe the type and length of instruction and the time and place of examinations; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. Issue a certificate of competency to individuals who successfully complete the examination. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

11. Coyote control program. Pursuant to section 10053, subsection 8, the commissioner shall maintain a coyote control program as follows.

A. The commissioner may employ qualified persons to serve as agents of IFW for purposes of coyote control. These agents must be trained by IFW in animal damage control techniques and must be utilized by IFW to perform coyote control duties in areas where predation by coyotes is posing a threat to deer or other wildlife. Each agent shall execute a cooperative agreement with IFW specifying the conditions and limitations of the agent's responsibilities as an agent, including any terms for reimbursement of

expenses or payment of wages. [2003, c. 655, Pt. B, §30 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. An agent employed pursuant to paragraph A may use snares to control coyotes during winter months under the following conditions.

(1) An agent may use snares only for animal damage control purposes to help meet management goals established by the commissioner for deer, threatened or endangered species or other wildlife species or to benefit agricultural interests as described in paragraph C.

(2) An agent must be trained and certified by IFW in the use of snares.

(3) An agent must be deployed by a department wildlife biologist before setting snares.

(4) An agent shall post access points to areas in which snaring activity is taking place, including, but not limited to, roads and trails for motorized vehicles, cross-country skiers or hikers or other obvious travel ways that may be used by people.

(5) An agent shall plainly label snares with the full name and address of that agent.

(6) An agent shall keep an accurate record of the number and location of snares set by that agent and must be able to account for those snares at all times.

(7) An agent shall check that agent's snares that are equipped with relaxing locks on a daily basis.

(8) A department employee may accompany an agent at any time an agent is checking snares.

(9) An agent shall report monthly to IFW, on forms provided by IFW, the coyotes and nontarget species taken by snaring during the reporting period.

The commissioner shall revoke the snaring certificate of an agent who violates any provision of this paragraph.

The commissioner shall adopt policies and procedures on the use of snares as necessary to minimize the potential for taking nontarget species and to adequately protect threatened and endangered species. [2003, c. 655, Pt. B, §30 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

C. An agent employed pursuant to paragraph A may be employed for the benefit of agricultural interests as long as IFW is reimbursed annually for the cost of those efforts by IFW of Agriculture, Food and Rural Resources from funds specifically appropriated or otherwise made available to IFW of Agriculture, Food and Rural Resources for that purpose. [2003, c. 655, Pt. B, §30 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

[2003, c. 655, Pt. B, §30 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B28-30 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 419, §1 (AMD). 2005, c. 419, §12 (AFF).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 2: DEPARTMENT ORGANIZATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 903: DEPARTMENT OF INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 3: ADVISORY COUNCIL, BOARDS AND COMMITTEES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10151. Inland Fisheries and Wildlife Advisory Council

1. Appointment. The Inland Fisheries and Wildlife Advisory Council, established by Title 5, section 12004-G, subsection 20 and referred to in this Part as the "advisory council," consists of 10 members representing the 16 counties of the State in the following manner: one member representing Androscoggin County, Kennebec County and Sagadahoc County; one member representing Aroostook County; one member representing Cumberland County; one member representing Franklin County and Oxford County; one member representing Hancock County; one member representing Knox County, Lincoln County and Waldo County; one member representing Penobscot County; one member representing Piscataquis County and Somerset County; one member representing Washington County; and one member representing York County. Members of the advisory council are appointed by the Governor, subject to review by the joint standing committee of the Legislature having jurisdiction over fisheries and wildlife matters and to confirmation by the Legislature. The commissioner is a nonvoting, ex officio member of the advisory council, but may vote to break a tie.

An employee of IFW may not serve as a member of the advisory council prior to the expiration of one year from that employee's last day of employment with IFW. A Legislator may not serve as a member of the advisory council. A former Legislator who was a member of the joint standing committee of the Legislature having jurisdiction over fisheries and wildlife matters may not serve as a member of the advisory council prior to the expiration of one year from that former Legislator's last day of membership on that committee.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Length of terms. Appointments are for a term of 3 years and until successors are appointed and qualified. A person may not serve more than 2 consecutive 3-year terms. On the death, resignation or removal from office of any person appointed to the advisory council, the Governor shall appoint a member to serve for the unexpired term.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Expenses. The members of the advisory council are entitled to compensation as provided in Title 5, chapter 379.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Duties. The advisory council shall perform the following duties.

A. The advisory council shall render to the commissioner information and advice concerning the administration of IFW and carry out other duties specifically delegated by this Part. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. The advisory council shall hold regular meetings with the commissioner or the commissioner's deputy in December and May of each year and may hold special meetings at such other times and places as are advisable. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Meetings. All regular and special meetings of the advisory council must be public meetings and must be held in a public meeting place convenient for the public. Public comment must be accepted at regular and special meetings of the advisory council. Comments may be restricted to subjects before the advisory council at the meeting and consistent with any applicable requirements and limitations of the Maine Administrative Procedure Act. Public notice of all regular and special advisory council meetings must be published in a daily newspaper of general circulation in the geographic area where the meeting is scheduled at least 7 days and not more than 21 days prior to the meeting. That notice must include an agenda or statement of purpose of the meeting. That notice may be combined with any other notice of the meeting required by law.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Officers. At the meeting held in May of each year, the advisory council may elect one member as chair and one member as vice-chair.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§10152. Disabled hunter, trapper and angler advisory committee

The commissioner shall establish a disabled hunter, trapper and angler advisory committee, referred to in this section as the "advisory committee," composed of 4 disabled persons, a representative of state agencies that work on disability issues, representatives of 2 statewide organizations representing hunters, trappers or anglers and one interested person. The purpose of the advisory committee is to advise the commissioner on applications for a special permit under section 10853, subsection 11 and to provide recommendations to the commissioner on ways to promote and enhance access to hunting, fishing and trapping opportunities in this State for disabled persons. The commissioner shall meet with the advisory committee at least twice a year, once during the month of January, February or March and once during the month of July, August or September, to review applications for special permits to accommodate permanent physical disabilities provided for in section 10853, subsection 11 but may meet more often as the commissioner determines necessary. The commissioner may, within existing budgeted resources, reimburse advisory committee members for mileage or other expenses related to attending meetings of the advisory committee. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §32 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B32 (AMD). 2003, c. 655, §B422 (AFF).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 2: DEPARTMENT ORGANIZATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 903: DEPARTMENT OF INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 4: FINANCES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10201. Power to raise revenue

1. Sale of publications. If the commissioner determines it advisable for the more effective dissemination of factual information, information of public interest or information tending to promote better public relations, the commissioner may fix the price, if any, of certain publications and materials of IFW and sell and deliver them. Publications and materials included within this authority are all publications, articles, biological and statistical data, professional and technical service reports by departmental personnel and other materials in IFW's possession and pertaining to IFW. These publications may not carry any advertising of a political nature but may carry commercial advertising. The commissioner shall accept commercial advertising in IFW's general circulation magazine entitled "Maine Fish and Wildlife" and any successor or similar publication developed by IFW.

§10202. Department funds

1. Appropriation. The amount of funds appropriated to IFW in each fiscal year may not be less than the dollar amount collected, received or recovered by IFW from license and permit fees, fines, penalties and all other money received by IFW, except for any funds received from the Federal Government and money relating to the following:

A. IFW's account for the acquisition of waterfowl habitat set forth in section 10206, subsection 4; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Whitewater rafting; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. The Maine Endangered and Nongame Wildlife Fund established in section 10253; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. The watercraft fund of IFW of Marine Resources; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

E. The Snowmobile Trail Fund of IFW of Conservation, Bureau of Parks and Lands; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

F. The ATV Recreational Management Fund of IFW of Conservation; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

G. Boating access sites. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Additional funding. The appropriation of certain additional funds is governed by the following.

A. Appropriations to IFW for costs that are associated with search and rescue are not considered amounts appropriated to IFW under the Constitution of Maine, Article IX, Section 22. The liability of the General Fund for search and rescue costs is limited to the amount appropriated. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §41 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

B. General Fund appropriations to the Fiscal Stability Program under subsection 9 are not considered amounts appropriated to IFW under the Constitution of Maine, Article IX, Section 22. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §41 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §41 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Revenues. Actual revenues received in excess of that estimated and allocated by the Legislature may not be expended without allocation by the Legislature, except that excess federal revenues received are subject to the expenditure provisions of Title 5, section 1669.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Unencumbered balances. Any unencumbered allocated balances, including existing balances, must be carried forward into the next fiscal year and may not be expended without allocation by the Legislature, except as provided in this section. Unencumbered balances in the boating access sites account are nonlapsing and must be carried forward to be used for the same purpose.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Nonlapsing appropriations. General Fund appropriations to IFW are nonlapsing and must be carried forward in a separate General Fund program to be used by IFW for the purposes described in section 10801, subsection 5. IFW, in accordance with the Constitution of Maine, Article IX, Section 22, shall seek legislatively authorized transfers from this program to meet the various costs associated with IFW's other programs.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §42 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

6. Savings fund; offset against future fee increases. A savings fund, referred to in this subsection as the "fund," is established in IFW. Appropriations to the fund are considered funds appropriated to IFW under the meaning of the Constitution of Maine, Article IX, Section 22. Money appropriated to the fund does not lapse but must be carried forward and may be used by IFW only to offset license fee increases if the use of that money for that purpose is approved by the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

7. Cash reserve. IFW shall maintain as practical a cash reserve for the purpose of ensuring an adequate cash flow.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

8. Snowmobile enforcement expenditures not to diminish. In every fiscal year, IFW shall budget from appropriations to the enforcement operations program an amount for snowmobile enforcement activities that is not less than the average General Fund expenditures from that program for those purposes over the previous 2 fiscal years.

Expenditures from the Snowmobile Enforcement Fund, established in section 10258, may not be included in calculating average expenditures.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

9. Fiscal Stability Program. The Fiscal Stability Program is established to ensure that the general public and hunters and anglers share the cost of the fish and wildlife conservation programs of IFW. To achieve this goal, beginning with the 2014-2015 biennial budget and for each biennial budget thereafter, the biennial budget submitted by the executive branch must include an additional General Fund appropriation of 18% in excess of IFW's requested biennial budget.

[2011, c. 380, Pt. HH, §1 (AMD) .]

10. Review of budget. The joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters shall review that part of the current services budget bill and any supplemental budget bills pertaining to IFW in accordance with Title 5, section 522-A.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

11. Review of license and permit fees, fines and penalties. The joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters shall review license and permit fees, fines, penalties and all other money received by IFW and shall submit a written report to the joint standing committee of the Legislature having jurisdiction over appropriations and financial affairs on or before March 1st of each year.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

12. Monthly report. By the 15th day of each month, IFW shall submit a report to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters. When the Legislature is in session, IFW shall submit its report at a meeting of the committee. When the Legislature is not in session, IFW shall mail the report to each member of the committee with a copy to the Executive Director of the Legislative Council. The report must identify for the immediately preceding month:

A. Revenues of IFW; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Expenditures of IFW; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. The difference between the projected revenues and expenditures of IFW and the actual revenues and expenditures. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

13. Equipment. IFW shall notify the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters of any vehicle or heavy equipment purchase prior to that purchase, including the name of the item and expected cost. In addition, IFW shall develop and implement a formal replacement schedule for IFW's radio communication system. The joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters shall review the replacement schedule.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §44 (AMD) .]

14. Bond issue. IFW shall submit to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters plans for a bond issue prior to submission of the bond issue to the full Legislature.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

15. Temporary assessment on licenses, permits and registrations.

[2005, c. 12, Pt. III, §1 (RP) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B41-45 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 12, §§Z1,III1 (AMD). 2007, c. 240, Pt. O, §1 (AMD). 2009, c. 213, Pt. I, §1 (AMD). 2011, c. 380, Pt. HH, §1 (AMD).

§10203. Collection and disposition of money

1. General. The following money must be paid to the Treasurer of State as undedicated revenue to the General Fund:

A. All fees, fines, penalties and officers' costs and all other money received, collected or recovered by the court or IFW under any provisions of this Part except section 10206, subsections 1 and 3; section 10259; section 10353, subsection 3; section 11157; chapter 925, subchapter 3; and chapter 929; and [2009, c. 146, §1 (AMD).]

B. Any fees, fines and penalties recovered by the court from any prosecution by wardens pursuant to their acting, under section 10353, subsection 3, with the same powers and duties as sheriffs. [2009, c. 146, §2 (AMD).]

C. [2009, c. 146, §3 (RP).]

[2009, c. 146, §§1-3 (AMD) .]

2. Counties not to pay unpaid officers' fees. Officers' fees taxed against a respondent, if any, under this Part that are not paid by or recovered from the respondent may not be assumed or paid by the county where the offense was committed.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. License and permit fees. License and permit fees must be collected and expended in accordance with section 10801.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Watercraft. Money relating to watercraft laws and rules must be collected and expended in accordance with section 10206, subsection 3.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Snowmobiles and trail-grooming equipment. Money relating to snowmobile and trail-grooming equipment laws and rules must be collected and expended in accordance with section 1893, subsection 3 and section 10206, subsection 2.

[2005, c. 93, §1 (AMD) .]

6. Failure to pay fine or fee. A person who receives money for any fine, or part thereof, for a violation of this Part, or any fee for a license or permit issued under the authority of this Part, may not neglect for more than 30 days to pay the money over as provided in this section.

A person who violates this subsection commits a Class E crime.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §46 (AMD) .]

7. Department-owned property. Money received from the sale, lease or rental of department-owned property or products must be deposited into the program account that originally expended funds for that property.

[2009, c. 146, §4 (NEW) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B422 (AFF). 2003, c. 655, §B46 (AMD). 2005, c. 93, §1 (AMD). 2009, c. 146, §§1-4 (AMD).

§10204. Administrative costs recovered; federal and dedicated money

IFW is entitled to reimbursement for administrative costs associated with activities of IFW performed in support of federal and other special revenue accounts from those accounts. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§10205. Funding of new programs

Any new program or service involving a mandated responsibility to IFW must include provisions that specify that full funding for the new program or service is collected from those individuals who receive the service from IFW. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 2: DEPARTMENT ORGANIZATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 903: DEPARTMENT OF INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 5: SPECIAL FUNDS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10264. Predator Control and Deer Habitat Fund

(REALLOCATED FROM TITLE 12, SECTION 10263)

The Predator Control and Deer Habitat Fund, referred to in this section as "the fund," is established within IFW as a nonlapsing fund to be used by the commissioner to fund or assist in funding predator control and to enhance deer habitat. The commissioner shall establish on IFW's online licensing system checkoff options that allow a person to donate money for predator control or deer habitat enhancement. The checkoff options must be prominently displayed and contain web links to information about how the checkoff revenues have been and will be used. Revenues from the checkoffs must be deposited in the fund and used for purposes indicated by the checkoffs. [RR 2011, c. 1, §14 (RAL).]

The commissioner may accept and deposit into the fund monetary gifts, donations or other contributions from public or private sources for the purposes specified in this section. The fund must be held separate and apart from all other money, funds and accounts. IFW shall report annually to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters on the fund and its utilization. [RR 2011, c. 1, §14 (RAL).]

SECTION HISTORY
RR 2011, c. 1, §14 (RAL).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 3: LAW ENFORCEMENT AND GENERAL OFFENSES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 905: ENFORCEMENT OFFICERS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: GAME WARDENS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10353. Duties and powers

1. Duties. In addition to other duties set out in this Part, a game warden shall:

A. Enforce:

(1) This Part;

(2) All rules adopted by the commissioner; and

(3) The federal Migratory Bird Treaty Act, 16 United States Code, Chapter 7, subchapter II, section 703 as amended, and all rules and regulations promulgated in pursuance of that Act; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Act as a state fire warden.

(1) A warden shall, when possible, while in and about the woods, caution all sportsmen of the danger from fires in the woods and, if possible, extinguish a fire left burning by anyone.

(2) A warden shall, when possible, give notice to all interested parties of a fire raging and beyond the warden's control in order that the fire may be controlled and extinguished. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Powers. In addition to other powers granted in this Part, a game warden or other official described in section 10401 may:

A. Arrest, summons and prosecute a violator of the following:

(1) This Part;

(2) Rules adopted by the commissioner; and

(3) The federal Migratory Bird Treaty Act, 16 United States Code, Chapter 7, subchapter II, section 703 and all rules and regulations promulgated in pursuance of that Act.

A game warden or other official described in section 10401 shall, without unnecessary delay, take any person so arrested before the District Court nearest the place of violation; [2011, c. 248, §1 (AMD).]

B. Serve criminal processes on offenders of the law and serve all processes pertaining to the enforcement of this Part; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Accept personal recognizances in accordance with the following procedures:

(1) A game warden or other official described in section 10401 making an arrest for any violation of this Part and Title 38, chapter 3, subchapter 1, article 5-A, at a point more than 50 miles distant from the nearest District Court having jurisdiction, may accept the personal recognizance of the prisoner in an amount not to exceed $1,000 for

the prisoner's appearance before the nearest District Court on a specified date and a deposit in money to the amount of that recognizance; and

(2) The warden or other official described in section 10401 shall report all those recognizances and forward all those deposits to the court to which the recognizance is returnable.

Recognizances and deposits must be handled by the court in accordance with sections 10202 and 10203; [2011, c. 248, §1 (AMD).]

D. If the warden or other official described in section 10401 is in uniform and has reasonable and articulable suspicion to believe that a violation of law has taken place or is taking place, stop a motor vehicle or watercraft for the purpose of:

(1) Arresting the operator for a criminal violation;

(2) Issuing the appropriate written process for a criminal or civil violation or a traffic infraction; or

(3) Questioning the operator or occupants; [2011, c. 248, §1 (AMD).]

E. In order to protect fish and wildlife:

(1) If the warden or other official described in section 10401 is in uniform, stop a person for the purpose of determining compliance with license, permit, equipment or other requirements or restrictions if the person, at the time of the stop, is:

(a) Engaged in hunting, fishing or trapping; and

(b) Not in or on a motor vehicle; and

(2) Pursuant to policy established by the commissioner, establish checkpoints to stop any type of vehicle and conduct checks to gather statistics concerning hunting, fishing and trapping and to determine compliance with fish and wildlife laws; [2011, c. 248, §1 (AMD).]

F. Stop any watercraft to inspect the craft, its equipment and its documents or certificates; board a watercraft when necessary to enforce chapter 935 or any other provision of this Part regarding watercraft; and order any watercraft ashore to correct a violation or to protect the safety of its occupants, if in the opinion of the warden or other official described in section 10401 their safety is in jeopardy; [2011, c. 248, §1 (AMD).]

G. Stop and examine any all-terrain vehicle to ascertain whether it is being operated in compliance with chapter 939 or any other provision of this Part regulating ATVs, demand and inspect the operator's certificate of registration and, when appropriate, demand and inspect evidence that the operator has satisfactorily completed a training course as required by section 13152; [2011, c. 248, §1 (AMD).]

H. Stop and examine any snowmobile to ascertain whether it is being operated in compliance with chapter 937 or any other provision of this Part regulating snowmobiles; demand and inspect the operator's certificate of registration; and examine the identification numbers of the snowmobile and any marks on it; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

I. Do anything otherwise prohibited by this Part if necessary to carry out the duties and powers of the warden or other official described in section 10401. This paragraph does not authorize a warden or other official described in section 10401 enforcing this Part to stop any person, motor vehicle or watercraft except as specifically provided in this section. [2011, c. 248, §1 (AMD).]

[2011, c. 248, §1 (AMD) .]

3. Same duties and powers as sheriffs. In addition to specified duties and powers, a warden has the same duties and powers throughout the several counties of the State as sheriffs have in their respective counties, except that a warden's primary responsibility is enforcement of laws protecting fish and wildlife.

A. A warden has the same rights as sheriffs to require aid in executing the duties of their offices. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. A warden is entitled to the same fees as sheriffs and their deputies for like services, except before the District Court. All the fees must be paid to the commissioner. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Agents of commissioner. A warden may act as an agent of the commissioner.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Assistance to federal agencies. The Bureau of Warden Service may provide assistance to federal agencies. The director of the Bureau of Warden Service may charge the various federal agencies for these services. Revenues received from these agencies must be allocated for the purpose of funding the cost of providing the services.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Assistance to other entities and persons. The Bureau of Warden Service may, with approval of the commissioner, provide assistance to other entities, including county and state agencies, municipalities and private organizations, and persons. The director of the Bureau of Warden Service may charge the entities or individuals for these services. The Bureau of Warden Service shall report to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters no later than January 15th of each year concerning the assistance provided to other entities and persons during the previous calendar year. The report must contain information about the types of services provided, the number of services and the fees charged by the director of the Bureau of Warden Service.

[2007, c. 20, §1 (NEW) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B422 (AFF). 2003, c. 655, §B54 (AMD). 2007, c. 20, §1 (AMD). 2009, c. 389, §1 (AMD). 2011, c. 248, §1 (AMD).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 913: GENERAL LICENSE AND PERMIT PROVISIONS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: LICENSES AND PERMITS; ELIGIBILITY, ISSUANCE AND REQUIREMENTS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10751. Application and license specifications

1. Form. The commissioner shall furnish application blanks, licenses and permits in such form as the commissioner may designate.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §81 (AMD) .]

2. Identification number. The commissioner may require an identification number and any other pertinent information on any licenses or permits issued by IFW as the commissioner determines necessary.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Statement of right to possess firearms.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §82 (RP) .]

4. Stamps.

[2011, c. 253, §9 (RP) .]

5. Preissue. A license or permit may be issued prior to the date upon which it goes into force.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Duplicates. A duplicate license or permit may be obtained by a person who has accidentally lost or destroyed a license or permit issued to that person under this chapter upon payment of a fee of $2, all of which must be retained by the agent.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

7. License must be signed.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §83 (RP) .]

8. Transaction fees. The commissioner may charge a transaction fee of up to $12 to cover administrative costs for the issuance of a license or permit that does not have a fee provided by law. When a transfer of a license or permit or exchange of a hunting zone or area is authorized under this Part, the commissioner may assess a $7 transaction fee for that transfer or exchange.

The commissioner may adopt rules to implement this subsection. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2005, c. 12, Pt. III, §3 (AMD) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B81-84 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 12, §III3 (AMD). 2011, c. 253, §9 (AMD).

§10752. Eligibility

1. Residents. A resident is eligible for a resident license or permit under this Part.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Nonresidents. A nonresident is eligible for a nonresident license or permit under this Part.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Aliens. An alien is eligible for an alien license or permit under this Part.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Member of United States Armed Forces permanently stationed in State. The following persons are eligible for any trapping, fishing, hunting or combination fishing and hunting license or permit at the resident fee and have the same privileges as residents of this State in regard to trapping, hunting and fishing:

A. A person serving in the Armed Forces of the United States who is permanently stationed at a military or naval post, station or base in the State; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. The spouse and children of a person under paragraph A if the spouse and children permanently reside with that person. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

A member of the Armed Forces of the United States stationed in the State who desires a trapping, hunting, fishing or combination license or permit shall present certification from the commander of the member's post, station or base, or from the commander's designated agent, that the person is permanently stationed at that post, station or base.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Persons convicted of burglary, criminal trespass or theft. A person convicted of any of the following offenses is ineligible to obtain a license or permit issued by IFW:

A. Burglary or criminal trespass of a building located within the unorganized territories; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Theft of equipment used for trapping, hunting or fishing; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Theft of an animal that has been obtained by trapping or hunting and that was in the possession or control of the person who trapped or hunted the animal. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

If a person is convicted of an offense under paragraph A, B or C, that person is ineligible to obtain a license or permit issued by IFW within 2 years of the date of that conviction.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §85 (AMD) .]

6. License ineligibility following certain offenses. The following provisions set the period of time a person is ineligible to obtain a license following conviction of certain offenses.

A. A person convicted of a violation of section 12256, disturbing traps, is ineligible to obtain any license issued by IFW for 3 years from the date of conviction in the case of

a first offense and 5 years from the date of conviction in the case of a 2nd or subsequent offense. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §85 (AMD).]

B. Notwithstanding any other provision of this Part, a person is ineligible to obtain a hunting license under the following circumstances.

(1) A person convicted of shooting a domestic animal in violation of section 11210 is ineligible to obtain a license to hunt in this State for a period of at least 5 years from the date of conviction.

(2) A person convicted of hunting while under the influence of intoxicating liquor or drugs in violation of section 10701, subsection 1-A is ineligible to obtain a license to hunt in this State for a period of 5 years from the date of conviction.

(3) A person convicted of a violation of Title 17-A, chapter 9, if the offense occurred in the context of a hunting activity and if, through failure of the hunter to make proper target identification, the offense resulted in the injury or death of another person, is ineligible to obtain a license to hunt in this State for a period of at least 10 years from the date of the conviction. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §85 (AMD).]

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §85 (AMD) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B422 (AFF). 2003, c. 655, §B85 (AMD).

1. Infants, youth and seniors. The following lifetime licenses may be purchased:

A. For a person who is less than 6 years of age:

(1) An infant lifetime fishing license. The fee for an infant lifetime fishing license is $150 for a resident and $450 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $200;

(2) An infant lifetime hunting license. The fee for an infant lifetime hunting license is $150 for a resident and $450 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $200;

(3) An infant lifetime archery hunting license. The fee for an infant lifetime archery hunting license is $150 for a resident and $450 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $200;

(3-A) An infant lifetime trapping license. The fee for an infant lifetime trapping license is $150 for a resident and $450 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $200;

(4) An infant combination of any 2 lifetime licenses. The fee for an infant combination of any 2 lifetime licenses is $250 for a resident and $750 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $425; and

(5) An infant combination of any 3 lifetime licenses. The fee for an infant combination of any 3 lifetime licenses is $400 for a resident and $1,200 for a nonresident, except that, from December 1, 2011 until March 1, 2015, the fee for a nonresident is $660; [2011, c. 268, §1 (AMD).]

B. For a person from 6 to 15 years of age:

(1) A junior lifetime fishing license. The fee for a junior lifetime fishing license is $300 for a resident and $900 for a nonresident;

(2) A junior lifetime hunting license. The fee for a junior lifetime hunting license is $300 for a resident and $900 for a nonresident;

(3) A junior lifetime archery hunting license. The fee for a junior lifetime archery hunting license is $300 for a resident and $900 for a nonresident;

(3-A) A junior lifetime trapping license. The fee for a junior lifetime trapping license is $300 for a resident and $900 for a nonresident;

(4) A junior combination of any 2 lifetime licenses. The fee for a junior combination of any 2 lifetime licenses is $500 for a resident and $1,500 for a nonresident; and

(5) A junior combination of any 3 lifetime licenses. The fee for a junior combination of any 3 lifetime licenses is $800 for a resident and $2,400 for a nonresident; [2009, c. 404, §1 (AMD).]

C. For a resident from 65 to 69 years of age:

(1) A senior resident lifetime fishing license. The fee for a senior resident lifetime fishing license is $50 for a person who purchases the license in the year in which that person turns 65 years of age, $40 for a person who purchases the license in the year in which that person turns 66 years of age, $30 for a person who purchases the license in the year in which that person turns 67 years of age, $20 for a person who purchases the license in the year in which that person turns 68 years of age and $10 for a person who purchases the license in the year in which that person turns 69 years of age;

(2) A senior resident lifetime hunting license. The fee for a senior resident lifetime hunting license is $50 for a person who purchases the license in the year in which that person turns 65 years of age, $40 for a person who purchases the license in the year in which that person turns 66 years of age, $30 for a person who purchases the license in the year in which that person turns 67 years of age, $20 for a person who purchases the license in the year in which that person turns 68 years of age and $10 for a person who purchases the license in the year in which that person turns 69 years of age;

(3) A senior resident lifetime archery hunting license. The fee for a senior resident lifetime archery hunting license is $50 for a person who purchases the license in the year in which that person turns 65 years of age, $40 for a person who purchases the license in the year in which that person turns 66 years of age, $30 for a person who purchases the license in the year in which that person turns 67 years of age, $20 for a person who purchases the license in the year in which that person turns 68 years of age and $10 for a person who purchases the license in the year in which that person turns 69 years of age;

(3-A) A senior resident lifetime trapping license. The fee for a senior resident lifetime trapping license is $50 for a person who purchases the license in the year in which that person turns 65 years of age, $40 for a person who purchases the license in the year in which that person turns 66 years of age, $30 for a person who purchases the license in the year in which that person turns 67 years of age, $20 for a person who purchases the license in the year in which that person turns 68 years of age and $10 for a person who purchases the license in the year in which that person turns 69 years of age;

(4) A senior resident combination of any 2 lifetime licenses. The fee for a senior resident combination of any 2 lifetime licenses is $80 for a person who purchases the license in the year in which that person turns 65 years of age, $64 for a person who

purchases the license in the year in which that person turns 66 years of age, $48 for a person who purchases the license in the year in which that person turns 67 years of age, $32 for a person who purchases the license in the year in which that person turns 68 years of age and $16 for a person who purchases the license in the year in which that person turns 69 years of age; and

(5) A senior resident combination of any 3 lifetime licenses. The fee for a senior resident combination of any 3 lifetime licenses is $110 for a person who purchases the license in the year in which that person turns 65 years of age, $94 for a person who purchases the license in the year in which that person turns 66 years of age, $78 for a person who purchases the license in the year in which that person turns 67 years of age, $52 for a person who purchases the license in the year in which that person turns 68 years of age and $26 for a person who purchases the license in the year in which that person turns 69 years of age; and [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §92 (AMD).]

D. For a resident 70 years of age or older. For a person who holds a valid senior lifetime license under this section at any time during the calendar year that person turns 70 years of age , that lifetime license includes all hunting permits and licenses authorized in this Part and may renew at no cost a guide license under section 12853. A person who is 70 years of age or older may purchase a senior lifetime license that entitles the holder to all the privileges described in this paragraph for a one-time $8 fee. [2011, c. 253, §12 (AMD).]
[2011, c. 253, §12 (AMD); 2011, c. 268, §1 (AMD) .]

A person must be a resident to purchase a senior resident lifetime license under paragraphs C and D. Once purchased, a lifetime license is valid for the life of the holder without regard to subsequent changes in the legal residence of the holder. The license entitles the holder to all fishing or hunting privileges extended to residents or nonresidents as applicable of that same age who hold the equivalent annual license and subjects the holder to all limitations and prerequisites on those fishing or hunting privileges that apply to residents or nonresidents of that same age who hold the equivalent annual license. [2009, c. 404, §1 (AMD).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B422 (AFF). 2003, c. 655, §B92 (AMD). 2007, c. 433, §1 (AMD). 2007, c. 651, §9 (AMD). 2009, c. 404, §1 (AMD). 2011, c. 253, §12 (AMD). 2011, c. 268, §1 (AMD). MRSA T. 12, §10851 (AMD).

§10852. Lifetime privileges to be honored

A lifetime license issued under this subchapter is valid for the life of the license holder unless lawfully suspended or revoked by the commissioner for a violation of fish and wildlife laws under this Part. The Legislature may not otherwise act in any way to limit or end the right of a person holding a lifetime license to the lifetime enjoyment of all the rights and privileges authorized by that license. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]SECTION HISTORY 2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 913: GENERAL LICENSE AND PERMIT PROVISIONS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 3: LIFETIME, COMPLIMENTARY AND REDUCED-RATE LICENSES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§10853. Complimentary and reduced-rate licenses

1. Residents over 70 years of age. A complimentary license to hunt, trap or fish, including an archery license under section 11109, subsection 7, a pheasant hunting permit under section 11156, a muzzle-loading hunting license under section 11109, subsection 4, a migratory waterfowl permit under section 11157 and a bear hunting permit under section 11151 must be issued to a resident who is 70 years of age or older upon application to the commissioner.

A. A resident who applies for a complimentary license under this section at any time during the calendar year of that resident's 70th birthday must be issued a license upon application, regardless of the actual date during that calendar year in which that resident attains 70 years of age. A guide license may be renewed without charge for a resident who is 70 years of age or older upon application to the commissioner. The application must be accompanied by a birth certificate or other certified evidence of the applicant's date of birth and residency. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Beginning January 1, 2006, IFW may not issue a complimentary license to a resident over 70 years of age. A complimentary license issued to a resident over 70 years of age prior to January 1, 2006 is valid as long as the license holder satisfies the residency requirements set out in section 10001, subsection 53. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. A complimentary license issued under this subsection remains valid for the remainder of the life of the license holder, as long as the license holder continues to satisfy the residency requirements set out in section 10001, subsection 53 and the license is not revoked or suspended. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

1-A. Residents 100 years of age or older. A complimentary antlerless deer permit under section 11152 may be issued to a resident of the State who is 100 years of age or older upon application to the commissioner.

A. A resident who applies for a complimentary antlerless deer permit under this subsection at any time during the calendar year of that resident's 100th birthday may be issued the permit regardless of the actual date during that calendar year in which that resident attains 100 years of age. The application must be accompanied by a birth certificate or other certified evidence of the applicant's date of birth and proof of residency. [2005, c. 75, §1 (NEW).]

B. A complimentary antlerless deer permit issued under this subsection remains valid for the remainder of the life of the permit holder, as long as the permit holder continues to satisfy the residency requirements set out in section 10001, subsection 53 and the permit is not revoked or suspended. [2005, c. 75, §1 (NEW).]

[2005, c. 75, §1 (NEW) .]

2. Blind residents. A complimentary license to fish must be issued to a resident who is 16 years of age or older and blind and applies to the commissioner for the fishing license. This complimentary license remains valid for the life of the license holder if the license holder continues to satisfy the residency requirements in section 10001, subsection 53 and the license is not revoked or suspended. The application must be accompanied by certified evidence that the applicant is permanently blind. For the purpose of this subsection, "blind" means having visual acuity for distance vision of 20/200 if the widest diameter of field of vision subtends an angle no greater than 20 degrees.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §93 (AMD) .]

3. Paraplegics. The commissioner may issue, upon application, complimentary resident hunting and fishing licenses to a resident who has lost, or who has permanently lost the use of, both lower extremities. A license issued under this subsection remains valid for the life of the license holder if the license holder continues to satisfy the residency requirements in section 10001, subsection 53 and the license is not revoked or suspended.

The commissioner may issue, upon application, complimentary nonresident hunting and fishing licenses to a person from another state who would qualify under this subsection as long as the state where the person resides provides a reciprocal privilege for residents of this State.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Resident disabled veteran. A resident disabled veteran may obtain upon application, at no cost, all hunting, trapping and fishing licenses, including permits, stamps and other permission needed to hunt, trap and fish, and, upon meeting the qualifications as established in section 12853, subsection 4, a guide license. The commissioner shall issue all fishing, trapping and hunting licenses and permits requested under this subsection if the commissioner determines the applicant is a resident disabled veteran and is not otherwise ineligible to hold that permit or license. For the purposes of this subsection, "resident disabled veteran" means a person who:

A. Is a resident as defined in section 10001, subsection 53; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Is a veteran as defined in Title 37-B, section 505, subsection 2, paragraph A, subparagraph (3); and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Has a service-connected disability evaluated at:

(1) One hundred percent; or

(2) Seventy percent or more as a result of honorable military service and who has served in a combat zone during any armed conflict in which participants were exposed to war risk hazards as defined in 42 United States Code, Section 1711 (b). [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

Each application must be accompanied by satisfactory evidence that the applicant meets the requirements of this subsection. An applicant for a license or permit under

this section is subject to the provisions of this Part, including, but not limited to, a lottery or drawing system for issuing a particular license or permit. A permit or license issued under this subsection remains valid for the life of the permit or license holder, as long as the permit or license holder continues to satisfy the residency requirement in section 10001, subsection 53 and the permit or license is not revoked or suspended.
[2007, c. 651, §10 (AMD) .]

5. Holders of Congressional Medal of Honor. Upon application, the Governor may grant 2-year complimentary hunting and fishing licenses to holders of the Congressional Medal of Honor.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Members of Armed Forces domiciled in State. A member of the Armed Forces of the United States on active duty who is permanently stationed outside of the State may be issued a combination fishing and hunting license for an amount equal to the administrative costs associated with issuing the license as determined by IFW. Administrative costs do not include agent fees. To qualify, the member of the Armed Forces of the United States must show proof that that member's home of record, as recorded in that person's service records, is Maine. That person may purchase all other licenses or permits at resident fees. The license is valid during the year of issue. That person's spouse and children may purchase hunting and fishing licenses at reduced rates. The reduced fees are as follows:

A. Twenty dollars, plus the issuing fee for a combination fishing and hunting license; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Ten dollars, plus the issuing fee for a hunting license; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Ten dollars, plus the issuing fee for a fishing license. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

7. Patients and inmates in certain state institutions. The commissioner may issue free fishing permits covering:

A. Clients of IFW of Health and Human Services who reside in licensed facilities for persons with mental retardation or licensed facilities for the treatment of mental illness; [2005, c. 397, Pt. C, §10 (RPR).]

B. Groups of full-time patients at a nursing home, as defined in Title 22, section 1812-A; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Groups of full-time residents of a facility licensed under Title 22, chapter 1663. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2005, c. 397, Pt. C, §10 (AMD) .]

8. Members of federally recognized nation, band or tribe. The commissioner shall issue a hunting, trapping and fishing license, including permits, stamps and other permission needed to hunt, trap and fish, to a person, 10 years of age or older, who is an enrolled member of the Passamaquoddy Tribe, the Penobscot Nation, the Houlton Band of Maliseet Indians or the Aroostook Band of Micmacs that is valid for the life of that person without any charge or fee if the person presents certification from the respective reservation governor or the Aroostook Micmac Council stating that the person described is an enrolled member of a federally recognized nation, band or tribe listed in this subsection. Holders of these licenses are subject to this Part, including, but not limited to, a lottery or drawing system for issuing a particular license or permit.
[2011, c. 327, §1 (AMD) .]

9. Foreign exchange students. A resident license to hunt or fish must be issued, at a fee equal to the resident license fee for a person of like age and status, to any citizen of a foreign nation under 21 years of age who is domiciled with a family within the State pursuant to any cultural or educational exchange program conducted by any governmental, educational, cultural or religious organization.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

10. Persons with developmental disabilities. A complimentary license to fish must be issued to any person with a developmental disability, as defined in Title 5, section 19503, subsection 3, upon application to the commissioner when that application is accompanied by a statement signed by the person's physician that states that the applicant's functional limitations substantially limit that person's ability to fish independently. This complimentary license remains effective for the life of the license holder, if the license is not revoked or suspended.

[2011, c. 355, §1 (AMD) .]

11. Permits to accommodate permanent physical disabilities. The commissioner may issue a special permit to a person with a permanent physical disability that includes special authorization that allows that person to hunt, trap or fish at times or in a manner otherwise prohibited by this Part in order to enhance access to hunting, trapping and fishing opportunities. No laws or rules may be waived except as are necessary to effect this subsection. A permit may be issued under this subsection only if:

A. The applicant provides the commissioner with a letter signed by a licensed physician clearly stating the nature of that person's disability, the permanence of the disability and the extent to which the disability affects that person's ambulatory ability or endurance; use of one or both hands, arms or legs; or sight or hearing; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. The commissioner determines that the permanent physical disability prevents that person from safely accessing hunting, trapping or fishing opportunities at the times or in the manner allowed by this Part or by rules adopted pursuant to this Part; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. The person meets all other requirements for issuance of that permit and related licensing requirements and is not otherwise ineligible for that permit. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

Prior to making a determination of eligibility under this subsection, the commissioner or the commissioner's agent shall meet with the applicant in person at a location chosen by the commissioner to discuss the applicant's needs. Each applicant's disability and needs must be reviewed in consultation with the disabled hunter, trapper and angler advisory committee established in section 10152 and a determination made regarding the special authorization that may be made to enhance the applicant's access to fishing, hunting and trapping opportunities. A permit issued under this subsection must be signed by the commissioner and include a clear and specific description of the activities authorized by that permit. The disabled person shall carry the permit whenever that person is hunting, trapping or fishing, and the permit must be presented to a game warden or other law enforcement officer upon request. No laws or rules may be waived except as are necessary to effect this subsection.

The commissioner may authorize only the minimum special exceptions necessary to overcome the applicant's disability and allow that applicant to safely hunt, trap or fish.

This does not authorize the commissioner to issue special exceptions that endanger public safety. A permit issued under this subsection does not authorize a person to exceed the allowable bag or size limits for any fish or wildlife species; to fish for or take a fish or wildlife species for which a license is not otherwise issued; to fish for, trap or hunt a fish or wildlife species more than 7 days before the opening or more than 7 days after the closing of the regular open season for that species; or to fish, trap or hunt in any area permanently closed to those activities by state law or rule.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §93 (AMD) .]

12. Persons with acquired brain injury. A complimentary license to fish must be issued to any person with a head injury, as defined by Title 22, section 3086, upon application to the commissioner. This complimentary license remains effective for the life of the license holder if the license is not revoked or suspended.

[2003, c. 655, Pt. B, §422 (AFF); 2003, c. 655, Pt. B, §93 (NEW) .]

13. Certain veterans.

[2009, c. 440, §2 (AMD); MRSA T .12, §10853, sub-§13 (RP) .]

14. Game warden killed in line of duty. A complimentary license to hunt, trap and fish, including permits, stamps and other permissions needed to hunt, may be issued, upon application, to the spouse or child of a game warden who has been killed in the line of duty. These licenses must be issued in accordance with criteria established by the Maine Chiefs of Police Association and the Maine Law Enforcement Officer Memorial board, upon confirmation by the Game Warden Colonel that the applicant is qualified for such a license.

[2007, c. 651, §11 (AMD) .]

15. Assisting a person with disabilities. The commissioner may allow a licensee who has received a complimentary fishing license under subsection 2, 3, 4, 7, 10 or 12 to have a person accompany and assist that licensee in fishing. The person accompanying and assisting the holder of a complimentary fishing license as provided in this subsection may do so without obtaining a separate fishing license. This subsection does not authorize the person accompanying and assisting the licensee to assist that licensee with more than one fishing rod and reel. The person accompanying and assisting the licensee must remain within the immediate proximity of the licensee while that licensee is fishing.

[2011, c. 355, §2 (NEW) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B93-95 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 75, §1 (AMD). 2005, c. 268, §2 (AMD). 2005, c. 397, §C10 (AMD). 2005, c. 477, §2 (AMD). 2007, c. 195, §1 (AMD). 2007, c. 463, §2 (AMD). 2007, c. 651, §§10, 11 (AMD). 2009, c. 440, §2 (AMD). 2011, c. 327, §1 (AMD). 2011, c. 355, §§1, 2 (AMD). MRSA T. 12, §10853, sub-§13 (AMD).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 917: TRAPPING HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: LICENSE REQUIREMENTS AND FEES HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§12201. Trapping license

1. License required. Except as otherwise authorized pursuant to this Part, a person may not trap unless that person has a valid license issued under this section. Each day a person violates this subsection that person commits a Class E crime for which a minimum fine of $50 and an amount equal to twice the applicable license fee must be imposed.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

1-A. Trapping by agents of commissioner. The commissioner may authorize a full-time department employee to trap wild animals without a license for purposes of animal damage control. A person serving as an agent of the commissioner for purposes of animal damage control, including animal control officers appointed pursuant to Title 7, section 3947, must satisfy the licensing requirements of this section prior to trapping or attempting to trap a wild animal.

[2003, c. 655, Pt. B, §209 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Eligibility. The following persons are eligible to purchase a trapping license, subject to the provisions of subsection 3.

A. A resident 16 years of age or older is eligible to purchase a resident trapping license. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. A resident 10 years of age or older and under 16 years is eligible to purchase a resident junior trapping license. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. A resident under 10 years of age may trap all legal species, except bear, without a license. [2009, c. 69, §2 (AMD).]

D. A nonresident is eligible to purchase a nonresident trapping license. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

Nonresident aliens are ineligible to purchase a trapping license.

[2009, c. 69, §2 (AMD) .]

3. Successful completion of trapper evaluation program required for license. A person who applies for a state license to trap, other than a junior license, must submit proof of having successfully completed an education course of the type described in section 10108, subsection 7 or satisfactory evidence of having previously held an adult license to trap in this State or any other state, province or country in any year beginning with 1978.

When proof or evidence can not otherwise be provided, the person may substitute a signed affidavit that that person has previously held the required adult trapping license or that that person has successfully completed the required trapper education course.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Issuance. The commissioner, or the commissioner's agent, may issue a license to engage in trapping. Clerks or other agents appointed by the commissioner shall charge a fee of $2 for each trapping license issued. The commissioner shall charge a fee of $1 for each trapping license issued by department employees.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Expiration. All licenses issued under this section are valid for one year commencing July 1st of each year.

A resident junior trapping license issued to a person who has passed that person's 15th birthday is valid through the year for which the license was issued.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

6. Trapping fees. The fees for trapping licenses are as follows:

A. A resident junior trapping license, for a person 10 years of age or older and under 16 years of age, is $9; [2005, c. 12, Pt. III, §23 (AMD).]

B. A resident trapping license, for a person 16 years of age or older, is $35; and [2005, c. 12, Pt. III, §23 (AMD).]

C. A nonresident trapping license is $317. [2009, c. 213, Pt. OO, §9 (AMD).]
[2009, c. 213, Pt. OO, §9 (AMD) .]

7. Supervision of junior trappers. The following provisions must be observed.

A. A person under 10 years of age may not trap unless that person is accompanied at all times while trapping by a parent or guardian or by an adult at least 18 years of age approved by a parent or guardian. A person under 10 years of age may not trap bear. [2009, c. 69, §3 (AMD).]

B. A person over 10 years of age and under 16 years of age may not trap unless that person:

(1) Holds a junior trapping license; and

(2) Is accompanied by an adult at all times while trapping, unless the holder of the junior trapping license submits proof of having successfully completed an education course of the type described in section 10108, subsection 7. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2009, c. 69, §3 (AMD) .]

8. License violations. The following penalties apply to violations of restrictions of licenses under this section.

A. A person who violates a restriction of a license issued under this section commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2003, c. 655, Pt. B, §211 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person who violates a restriction of a license issued under this section after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 655, Pt. B, §211 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

Each day a person violates a restriction of a license issued under this section is a separate offense.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §211 (RPR); 2003, c. 655, Pt. B, §422 (AFF) .]

9. Parent or guardian; junior trappers. A person violates this subsection if that person is the adult supervisor, parent or guardian of a holder of a valid junior trapping license and that junior trapper violates any provision of this Part pertaining to trapping.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2009, c. 69, §4 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2009, c. 69, §4 (NEW).]

[2009, c. 69, §4 (NEW) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B209-211 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 12, §III23 (AMD). 2009, c. 69, §§2-4 (AMD). 2009, c. 213, Pt. OO, §9 (AMD).

§12202. Trapping by landowner

A resident and a member of the resident's immediate family, as long as the trapper's license to trap is not under suspension or revocation, may trap for wild animals, except beaver, without a trapping license issued under section 12201 on land: [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

1. Possession. To which they are legally entitled to possession;

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Domiciled. On which they are actually domiciled; and

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Agricultural purposes. That is used exclusively for agricultural purposes.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

12204. Apprentice trapper license

1. Definitions. As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

A. "In the presence of" means in visual and voice contact without the use of visual or audio enhancement devices, including but not limited to binoculars and citizen band radios. [2011, c. 51, §1 (NEW).]

B. "Supervisor" means a person who is 18 years of age or older, has held a valid trapping license under this subchapter for 3 consecutive years and is trapping with a person holding an apprentice trapper license. [2011, c. 51, §1 (NEW).]

[2011, c. 51, §1 (NEW) .]

2. Supervisor required. A holder of an apprentice trapper license may not trap other than in the presence of a supervisor.

[2011, c. 51, §1 (NEW) .]

3. Supervisor responsibility. A supervisor shall ensure that the holder of an apprentice trapper license follows safe and ethical trapping protocol and adheres to the laws under this Part. A supervisor may not intentionally permit a person trapping under an apprentice trapper license with that supervisor to violate subsection 2.

[2011, c. 51, §1 (NEW) .]

4. Eligibility. A resident or nonresident 16 years of age or older who has never held a valid trapping license or junior trapping license in this State, or any other state, province or country, is eligible to obtain an apprentice trapper license, except that a person may not be issued an apprentice trapper license after having previously held an apprentice trapper license under this section. A person is eligible to obtain an apprentice trapper license without having successfully completed a trapper education course as described in section 10108, subsection 7.
[2011, c. 51, §1 (NEW) .]

5. Expiration of apprentice trapper license. An apprentice trapper license is valid for up to 12 calendar months and expires on June 30th.
[2011, c. 51, §1 (NEW) .]

6. Issuance; fee. The commissioner, through the commissioner's authorized agent, shall issue an apprentice trapper license to an eligible person. The fee for an apprentice trapper license is $35 for residents and $317 for nonresidents.
[2011, c. 51, §1 (NEW) .]

7. Restrictions. The holder of an apprentice trapper license is not eligible to obtain a permit to trap for bear under section 12260-A.
[2011, c. 51, §1 (NEW) .]

8. Penalties. The following penalties apply to violations of this section.

A. A person who violates this section commits a civil violation for which a fine of not less than $100 and not more than $500 may be adjudged. [2011, c. 51, §1 (NEW).]

B. A person who violates this section after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2011, c. 51, §1 (NEW).]
[2011, c. 51, §1 (NEW) .]

SECTION HISTORY
2011, c. 51, §1 (NEW).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 917: TRAPPING HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 2: TRAPPING SEASON, REQUIREMENTS AND RESTRICTIONS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§12251. Closed seasons

1. General. Except as otherwise provided in this Part and except as the commissioner may establish by rule that is not inconsistent with this chapter, there is a perpetual closed season on trapping any wild animal or wild bird.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Unity Utilities District. There is a continued closed season on all wild animals and wild birds on property owned by the Unity Utilities District located on Route 139 and Prairie Road in the municipality of Unity in Waldo County.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Closed season violation. A person may not trap, or attempt to trap, any wild animal or wild bird during the closed season or possess any wild animal or wild bird taken during the closed season on that wild animal or wild bird.

A person who violates this subsection commits a Class E crime.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §213 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B213 (AMD). 2003, c. 655, §B422 (AFF).

§12252. Unlawful trapping methods

1. Unlawfully rigging traps. A person may not use auxiliary teeth on any leg-hold trap set on land.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Use or possession of prohibited implements or aids. A person may not:

A. Set or tend a snare for the purpose of trapping any wild animal or wild bird, except as provided in section 10105, subsection 1 and section 12259; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Set or tend a set gun for the purpose of killing, taking, catching, wounding, harming or molesting any wild animal or wild bird; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Deposit any poisonous or stupefying substance for the purpose of killing, taking, catching, wounding, harming or molesting any wild animal or wild bird, except that a landowner or member of the landowner's immediate family may use gas cartridges on

the landowner's own land for woodchuck control; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. Sell, advertise, give notice of the sale or keep for sale any set gun or poisonous substance for the taking of wild animals or wild birds, except that a person may sell, advertise, give notice of sale of or keep for sale rodenticide for orchard mouse control and gas cartridges for woodchuck control. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Use of pole traps. A person may not use or set any steel trap on the top of a pole, constituting a device commonly known as a "pole trap" for the purposes of catching any wild bird.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Penalty. A person who violates this section commits a Class E crime.

[2003, c. 655, Pt. B, §214 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B214 (AMD). 2003, c. 655, §B422 (AFF).

§12253. Consent to trap

1. Trapping without written consent. A person may not, without first obtaining the written consent of the landowner or occupant, trap any wild animal on land in any organized or incorporated place or on the cultivated or pasture area of land that is used for agricultural purposes in any unorganized place and on which land there is an occupied dwelling. The provisions of this subsection do not apply to:

A. Beaver trapping; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Trapping with drowning sets in navigable rivers and streams; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Trapping with drowning sets on state-owned land and public rights-of-way. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

A person who violates this subsection commits a Class E crime.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §215 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Trapping near occupied dwelling without written consent. A person may not trap any wild animal within 200 yards of an occupied dwelling without first obtaining the written consent of the owner or occupant of the land on which the trap is to be set. The provisions of this subsection do not apply to beaver trapping or trapping with drowning sets on state-owned land or public rights-of-way.

A person who violates this subsection commits a Class E crime.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §215 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Trapping near compact, built-up portion of city or village. A person may not trap outside that person's land within 1/2 mile of the compact, built-up portion of a city or village, except:

A. A person may trap within 1/2 mile of the built-up portion of a city or village with drowning sets; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. A person who has a written permit from the landowner may trap on that landowner's land with cage-type live traps within 1/2 mile of the built-up portion of a city or village. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §215 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3-A. Penalties. The following penalties apply to violations of subsection 3.

A. A person who violates subsection 3 commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2003, c. 655, Pt. B, §215 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person who violates subsection 3 after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 655, Pt. B, §215 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]
[2003, c. 655, Pt. B, §215 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

4. Proof of ownership of land. Before any prosecution is made under subsection 1 or 2, the landowner or occupant shall provide proof to the commissioner of that landowner's ownership or that occupant's occupancy of the land in question.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §215 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

5. Permission to trap on land of another. This section does not give license or permission to set, place or tend traps on property that is owned by another person.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §215 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B215 (AMD). 2003, c. 655, §B422 (AFF).

§12254. Labeling traps

1. Prohibition. A person may not set a trap for any wild animal without having the trap plainly labeled with that person's full name and address.
[2003, c. 655, Pt. B, §216 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Penalties. The following penalties apply to violations of this section.

A. A person who violates subsection 1 commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2003, c. 655, Pt. B, §216 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person who violates subsection 1 after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 655, Pt. B, §216 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]
[2003, c. 655, Pt. B, §216 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B216 (RPR). 2003, c. 655, §B422 (AFF).

§12255. Tending traps

1. Failure to visit traps. A person shall:

A. While trapping in an organized or incorporated place:

(1) Check each trap, except killer-type traps, at least once in every calendar day; and

(2) Check each killer-type trap at least once in every 3 calendar days; and [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §217 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

B. While trapping in an unorganized place fail to:

(1) Check each trap, except killer-type traps and drowning sets, at least once in every calendar day; and

(2) Check each killer-type trap or drowning set at least once in every 5 calendar days. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

This subsection does not apply to under-ice drowning sets for beaver and muskrat. For the purposes of this subsection, "check" means to visit or cause to be visited.

A person who violates this subsection commits a Class E crime.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §217 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Failure to remove animal from trap. A person shall remove or cause to be removed from that person's trap an animal found caught in that trap.

A person who violates this subsection commits a Class E crime.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §217 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Carrying a firearm while trapping. Notwithstanding section 11205, subsection 1, paragraph A and section 11206, subsection 1, paragraph A, a person who holds a valid trapping license may carry a firearm at any time during the open trapping season for the sole purpose of dispatching trapped animals unless that person is prohibited from possessing a firearm under Title 15, section 393, subsection 1 and has not obtained a valid permit in accordance with Title 15, section 393, subsection 2.
[RR 2011, c. 1, §18 (COR) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B217 (AMD). 2003, c. 655, §B422 (AFF). 2009, c. 340, §15 (AMD). RR 2011, c. 1, §18 (COR).

§12256. Disturbing traps of another

A person may not disturb or take a trap or a wild animal from a trap, other than that person's own trap, without the consent of the owner of the trap, except that a landowner or occupant of land that the landowner or occupant is legally entitled to possess may remove any trap found on the land if permission has not been granted under section 12253, subsection 1 or 2 or the person has not obtained a written permit from the landowner to trap on that landowner's land with cage-type live traps within 1/2 mile of a built-up portion of a city or village. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

A person who violates this section commits a Class E crime. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§12257. Trapping by certain department employees

1. Prohibition. A department biologist or warden may not trap wild animals for profit while on duty within the district to which that person is assigned.
[2003, c. 655, Pt. B, §218 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Penalties. The following penalties apply to violations of this section.

A. A person who violates subsection 1 commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2003, c. 655, Pt. B, §218 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person who violates subsection 1 after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 655, Pt. B, §218 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]
[2003, c. 655, Pt. B, §218 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B218 (RPR). 2003, c. 655, §B422 (AFF).

§12258. Eel permit for licensed trappers

1. Issuance. The commissioner may issue a permit to any licensed trapper to take eels for baiting traps.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Restrictions. A licensed trapper who holds a valid eel permit may for purposes of baiting traps take eels by eel pots or hook and line. A person harvesting eels under this subsection may not use any means other than eel pots or hook and line to take eels and may not take more than 20 pounds of eels annually.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §219 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Penalties. The following penalties apply to violations of a restriction of a permit issued in accordance with this section.

A. A person who violates a restriction of a permit issued in accordance with this section commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged. [2003, c. 655, Pt. B, §220 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person who violates a restriction of a permit issued in accordance with this section after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 655, Pt. B, §220 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

Each day a person violates a restriction of a permit issued in accordance with this section is a separate offense.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §220 (RPR); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B219,220 (AMD). 2003, c. 655, §B422 (AFF).

§12259. Trapping beaver

1. Snares. A person may use snares to trap for beaver during the open beaver trapping season.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Rules. All rules adopted pursuant to section 10104, subsection 1 pertaining to the trapping of beaver with killer-type traps also apply to the trapping of beaver with snares.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Nonresident trapping beaver. A nonresident may not trap beaver in this State unless that nonresident's state or province of residency allows Maine residents to trap beaver in that state or province.

A person who violates this subsection commits a Class E crime.

[2011, c. 253, §25 (AMD) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B221 (AMD). 2003, c. 655, §B422 (AFF). 2011, c. 253, §25 (AMD).

§12260. Trapping bear

1. Open and closed season. There is an open season on trapping bear from September 1st to October 31st annually.

A. The commissioner may shorten the open season on bear in any part of the State as long as:

(1) The demarcation of the areas with a shortened season follows recognizable physical boundaries such as rivers and railroad rights-of-way; and

(2) The decision is made and published prior to February 1st of any year. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. The commissioner may terminate the open season on bear at any time in any part of the State if, in the commissioner's opinion, an immediate emergency action is necessary due to adverse weather conditions or severe hunting or trapping pressure. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Unlawful trapping of bear. A person may not catch a bear in a trap and cause or allow another person to kill or register that bear. A person who violates this subsection commits a Class E crime.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §222 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Setting bear traps. Setting traps for bear is governed by this subsection.

A. A person may use a cable trap with a closing diameter of not less than 2 1/2 inches to trap bear in the State during the open season on bear. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. A person may not set a bear trap other than a cable trap or a cage-type trap as authorized by the commissioner.

[2011, c. 253, §26 (AMD).]

A person who violates this subsection commits a Class E crime.

[2011, c. 253, §26 (AMD) .]

4. Trapping bear after having killed one. A person may not trap a bear after that person has killed or registered one trapped pursuant to this section. A person who violates this subsection commits a Class D crime for which the court shall impose a sentencing alternative involving a term of imprisonment not to exceed 180 days and a fine of not less than $1,000, none of which may be suspended.

[2011, c. 309, §5 (AMD) .]

5. Exceeding bag limit on bears. Except as otherwise provided in this Part, a person may not possess more than 2 bears in any calendar year. A person who violates this subsection commits a Class D crime for which the court shall impose a sentencing alternative involving a term of imprisonment not to exceed 180 days and a fine of not less than $1,000, none of which may be suspended.

[2011, c. 309, §6 (AMD) .]

6. Trapping bear near dumps. Trapping bear near dumps is governed by this subsection.

A. The commissioner, or the commissioner's agent, shall establish a line of demarcation at least 500 yards from sites permitted or licensed for the disposal of solid waste. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §223 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

B. A person may not trap within the demarcation area established under paragraph A. The commissioner, or the commissioner's agent, is exempt from this prohibition for the purpose of live trapping of nuisance bears.

(1) A person who violates this paragraph commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged.

(2) A person who violates subparagraph 1 after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §224 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §§223, 224 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY

2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B222-224 (AMD). 2003, c. 655, §B422 (AFF). 2011, c. 253, §26 (AMD). 2011, c. 309, §§5, 6 (AMD).

§12260-A. Bear trapping permit

1. Permit required. Except as otherwise authorized pursuant to this Part a person may not trap for bear without a valid bear trapping permit during the open bear trapping season under section 12260, subsection 1.

Each day a person violates this subsection, that person commits a Class E crime for which a minimum fine of $50 and an amount equal to twice the applicable license fee must be imposed.

[2007, c. 168, §7 (NEW); 2007, c. 168, §8 (AFF) .]

2. Eligibility; trapping license required. A person who possesses a valid trapping license may obtain a permit to trap bear from the commissioner or the commissioner's authorized agent.

[2007, c. 168, §7 (NEW); 2007, c. 168, §8 (AFF) .]

3. Issuance; permit fee. The commissioner, through the commissioner's authorized agent, shall issue a bear trapping permit to an eligible person. The annual fee for each permit issued is $27 for residents and $67 for nonresidents.

[2007, c. 168, §7 (NEW); 2007, c. 168, §8 (AFF) .]

SECTION HISTORY
2007, c. 168, §7 (NEW). 2007, c. 168, §8 (AFF).

§12261. Beagle clubs; trapping snowshoe hares

The commissioner may issue a license to an organization recognized as a beagle club by the commissioner to take live snowshoe hares. [2007, c. 45, §1 (NEW).]

1. License required. Except as otherwise authorized pursuant to this Part, a beagle club may not trap a snowshoe hare without a valid license issued under this section.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

2. Traps labeled and checked daily. A beagle club may not set a trap for a snowshoe hare unless that trap is plainly labeled with the name of the beagle club and the telephone number of a contact person and is checked at least once every calendar day.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

3. Use of snowshoe hares. A snowshoe hare trapped pursuant to this section may not be used for anything other than to stock the running areas of the licensee and may not be given to any other beagle club or entity.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

4. Transport out of State. A snowshoe hare trapped pursuant to this section may not be transported out of the State.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

5. Trapping season for snowshoe hares. A beagle club may not trap for snowshoe hares except between September 1st and April 30th of each calendar year.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

6. Cottontail rabbits. A beagle club may not keep and must release immediately a cottontail rabbit caught in a trap.

A. A person who violates this subsection commits a civil violation for which a fine of not less than $100 or more than $500 may be adjudged. [2007, c. 45, §1 (NEW).]

B. A person who violates this subsection after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime. [2007, c. 45, §1 (NEW).]

[2007, c. 45, §1 (NEW) .]

7. Reporting of trapped cottontail rabbits. As a condition of licensure under this section, a beagle club shall file with IFW no later than July 1st of each calendar year a report of cottontail rabbits trapped pursuant to this section.

[2007, c. 45, §1 (NEW) .]

SECTION HISTORY
2007, c. 45, §1 (NEW).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 919: REGISTRATION AND TRANSPORT OF HARVESTED ANIMALS HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: REGISTRATION HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§12301-A. Registration of harvested animals

1. Registration stations established. The commissioner shall adopt rules governing the establishment and closure of bear, deer, moose and wild turkey registration stations for the purpose of registering harvested bear, deer, moose and wild turkey and to allow for the collection of biological and hunting data. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2003, c. 655, Pt. B, §226 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Agents designated. An agent designated by the commissioner must be in charge of each bear, deer, moose or wild turkey registration station.

[2003, c. 655, Pt. B, §226 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Agent duties. Registration agents shall:

A. Register every bear, deer, moose or wild turkey legally presented for registration; [2003, c. 655, Pt. B, §226 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. Attach a seal to each bear, deer, moose or wild turkey in the manner directed and with the materials furnished by the commissioner; and [2003, c. 655, Pt. B, §226 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

C. Collect $5 and retain $1 for each seal from the person registering a bear, deer, moose or wild turkey. The remaining $4 must be returned to IFW by the agent pursuant to section 10801, subsection 3. [2009, c. 213, Pt. OO, §10 (AMD).]

[2009, c. 213, Pt. OO, §10 (AMD) .]

SECTION HISTORY
2003, c. 655, §B226 (NEW). 2003, c. 655, §B422 (AFF). 2009, c. 213, Pt. OO, §10 (AMD).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 925: FISH AND WILDLIFE MANAGEMENT AND RESEARCH HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 1: WILDLIFE MANAGEMENT AND RESEARCH HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§12701. Commissioner's authority over sanctuaries; management areas and access sites

1. Public use. The commissioner may, pursuant to section 10104, adopt rules regulating hunting, fishing, trapping or other public use of any wildlife management area or wildlife sanctuary as designated in section 12706, subsection 1, except that a landowner may not be prohibited from operating any vehicle on land on which that person is domiciled. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §289 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Natural products. The commissioner may harvest and sell natural products of the land from land owned by IFW and, if the land was purchased with federal aid funds, use the resulting revenue for land management, in accordance with federal aid guidelines.

[2007, c. 217, §1 (AMD) .]

3. Trapping. The commissioner may regulate the trapping of wild animals on wildlife sanctuaries or closed territories.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

4. Fees. The commissioner may establish reasonable fees for admission to the Maine Wildlife Park and the Steve Powell Wildlife Management Area at Perkins Township, Sagadahoc County, known as Swan Island and Little Swan Island. Fees associated with the Steve Powell Wildlife Management Area must be deposited into a dedicated revenue account. In addition to those fees, the commissioner may accept and deposit into the dedicated revenue account money from any other source, public or private.

[2007, c. 539, Pt. KKKK, §1 (AMD) .]

5. Access sites to inland and coastal waters. The commissioner may, pursuant to section 10104, subsection 1, adopt rules regulating public use of department-owned or department-maintained sites that provide public access to inland or coastal waters. The commissioner may establish reasonable fees for use of these sites by members of the public as necessary to help defray the cost of routine maintenance and security. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §290 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B289,290 (AMD). 2003, c. 655, §B422 (AFF). 2007, c. 217, §1 (AMD). 2007, c. 539, Pt. KKKK, §1 (AMD).

§12702. Rule violations; state-owned wildlife management areas

The following penalties apply to violations of rules regulating state-owned wildlife management areas. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §291 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]

1. Civil violation. Notwithstanding section 10650, a person who violates a rule regulating state-owned wildlife management areas commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged.
[2003, c. 655, Pt. B, §291 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Criminal violation. A person who violates a rule regulating state-owned wildlife management areas after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime.
[2003, c. 655, Pt. B, §291 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B291 (RPR). 2003, c. 655, §B422 (AFF).

§12704. Permit to hunt, trap, possess, band and transport wild animals and wild birds for scientific purposes

The commissioner may issue a permit to any person, permitting that person to hunt, trap, possess, band and transport wild animals and wild birds for scientific purposes. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§12705. Rule violations; scientific collection permits

The following penalties apply to violations of rules regulating scientific collection permits. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §292 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]

1. Civil violation. Notwithstanding section 10650, a person who violates a rule regulating scientific collection permits commits a civil violation for which a fine of not less than $100 nor more than $500 may be adjudged.
[2003, c. 655, Pt. B, §292 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Criminal violation. A person who violates a rule regulating scientific collection permits after having been adjudicated as having committed 3 or more civil violations under this Part within the previous 5-year period commits a Class E crime.
[2003, c. 655, Pt. B, §292 (NEW); 2003, c. 655, Pt. B, §422 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B292 (RPR). 2003, c. 655, §B422 (AFF).

Title 12: CONSERVATION
Part 13: INLAND FISHERIES AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subpart 4: FISH AND WILDLIFE HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Chapter 925: FISH AND WILDLIFE MANAGEMENT AND RESEARCH HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)
Subchapter 3: ENDANGERED SPECIES; MANAGEMENT AND RESEARCH HEADING: PL 2003, C. 414, PT. A, §2 (NEW); PT. D, §7 (AFF); C. 614, §9 (AFF)

§12801. Declaration of purpose

The Legislature finds that various species of fish or wildlife have been and are in danger of being rendered extinct within the State of Maine, and that these species are of esthetic, ecological, educational, historical, recreational and scientific value to the people of the State. The Legislature, therefore, declares that it is the policy of the State to conserve, by according such protection as is necessary to maintain and enhance their numbers, all species of fish or wildlife found in the State, as well as the ecosystems upon which they depend. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

This subchapter and chapter 631 are established to carry out the purposes of this section. [2003, c. 573, §5 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 573, §5 (AMD). 2003, c. 573, §8 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§C3,6 (AFF).

§12802. Commissioner's authority, investigations and programs

1. Investigations. The commissioner may conduct investigations in order to develop information relating to population size, distribution, habitat needs, limiting factors and other biological and ecological data relating to the status and requirements for survival of any species of fish or wildlife occurring in the State, whether endangered or not.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §308 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

2. Programs. The commissioner may develop programs to enhance or maintain the populations described in subsection 1.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §B308 (AMD). 2003, c. 655, §B422 (AFF).

§12803. Designation of endangered species

1. Standards. The commissioner shall recommend a species to be listed as endangered or threatened whenever the commissioner finds one of the following to exist:

A. The present or threatened destruction, modification or curtailment of its habitat or range; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Overutilization for commercial, sporting, scientific, educational or other purposes; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Disease or predation; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. Inadequacy of existing regulatory mechanisms; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

E. Other natural or manmade factors affecting its continued existence within the State. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Commissioner's duties. In recommending a species to be listed as endangered or threatened, the commissioner shall:

A. Make use of the best scientific, commercial and other data available; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Consult, as appropriate, with federal agencies, other interested state agencies, other states having a common interest in the species and interested persons and organizations; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Maintain a list of all species that the Legislature has designated to be endangered or threatened, naming each species by both its scientific and common name, if any, and specifying over what portion of its range each species so designated is endangered or threatened. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Legislative authority. The Legislature, as sole authority, shall designate a species as a state endangered or state threatened species. The list of state endangered or state threatened species by common name, scientific name and status is as follows:

A. Least tern, Sterna antillarum, endangered; [2007, c. 166, §1 (AMD).]

B. Golden eagle, Aquila chrysaetos, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

C. Piping plover, Charadrius melodus, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

D. Sedge wren, Cistothorus platensis, endangered; [2007, c. 166, §1 (AMD).]

E. Grasshopper sparrow, Ammodramus savannarum, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

F. Box turtle, Terrapene carolina, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

G. Black racer, Coluber constrictor, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

H. Roseate tern, Sterna dougallii, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

I. Northern bog lemming, Synaptomys borealis, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

J. Blanding's turtle, Emydoidea blandingii, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

K. Black tern, Chlidonias niger, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

L. American pipit, Anthus rubescens (breeding population only), endangered; [2007, c. 166, §1 (AMD).]

M. Peregrine falcon, Falco peregrinus (breeding population only), endangered; [2007, c. 166, §1 (AMD).]

N. Roaring Brook mayfly, Epeorus frisoni, endangered; [2007, c. 166, §1 (AMD).]

O. Ringed boghaunter, Williamsonia lintneri, threatened; [2007, c. 166, §1 (AMD).]

P. Clayton's copper, Lycaena dorcas claytoni, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

Q. Edwards' hairstreak, Satyrium edwardsii, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

R. Hessel's hairstreak, Callophrys hesseli, endangered; [2007, c. 166, §1 (AMD).]

S. Katahdin arctic, Oenis polixenes katahdin, endangered; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

T. Spotted turtle, Clemmys guttata, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

U. [2009, c. 60, §1 (RP).]

V. Razorbill, Alca torda, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

W. Atlantic puffin, Fratercula arctica, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

X. Harlequin duck, Histrionicus histrionicus, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

Y. Arctic tern, Sterna paradisaea, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

Z. Upland sandpiper, Bartramia longicauda, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

AA. Swamp darter, Etheostoma fusiforme, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

BB. Tidewater mucket, Leptodea ochracea, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

CC. Yellow lampmussel, Lampsilis cariosa, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

DD. Tomah mayfly, Siphlonisca aerodromia, threatened; [2003, c. 573, §6 (NEW); 2003, c. 573, §8 (AFF); 2003, c. 655, Pt. C, §§3, 6 (AFF).]

EE. [2007, c. 166, §1 (RP).]

FF. Twilight moth, Lycia rachelae, threatened; [2007, c. 166, §1 (AMD).]

GG. Pine barrens zanclognatha, Zanclognatha martha, threatened; [2007, c. 166, §1 (AMD).]

HH. Redfin pickerel, Esox americanus americanus, endangered; [2007, c. 166, §1 (NEW).]

II. Juniper hairstreak, Callophrys gryneus, endangered; [2007, c. 166, §1 (NEW).]

JJ. Rapids clubtail, Gomphus quadricolor, endangered; [2007, c. 166, §1 (NEW).]

KK. New England cottontail, Sylvilagus transitionalis, endangered; [2007, c. 166, §1 (NEW).]

LL. Black-crowned night heron, Nycticorax nycticorax, threatened; [2007, c. 166, §1 (NEW).]

MM. Common moorhen, Gallinula chloropus, threatened; [2007, c. 166, §1 (NEW).]

NN. Great cormorant, Phalacrocorax carbo (breeding population only), threatened; [2007, c. 166, §1 (NEW).]

OO. Short-eared owl, Asio flammeus (breeding population only), threatened; [2007, c. 166, §1 (NEW).]

PP. Purple lesser fritillary, Boloria chariclea grandis, threatened; [2007, c. 166, §1 (NEW).]

QQ. Sleepy duskywing, Erynnis brizo, threatened; [2007, c. 166, §1 (NEW).]

RR. Boreal snaketail, Ophiogomphus colubrinus, threatened; [2007, c. 166, §1 (NEW).]

SS. Brook floater, Alasmidonta varicosa, threatened; [2007, c. 166, §1 (NEW).]

TT. Barrow's goldeneye, Bucephala islandica, threatened; and [2007, c. 166, §1 (NEW).]

UU. Least bittern, Ixobrychus exilis, endangered. [2007, c. 166, §1 (NEW).] [2009, c. 60, §1 (AMD) .]

4. Process for recommendation; notice and hearings. Prior to recommending an addition, deletion or other change to the endangered and threatened species listed in subsection 3, the commissioner shall provide for public notice and public hearings on that proposed recommendation in accordance with the provisions of Title 5, chapter 375, subchapter 2.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

5. Designation by Legislature. The Legislature may not amend the list of endangered or threatened species in subsection 3 except upon the recommendation of the commissioner.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 573, §6 (AMD). 2003, c. 573, §8 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§C3,6 (AFF). 2007, c. 166, §1 (AMD). 2009, c. 60, §1 (AMD).

§12804. Conservation of endangered species

1. Conservation of nongame and endangered species. The commissioner may establish such programs as are necessary to bring any endangered or threatened species to the point where it is no longer endangered or threatened, including:

A. Acquisition of land or aquatic habitat or interests in land or aquatic habitat; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Propagation; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. Live trapping; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

D. Transplantation. Prior to the transplantation, introduction or reintroduction of an endangered or threatened species in the State, the commissioner shall, in conjunction

with IFW of Marine Resources, when appropriate, develop a recovery plan for that species, conduct a public hearing on that recovery plan pursuant to Title 5, Part 18 and submit that plan to the joint standing committee of the Legislature having jurisdiction over inland fisheries and wildlife matters. The introduction or reintroduction of that species must be conducted in accordance with the recovery plan developed under this paragraph and may not begin sooner than 90 days after all conditions of this paragraph have been met; and [2009, c. 561, §34 (AMD).]

E. In the extraordinary case where population pressures within a given group ecosystem can not be otherwise relieved, regulated taking. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2009, c. 561, §34 (AMD) .]

2. Habitat. For species designated as endangered or threatened under this subchapter the commissioner may by rule identify areas currently or historically providing physical or biological features essential to the conservation of the species and that may require special management considerations. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §309 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Protection guidelines. The commissioner may by rule develop guidelines for the protection of species designated as endangered or threatened under this subchapter. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §309 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

4. Annual report.
[2007, c. 651, §14 (RP) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 573, §7 (AMD). 2003, c. 614, §9 (AFF). 2003, c. 655, §B309 (AMD). 2003, c. 655, §B422 (AFF). 2007, c. 651, §14 (AMD). 2009, c. 561, §34 (AMD).

§12805. Cooperative agreements

The commissioner may enter into agreements with federal agencies, other states, political subdivisions of this State or private persons for the establishment and maintenance of programs for the conservation of endangered or threatened species and may receive all federal funds allocated for obligations to the State pursuant to these agreements. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§12806. State and local cooperation

1. Review. A state agency or municipal government may not permit, license, fund or carry out projects that will:

A. Significantly alter the habitat identified under section 12804, subsection 2 of any species designated as threatened or endangered under this subchapter; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Violate protection guidelines set forth in section 12804, subsection 3. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

The commissioner shall make information under section 12804 available to all other state agencies and municipal governments for the purposes of review.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Variance. Notwithstanding subsection 1, state agencies and municipal governments may grant a variance from this section provided that:

A. The commissioner certifies that the proposed action would not pose a significant risk to any population of endangered or threatened species within the State; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. A public hearing is held on the proposed action. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

3. Pending applications. Notwithstanding Title 1, section 302, applications pending at the time of adoption of habitats and guidelines under section 12804, subsections 2 and 3 are governed by this section.
[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

§12808. Misuse of endangered or threatened species

For the purposes of this section, "to take," "take" and "taking" mean the act or omission that results in the death of any endangered or threatened species. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §310 (AMD); 2003, c. 655, Pt. B, §422 (AFF).]

1. Prohibited acts regarding endangered or threatened species; negligence. Except as provided in subsections 2 and 3, a person may not negligently:

A. Import into the State or export out of the State any endangered or threatened species. A person who violates this paragraph commits a Class E crime; [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §311 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]

B. Hunt, take, trap or possess any endangered or threatened species within the State. A person who violates this paragraph commits a Class E crime; [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §311 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]

C. Possess, process, sell, offer for sale, deliver, carry, transport or ship, by any means whatsoever, any endangered or threatened species or any part of an endangered or threatened species. A person who violates this paragraph commits a Class E crime; or [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §311 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]

D. Feed, set bait for or harass any endangered or threatened species. A law enforcement officer, as defined in Title 25, section 2801-A, subsection 5, must issue a warning to a person who violates this paragraph for the first time. A person who violates this paragraph after having previously been given a warning under this paragraph

commits a Class E crime. [2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §311 (RPR); 2003, c. 655, Pt. B, §422 (AFF).]
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §311 (RPR); 2003, c. 655, Pt. B, §422 (AFF) .]

1-A. Prohibited acts regarding endangered or threatened species; intentional. Except as provided in subsections 2 and 3, a person may not intentionally:

A. Import into the State or export out of the State any endangered or threatened species. A person who violates this paragraph commits a Class D crime; [2003, c. 655, Pt. B, §312 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

B. Hunt, take, trap or possess any endangered or threatened species within the State. A person who violates this paragraph commits a Class D crime; [2003, c. 655, Pt. B, §312 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]

C. Possess, process, sell, offer for sale, deliver, carry, transport or ship, by any means whatsoever, any endangered or threatened species or any part of an endangered or threatened species. A person who violates this paragraph commits a Class D crime; or [2005, c. 477, §23 (AMD).]

D. Feed, set bait for or harass any endangered or threatened species. A law enforcement officer, as defined in Title 25, section 2801-A, subsection 5, must issue a warning to a person who violates this paragraph for the first time. A person who violates this paragraph after having previously been given a warning under this paragraph commits a Class D crime. [2003, c. 655, Pt. B, §312 (NEW); 2003, c. 655, Pt. B, §422 (AFF).]
[2005, c. 477, §23 (AMD) .]

2. Exceptions for certain purposes. Notwithstanding subsections 1 and 1-A or section 10650 as it applies to rules adopted in accordance with this subchapter, the commissioner may:

A. Under such terms and conditions as the commissioner may prescribe, permit any act prohibited by this section or by rule for educational or scientific purposes or to enhance the propagation or survival of an endangered or threatened species; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Under such terms and conditions as the commissioner may prescribe, permit any endangered or threatened species that enters the State and is being transported to a point outside the State to be so entered and transported without restriction in accordance with the terms of any federal or state permit. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]
[2003, c. 614, §9 (AFF); 2003, c. 655, Pt. B, §313 (AMD); 2003, c. 655, Pt. B, §422 (AFF) .]

3. Exceptions; incidental take plan. Notwithstanding subsection 1, the commissioner may:

A. Permit the taking of any endangered species or threatened species if:

(1) Such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity;

(2) The taking will not impair the recovery of any endangered species or threatened species; and

(3) The person develops and implements an incidental take plan approved by the commissioner to take an endangered species or threatened species pursuant to paragraph B; and [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Allow a plan that minimizes the incidental taking of an endangered species or threatened species that specifies the following:

(1) A description of the specific activities sought to be authorized by the incidental take permit and an analysis of potential alternatives;

(2) The individual and cumulative effects that may reasonably be anticipated to result from the proposed actions covered by the plan;

(3) The recovery measures the applicant will implement to prevent, minimize and mitigate the individual and cumulative effects and any provisions that are necessary to prevent, minimize and mitigate circumstances that are likely to impair the recovery of any endangered or threatened species covered by the plan;

(4) The procedures for monitoring the effectiveness of the recovery measures in the plan;

(5) The anticipated costs of implementing the plan and the availability of necessary funding for the applicant to implement the plan; and

(6) Other modifications to the plan or other additional measures, if any, that IFW may require and such other matters as IFW determines to be necessary for the recovery of species consistent with this section. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

IFW shall seek input from knowledgeable individuals or groups on each incidental take plan for endangered or threatened species.

If any person fails to abide by the terms of any permit authorizing the incidental taking of an endangered or threatened species, the permit must be immediately suspended or revoked.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF). 2003, c. 655, §§B310-313 (AMD). 2003, c. 655, §B422 (AFF). 2005, c. 477, §23 (AMD).

§12809. Judicial enforcement

1. General. In the event of a violation of this subchapter, any rule adopted pursuant to this subchapter or any license or permit granted under this subchapter, the Attorney General may institute injunctive proceedings to enjoin any further violation, a civil or criminal action, or any appropriate combination of those proceedings without recourse to any other provision of law administered by IFW.

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

2. Restoration. The court may order restoration of any area affected by any activity found to be in violation of this subchapter, any rule adopted pursuant to this subchapter or any license or permit granted under this subchapter, to its condition prior to the violation or as near to that condition as possible. When the court finds that the violation was willful, the court shall order restoration under this subchapter, unless the restoration would result in:

A. A threat to public health and safety; [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

B. Environmental damage; or [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

C. A substantial injustice. [2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF).]

[2003, c. 414, Pt. A, §2 (NEW); 2003, c. 614, §9 (AFF) .]

SECTION HISTORY
2003, c. 414, §A2 (NEW). 2003, c. 414, §D7 (AFF). 2003, c. 614, §9 (AFF).

Appendix 2. Maine Department of Inland Fisheries and WildlifeTrapping Rules

09-137 DEPARTMENT OF INLAND FISHERIES AND WILDLIFE

Chapter 4: HUNTING AND TRAPPING

4.01 Upland Game and Furbearing Animals

A. **General Prohibition**

It shall be unlawful for any person to have in possession, at any time, any wild bird or wild animal, or part thereof, taken in violation of these regulations. There shall be a closed season for the hunting or trapping of any wild bird or wild animal for which an open season is not herein specifically provided or is provided by law.

B. **Limits**

No person shall hunt, trap or have in his possession at any time more than the numerical limits of any given species of upland game or furbearing animal which are specifically set forth in these regulations.

C. **Keeping Upland Game and Furbearing Animals Alive**

No person shall keep alive any upland game or furbearing animal which such person has taken, whether by hunting or trapping, except in accordance with the provisions of 12 MRSA §§ 7231, 7232, 7235, 7242 and 7771, as amended, providing, among other things, for the issuance of permits for such purposes by the Commissioner of Inland Fisheries and Wildlife.

G. **Open Seasons for the Hunting and Trapping of Furbearing Animals**

1. **Beaver Trapping**

1.a.

Wildlife Management Districts 1, 2, 4, 5	October 19 - April 30
Wildlife Management Districts 3, 6, 8, 9, 10, 11	November 2 – April 30
Wildlife Management Districts 18, 19, 28	November 2 – April 15
Wildlife Management Districts 7, 12, 13, 14, 17, 27	November 2 – March 31
Wildlife Management Districts 15, 16, 20, 21, 22, 23, 24, 25, 26, 29	December 1 – March 31

After the close of the Regular Trapping Season (paragraph 2 below), muskrats may still be trapped, but only in those areas that are open to beaver trapping. After February 28, in those Wildlife Management Districts open to beaver trapping, muskrat trapping is restricted to 1) killer-type traps, foot-hold traps, and colony traps, which must be set to remain underwater at all time; or 2) foothold traps on "covered floats." A covered float is defined as a float completely covered on the sides and top with hardware cloth, screen, or other similar

material, having a mesh size no greater than 1/2 inch square. Access to the float will be limited to openings at the extreme ends of the float and the openings will not exceed 7 inches in height, or 14 inches in width. The use of exposed bait or visible attractor on covered floats is prohibited. Only one trap may be placed per float; the trap must be recessed 3 inches or greater from any opening in the cover; the trap chain or wire must be at least 3 feet long; and the maximum foothold trap size for covered floats sets will be No. 1 1/2.

Traps set for beaver in October, November and April are restricted to killer-type traps and drowning sets.

2. **Statewide Regular Trapping Season**: Bobcat, coyote, fisher**, fox, marten, mink, muskrat*, opossum, otter, raccoon, red squirrel, skunk, weasel: The Sunday preceding the first day of the open firearm season on deer through December 31. (For exceptions to the general trapping season please read below.)

Any lynx caught incidentally, whether dead or alive, during any trapping season must be reported to a game warden or biologist of the Department as soon as possible and prior to removing the animal from the trap, unless a Department official can not be reached in time to prevent injury to the lynx. Any lynx released under this provision before reporting to the Department must also be reported to the Department within 24 hours from the time it was discovered.

2-A. **Early Fox and Coyote Trapping Season Statewide**

There shall be an early fox and coyote trapping season statewide beginning on the Sunday 2 weeks prior to the opening of the regular fall trapping season and extending through the day prior to the opening of the regular fall trapping season. Any raccoon, skunk or opossum taken incidental to fox and coyote trapping may be lawfully possessed. During this early trapping season, except as provided in this section, it is unlawful to take or possess any furbearing animal other than fox, coyote, raccoon, opossum and skunk. Any other furbearing animal caught incidentally in a fox or coyote set must be immediately released alive, or, if found dead in the trap, must be reported to a game warden as soon as possible and prior to removal of the animal from the trap and trap site location. Any such incidental catch found dead in the trap must be turned over to an agent of the commissioner within 48 hours from the rime it was discovered.

During this early fox and coyote trapping season, in addition to department rules and state laws which affect trapping in general, the following restrictions also apply;

a. Killer-type traps are prohibited;

b. Traps may not be set in the water;

c. The use of exposed bait or visible attractor at any trap site location is prohibited.

*2-B. **Early Muskrat Trapping Season in WMD's 1, 2, 3, 4, 5, 6, 9, 10, 11**

There shall be an early muskrat trapping season beginning on the Sunday 1 week prior to the opening of the regular fall trapping season, and extending through the day prior to the opening of the regular fall trapping season. Any raccoon or mink taken incidental to muskrat trapping may be lawfully possessed. During this early trapping season, except as provided in this section, it is unlawful to take or possess any furbearing animal other than raccoon and mink. Any other furbearing animal caught incidentally in a muskrat set must be immediately released alive, or, if found dead in the trap, must be reported to a game warden as soon as possible *and* prior to removal of the animal from the trap and trap site location. Any such incidental catch found dead in the trap must be turned over to an agent of the commissioner within 48 hours from the time it was discovered.

During this special muskrat trapping season, in addition to Department rules and State laws which affect trapping in general, the following restrictions also apply:

a. All traps must be set at or below ground or water level;

b. The use of exposed bait or visible attractor at any trap site location is prohibited;

c. Killer-type traps may be used for muskrat trapping and must have a jaw spread no greater than 5 inches;

d. The maximum foothold trap size for muskrat sets shall be No. 1 1/2 during this special season.

2-C. In any township of the State that is open to beaver trapping, any otter taken in a beaver or muskrat set, so called, may be lawfully possessed by any licensed trapper.

3. **Marten Limit**

a. The harvest of marten will be limited to 25 marten per trapper statewide. Twenty-five numbered temporary transportation permits will be issued at the time of trapping license purchase/renewal (25 marten tags only) A temporary marten transportation permit must be signed, dated and attached to the captured marten at the time the animal is removed from the capture site. The temporary transportation permit must accompany the animal/pelt from the capture site until a permanent fur tag is affixed by a fur-tagging agent. Fur-tagging agents will retain the temporary transportation permit from each marten at the time a permanent fur tag is attached to the pelt.

It is unlawful for any person to use or possess any marten temporary transportation permit with a number that does not coincide with the number issued with their license, as so indicated on their trapping license.

Prior to the time the animal is tagged with a permanent fur tag, it is unlawful for any person to possess any marten, or pelt thereof, that is not

accompanied by a signed and dated temporary marten transportation permit marked with the number coinciding with the number printed on their trapping license. Trappers who are not required by law to have a trapping license (residents under 10 years of age and residents trapping on their own land) may use, in lieu of the official temporary marten transportation permit, a substitute transportation permit (string tag) on which the name and address of the individual has been clearly written in ink. The substitute transportation tag must be signed, dated and attached to the captured marten in the same manner as an official temporary marten transportation permit at the time the animal is removed from the capture site.

Any marten caught in excess of the annual limit (25) must be immediately released alive, or, if found dead in the trap, must be reported to a game warden as soon as possible and prior to removal of the animal from the trap and trap site location. Any such incidental catch found dead in the trap must be turned over to an agent of the commissioner within 48 hours from the time it was discovered.

It is the intent of the Department of Inland Fisheries and Wildlife to revoke, pursuant to Title 12 MRSA §10901, the trapping license of any person convicted of a violation of any provisions of these rules.

3-A. **Fisher Limit, Restrictions and Season Exceptions**

a. In WMDs 12, 13 and 15-29 the season is limited to Nov. 15th through December 15th. All fisher caught outside of the fisher season must be immediately released alive. If a fisher is found dead in the trap the animal must be submitted to a game warden or to an IFW regional office within 72 hours of taking the fisher. (The general season listed in section 2. above applies to all other WMDs.)

b. The harvest of fisher will be limited to 10 fisher per trapper statewide.

The harvest of fisher will be limited to 10 fisher per trapper statewide. Ten numbered temporary transportation permits will be issued at the time of trapping license purchase/renewal (10 fisher tags *only*). A temporary fisher transportation permit must be signed, dated and attached to the captured fisher at the time the animal is removed from the capture site. The temporary transportation must accompany the animal/pelt from the capture site until a permanent fur tag is affixed by a fur-tagging agent. Fur-tagging agents will retain the temporary transportation permit from each fisher at the time a permanent fur tag is attached to the pelt.

It is unlawful for an person to use or possess any fisher temporary transportation permit with a number that does not coincide with the number issued with their license, as so indicated on their trapping license.

Prior to the time the animal is tagged with a permanent fur tag, it is unlawful for any person to possess any fisher, or pelt thereof, that is not accompanied by a signed and dated temporary fisher transportation permit marked with the number coinciding with the number printed on their trapping license. Trappers who are

not required by law to have a trapping license (residents under 10 years of age and residents trapping on their own land) may use, in lieu of the official temporary fisher transportation permit, a substitute transportation permit (string tag) on which the name and address of the individual has been clearly written in ink. The substitute transportation tag must be signed, dated and attached to the captured fisher in the same manner as an official temporary fisher permit at the time the animal is removed from the capture site.

Any fisher caught in excess of the annual limit (10) must be immediately released alive, or, if found dead in the trap, must be reported to a game warden as soon as possible *and* prior to removal of the animal from the trap and trap site location. Any such incidental catch found dead in the trap must be turned over to an agent of the commissioner within 48 hours from the time it was discovered.

It is the intent of the Department of Inland Fisheries and Wildlife to revoke, pursuant to Title 12 MRSA, Section 10901, the trapping license of any person convicted of a violation of any provisions of these rules.

4. **Statewide hunting seasons for furbearing animals**: December 1 through February 14; **Coyote**: January 1 through December 31; **Raccoon**: October 1 through December 31; **Red Squirrel**: January 1 through December 31; **Skunk and opossum**: Monday after the opening of the Special Fox & Coyote Trapping Season through December 31; **Fox**: Monday after the opening of the Special Fox and Coyote Trapping Season through February 28.

H. **Tagging and Registration Procedure**

It shall be unlawful for any person to possess, sell, give away, buy, accept as a gift, offer for transportation or transport out of the State of Maine the raw skin of any fox, bobcat, marten, fisher, coyote, beaver, mink or otter unless each skin has been tagged.

For the purposes of this regulation, "raw skin" means the skin of the animal, whether removed from or attached to the carcass.

Notwithstanding this regulation, any person who lawfully possesses the untagged raw skin of any fox, bobcat, marten, fisher, coyote, beaver, mink or otter may transport that skin within the jurisdiction of the State for purposes of pelt preparation and tagging.

The raw skins of all fox, bobcat, marten, fisher, coyote, beaver, mink and otter must be presented to a warden, or other agent designated by the Commissioner, and each raw skin legally presented shall be tagged. All information requested relating to the taking of each skin shall be accurately and truthfully reported. A fee of 25¢ shall be paid for each skin tagged.

The raw skins of all fox, bobcat, marten, fisher, coyote, beaver, mink and otter must be presented for tagging within 10 days after the closing of the open season thereon, except the raw skins of all bobcat taken during the open bobcat hunting season shall be presented, by the person who killed said bobcat, for tagging within 72 hours of killing said animal. Following ten days after the close of the open season thereon, it shall be unlawful for any person to possess the raw skin of any fox, bobcat, marten, fisher, coyote, beaver, mink or otter which does not have attached to it the necessary tag.

The raw skins of any fox, bobcat, marten, fisher, coyote, beaver, mink and otter that come into this State in any manner from any other state, country, or province shall bear the official stamp, tag, or seal of such other state, country, or province. Any such skins that come into this State from any other state, country, or province which does not require an official stamp, tag, or seal shall be tagged in accordance with this section by the person possessing such raw skins. The fee for tagging such imported raw skins shall be 25¢ for each tag so issued. Licensed taxidermists who import raw skins for the purpose of taxidermy are exempt from the provisions of this paragraph.

I. **Raccoons**

Raccoons may be hunted at night during the open season only when the hunter (i) is accompanied by a dog, (ii) uses an electric flashlight to locate raccoons that are treed, or held at bay, by a dog or dogs, and (iii) is in possession of, and uses a rifle, pistol, or revolver of no greater power or caliber than one which uses .22 caliber long rifle ammunition; said rifle to be loaded only when being used to dispatch a raccoon that is treed or held at bay by a dog or dogs.

J. **Size of Traps**

Animals may be trapped with any common ordinary steel trap except that in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11, no foothold trap (also known as a leghold trap) may be used that has an inside jaw spread of more than 5 3/8 inches, except that a foothold trap with an inside jaw spread of more than 5 3/8 inches may be used if it is set so as to be fully or partially covered by water at all times. Inside jaw spread is the distance, with the trap in the set position, from the inside center of one jaw (at the dog) to the inside center of the opposite jaw when measured directly across the center of the pan and perpendicular to the base plate. Killer-type traps with a jaw spread not to exceed 8 inches may only be used, as provided in paragraph K. During the open season on beaver it shall be lawful to use a killer-type trap with a jaw spread larger than 8 inches if, when set, placed and tended, the trap is completely under water. Killer-type traps shall include so-called Conibear traps and all other traps of that type. It shall be unlawful to sue any trap with teeth on the jaws unless when set, placed and tended, the trap is completely covered with water.

It shall be lawful to trap furbearing animals with a common cage type live trap, except that in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11, no cage trap which has an opening of more than 13 inches in width or more than 13 inches in height may be used unless the cage trap is being used (1) for wildlife research and survey activities; (2) for the removal of animals that are causing damage to property; or (3) to capture bear. Cage traps also include suitcase-type live traps, such as Hancock traps. The setting of suitcase-type live traps during the recreational beaver trapping season is prohibited except under the authorization of a Regional Wildlife Biologist as part of the Department's Animal Damage Control program. These traps must be set with the bottom portion in the water, and with the opening of the trap facing away from land.

Furbearing animals may be trapped with so-called colony traps having outside dimensions no greater than 7 inches high by 7 inches wide by 40 inches long, only if set so as to remain completely under water at all times.

Furbearing animals may be trapped with so-called egg traps, duffer traps and all other traps of that type that are designed primarily to catch raccoons and avoid incidental catches of other animals.

Wooden-base rat traps may be set on land for weasel and red squirrel trapping if recessed in a wooden box with a hole no larger than 2 inches in diameter.

K. **Location of and Preparation for Traps**

No person shall stake, hook, fasten or position a trap at any trap site location in the fields, forests or waters of the State prior to the opening day of the trapping season.

No person shall make any advance preparation on the trapping grounds for the taking of beaver or muskrat previous to the open season on these animals.

No person shall use meat or fish as bait in trapping for beaver.

Except as provided herein, no person, except an agent of the Commissioner, shall place, set or tend any traps (i) within 10 feet of a beaver house, muskrat den or house, (ii) within 5 feet of a beaver dam, or (iii) within 4 feet of a beaver trap that has been set by another trapper. In Wildlife Management Districts 1, 2, 4, 8, 9, and 10 there is no required setback distance from an active beaver dam. In Wildlife Management Districts 1, 2, 3, 4, 5, and 6 there is no required setback distance from a beaver house.

Steel foothold or killer-type traps must not be set within 50 yards of bait that is visible from above. Bait may be used for trapping if it is completely covered to prevent it from being seen from above, and it must be covered in such a way as to withstand wind action and other normal environmental conditions. Bait is defined as animal matter including meat, skin, bones, feathers, hair or any other solid substance that used to be part of an animal. This includes live or dead fish. For the purposes of this paragraph, bait does not include animal droppings (scat), urine or animals, dead or alive, held in a trap as the result of lawful trapping activity.

Steel foothold traps must not be set above ground or snow level.

Steel foothold traps must have a chain that is mounted within the central portion of the base of the trap, and must have three swiveling points, with one swiveling point at the base of the trap, one midway in the chain, and one at the trap's anchoring point. These restrictions do not apply to foothold traps that when set, placed, or tended are fully or partially covered by water, those that are set on a muskrat "float", or dog-proof traps (also known as Duffer traps).

In WMD's 1-11, 14, 18, and 19, foothold traps must be securely anchored to the ground. The use of drags is prohibited in these WMD's. Foothold traps must have the catch circle cleared of woody vegetation, debris and manmade material that could cause entanglement of a trapped animal. Small sticks and rocks, and rotten/decaying woody material may be used for stepping guides, blocking, and backing for trap sets, if they are not rooted to the ground. A catch circle is defined as the area that can be circumscribed by the outer edge of a trap when the trap and trap chain are fully extended and moved in a circle (360°) around the anchoring point. These restrictions do not apply to foothold traps that when set, placed, or tended are fully or partially covered by water, those that are set on a muskrat "float", or dog-proof traps (also known as Duffer traps).

No person may set, place, or tend any killer-type trap unless:

1) set completely underwater except or

2) killer-type traps with an inside jaw spread not to exceed 5 inches may also be used under the following conditions:

(a) when set so as to be partially covered by water at all times, or

(b) when set under overhanging stream banks, or

(c) when used at blind sets defined as –

any set designed to catch a wild animal, without the use of bait, lure or visible attractor, by intercepting the animal as it moves naturally through its habitat. Bait, lure and visible attractor do not include animal droppings (scat) or urine.

Notwithstanding the previous paragraph, in all Wildlife Management Districts killer-type traps with a jaw spread not to exceed 8 inches may be used on or above ground level if the trap is placed within a lynx exclusion device. The trap jaws must be completely within the device, the trap springs can be outside of the device. Exclusion devices will have the following designs:

(1) For traps with a jaw spread less than or equal to 5 inches (primarily used for marten trapping), the device must have an opening of 4 x 4 inches or less. The entrance hole may be placed on the end or on the side of the device, and the set trap must be a minimum of 18 inches from the closest edge of the entrance hole.

(2) For traps with a jaw spread greater than 5 inches but less than 8 inches, two designs may be constructed. The first design has an entrance hole on the end of the device that must not exceed 5 x 6 inches. A baffle must be placed no more than 6 inches back from the entrance hole and must not have an opening greater than 5 x 6 inches. With the baffle in place, the entrance hole and interior opening may not overlap to create an unobstructed view to the interior of the exclusion device.

For the second design the entrance hole must not exceed 6 x 7 inches and must be placed on the side of the device. A baffle must be placed at the edge of the entrance with the baffle opening opposite of the entrance hole, and the hole must not exceed 6 x 6 inches.

For both devices the trap must be placed no closer than 18 inches from the closest edge of the entrance hole. An example design is included in the annual Trapper Information Booklet.

The exclusion device can be constructed of wood, plastic, or wire mesh. If using wire mesh, the mesh cannot exceed 1 ½ by 1 ½ inches, or 1 inch by 2 inch openings, (side to side). The wire mesh has to be 16 gauge or less (wire diameter of 0.05 or greater). The opening slot in the exclusion device that allows the trap springs to extend outside the device can be no more than 7 ½ inches wide and a height of no more than 1 ½ inches. The back of the device must be secured to withstand heavy pulling; if using wire mesh with a wood or plastic box, the wire mesh must wrap around two opposite sides of the box and be secured. There must be at least 1 attachment point for each side of the device where a joint or panels come together. The opening slot in the exclusion device that allows the trap springs to extend outside the device can be no more than 7 ½ inches wide and a height of no more than 1½ inches. The trap must be anchored outside of the exclusion device. Bait must not be visible from above. When enclosed in an exclusion device, killer-type traps can be set directly on the ground, or elevated in trees or on poles, with no specific requirements as to the height above ground or diameter of the tree or pole.

L. **Destruction of Beaver Dams, etc.**

No person except agents of the Commissioner or someone authorized by them shall damage, destroy, or molest any beaver house, beaver dam, muskrat house, or muskrat den.

M. *(Repealed effective September 2, 200, filing 2000-379)*

N. **Zones for Trapping and Hunting Furbearers and Upland Games Defined**

(*Deleted 8-12-87, filing 87-279)*

O. **Mandatory Submission of Premolar Tooth**

Whenever a bear is presented for registration a premolar tooth shall be removed from the bear and submitted to the Department by the person presenting the bear for registration

P. **Bobcat Biological Data Collection**

DELETED 8-12-87 (87-279)

4.04 Bear Hunting/Trapping Season

B. **Bear Trapping**: Except as otherwise provided by State law, no person may set, place or tend any bear trap that is not in conformity with the following provisions:

1. No person may have more than 1 traps set for bear at any one time.

2. Bear may be trapped only with the use of cable traps (foot snares) or cage-type live traps.

3. Whenever a cage-type live trap is used to trap for bear, the trap must be enclosed and identified by signs in accordance with the provisions of Title 12 §12260, subsection 3.

4. Whenever a cable trap (foot snare) is used to trap for bear, the trap must be set at or below ground level in such a mannner as to catch the animal only by the foot or leg.

5. A bear caught in traps must be killed or released and not moved away from the catch site. A bear caught in a trap may not be used in conjunction with a hunt or to train a dog for bear hunting.

6. The placement of bait when trapping for bear must be done in accordance with the provisions of Title 12 §11301, subsection 1.

For purposes of this rule, cage-type live traps for bear are defined as traps designed as a cage, tunnel or other enclosure fitted with a door that, when tripped, closes in a manner that prevents escape of the bear. Traps must be heavily constructed to prevent damage from bears, and also must have adequate openings for ventilation and cooling inside when the door is closed. Traps must also be constructed with no sharp intrusions to injure bears, and be large enough for caught bears to turn around inside the closed trap.

4.11 Registration and Tagging of Big Game and Fur Bearing Animals

C. **Fur Tagging Agents and Tagging Operations**

1. Fur tagging agents shall be established by the Commissioner of Inland Fisheries and Wildlife on the basis of need, except that the total number of such stations shall not exceed 50 statewide.

2. Agents shall be located so as to provide tagging stations at strategic locations throughout the State. All selections shall be based upon the following considerations:

   a. Location of applicants in relation to the major access routes within the various sections of the State;

   b. Location of applicants in relation to other fur tagging agents. New fur tagging agents shall be a minimum of 20 airline miles from an existing agent;

   c. Location of applicants in relation to major fur buyers; and

   d. Fur harvest characteristics of the various sections of the State.

   e. Availability of personnel and facilities required to tag large lots of fur in an efficient and confidential manner.

3. The Commissioner of Inland Fisheries and Wildlife shall enter into a written agreement with each fur tagging agent which specifies the minimum operating standards for tagging stations.

These standards shall include the following:

a. Minimum time of operation - 8:00 A.M. to 6:00 P.M.

b. Minimum days of operation - Monday through Saturday

c. Minimum registration and tagging requirements

d. Station location

e. A restriction prohibiting the agent from holding a trapping or hide buyers license.

4. The operators of tagging stations which were operational during 1983 shall be formally designated as fur tagging agents upon entering into a written agreement with the Commissioner of Inland Fisheries and Wildlife regarding the operation of the station according to minimal operating standards. Failure to enter into the above agreement may result in the elimination of the station.

5. Agents designed by the Commissioner for the purpose of operating fur tagging stations shall be responsible for complying with all pertinent laws, regulations, and performance agreements regarding the tagging of the skins of furbearing animals.

6. All contracts with fur tagging agents shall remain in effect until:

a. The agent no longer wishes to operate a fur tagging station at the agreed upon location and terminates the agreement with the Commissioner;

b. The agent changes the location of the station;

c. The agent sells or leases the station location to another person, or

d. The designation is terminated by the Commissioner.

7. Agreements regarding the operation of fur tagging stations are not transferable to another individual, location, business, corporation, etc.

8. Individuals interested in becoming a fur tagging agent shall contact the Warden Lieutenant within whose Region they wish to operate a tagging station. When the need exists for a new tagging station in a particular area, interested individuals will be provided an application which must be completely and accurately completed and returned to the Commissioner by September 1 of the year in which the applicant wishes to become established as an agent. Applications will be considered only when there is a need for new fur tagging station(s) in a particular section of the State.

D. **Termination of Services**

1. Whenever it comes to the attention of the Commissioner that a big game registration agent or a fur tagging agent has violated any provision of these rules, the Commissioner may immediately terminate the services of that agent.

2. Whenever the services of a big game registration agent or a fur tagging agent are terminated, the Commissioner shall notify the agent in writing as to the circumstances surrounding the action and shall arrange to collect, from the agent, all state-owned wildlife registration and tagging materials. The Commissioner's notice shall state the ground for the termination, and shall give the specific factual basis if applicable. If the agent wishes to contest the termination, he shall notify the Commissioner in writing within ten days, specifying all areas of disagreement with the notice. He may supplement his position with written statements of witnesses. After reviewing the materials submitted, the Commissioner may decide to take no further action thus maintaining the original termination, or he may modify the termination in such fashion as he deems appropriate. Pending this determination, the original termination shall remain in effect.

Appendix 3. Chapter Titles and Content Standards from Maine's Trapper Education Manual (May 2008), and Supplemental Course Material on Lynx and Eagle Incidental Captures.

CHAPTER 1 – INTRODUCTION

Content Standard
Students demonstrate an understanding of the purpose of trapping and trapper education in today's society. (Student Trapper Education Manual pages 2-8).

CHAPTER 2 – HISTORICAL CONSIDERATIONS

Content Standard
Students use knowledge of history, public attitudes about wildlife, and the North American Model of Wildlife Conservation to understand regulated trapping as a legitimate activity.

CHAPTER 3 – RESPONSIBLE TRAPPING

Content Standard
Students demonstrate awareness of their responsibilities to landowners, wildlife, other outdoor users, and the public.

CHAPTER 4 – RUNNING A TRAPLINE

Content Standard
Students demonstrate an understanding of the knowledge, skills, and attitudes needed to safely and responsibly harvest furbearing animals using best management practices.

CHAPTER 5 – FURBEARER MANAGEMENT

Content Standard
Students use knowledge of furbearer management principles, practices, and issues to explain current management programs in their state.

CHAPTER 6 –FURBEARERS

Content Standard – None.

CHAPTER 7 – BEST MANAGEMENT PRACTICES

Content Standard
Students understand Best Management Practices for Trapping are needed to address animal welfare, trapping efficiency, selectivity, and safety in furbearer management programs (p. 52-52).

CHAPTER 8 – TRAPS

Content Standard
Students demonstrate the ability to identify types of traps, prepare traps for use, and safely operate traps.

CHAPTER 9 – CABLE DEVICES

Content Standard
Students demonstrate an understanding of cable devices, and responsible techniques for using them.

CHAPTER 10 – TRAPPING SAFETY

Content Standard
Students demonstrate an understanding of potential risks to their personal health, safety, and welfare from trapping activities.

CHAPTER 11 – TRAPPING REGULATIONS

Content Standard
Students demonstrate the ability to understand, support, and comply with trapping regulations.

CHAPTER 12 – USING FURBEARERS

Content Standard
Students demonstrate an understanding of the full value of harvested furbearers.

CHAPTER 13 – HANDLING FUR

Content Standard
Students demonstrate an understanding of the knowledge, skills, and equipment needed to safely skin animals and prepare the pelts for market.

CHAPTER 14 – USING BAIT, LURE, AND URINE

Content Standard
Students explain responsible use of lure, bait, and urine to attract furbearers to sets.

CHAPTER 15 – SELECTIVE TRAPPING TECHNIQUES

Content Standard
Students demonstrate and understanding of trapping principles and techniques that increase selectivity of sets.

CHAPTER 16 – WATER SETS

Content Standard
Students demonstrate an understanding of the procedures for making safe, effective, and selective sets in or near water.

CHAPTER 17 - LAND SETS

Content Standard
Students demonstrate an understanding of the procedures for making safe, effective, and selective sets on land.

Content of Flyers On Avoiding the Incidental Catch of Lynx and Eagles Used in Trapping Education Course

AVOIDING INCIDENTAL CAPTURES

Bald Eagles

In past years, the single biggest factor leading to the incidental capture of bald eagles was the use of exposed bait. **This year is the first year trappers will be required to cover exposed bait that is within 50 yd of a trap. Bait must be covered so that it is not visible from above and be covered in such a way that the covering will not easily be blown off in the wind. Bait that must be covered includes feathers or other animal parts used as attractants, such as might be used to trap bobcat.** Although eagles are fish eaters, they are attracted to a variety of carrion including large and small mammals. Examples of trapping sets where exposed bait resulted in an incidental eagle capture are fisher and marten sets, float sets for muskrats where more than one trap is set on the float (if multiple traps are set, eagles may get caught in one of the remaining traps), pocket sets along stream banks, and traps set near carrion. Bald eagles are particularly attracted to sets where fish are used as bait. Do not depend on water hiding the bait. Several eagles have been caught in traps baited with fish when water levels dropped leaving the fish exposed.

It is imperative that trappers **report ALL incidental captures of lynx or eagles** by calling IFW at either 207-941-4466 during regular office hours (8 a.m. to 5 p.m. Monday – Friday) **or by calling the incidental capture hotline at 207-592-4734**. The hotline is staffed 24 hours a day, seven days a week during the trapping season. If you can report an incidental capture more quickly by directly contacting an IF&W biologist or game warden, you should do so. Unless circumstances make it impossible to promptly contact IFW, do not release a trapped lynx or eagle until you have spoken with, and received instructions from, an IF&W staff person.

Canada Lynx

If you are trapping in WMDs 1 through 11, lynx could be in the area. If you are trapping for fox, coyote, or bobcat and see lynx sign near the vicinity of your traps, please consider moving your traps to another location. There have been a number of changes to Maine's trapping regulations this year. These new regulations include:

1. a.) an **emergency rule** that complies with a Consent Decree issued by the United States District Court for the District of Maine on October 4, 2007. The Consent Decree resolves a lawsuit brought against the State by the Animal Protection Institute, alleging that IFW's licensure of trappers violated the federal Endangered Species Act. The purpose of this rule is to limit some of the trap types and sizes that may accidentally capture the federally threatened Canada lynx in northern Maine (Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11). The emergency rule [Chapter 4.01, Paragraph J] took effect on October 5, 2007 and reads as follows:

"Animals may be trapped with any common ordinary steel trap, except that in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11, no foothold trap (also known as a leghold trap) may be used that has an inside jaw spread of more than 5 3/8 inches, except that a foothold trap with an inside jaw spread of more than 5 3/8 inches may be used if it is set so as to be fully or partially covered by water at all times. Every foothold trap used in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11 that is not set so as to be fully or partially covered by water at all times must be equipped with at least one chain swivel.

"It shall be lawful to trap furbearing animals with a common cage type live trap, except that in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11, no cage trap which has an opening of more than 13 inches in width or more than 13 inches in height may be used unless the cage trap is being used (1) for wildlife research and survey activities; (2) for the removal of animals that are causing damage to property; or (3) to capture bear."

1. b.) IFW recommends that trappers not set on the ground in Wildlife Management Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11 foothold traps with an inside jaw spread of more than 5 inches unless such traps are equipped with offset jaws.

It is imperative that trappers **report ALL incidental captures of lynx or eagles** by calling IFW at either 207-941-4466 during regular office hours (8 a.m. to 5 p.m. Monday – Friday) **or by calling the incidental capture hotline at 207-592-4734**. The hotline is staffed 24 hours a day, seven days a week during the trapping season. If you can report an incidental capture more quickly by directly contacting an IF&W biologist or game warden, you should do so. Unless circumstances make it impossible to promptly contact IFW, do not release a trapped lynx or eagle until you have spoken with, and received instructions from, an IF&W staff person. **Tips on avoiding lynx captures can be found on IFW website [http://www.maine.gov/ifw/wildlife/management/lynx_avoid.htm].**

2) new regulations governing the use of exposed bait and new regulations on the use of conibears or killer-type traps were passed this year to reduce the incidental catch of lynx and eagles. In WMDs 1-11, conibears must be set completely under water or at least 4 feet above the ground or snow level on poles or trees no greater than 4 inches in diameter and at an angle of at least 45º from the ground. [Some exceptions were made for mink trappers wishing to use small conibears in blind sets on the ground.] Please see the Hunting and Trapping 2007-08 Laws & Rules booklet for exceptions for traps that have an inside jaw spread of 5 inches or less. To reduce eagle captures, traps cannot be set within 50 yards of bait that is visible from above. Bait may be used if it is completely covered to prevent it from being seen from above. Please see the Hunting and Trapping Laws and Rule booklet for further details on this rule change.

IF YOU CATCH A LYNX OR EAGLE

It is imperative that trappers **report ALL incidental captures of lynx or eagles** by calling IFW at either 207-941-4466 during regular office hours (8 a.m. to 5 p.m. Monday – Friday) **or by calling the incidental capture hotline at 207-592-4734**. The hotline is staffed 24 hours a day, seven days a week during the trapping season. If you can report an incidental capture more quickly by directly contacting an IF&W biologist or game warden, you should do so. Unless circumstances make it impossible to promptly contact IFW, do not release a trapped lynx or eagle until you have spoken with, and received instructions from, an IF&W staff person. You may also contact the nearest regional office at one of the numbers listed in the back of this booklet. **Tips on avoiding lynx captures can be found on IFW website [http://www.maine.gov/ifw/wildlife/management/lynx_avoid.htm].**

Department personnel are available to help release lynx or eagles caught in traps. Lynx and eagles are protected by federal and state laws, and cannot be kept if caught in a trap. An eagle caught in a trap will likely require rehabilitation. An eagle caught in a trap by one of its legs may show little if any signs of injury at the time of capture. What may appear to be a very minor bruise at the time of capture can quickly develop into a fatal injury. This is because of the unique way that blood circulates in an eagle's leg; a bruise may result in a loss of blood flow in the leg, that results in an infection that causes the death of the bird. Please contact IFW as soon as possible if you catch an eagle in a trap. Ideally, an eagle should spend as little time in a trap as possible. Safely releasing an eagle from a trap will require covering the eyes or head of the animal, controlling the talons (e.g., tether the feet together), and putting the released eagle in a holding container that has adequate ventilation and that restricts wing movement (e.g., burlap bag). Once the eagle is secure it can be held for a biologist or warden or be transported to the nearest IFW regional office. For information regarding how to safely release a lynx from a trap, please refer to: http://www.maine.gov/ifw/wildlife/management/lynx_avoid.htm .

If you incidentally capture a lynx that has an eartag or radiocollar, and you are unable to reach IFW personnel for assistance in releasing the lynx, please contact Jennifer Vashon at 207-941-4466 at your earliest convenience to provide information

regarding the animal. If you incidentally capture a lynx that is not marked with an eartag or radiocollar, this animal could provide valuable information. **We would like to mark all incidentally captured lynx with eartags, and radiocollar them, if possible.** If you would like more information on lynx in Maine, please contact Wally Jakubas or Jennifer Vashon at 941-4466.

If you catch a collared cat and are uncertain whether it is a bobcat or a lynx, please contact a regional wildlife biologist, warden, or biologists at the Bangor office before killing the animal. Remember any lynx caught in a trap must be released.

Reducing Mortality and Injuries to Incidentally Captured Lynx

Please contact your local game warden or state fish and wildlife office listed on page 18 for help in releasing a lynx from a trap. If you cannot reach IFW personnel, please release the animal as soon as possible using recommendations outlined as follows. A catchpole should be used to allow safe release of any unintended animal captures. Care should be taken to approach any trapped animals slowly to avoid their excessive movement. A trapped lynx will allow the catchpole loop to be placed over its head, but it can be expected to react when the loop is tightened.

Use of a catchpole to release any lynx taken incidental to harvests of other furbearers. Tighten the catchpole loop sufficiently to immobilize the lynx without cutting off its air supply. Then quickly remove the trap and release the catchpole loop.

Tighten the catchpole loop only sufficiently to hold the lynx securely without preventing its ability to breathe. It is important to keep the head of the lynx pinned to the ground so that the front end of the body is restrained. Once the head is down, quickly place a foot, with light pressure only, on the hindquarters to restrain the rear legs. Once the lynx is restrained, a canvas can be placed over the animal to calm it as the trap is removed quickly. Securely hold the catchpole until the loop is relaxed and the animal has been freed.

If a catchpole is not available, an alternative method to release lynx is to cut a strong forked stick to allow the pinning of the lynx's neck and shoulder to the ground while the trap is removed.

Never attempt to render a trapped lynx unconscious with a blow to the nose or head or by any other means. Life threatening injury to the lynx may result.

Care should be taken at all times when releasing a lynx because they are capable of injuring the trapper with their teeth or claws. Always be aware a trapped lynx may try to kick at you with claws extended on any foot. Wearing thick gloves to release trapped animals is always wise.

Reporting Incidentally Captured Lynx

We are studying lynx by radiocollaring individuals and monitoring their movements, behavior, and habitat use. If you incidentally capture a lynx, this animal could provide valuable information.

We would like to mark all incidentally captured lynx with eartags and radiocollar them, if possible. Please contact your local IFW office or the Bangor office for assistance with releasing a lynx (see below). During the trapping season, a number will also be available after business hours: 207-592-4734.

If you cannot reach IFW personnel, release the animal as soon as possible. We would appreciate you providing us with the location of capture and whether the animal was marked with eartags and/or a radiocollar.

Bangor – 207-941-4466
Ashland – 207-435-3232
Greenville – 207-695-3750
Enfield – 207-732-4132

Houlton State Police – 1-800-924-2261
Orono State Police – 1-800-432-7381

Reporting Incidentally Captured Lynx:

Non-business hours, call: 207-592-4734.

Bangor - 207-941-4466
Ashland - 207-435-3231
Greenville - 207-695-3756
Enfield - 207-732-4132

Maine Department of Inland Fisheries & Wildlife

Lynx: *Note long eartufts, large feet, and completely black-tipped tail.*

Roger W. Barbour

Bobcat: *Note shorter eartufts, smaller feet, and tail coloration.*

Quick Reference

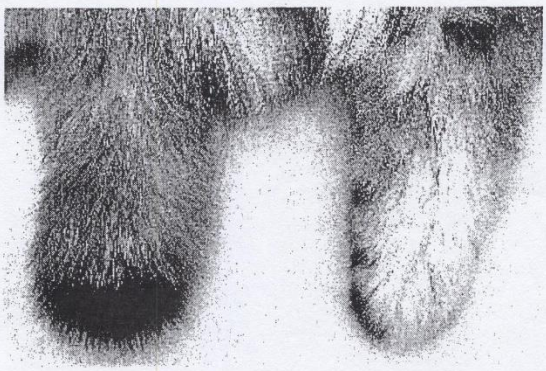
HOW TO AVOID INCIDENTAL TAKE OF LYNX

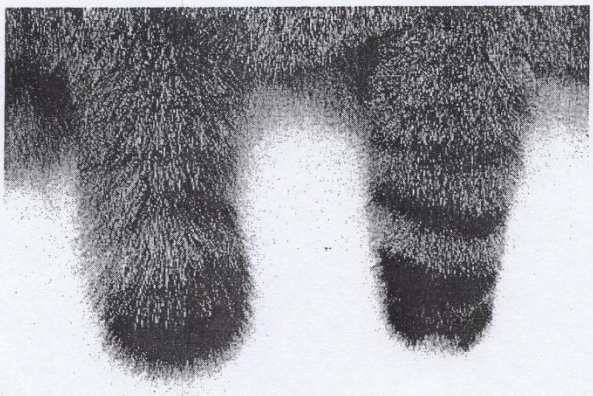
While Trapping or Hunting Bobcats and Other Furbearers

Lynx
©Corel Corporation

Maine Department of Inland Fisheries and Wildlife

Note the foot size and color differences between lynx (left) and bobcat (right).





©Tom Krause

Lynx tails appear much the same when viewed from the top (top) or bottom (bottom). The lynx tail tip is completely black all around, while bobcat tails show black bars with a white tip when viewed from above (top) and

Appendix 4. Excerpts from IFW's 2006 Trapper Mailing on Incidental Lynx Captures.

AVOIDING INCIDENTAL CAPTURES

Lynx

- To date, the incidental captures that have led to lynx fatalities have all been associated with conibear traps. When trapping in northern Maine, please set conibears in enclosures and on leaning poles that are 4 inches or less in diameter. The traps will still be accessible to marten and fisher, but lynx will be reluctant to climb the narrow poll to investigate the trap set.

- Further information on how to avoid the incidental capture of lynx and how to safely release a lynx from a trap is in the enclosed booklet -- "How to Avoid Incidental Take of Lynx". This information is also available on our website www.mefishwildlife.com.

IF YOU CATCH A LYNX OR EAGLE

Trappers catching either of these species are required to notify IFW as soon as possible. If you accidentally trap a lynx or eagle during the trapping season, please notify a biologist or game warden immediately, before releasing the animal. **For quickest response, phone 207-941-4466 during regular office hours (8 AM - 5 PM Monday-Friday), or 207-592-4734 outside of business hours (during the trapping season only). You may also contact the nearest regional office at one of the numbers listed in the back of this booklet.** If you cannot reach IFW personnel, please release the animal as soon as possible.

Lynx and eagles are protected by federal and state laws, and must be released if incidentally trapped. Department personnel are available to help release lynx or eagles caught in traps. Eagles caught in traps may require rehabilitation. If possible, a biologist should examine the eagle before they are released from a trap. If an eagle is caught in a remote location, and a biologist or warden is not available to help release the bird, trappers may remove the bird from the trap. If possible, the bird should be transported (in a box with ventilation or other suitable container) to the nearest IFW regional office. For information regarding how to safely release a lynx from a trap, please refer to the brochure: How to Avoid Incidental Take of Lynx.

If you incidentally capture a lynx that has an eartag or radiocollar, and you are unable to reach IFW personnel for assistance in releasing the lynx, please contact Jennifer Vashon at 207-941-4466 at your earliest convenience to provide information regarding the animal. If you incidentally capture a lynx that is not marked with an eartag or radiocollar, this animal could provide valuable information. **We would like to mark all incidentally captured lynx with eartags, and radiocollar them, if possible.** If you

would like more information on lynx in Maine, please contact Wally Jakubas or Jennifer Vashon at 941-4466.

RARE MAMMALS TO WATCH FOR

Lynx vs. Bobcat Know the Difference

The most notable difference between a lynx and a bobcat is paw size. Lynx paws are about twice the size of bobcat paws. Lynx can also be distinguished from bobcats by the tip of their tail, which is completely black (bobcat tail tips are black on the upper side [dorsal side] and white underneath). Lynx have more prominent ear tufts, paler coloration, less spotting, and longer legs than a bobcat (Table 4, Figure 3).

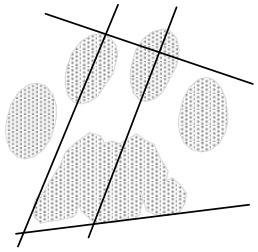
If you trap a bobcat that looks like a cross between a lynx and a bobcat, we would like to know about it. We have recovered several lynx-bobcat hybrids in north central Maine and are interesting in documenting other specimens. Remember if you are uncertain whether an animal is a lynx or bobcat please call a biologist or warden before dispatching the animal. If you have already dispatched the animal, and think it has unusual characteristics for a bobcat, we are still interested in seeing it.

TRACK AND TRACK PATTERNS FOR COUGAR, LYNX, AND WOLF; WITH COMPARISONS TO MORE COMMON SPECIES

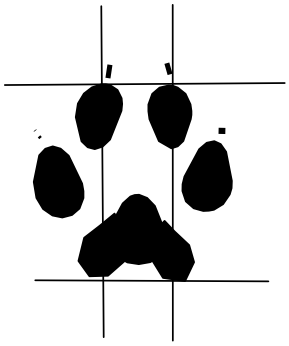
Table 4. Distinguishing track characteristics

Species	General Shape	Walking Stride	Print Size (Front Foot)	Track Pattern
Bobcat	General round appearance. Heel points in slightly different direction than toes. No nail marks, but if present, attached to toe marks.	6" to 14"	Length - 1⅞" to 2½" Width - 1⅞" to 2 $^{5}/_{8}$"	Direct or double register walking pattern. Trail pattern zigzags right-left-right-left.
Lynx	Same as bobcat but tracks show a lot more hair. Smaller pads than a mountain lion.	11" to 18"	Length - 3¼" to 3¾" Width - 3" to 3⅜" Outline of hair impression Length - 4½" to 5⅜" Width - 3⅜" to 5½"	Same as bobcat
Cougar	Same as bobcat	20" to 32"	Length - 3" to 4¼" Width - 3⅛" to 3 $^{9}/_{16}$"	Walking pattern similar to other cats. Deep snow may show belly and tail drag marks.
Coyote	4 toes, oval shaped track, Front nails often close together. Side nails often do not register.	**Eastern:** 17½" to 26"	**Eastern:** Length - 2⅞" to 3½" Width - 1⅞" - 2½"	Trail pattern usually is in a straight line. Walking pattern is usually direct registering
Dog	Similar to wolves and coyotes. Inner toes often splayed outwards.	Varies with breed	Varies with breed	Trail pattern sloppy, wandering, not usually in a straight line. Walking pattern is often double register.
Wolf	4 toes, symmetrical track, longer than wide, more rounded than a coyote, nail marks not attached to toe mark (same as coyote), 4 nails register.	**Algonquin**: 20½" to 28½"	**Algonquin**: Length - 4" - 4¾" Width - 2½" - 3¼" **Other**: Length - 3⅞" - 5½" Width - 2⅜ - 5"	Trail pattern usually is in a straight line. Walking pattern is usually direct registering.

Figure 3. Typical shape of canine and cat tracks, and a comparison of bobcat, lynx, and cougar tracks. Illustrations follow those in Rezendes (1992) and Elbroch (2003).

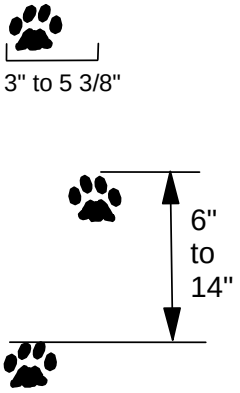


Asymmetrical Shape
Cat Family

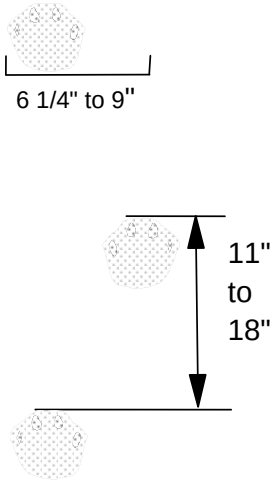


Symmetrical Shape
Large Domestic Dog

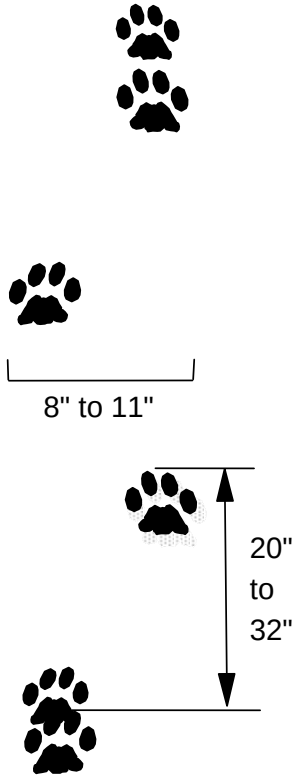
Bobcat Track Pattern

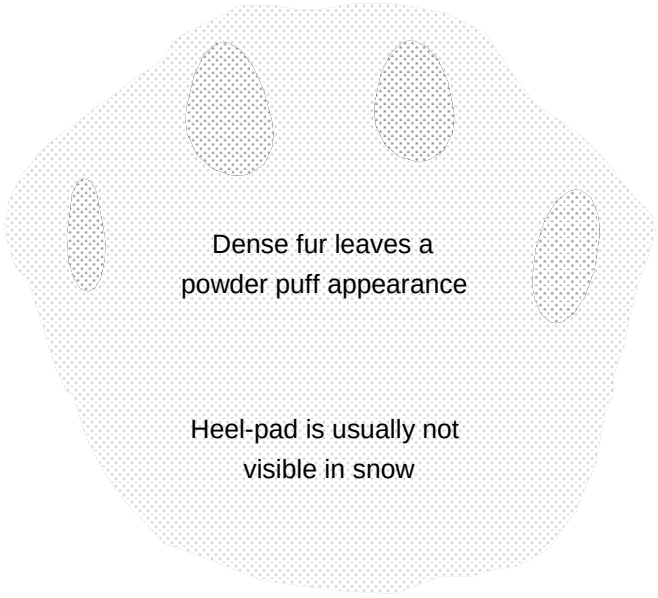


Lynx Track Pattern



Cougar Track Pattern





LYNX PRINT, ACTUAL SIZE

COUGAR PRINT, ACTUAL SIZE

Appendix 5. Application of avoidance and minimization measures to lynx WMDs

This plan applies to the statewide trapping programs, though some avoidance and minimization measures are only required in areas that are specifically occupied by lynx. For these measures, the plan will initially apply to the existing lynx WMDs (1-11, 14, 18, and 19). The occupancy status of WMDs can change over the permit period, for the purpose of plan implementation, based on procedures described below.

The plan focuses on extending avoidance and minimization measures to WMDs that are occupied by resident lynx. Resident lynx will have repeated use of an area over an extended period of time and therefore could have repeated exposure to trapping activities in that area. In contrast, transient lynx could move through a WMD and not become established as a resident. Such transient lynx would not have repeated use of an area and thus would not have increased risk of exposure to trapping activities. In those cases, IFW does not want to encumber the trapping program by measures that would not reduce the already low risk of incidentally trapping a single transient lynx in a WMD. Therefore, the criteria established below are intended to identify previously unoccupied WMDs that become occupied by resident lynx over time.

IFW will adjust regulations in newly occupied WMDs before the next trapping season. If information on lynx occupying a previously unoccupied WMD becomes available during the trapping season, it is unlikely that changes in trapping regulations could be put in place during that trapping season because the time period when lynx are incidentally captured in traps is a relatively short period (between mid-late October and mid-November).

Currently unoccupied lynx WMDs will be considered occupied if they meet the following criteria:

1. A lynx is captured in a trap within an unoccupied WMD, or
2. Verified observation(s) of kitten traveling with a female within an unoccupied WMD, or
3. IFW systematic surveys document the presence of one or more resident lynx within an unoccupied WMD; or
4. Verified anecdotal reports of lynx will be considered based on the following criteria:
    a. There is more than one independent lynx observations, and verified by IFW, annually within an unoccupied WMD for two or more years; or
    b. In one year, there are three or more independent lynx observations within an unoccupied WMD, each verified by IFW.

Criterion #1. A lynx captured in a trap will be considered verification that lynx are occupying a previously unoccupied WMD and that plan avoidance and minimization measures should be applied.

Criterion # 2. V*erified observations* include a photograph of a lynx or lynx tracks, an incidentally captured lynx, lynx road mortality, lynx radiotelemetry locations, and other evidence of lynx collected by IFW during lynx survey efforts (e.g., presence of snow tracks, photograph, DNA evidence). In each circumstance, identification is considered absolute when the location of the observation is known and confirmed to be in Maine (e.g., GPS coordinates, land features) and the animal is either in hand or there is adequate documentation of the size and characteristics of the animal or track (e.g., measurements or photographs) that have been verified by IFW staff.

Criterion #3 (i.e., systematic surveys) provides a rigorous dataset (e.g., extensive coverage of an area, repeated sampling in one year, an estimate of the number of lynx in the area, etc.) upon which to establish that lynx are using previously unoccupied WMDs. However, IFW does not always conduct these surveys and does not do so routinely in all WMDs. Surveys will follow IFW's winter snow-track ecoregion protocol with the exception that:

a) In a WMD, at least 20% of the townships where lynx are likely to be found (e.g., towns with ≥5,000 acres of dense spruce/fir sapling forest) will be surveyed;
b) Observers will survey at least 55 km of unplowed roads for lynx tracks in each survey area (100km^2- ~ 1 township), unless 2 or more independent lynx tracks are detected.
c) Towns where lynx tracks are observed will count as a detection of presence.
d) If only one independent observation of a single animal is made in the survey area (i.e., township), observers will return to that survey area to assess whether the observation represents a resident lynx (i.e., animal is still present during the follow-up survey); if lynx are not detect in subsequent survey(s) the area will not be included as a count of presence.
e) Lynx minimizations measures will be extended to WMDs when surveys have detected presence of lynx, unless lynx are only observed in a portion of a WMD (i.e., edge of range), lynx avoidance measures will at a minimum be extended to the areas within the WMD where lynx were detected.

Criterion #4 (i.e., anecdotal reports from the public verified by IFW or observations made by IFW staff during other activities (i.e., not systematic surveys)) is least absolute in terms of validating that lynx are occupying a previously unoccupied WMD. Observations of lynx by the public are sometimes reported to IFW staff. These are considered anecdotal observations and need to be verified by IFW before being considered as legitimate sources of data. The verification will follow the standards described above for criterion #2. In addition, multiple years of repeated anecdotal observations by the public or IFW staff are needed to assess if the observation represents a resident (versus transient) lynx. IFW does not consider one or two observations of a lynx or lynx sign in one year as evidence of consistent presence of lynx, as these observations could represent a dispersing individual. In addition, the anecdotal reports need to be independent to ensure that multiple reports are not based on multiple observations of the same transient lynx. Such reports will be considered independent if the lynx is marked and can be distinguished from other marked or

unmarked animals, or the observations are more than one week apart, or observations on the same day are more than 6 kilometers apart.

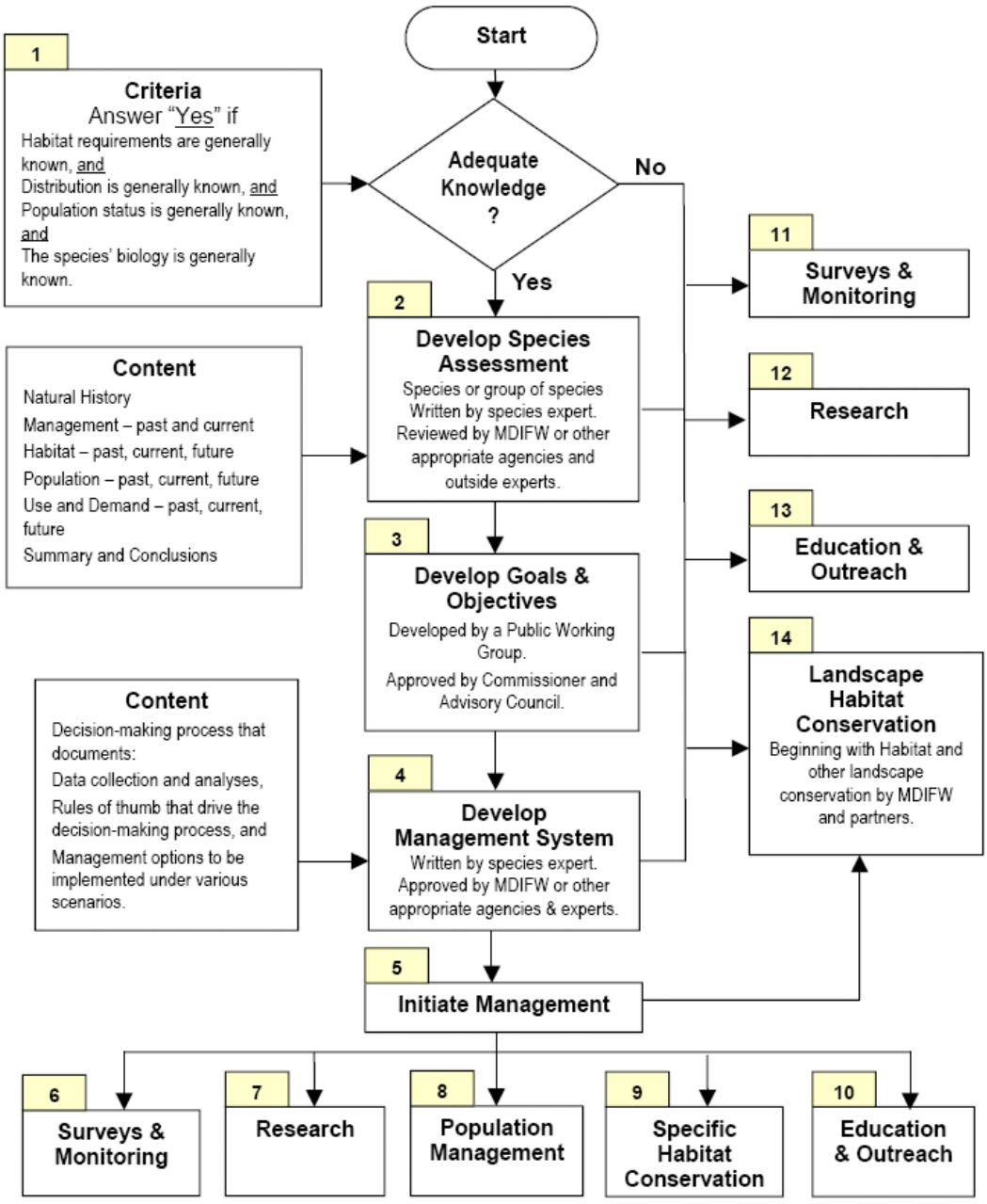
Observations of dead lynx (e.g., road mortalities) will provide supportive information about changes in lynx distribution, but will not by themselves trigger changes to the occupancy status of a WMD. If survey efforts determine the animal is transient (e.g., radiocollared lynx that does not remain in survey area), trapping regulations will not be extended.

Currently occupied lynx WMDs will be considered unoccupied based on the following criteria:

- Five or more years of systematic track surveys (as described above in criterion #3) targeting townships with the best lynx habitat do not detect lynx.

In these circumstances, the specific avoidance and minimization measures required in WMDs occupied by lynx may be discontinued, after consulting and getting concurrence from USFWS. Establishing a 5-year period before trapping regulations can be rescinded would avoid the confusion that frequent adjustments to regulations may cause. If avoidance and minimization measures are removed from an area, these measures will be reinstituted if resident lynx are later identified in the area.

Appendix 6. Flow Diagram of Maine's Strategic Planning Process for Species of Greatest Conservation Need.



NOTE: The above outlines how Maine will conserve SGCN species. However, a time may come when emergency population management and habitat conservation measures may be needed for a species that has not been through the planning process. These emergencies will be addressed as they arise.

Appendix 7. Lynx Population Model

Summary of inputs used to assess lynx population growth rates and the influence of minor annual trapping related mortality on lynx.

We used VORTEX 9.99 software to calculate the growth rate of Maine's lynx population and to simulate lynx population dynamics from lynx demographic data collected in Maine between 1999 and 2010. The purpose of the simulation was to 1) update the inputs used in the population model presented in Maine's 2008 Incidental Take Plan (Plan), and 2) to determine if Maine's lynx population would continue to increase despite minor losses that might result from the incidental capture of lynx in traps set for other furbearing animals. We considered the effects of incidental trapping over the 15-year time frame of the Incidental Take Permit (ITP).

We collected data on lynx vital rates during a period when snowshoe hare populations fluctuated from >2 hares/ha to >1.0 hare/ha in northern Maine's regenerating conifer clearcuts (Scott 2009). Data collected from this period suggests that Maine's lynx population reached a historic high due to the abundance of young conifer forests that supported high prey densities. When hares declined, lynx reproductive rates also declined.

Vortex allows users to consider the influence of small isolated populations on population growth rates. For our simulations, we selected no inbreeding depression because DNA analysis indicated that Maine's lynx are not isolated from lynx populations in northeastern Canada. We also have direct observations of 12 lynx monitored in Maine moving between Maine and Quebec or New Brunswick.

Since environmental variability can influence various vital rates, Vortex allows for concordance between female reproductive rates and adult survival (e.g., a stressful winter can reduce survival and production of kittens). In Maine, a major source of mortality is predation of lynx. Predation can be independent of environmental variability; thus, we did not select concordance between female reproductive rates and adult survival for our model and simulations. However, Vortex did simulate concordance in survival rates among age-sex classes.

Although female lynx can breed (March) as 1 year olds and produce their first litter (May) at age 2 (Parker 1983), we set the first age of reproduction at age 3 since most lynx produce their first litter at 3. Setting the first age of reproduction at 3 should produce a conservative estimate of population growth. Male lynx can breed at 2 years of age. To date, the oldest female lynx that produced a litter in Maine was 13 and the sex ratio of kittens from all litters was 50% male and 50% female (n=35 litters).

Lynx are considered polygynous breeders (i.e., male lynx will mate with several female lynx). Although most female lynx produce 1 litter a year, we observed the birth of a late litter shortly after the loss of an earlier litter one summer.

Between 1999 and 2010, when hares populations fluctuated between 1 and 2 hares/ha, 65% of the adult female lynx produced litters (range = 0-100%, σ = 42; n=66) of 1-5 kittens each year ($\overline{X} = 2.64$; σ = 1.21; n =111), where σ = standard deviation. The high variability associate with this vital rate was influenced by years with very good productivity and years with very poor productivity. Thus, we also ran simulations where the σ =10, which may better reflect true variability. For our simulations, we provided mortality rates for 3 age classes; kittens (<1 year old), juveniles (1 and 2 year olds), and adults (3 years and older). We had good estimates of adult (21%, σ = 17) and kitten mortality rates (18%; σ = 23) in Maine from a 12-year telemetry study. However, our sample size of juvenile lynx was small. Therefore, we used our knowledge of carnivore and felid ecology to estimate juvenile lynx mortality rates. We assumed that male and female juvenile mortality rates were twice and 1 ½ times our observed adult lynx mortality rates (21%), respectively, since male juveniles experience higher mortality rates because they often disperse greater distances than female juveniles (Breitenmoser et al. 1993). Among felids, female offspring often do not disperse and remain near their mother's range (Breitenmoser et al. 1993).

Maine's lynx assessment estimated between 750 and 1,000 lynx in WMD 1-10 and 14 and a carrying capacity between 1,100 and 1,800 lynx. For our simulations, we set our initial population at 750 lynx and Maine's carrying capacity at 1,450 lynx. We ran our simulations for 15 years, since our permit request spans a 15 year period.

Based on population vital rates observed in Maine when hare populations fluctuated, Vortex calculated a slightly increasing population growth rate (r = 0.0595) without the loss of any animals from harvest (Figure VI. 1; Output I).

To test the assumption that Maine's lynx population size would continue to increase even if lynx mortalities resulted from incidental trapping (or other causes), the USFWS requested that we run our simulations using a level of lethal take that was higher than maximum lethal take requested in our Plan. Maine's Plan requested that trappers in Maine's trapping program be allowed to incidentally kill up to 3 lynx (adults and juveniles) over the 15-year time frame of the ITP (r=0.0473). We used a rate of lethal incidental take that was 15 times greater than the maximum rate of lethal take requested in our Plan. Specifically, we ran our simulations to determine the influence of the loss of 3 lynx (1 adult female, 1 adult male, and 1 yearling male or female) each fall during the 15-year permit period. Use of this high level of lethal take, does not imply that either agency believes that this level of lethal take has or will occur. Even at 15x the rate of lethal incidental take requested in our Plan, our simulations indicated that Maine's lynx population could maintain a positive growth rate (r = 0.0343) (Figure IV.1; Output II).

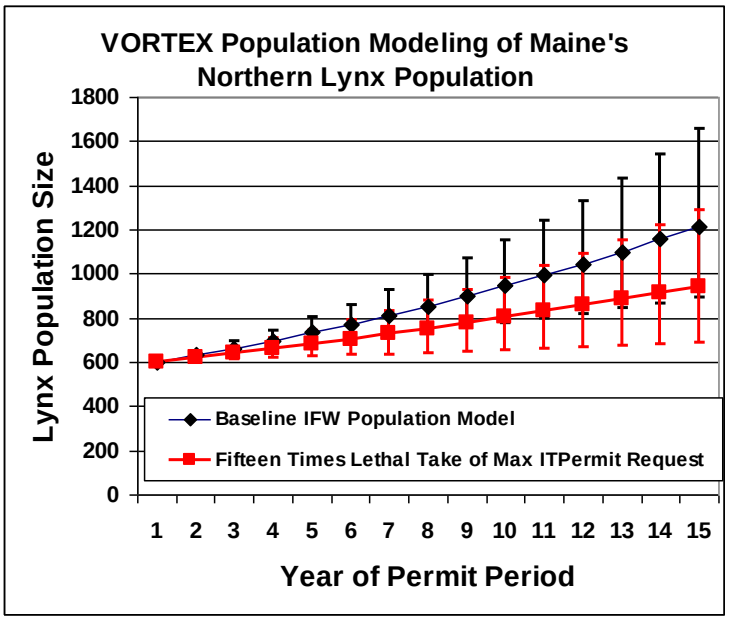
Table VI.1. Lynx reproductive rates observed for radiocollared lynx in Maine between 1999 and 2010 used in Vortex to estimate population growth rates and affect of the lethal take of 5 lynx incidentally captured by trappers in Maine.

	Female	Male
Age of first reproduction	3	2
Maximum breeding age	13	
Sex ratio at birth	50	50
Percent of adults that breed	65	100
Percentage of breeding females that produce 1 litter	100	
	Average	SD
Litter size	2.64	1.21

Table VI.2. Lynx mortality rates observed for radiocollared lynx in Maine between 1999 and 2010 used in Vortex to estimate population growth rates and affect of the lethal take of 5 lynx incidentally captured by trappers in Maine.

	Females		Males	
	Average	SD	Average	SD
Litter size	2.64	1.21		
Mortality 0-1	18%	23	18%	23
Mortality 1-2	32%	20	42%	20
Mortality 2+	21%	17	21%	17

Figure VI.1. Depiction of the intrinsic rate of increase of Maine's lynx population when (1) no lethal take occurs and (2) at 15 times the level of lethal take requested in Maine's Incidental Take Plan. Values were obtained from a VORTEX population model and the most recent demographic data on lynx in Maine.



This model applies VORTEX mean overal r-values (intrinsic rates of increase) along with mean overall SEs of those r-values. The error bars are ~95%CIs. The starting population size is set to equal 600.

This model assumes no density-dependence and compounding uncertainty in future expectations. This model is deterministic using mean values from 1,500 stochastic model runs of *a density-dependent model, which affects the mean r-values if those model populations approach a level where growth rate becomes affected by denisty-dependent model paramters.*

Output 1: Results of Base run with no take of lynx in 15 year permit period

```
VORTEX 9.99 -- simulation of population dynamics

Scenario 1 - Base Run No Take
Tue Jun 11 16:28:37 2013

  1 population(s) simulated for 15 years, 100 iterations
  Each simulation year is 365 days duration.

  Extinction is defined as no animals of one or both sexes.

  No inbreeding depression

  EV in mortality will be concordant among age-sex classes
     but independent from EV in reproduction.

  First age of reproduction for females: 3   for males: 2
  Maximum breeding age (senescence): 13
  Sex ratio at birth (percent males): 50

Population 1: Population 1

  Polygynous mating;
    % of adult males in the breeding pool = 100

  % adult females breeding = 65
   EV in % adult females breeding: SD = 42

Distribution of number of separately sired broods produced by a female in a
year ...
      0.00 percent of females produce 0 broods (litters, clutches) in an
average year
    100.00 percent of females produce 1 broods (litters, clutches) in an
average year

   Of those females producing progeny, ...
   Mean number of progeny per breeding female per year = 2.64
   SD in number of progeny = 1.21

   % mortality of females between ages 0 and 1 = 18
    EV in % mortality: SD = 23
   % mortality of females between ages 1 and 2 = 32
    EV in % mortality: SD = 20
   % mortality of females between ages 2 and 3 = 21
    EV in % mortality: SD = 17
   % mortality of adult females (3<=age<=13) = 21
    EV in % mortality: SD = 17
   % mortality of males between ages 0 and 1 = 18
    EV in % mortality: SD = 23
   % mortality of males between ages 1 and 2 = 42
    EV in % mortality: SD = 20
   % mortality of adult males (2<=age<=13) = 21
    EV in % mortality: SD = 17
    EVs may be adjusted to closest values possible for binomial
distribution.
```

```
  Initial size of Population 1:      750
    (set to reflect stable age distribution)
 Age  1   2   3   4    5    6    7   8   9  10  11   12   13  Total
     124  66  47  35  24   18   13   9   7   4   4    2    2  355 Males
     124  77  56  40  29   21   15   10  8   6   4    3    2  395 Females

  Carrying capacity = 1450
    EV in Carrying capacity = 10

Deterministic projections assume no stochastic fluctuations, no inbreeding
depression, no limitation of mates, no harvest, and no supplementation.

Scenario: Scenario 1

Population 1: Population 1

Deterministic population growth rate:

     r =  0.092
     lambda = 1.096
     R0 =     1.665
   Generation time for:
    females = 5.56
    males = 4.66

Stable age distribution:
  Age class    females    males
      0        0.153      0.153
      1        0.115      0.115
      2        0.071      0.061
      3        0.051      0.044
      4        0.037      0.032
      5        0.027      0.023
      6        0.019      0.016
      7        0.014      0.012
      8        0.010      0.009
      9        0.007      0.006
     10        0.005      0.004
     11        0.004      0.003
     12        0.003      0.002
     13        0.002      0.002

Ratio of adult (>= 2) males to adult (>= 3) females: 1.193

Initial population size, N = 750
Initial carrying capacity, K = 1450
```

```
Project: Lynx ITP 2013 base run – no take
Scenario: Scenario 1

Population 1: Population 1

Year 1
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  826.84 (  29.16 SE;  291.59 SD)
  Means across extant populations only:
     Population size =           826.84 (  29.16 SE;  291.59 SD)
     Expected heterozygosity =    0.999 (  0.000 SE;   0.000 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles = 1181.23 (  22.21 SE;  222.13 SD)

Year 2
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  915.90 (  35.58 SE;  355.84 SD)
  Means across extant populations only:
     Population size =           915.90 (  35.58 SE;  355.84 SD)
     Expected heterozygosity =    0.999 (  0.000 SE;   0.000 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  997.28 (  24.00 SE;  240.03 SD)

Year 3
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  952.01 (  37.85 SE;  378.53 SD)
  Means across extant populations only:
     Population size =           952.01 (  37.85 SE;  378.53 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  873.13 (  23.42 SE;  234.23 SD)

Year 4
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  994.59 (  39.95 SE;  399.52 SD)
  Means across extant populations only:
     Population size =           994.59 (  39.95 SE;  399.52 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  785.78 (  21.82 SE;  218.24 SD)

Year 5
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  989.60 (  42.64 SE;  426.35 SD)
  Means across extant populations only:
     Population size =           989.60 (  42.64 SE;  426.35 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.001 SD)
     Number of extant alleles =  704.59 (  21.13 SE;  211.29 SD)

Year 6
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  930.05 (  42.95 SE;  429.49 SD)
```

```
  Means across extant populations only:
     Population size =          930.05 (  42.95 SE;  429.49 SD)
     Expected heterozygosity =    0.997 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.001 SD)
     Number of extant alleles =  632.17 (  20.17 SE;  201.69 SD)

Year 7
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  922.63 (  44.77 SE;  447.69 SD)
  Means across extant populations only:
     Population size =          922.63 (  44.77 SE;  447.69 SD)
     Expected heterozygosity =    0.997 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  570.54 (  19.43 SE;  194.26 SD)

Year 8
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  905.89 (  45.51 SE;  455.15 SD)
  Means across extant populations only:
     Population size =          905.89 (  45.51 SE;  455.15 SD)
     Expected heterozygosity =    0.996 (  0.000 SE;   0.003 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  519.39 (  17.71 SE;  177.12 SD)

Year 9
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  899.89 (  43.58 SE;  435.80 SD)
  Means across extant populations only:
     Population size =          899.89 (  43.58 SE;  435.80 SD)
     Expected heterozygosity =    0.996 (  0.000 SE;   0.004 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  474.27 (  16.69 SE;  166.86 SD)

Year 10
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  880.13 (  44.72 SE;  447.23 SD)
  Means across extant populations only:
     Population size =          880.13 (  44.72 SE;  447.23 SD)
     Expected heterozygosity =    0.995 (  0.000 SE;   0.005 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  441.07 (  15.84 SE;  158.38 SD)

Year 11
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  945.16 (  45.91 SE;  459.07 SD)
  Means across extant populations only:
     Population size =          945.16 (  45.91 SE;  459.07 SD)
     Expected heterozygosity =    0.995 (  0.001 SE;   0.006 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  414.90 (  15.21 SE;  152.12 SD)

Year 12
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  975.96 (  44.43 SE;  444.30 SD)
```

```
  Means across extant populations only:
     Population size =          975.96 (  44.43 SE;  444.30 SD)
     Expected heterozygosity =    0.994 (  0.001 SE;   0.006 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  393.30 (  14.70 SE;  147.01 SD)

Year 13
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  950.11 (  46.76 SE;  467.62 SD)
  Means across extant populations only:
     Population size =          950.11 (  46.76 SE;  467.62 SD)
     Expected heterozygosity =    0.994 (  0.001 SE;   0.007 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  368.37 (  13.93 SE;  139.34 SD)

Year 14
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  950.14 (  45.90 SE;  458.98 SD)
  Means across extant populations only:
     Population size =          950.14 (  45.90 SE;  458.98 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.008 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  350.44 (  13.25 SE;  132.46 SD)

Year 15
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  959.50 (  46.25 SE;  462.45 SD)
  Means across extant populations only:
     Population size =          959.50 (  46.25 SE;  462.45 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.009 SD)
     Observed heterozygosity =    0.996 (  0.001 SE;   0.010 SD)
     Number of extant alleles =  332.31 (  12.43 SE;  124.29 SD)

In 100 simulations for 15 years:0 went extinct and 100 survived.

This gives a probability of extinction of 0.0000 (0.0000 SE),
  or a probability of success of          1.0000 (0.0000 SE).

Means across all populations (extant and extinct) ...
Mean final population was 959.50 (46.25 SE; 462.45 SD)
   Age 1       2   Adults    Total
  167.23          287.26    454.49  Males
  166.73   90.14  248.14    505.01  Females

Across all years, prior to carrying capacity truncation,
  mean growth rate (r) was 0.0595 (0.0110 SE; 0.4275 SD)

Final expected heterozygosity was      0.9929 ( 0.0009 SE;  0.0085 SD)
Final observed heterozygosity was      0.9958 ( 0.0010 SE;  0.0101 SD)
Final number of alleles was            332.31 (  12.43 SE;  124.29 SD)
**************************************************************************
```

Output 2: Results of 2nd run with 3 lynx mortalities in 15 year permit period.

```
VORTEX 9.99 -- simulation of population dynamics

Scenario 2 - Take 3 in 15 years (1.5F:1.5M)
Mon Jul 08 18:55:30 2013

  1 population(s) simulated for 15 years, 100 iterations
  Each simulation year is 365 days duration.

  Extinction is defined as no animals of one or both sexes.

  No inbreeding depression

  EV in mortality will be concordant among age-sex classes but independent from EV in
reproduction.

  First age of reproduction for females: 3   for males: 2
  Maximum breeding age (senescence): 13
  Sex ratio at birth (percent males): 50

Population 1: Population 1
  Polygynous mating;
    % of adult males in the breeding pool = 100

  % adult females breeding = 65
   EV in % adult females breeding: SD = 42

  Distribution of number of separately sired broods produced by a female in a year
      0.00 percent of females produce 0 broods (litters, clutches) in an average year
    100.00 percent of females produce 1 broods (litters, clutches) in an average year

   Of those females producing progeny, ...
   Mean number of progeny per breeding female per year = 2.64
   SD in number of progeny = 1.21

   % mortality of females between ages 0 and 1 = 18
    EV in % mortality: SD = 23
   % mortality of females between ages 1 and 2 = 32
    EV in % mortality: SD = 20
   % mortality of females between ages 2 and 3 = 21
    EV in % mortality: SD = 17
   % mortality of adult females (3<=age<=13) = 21
    EV in % mortality: SD = 17
   % mortality of males between ages 0 and 1 = 18
    EV in % mortality: SD = 23
   % mortality of males between ages 1 and 2 = 42
    EV in % mortality: SD = 20
   % mortality of adult males (2<=age<=13) = 21
    EV in % mortality: SD = 17

    EVs may be adjusted to closest values possible for binomial distribution.

  Initial size of Population 1:      750     (set to reflect stable age distribution)
 Age 1    2    3    4    5    6    7    8    9   10   11   12   13   Total
   124   66   47   35   24   18   13    9    7    4    4    2    2   355  Males
   124   77   56   40   29   21   15   10    8    6    4    3    2   395  Females

  Carrying capacity = 1450
    EV in Carrying capacity = 10
  Animals harvested from Population 1, year 1 to year 15 at 15 year intervals:
    female adults (3 <= age <= 13): 1
    males 1 years old: 1
    male adults (2 <= age <= 13): 1
```

```
Results from VORTEX 9.99 simulations completed Mon Jul 08 18:55:30 2013

Project: 3 in 15 yrs
Scenario: Scenario 2 - Take 3 in 15 years (1.5F:1.5M)

Population 1: Population 1

Year 1
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  745.45 (  26.32 SE;  263.19 SD)
  Means across extant populations only:
     Population size =           745.45 (  26.32 SE;  263.19 SD)
     Expected heterozygosity =    0.999 (  0.000 SE;   0.000 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles = 1126.88 (  24.08 SE;  240.80 SD)

Year 2
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  805.23 (  36.38 SE;  363.78 SD)
  Means across extant populations only:
     Population size =           805.23 (  36.38 SE;  363.78 SD)
     Expected heterozygosity =    0.999 (  0.000 SE;   0.000 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  950.56 (  26.37 SE;  263.67 SD)

Year 3
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  901.20 (  40.17 SE;  401.74 SD)
  Means across extant populations only:
     Population size =           901.20 (  40.17 SE;  401.74 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  842.23 (  25.30 SE;  253.01 SD)

Year 4
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  893.83 (  40.97 SE;  409.65 SD)
  Means across extant populations only:
     Population size =           893.83 (  40.97 SE;  409.65 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  751.07 (  24.01 SE;  240.14 SD)

Year 5
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  921.71 (  44.86 SE;  448.62 SD)
  Means across extant populations only:
     Population size =           921.71 (  44.86 SE;  448.62 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.001 SD)
     Number of extant alleles =  678.57 (  22.47 SE;  224.73 SD)

Year 6
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  920.85 (  45.14 SE;  451.40 SD)
  Means across extant populations only:
     Population size =           920.85 (  45.14 SE;  451.40 SD)
```

```
     Expected heterozygosity =    0.997 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.001 SD)
     Number of extant alleles =  611.50 (  21.63 SE;  216.25 SD)

Year 7
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  896.70 (  44.79 SE;  447.85 SD)
  Means across extant populations only:
     Population size =          896.70 (  44.79 SE;  447.85 SD)
     Expected heterozygosity =    0.997 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  556.08 (  20.50 SE;  205.01 SD)

Year 8
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  906.07 (  43.47 SE;  434.71 SD)
  Means across extant populations only:
     Population size =          906.07 (  43.47 SE;  434.71 SD)
     Expected heterozygosity =    0.996 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  509.27 (  19.76 SE;  197.58 SD)

Year 9
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  906.17 (  45.29 SE;  452.87 SD)
  Means across extant populations only:
     Population size =          906.17 (  45.29 SE;  452.87 SD)
     Expected heterozygosity =    0.996 (  0.000 SE;   0.003 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  467.04 (  18.09 SE;  180.92 SD)

Year 10
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  921.56 (  44.89 SE;  448.86 SD)
  Means across extant populations only:
     Population size =          921.56 (  44.89 SE;  448.86 SD)
     Expected heterozygosity =    0.995 (  0.000 SE;   0.003 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Number of extant alleles =  430.45 (  16.61 SE;  166.10 SD)

Year 11
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  895.82 (  43.32 SE;  433.19 SD)
  Means across extant populations only:
     Population size =          895.82 (  43.32 SE;  433.19 SD)
     Expected heterozygosity =    0.995 (  0.000 SE;   0.004 SD)
     Observed heterozygosity =    0.998 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  403.39 (  15.49 SE;  154.94 SD)

Year 12
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  893.99 (  44.22 SE;  442.19 SD)
  Means across extant populations only:
     Population size =          893.99 (  44.22 SE;  442.19 SD)
     Expected heterozygosity =    0.994 (  0.001 SE;   0.005 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  378.12 (  14.82 SE;  148.16 SD)
```

```
Year 13
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  914.66 (  45.71 SE;  457.06 SD)
  Means across extant populations only:
     Population size =           914.66 (  45.71 SE;  457.06 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.008 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  359.76 (  14.18 SE;  141.78 SD)

Year 14
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  866.38 (  42.63 SE;  426.27 SD)
  Means across extant populations only:
     Population size =           866.38 (  42.63 SE;  426.27 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.008 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.004 SD)
     Number of extant alleles =  342.30 (  13.53 SE;  135.34 SD)

Year 15
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  943.41 (  45.33 SE;  453.32 SD)
  Means across extant populations only:
     Population size =           943.41 (  45.33 SE;  453.32 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.008 SD)
     Observed heterozygosity =    0.996 (  0.001 SE;   0.008 SD)
     Number of extant alleles =  324.68 (  12.99 SE;  129.87 SD)


In 100 simulations of Population 1 for 15 years:
  0 went extinct and 100 survived.

This gives a probability of extinction of 0.0000 (0.0000 SE),
  or a probability of success of          1.0000 (0.0000 SE).

Means across all populations (extant and extinct) ...
Mean final population was 943.41 (45.33 SE; 453.32 SD)

   Age 1       2   Adults    Total
  173.61          272.95    446.56  Males
  172.55   75.65  248.65    496.85  Females

During years of harvest and/or supplementation
  mean growth rate (r) was -0.0714 (0.0371 SE, 0.3713 SD, mean n = 1.0 years)

During years without harvest or supplementation,
  mean growth rate (r) was 0.0557 (0.0113 SE; 0.4209 SD)

Across all years, prior to carrying capacity truncation,
  mean growth rate (r) was 0.0473 (0.0108 SE; 0.4189 SD)

0 of 100 harvests of females could not be completed because of insufficient animals.
47 of 200 harvests of males could not be completed because of insufficient animals.

Final expected heterozygosity was      0.9927 ( 0.0008 SE;  0.0080 SD)
Final observed heterozygosity was      0.9962 ( 0.0008 SE;  0.0078 SD)
Final number of alleles was            324.68 (  12.99 SE;  129.87 SD)
**********************************************************************
```

Output 3: Results of 3rd run with 3 lynx mortalities each year during 15 year permit period.

```
VORTEX 9.99 -- simulation of population dynamics: Take 3 lynx per year
for 15 years.

Scenario 2 - Take 3 per yr (1.5F:1.5M)
Tue Jun 11 17:18:48 2013

1 population(s) simulated for 15 years, 100 iterations
Each simulation year is 365 days duration.

Extinction is defined as no animals of one or both sexes.

No inbreeding depression

EV in mortality will be concordant among age-sex classes but independent
from EV in reproduction.

First age of reproduction for females: 3   for males: 2
Maximum breeding age (senescence): 13
Sex ratio at birth (percent males): 50

Population 1: Population 1

     Polygynous mating;
     % of adult males in the breeding pool = 100

     % adult females breeding = 65
     EV in % adult females breeding: SD = 42

Distribution of number of separately sired broods produced by a female
in a year ...
     0.00 percent of females produce 0 broods (litters, clutches) in an
     average year
     100.00 percent of females produce 1 broods (litters, clutches) in
     an average year

Of those females producing progeny, ...
        Mean number of progeny per breeding female per year = 2.64
        SD in number of progeny = 1.21

        % mortality of females between ages 0 and 1 = 18
         EV in % mortality: SD = 23
        % mortality of females between ages 1 and 2 = 32
         EV in % mortality: SD = 20
        % mortality of females between ages 2 and 3 = 21
         EV in % mortality: SD = 17
        % mortality of adult females (3<=age<=13) = 21
         EV in % mortality: SD = 17
        % mortality of males between ages 0 and 1 = 18
         EV in % mortality: SD = 23
        % mortality of males between ages 1 and 2 = 42
         EV in % mortality: SD = 20
        % mortality of adult males (2<=age<=13) = 21
         EV in % mortality: SD = 17
```

```
EVs may be adjusted to closest values possible for binomial
distribution.

Initial size of Population 1:      750
         (set to reflect stable age distribution)
Age 1    2    3    4    5    6   7   8   9  10  11  12  13 Total
   124   66  47   35   24   18  13   9   7   4   4   2   2  355  Males
   124   77  56   40   29   21  15   10  8   6   4   3   2  395 Females

       Carrying capacity = 1450
         EV in Carrying capacity = 10

Animals harvested from Population 1, year 1 to year 15 at 1 year
intervals:
         females 1 years old: 0.5
         female adults (3 <= age <= 13): 1
         males 1 years old: 0.5
         male adults (2 <= age <= 13): 1
```

Deterministic projections assume no stochastic fluctuations, no inbreeding depression, no limitation of mates, no harvest, and no supplementation.

```
Scenario: Scenario 2 - Take 3 per yr (1.5F:1.5M)

Population 1: Population 1

Deterministic population growth rate:

          r =  0.092
          lambda = 1.096
          R0 =     1.665
        Generation time for:
         females = 5.56
         males = 4.66

Stable age distribution:
       Age class    females    males
           0        0.153      0.153
           1        0.115      0.115
           2        0.071      0.061
           3        0.051      0.044
           4        0.037      0.032
           5        0.027      0.023
           6        0.019      0.016
           7        0.014      0.012
           8        0.010      0.009
           9        0.007      0.006
          10        0.005      0.004
          11        0.004      0.003
          12        0.003      0.002
          13        0.002      0.002
     Ratio of adult (>= 2) males to adult (>= 3) females: 1.193
     Initial population size, N = 750
     Initial carrying capacity, K = 1450
```

```
Population 1: Population 1

Year 1
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
    Mean size (all populations) =  815.77 (  28.03 SE;  280.29 SD)
  Means across extant populations only:
     Population size =           815.77 (  28.03 SE;  280.29 SD)
     Expected heterozygosity =    0.999 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles = 1145.77 (  24.85 SE;  248.49 SD)

Year 2
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  846.26 (  34.53 SE;  345.31 SD)
     Means across extant populations only:
     Population size =           846.26 (  34.53 SE;  345.31 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.001 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  974.46 (  25.34 SE;  253.40 SD)

Year 3
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  899.34 (  40.28 SE;  402.83 SD)
     Means across extant populations only:
     Population size =           899.34 (  40.28 SE;  402.83 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  845.84 (  24.52 SE;  245.17 SD)

Year 4
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  919.93 (  38.55 SE;  385.53 SD)
     Means across extant populations only:
     Population size =           919.93 (  38.55 SE;  385.53 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.000 SD)
     Number of extant alleles =  749.21 (  22.45 SE;  224.50 SD)

Year 5
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  868.45 (  41.32 SE;  413.18 SD)
     Means across extant populations only:
     Population size =           868.45 (  41.32 SE;  413.18 SD)
     Expected heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
     Observed heterozygosity =    1.000 (  0.000 SE;   0.001 SD)
     Number of extant alleles =  667.32 (  21.22 SE;  212.19 SD)

Year 6
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  873.01 (  44.80 SE;  447.98 SD)
      Means across extant populations only:
```

```
      Population size =           873.01 (  44.80 SE;  447.98 SD)
      Expected heterozygosity =    0.997 (  0.000 SE;   0.002 SD)
      Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
      Number of extant alleles =  595.53 (  21.35 SE;  213.50 SD)

Year 7
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  836.61 (  42.71 SE;  427.11 SD)
      Means across extant populations only:
      Population size =           836.61 (  42.71 SE;  427.11 SD)
      Expected heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
      Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
      Number of extant alleles =  532.55 (  19.53 SE;  195.29 SD)

Year 8
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  848.07 (  45.28 SE;  452.81 SD)
      Means across extant populations only:
      Population size =           848.07 (  45.28 SE;  452.81 SD)
      Expected heterozygosity =    0.996 (  0.000 SE;   0.003 SD)
      Observed heterozygosity =    0.999 (  0.000 SE;   0.002 SD)
      Number of extant alleles =  480.32 (  18.04 SE;  180.37 SD)

Year 9
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  849.52 (  46.41 SE;  464.08 SD)
      Means across extant populations only:
      Population size =           849.52 (  46.41 SE;  464.08 SD)
      Expected heterozygosity =    0.996 (  0.000 SE;   0.004 SD)
      Observed heterozygosity =    0.999 (  0.000 SE;   0.003 SD)
      Number of extant alleles =  436.85 (  16.78 SE;  167.78 SD)

Year 10
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  846.13 (  44.19 SE;  441.85 SD)
      Means across extant populations only:
      Population size =           846.13 (  44.19 SE;  441.85 SD)
      Expected heterozygosity =    0.995 (  0.000 SE;   0.004 SD)
      Observed heterozygosity =    0.998 (  0.000 SE;   0.003 SD)
      Number of extant alleles =  405.65 (  15.87 SE;  158.69 SD)

Year 11
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  860.34 (  45.26 SE;  452.60 SD)
      Means across extant populations only:
      Population size =           860.34 (  45.26 SE;  452.60 SD)
      Expected heterozygosity =    0.995 (  0.000 SE;   0.005 SD)
      Observed heterozygosity =    0.998 (  0.000 SE;   0.003 SD)
      Number of extant alleles =  381.18 (  14.85 SE;  148.45 SD)
```

```
Year 12
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  886.06 (  45.98 SE;  459.83 SD)
      Means across extant populations only:
      Population size =           886.06 (  45.98 SE;  459.83 SD)
      Expected heterozygosity =    0.994 (  0.001 SE;   0.006 SD)

     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
      Number of extant alleles =  356.95 (  14.06 SE;  140.62 SD)

Year 13
      N[Extinct] =       0, P[E] =  0.000
      N[Surviving] =   100, P[S] =  1.000
      Mean size (all populations) =  878.90 (  46.59 SE;  465.90 SD)
      Means across extant populations only:
      Population size =           878.90 (  46.59 SE;  465.90 SD)
      Expected heterozygosity =    0.993 (  0.001 SE;   0.007 SD)
      Observed heterozygosity =    0.998 (  0.000 SE;   0.002 SD)
      Number of extant alleles =  331.58 (  13.42 SE;  134.19 SD)

Year 14
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  882.09 (  46.54 SE;  465.39 SD)
     Means across extant populations only:
     Population size =           882.09 (  46.54 SE;  465.39 SD)
     Expected heterozygosity =    0.993 (  0.001 SE;   0.007 SD)
     Observed heterozygosity =    0.997 (  0.000 SE;   0.003 SD)
     Number of extant alleles =  316.27 (  12.90 SE;  129.03 SD)

Year 15
     N[Extinct] =       0, P[E] =  0.000
     N[Surviving] =   100, P[S] =  1.000
     Mean size (all populations) =  884.86 (  48.02 SE;  480.23 SD)
     Means across extant populations only:
     Population size =           884.86 (  48.02 SE;  480.23 SD)
     Expected heterozygosity =    0.992 (  0.001 SE;   0.009 SD)
     Observed heterozygosity =    0.996 (  0.000 SE;   0.005 SD)
     Number of extant alleles =  299.62 (  12.31 SE;  123.10 SD)

In 100 simulations of Population 1 for 15 years: 0 went extinct and 100
survived.

     This gives a probability of extinction of 0.0000 (0.0000 SE),
       or a probability of success of          1.0000 (0.0000 SE).

     Means across all populations (extant and extinct) ...
     Mean final population was 884.86 (48.02 SE; 480.23 SD)
        Age 1       2   Adults    Total
       151.59          265.63    417.22  Males
       152.84   81.56  233.24    467.64  Females

During years of harvest and/or supplementation mean growth rate (r) was
0.0343 (0.0113 SE, 0.4384 SD, mean n = 15.0 years)

Across all years, prior to carrying capacity truncation,
mean growth rate (r) was 0.0343 (0.0113 SE; 0.4384 SD)
```

```
518 of 3000 harvests of females could not be completed because of
insufficient animals.
518 of 3000 harvests of males could not be completed because of
insufficient animals.
Final expected heterozygosity was      0.9920 ( 0.0009 SE;  0.0090 SD)
Final observed heterozygosity was      0.9964 ( 0.0005 SE;  0.0047 SD)
Final number of alleles was            299.62 (  12.31 SE;  123.10 SD)
**********************************************************************
```

Appendix 8. Maine Department of Inland Fisheries and Wildlife Responding to Incidental Captures of Lynx.

Maine Department of Inland Fisheries and Wildlife

Responding to Incidental Captures of Lynx

Updated October 2012

Prepared by the Wildlife Division for Distribution to Biological Staff

Lynx

- longer ear tufts (1″ or longer)
- longer facial ruff,
- shorter & completely black tipped tail
- large and well furred feet
- uniform coat color
- buff colored hind foot

Bobcats

* shorter eartufts (absent to 1″)
* shorter facial ruff = more round face
* tail black tipped on top & white beneath
* smaller feet
* less uniform coat: white underbelly
* chocolate brown along back of hind foot

TABLE OF CONTENTS

Memorandum

To: *Regional Biologists, Maine Warden Service, John DePue, Randy Cross, Lee Kantar*
From: *Jennifer Vashon*
cc: *Jim Connolly, John Pratte, Walter Jakubas, Shawn Haskell*
Date: *September 20, 2012*
Subject: Responding to Incidental Captures of Lynx

The early coyote and fox trapping season opens on Sunday October 14th and regular season opens on October 28th. Lynx are sometimes caught in traps. In recent years, lynx have been found in areas where they have not been common in the past (eastern and central Maine). All staff should be prepared for responding to lynx in traps. Wardens are responsible for investigating each incidental lynx trapping and MIDFW's biologists are responsible for assessing lynx for injuries and releasing incidentally captured lynx. This memo and proceeding pages outlines the Department's policies and rules for responding to the incidental capture of lynx in traps.

CURRENT REGULATIONS:

1. In **WMD 7, 14, 18 and 19**, conibear traps (220 or smaller) may be set on the ground with the use of an exclusion device that prevents lynx from being caught. See ***Location and Preparation of Traps*** on page 36 of Maine's Hunting and Trapping Law Book for illustration and text.

2. Like WMD 1-11, Killer-type traps in **WMD 14, 18, and 19** when set on land (conibears with an inside jaw spread up to 8 inches) must be set at least 4 feet above ground or snow level and 4 feet away from any bank. The pole or tree that the trap is affixed to must be no greater than 4 inches wide at 4 feet above the ground and at an angle of 45º or greater to the ground the entire distance from the ground to the trap. The area within 4 feet of the trap in all directions must be free of objects greater than 4 inches wide and free of trees or poles slanted less than 45° between the ground & the height of the trap. If using a pole, the pole must be a natural section of tree which has not been planned or sawed to create a flat surface.

Other Trapping Requirements related to lynx :

1. **Foothold traps in WMDs 1-6 and 8-11** set on dry ground must have at least one swivel AND can NOT have an inside jaw spread greater than **5 ⅜ inches**.

2. Trappers are **required** to report the incidental capture of lynx in traps: *"Any lynx caught incidentally, whether dead or alive, during any trapping season must be reported to a game warden or biologist of the Department as soon as possible and prior to removing the animal from the trap, unless a Department official cannot be reached in time to prevent injury to the lynx. Any lynx released under this provision before reporting to the Department must also be reported to the Department within 24 hours from the time it was discovered."*

The intent of the "release" provision is to provide trappers the opportunity to release a lynx if it is unsafe for the lynx to remain in the trap, they cannot reach an IFW official, or it is unsafe for a Department official to travel to the site. These circumstances should be considered unusual and trappers and Department officials should make every effort to report and respond to all incidental captures of lynx.

STATUS OF MDIFW's INCIDENTAL TAKE PERMIT APPLICATION

Canada lynx are listed as a Federally threatened species under the US Endangered Species Act and Maine's regulated fur trapping season has the potential to capture a lynx and qualify as a "take" of a listed species. Thus an Incidental Take Permit (ITP) from the US Fish and Wildlife (USFWS) is required. The Department submitted an ITP application to the USFWS that would allow regulated trapping if sufficient regulations where in place to minimize the take of lynx. The USFWS and the Department are finalizing our permit request based on public comments received last spring. We do not expect than the USFWS will grant an incidental take permit to the Department this trapping season. Thus, the trapping regulations listed above will remain in place.

Roles of Department Personnel

IFW Warden Service

- Wardens generally receive initial report, advice caller to observe animal from a distance to minimize disturbance (avoid driving by the lynx, limit traffic)
- Complete section 1 on check list for responding to lynx captures to help the caller determine the appropriate response (i.e., when to advise trapper to release lynx (inclement weather, high human traffic difficult to control, (see page 4)).
- **Immediately report all incidental captures of lynx to 207-592-4734 to coordinate response**
- On site: Although lynx are often very calm in traps, make an effort to observe the animal from a safe distance to avoid disturbing the animal and causing injury.
    1. Confirm the animal is a lynx
    2. Visually assess the potential for injury (animal entangled, inclement weather, human disturbance, or shows obvious sign of injury).
    3. Crowd control on site to reduce disturbance and potential for injury
- Assist biological staff on site with release of lynx as needed
- Investigate take and legality of set
- Fill out items 4-7 on check list w/biological staff
- Reporting requirements (Plaintiffs in the lawsuit must be provide all reports of lynx captures within 2 weeks of the incident as agreed in court settlement). Please send reports to Jen Vashon within 10 days, so she can compile documents to submit to Plaintiffs.
    1. Incident report,
    2. Form for reporting lynx capture,
    3. Photos if available
    4. Indicate if set was legal or if trapper charged with trapping violations

IFW Biological Staff

In the event that biological staff receives initial call

- Complete item 1 on Form for Reporting Lynx Captures (Page)
- **Call lynx hot-line to report take** 592-4734 to coordinate response of law enforcement and biological staff (see page 3).

On site

- Visually assess lynx for injury (animal entangled, inclement weather, disturbance, or shows obvious sign of injury).
- Anesthetize lynx and physically examine animal for injury (staff will receive training)
- Complete capture datasheet
- Determine appropriate response (release, rehab, euthanasia)
- With the assistance of Warden Service staff on site, fill out items 4-7 on check list

IFW Lynx Biologist:

- Coordinate response
- Contact Federal agents immediately following initial report,
- On-site assistance when appropriate,
- Receive all reports of incidental captures,

- Coordinate and submit written reports to USFWS and Plaintiffs within 2 weeks of take as required by AWI v. MDIFW Settlement Decree.

Cage Trap Capture Response

Although lynx caught in a cage traps are calm and are rarely injured, if a lynx or suspected lynx is caught in a cage trap IFW staff, a warden or biologist, will respond to confirm the animal is a lynx and visual asses for potential injuries. The lynx response team will only be deployed to immobilize and asses lynx caught in cage traps, if determined necessary (e.g. initial responder observes injury).

1. Report cage trap captures to lynx hotline
2. Minimize disturbance to the site
3. Confirm the animal is a lynx (warden or IFW biologist)
4. Visually asses the animal for injuries (blood visible, limping, ect..) if injured deploy lynx response team
5. Complete lynx capture reporting form (page 9)
6. Release uninjured lynx

Reporting Incidental Lynx Captures

Immediately contact the lynx hot-line 207-592-4734 :

This phone number (592-4734) will be monitored 24 hours, 7 days a week during the trapping season. The person that answers this phone will help coordinate the response by:

1. Obtain information from the caller regarding the conditions at the site (see Reporting Lynx Capture Form – complete section 1).
2. Identify and contact biologists that will respond based on staff availability and travel distance.
3. Contact district warden to investigate take (if not already notified; often the individual receiving call and reporting to lynx hot-line).
4. Contact **USFWS Federal Agent** to notify and provide opportunity to assist with investigation. Eric Holmes:

In the unlikely event that no one can be reached, alternate numbers are listed below.

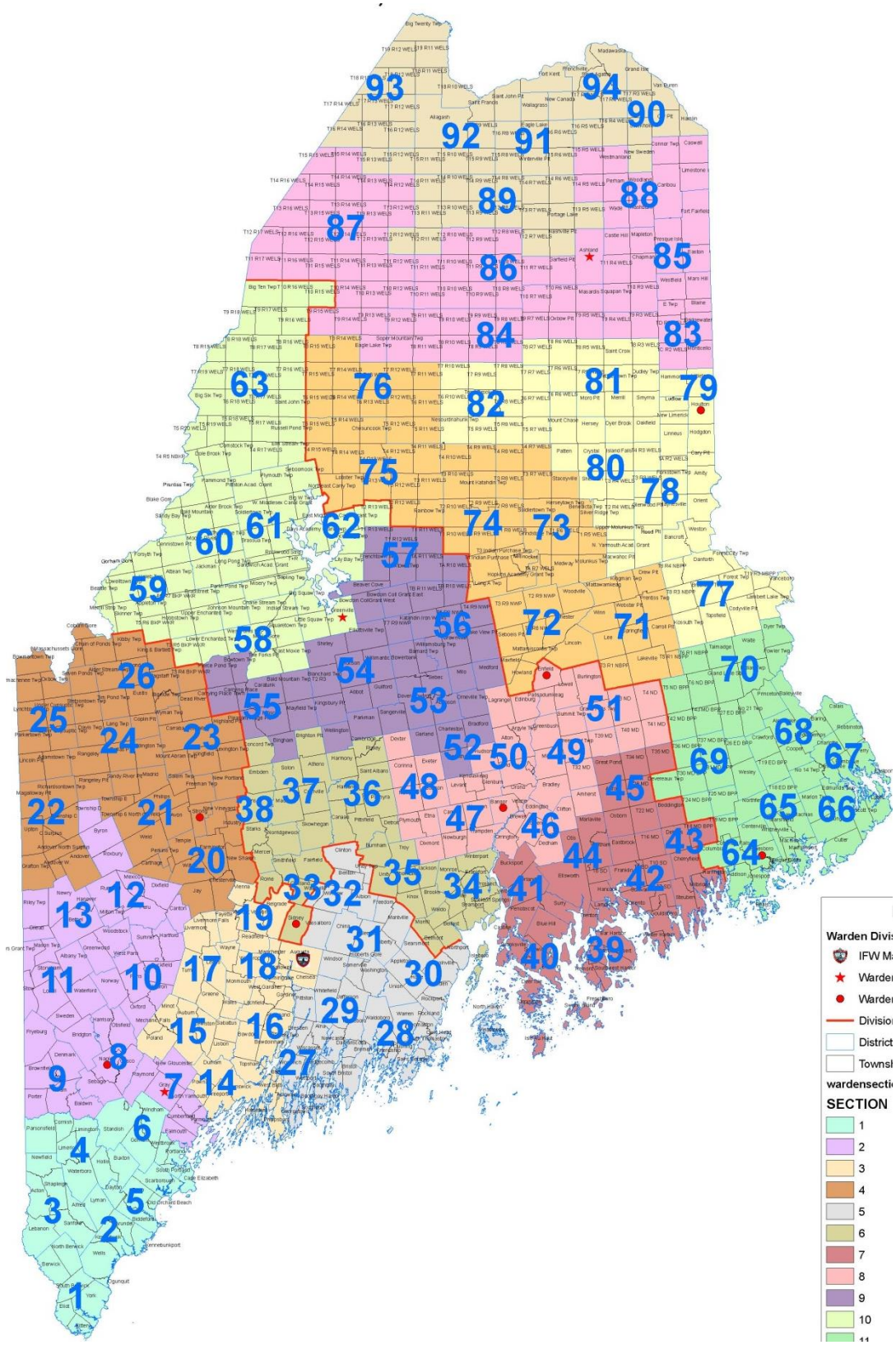
Contact	Weekdays	Weekends/Evenings	Radio Call Number
Lynx Hotline	**592-4734**	**592-4734**	
Jennifer Vashon			
John DePue			
Randy Cross			
Lee Kantar			
Walter Jakubas			

Veterinarian Contact List

Rehabilitator Contact List

Regional Biologists Phone Numbers

Warden Service District Map and Roster



Warden phone numbers

Form For Reporting & Responding to Incidental Captures of Lynx

1. Obtain information from CALLER

Date _____ **Time** _____ **IFW Staff collecting caller info:** _____

Trapper/Individual Reporting _____

Address _____ Phone number: _____

Circle all info that applies

Type of trap?	Foot-hold	Conibear	Cage	**When was trap last tended?**		_____
Animal still in trap?	Yes	No		**Is animal entangled?**	Yes	No
Staking of Trap?	Staked	Drag		**Lynx appear injuried?**	Yes	No
Animal's Behavior	Calm	Sleeping	Pacing		Alive	Dead

Disturbance at the site?	Yes	No		Other:	
Type of Disturbance: Vehicle traffic	Hunters			Equipment operation	Animal disturbance
*advise caller to minimize disturbance to the animal *					

Current weather?	Clear	Rain	Snow	Windy	**Current temperature?**	_____
Overnight weather?	Clear	Rain	Snow	Windy	**Overnight temperature?**	_____

Directions and meeting time:

2. Contact IFW lynx hotline 592-4734 to inform lynx specialist/ Mammal Group

3. At the site minimize disturbance (crowd and/or traffic control)

4. Inforamation when ON-SITE: Circle all informaiton that applies

Size of trap	#1.75	#2	#3	110	120	160	220	Other:_____
Inside jaw spread	_____	inches	**# coils**	_____	**Number of Swivels?**____		**In-line spring?** Y or N	
Jaw type	Padded	Laminated	Offset	**Legal Set?**	Yes	No	**All people present**	
Securing method	Staked	Drag					1_____	
Bait? Yes	No	**Type:** _____			**Visible?** Yes	No	2_____	
Lure? Yes	No	**Type:** _____					3_____	
Town: _____							4_____	
Location: _____							5_____	
GPS coordinates	_____	_____	E	_____	_____	N	6_____	
GPS datum	WGS84	NAD27	NAD83				7_____	

5. At the site: Assess the ANIMAL prior to chemical immobilization

Animal entangled in vegetation?	Yes	No				
Unresponsive?	Yes	No				
Broken bones?	Yes	No	**If yes,**	Compound	non-compound	
Bleeding?	Yes	No	**If yes,**	minor	Major	
Laceration?	Yes	No	**If yes,**	superficial (through 1st layer of skin)		major (deep requires sutures)
Limping/dragging limb?	Yes	No				

6. Anethesia (follow protocol and complete capture form* except for lynx in cage trap)

7. Action Taken:

Release uninjured? Y/N **Euthanized?** Y/N **Taken to rehab. Center?** Y/N

Name&Location of Rehab Center_____ Phone #_____

Comments:

See Department Policy for situations when you can advise the trapper to release a lynx 2012-13

Equipment and Supplies:

___Ketamine
___Xylazine
___Yohimbine (Antagonil)
___Antibiotic
___Syringe pole
___Syringes (1 and 3 cc)
___Needles (20 and 18 gauge)
___Thermometer
___Vaseline
___Eye lubricant
___Eye cover
___Eartags
___eartag applicator
___leather punch
___rubber gloves
___tweezers
___envelope for hair collection
___desiccant tubes
___tape measure
___scale
___ leg cuffs to weigh animal
___camera
___radio/cell phone
___dog crate
___Protocols/Response Handbook
___Contact list
___Data sheets
___ Pencil
___ GPS Unit
___ Batteries
___ Flashlight/pen light/head lamp
___ Cotton balls/swabs
___ Aluspray
___ Silver nitrate
___Saline and irrigation bottle/syringe
___ SAM splint and bandage
___heat pads
___sleeping bag or wool blanket
___ rubbing alcohol

Immobilization Protocol for Lynx

Lynx are normally very calm when trapped. The captured animal should provide you with ample time to:1) review the handling and immobilization protocol, and
2) plan your work.

On Site:

- Take control of the scene immediately upon arrival. Clear the area of any nonessential personnel and onlookers, and establish a quiet, level area to work on the immobilized lynx.
- Describe your planned handling activities to all personnel and onlookers.
- If possible, establish telephone contact with Jen or other biological staff available to assist you during the handling.
- Read through handling and immobilization protocols before beginning to handle the animal.
- Wear rubber gloves to avoid contaminating genetic samples and to protect personnel.

Identify cat species

Lynx

- longer ear tufts (1" or longer)
- longer facial ruff,
- shorter and completely black tipped tail
- large and well furred feet (>3"track)
- uniform coat color
- buff colored hind foot

Bobcats

* shorter ear tufts (absent to 1")
* shorter facial ruff = more round face
* tail black tipped on top and white underneath
* smaller feet (2"track)
* less uniform coat: white underbelly, spotted,
* chocolate brown along back of hind foot

Assess lynx for injury or potential for injury and estimate weight

- Approach all traps quietly to minimize stress.
- Assess the animal for any apparent injuries or potential for injury (see Assessing Lynx in Traps document page).
- Estimate the trapped animal's weight to determine proper dosage rate. A large cat, typically a male will weigh between 25 and 30 lb., and an adult female will weigh around 20 lb. A kitten born the previous spring will weigh between 6 and 10 lb..

Chemical immobilization

- Prepare immobilization equipment from a distance (preferably out of sight of captured animal).
- Lynx will be immobilized with a 5:1 ketamine hydrochloride and xylazine hydrochloride with a syringe pole. Use 18-gauge needle and 3 cc syringe for injections.
- These drugs and doses are very safe. It is better to overdose than underdose.
- The lynx will likely remain calm in the trap if you approach very slowly and quietly, periodically stopping as you approach.
- Slowly extend the syringe pole towards the cat's hind quarter and slowly insert the needle in the large muscle mass of the hind quarter. You may also administer the drug in the front shoulder if the hind leg is not visible.

- Lynx Dosage Chart (**5 ketamine :1 xylanzine**) (Kreeger 1990).

	Ketamine		Xylazine	
Concentration	100 mg/ml	200mg/ml	100mg/ml	400mg/ml
Kitten ~ 10 lbs	0.45cc	0.20 cc	0.09 cc	0.02 cc
Adult Female 20 lbs	0.90 cc	0.50 cc	0.18 cc	0.05 cc
Adult Male 30 lbs	1.35 cc	0.70 cc	0.27 cc	0.07 cc

Draw ketamine with a 1cc syringe and 20 gauge needle and then deposit dose in pole syringe
With a fresh needle and syringe draw the xylazine from the bottle and deposit in pole syringe

- Record time of delivery and delivery method on data sheet.
- Move out of sight and check the animal 8 minutes from delivery time to determine if the animal is fully anesthetized.
- If the animal does not appear to have any drug, prepare a second dose and deliver as described above.
- If the animal is partial dosed wait a few more minutes to allow the drug more time to take effect.
- In the event that the animal begins recovering from the drug during the handling or appears lightly dosed you can provide additional dose of ketamine (kitten 0.05 cc, AF=0.1 cc, AM=0.15cc) by hand injection.

Handling

Care of animal

- Minimize noise during handling and recovery to reduce stress.
- Find appropriate work site (flat ground preferable);
- To maintain lynx body temperature, place lynx on a tarp, blanket, or sleeping bag
- Straighten neck and check nose and mouth to make sure airway is clear and position animal so their head is slightly lower than their body to avoid aspiration of fluids

- Administer eye lubricant and cover eyes - keep eyes covered through recovery.
- Check animals body temperature and observe breathing and heart rhythm. Apply Vaseline to thermometer before obtaining body temperature. Normal body temperature for cats **101.5 F** Continue checking body temp. throughout the work-up.
- If breathing stops, administer antagonist (e.g. Yohimbine) & begin CPR (dosage chart p.4)
- Examine animal for any handling or capture related injuries (per protocol-assessing lynx for injuries).
- In the event of an injury follow recommendations in guidelines for assessing lynx for injuries.

Biological data collection

- Because testicles may not be developed in young males, use the distance between anal and urethra openings to determine the sex of each animal.


Adult Female


Adult Male


Female kitten


Male kitten

DNA-Tissue Samples

- Hair and tissue samples will be taken for genetic analysis.
- Clean tweezers, leather punch, and thermometer with antiseptic wipes before and after use
- Before administering ear tags remove a tissue sample from the ear using leather punch
- Ear tag will be administered through this hole (only necessary to obtain a tissue sample from one ear, but collect both if possible).
- Sterilized forceps (rubbing alcohol) will be used to remove ear plug from leather punch or ear
- Ear plug will be placed in small tubes containing desiccant for storage
- Label each tube with eartag number, sex, date of capture, capture town.

Eartagging and Radio collaring

- Each lynx will be equipped with numbered ear tags in each ear. Record tag numbers and tag color on data sheet.
- Because IFW telemetry study has ended, lynx will no longer be equipped with a radiocollar prior to release.

DNA- Hair Samples

- Hair will be collected by pulling a small clump of hair, that should ensure that hair follicles (contain skin cells and DNA) are attached.
- Hair will be placed in the supplied envelopes for storage. If hair is wet, let air dry in envelope before sealing.
- Each envelope will be marked with animal's eartag number, sex, date of capture, and capture location (town).

Morphological measurements:

- Standard morphological measurements will be taken. (See power point slides for specifics)
- Neck, chest, total length and weight are important for assessing condition of animal
- Ear tuft length, shoulder height, tail length, hind foot length (hock to tip of middle toe pad), are important for species identification (see graphic)
- Shoulder height is measured by extending the front leg and placing tape on tip of shoulder blade to rear edge of foot pad

Miscellaneous

- Examine female animals for sign of lactation, estrus, etc.
- Age will be estimated by examining dentition. Comments about tooth coloration, wear, and broken teeth will be recorded. Photographs can further aid in age determination.
- Describe pelage color and unique markings (i.e. toe coloration)
- Administer **antibiotic IM** (18 gauge needle is preferred for drawing antibiotic from vial, but use a 20 gauge needle for administering the antibiotic). To deliver subcutaneously pull the skin up (it should look like a tent) and insert the needle under the skin (i.e. through the front tent door).

Recovery

- Allow the animal to recover in a location with concealing cover, away from hazards such as roads, waterways or puddles, or set traps.
- Place animal in position that assures an open airway, with head at slightly lower elevation than body to prevent aspiration of fluids.
- Retain eye covering loosely, so animal can remove as it begins to recover.
- Reversing agent (Antagonil, Yohimbine,etc.) can be given IV or IM using a 20-gauge needle 45 minutes after lynx is given xylazine. Use a fresh needle and syringe (see dosage chart).
- Observe animal from a distance until it recovers fully, and record time when it stands. Do not attempt to hasten recovery by using loud noises or bright lights.

	Reversing agent for Xylazine (i.e., Antagonil)	Antibiotic CombiPen (Pen G Procaine and Pen G Benzathine)
Kitten ~ 10 lbs	0.25 cc	0.50 cc
Adult Female 20 lbs	0.5 cc	1.0 cc
Adult Male 30 lbs	0.75 cc	1.50 cc
Needle size	20 gauge	Draw:18 gauge Delivery: 20 gauge
Delivery time	≥45minutes after sedation	Any time
Delivery site	IM or IV (slowly)	Subcutaneous/IM

MDIFW Guidelines for Assessing & Evaluating Injuries of Lynx Captured in Traps (Updated 10-15-08 & 10-12-10)

Objective: The objective of this protocol is to provide guidance to Maine Department of Inland Fisheries and Wildlife (MDIFW) personnel on assessing the physical condition of lynx incidentally captured by trappers. This includes the identification and evaluation of injuries and their severity. This assessment will determine if a lynx requires veterinarian treatment or can be released on site.

A MDIFW employee will respond on-site to all reports of a lynx captured in a trap, unless: 1.) conditions are such (e.g., high disturbance, bad weather (**avoid hypothermia**)) that it would be unsafe for the animal to remain in the trap for the period of time it would take Department staff to travel to the site, 2.) it is dangerous for Department staff to travel to the site (e.g., extreme weather), 3.) a trapper has released the lynx because circumstances made it impossible for the trapper to contact the Department and not jeopardize the welfare of the lynx, or 4.) if Department staff **cannot** get to the site **before dark**.

The public and MDIFW staff are asked to immediately contact the 24 hr/7 day a week **lynx hotline (207) 592-4734** to deploy MDIFW staff trained and skilled in chemical immobilization of lynx. The trapper/observer will be advised on what they can do to minimize additional injury (e.g., minimize disturbance) in the interim until Department staff arrive. The closest MDIFW staff member (biologist or warden) will go to the site for additional assessment and to secure the site while awaiting the arrival of staff trained in chemical immobilization.

In the unlikely event that a person cannot be reached at the hot-line, please contact
Jennifer Vashon (MDIFW lynx biologist-Bangor Office) at: *(work),*

In the rare event that MDIFW staff cannot respond in person to a lynx capture, staff will interview the trapper/observer to determine the potential for injury and/or extent of injury (see pages 2 and 3). Staff will advise the trapper to release the lynx if a verbal assessment of the conditions of the capture indicates that the lynx is likely uninjured or has minor injuries not requiring veterinary attention. Staff will discuss with the trapper methods for releasing the lynx using the methods described in the section "*Acceptable methods for physically restraining a lynx to release the trap from the animal's foot*" (see p17). If the animal has an injury that requires veterinary care and extreme weather conditions or other circumstances make it impossible for Department staff to travel to the capture site, the trapper will be asked to either release or dispatch the lynx following the guidelines in Appendix 1. In cases where a trapper will be asked to euthanize a lynx, permission to euthanize the animal will first be requested from a USFWS special

agent or a Maine Warden[1]. If a USFWS special agent cannot be reached for this request, they will be notified as soon as possible after the Maine Warden Service gives permission for the euthanization.

Notification and Response

Before going to the scene, ask the individual reporting the capture to provide the following information:

- condition of animal (appears injured or uninjured);
- weather conditions (current and overnight temperatures, and precipitation);
- disturbance at site (e.g., vehicle traffic levels, equipment operation, and human or animal disturbance);
- type of trap (conibear or foothold);
- how is trap secured (i.e., foothold-trap staked or set with a drag, or conibear on ground or on a tree / pole);
- is the animal entangled or hanging from the trap;
- amount of time since trap was last tended to; estimate the maximum amount of time animal has been in the trap; and
- directions to the capture site and a meeting time.

Advise the reporting individual to keep disturbance to a minimum (do not approach the animal, do not photograph the animal, limit vehicle traffic) until MDIFW staff arrives on scene and secures the site.

Injury Assessment by MDIFW personnel

Major Injuries requiring veterinarian care

- ***Broken bones*** -- This is <u>any</u> bone that sustains a compound fracture (bone protrudes through skin) or any fracture of long bones (femur, ulna, radius, tibia)[2].
- ***Tooth injuries*** – Prior to anesthesia, a lynx that is visibly drooling or salivating indicates a tooth injury that deeply disturbs the roots and nerves.
- ***Mouth injurie****s* -- excessive bleeding, swelling, redness, odor
- ***Unresponsive to stimulus*** -- lynx are often observed sleeping in a trap but will respond to being touched. Prior to anesthesia, a lynx that does not move when touched, but is breathing should be evaluated by a veterinarian.
- ***Severe bleeding*** -- i.e., pulsing, spraying bright red blood (arterial blood)
- ***Laceration*** -- The direction and depth of the laceration should be assessed; length of laceration is of less importance. A laceration that is at least the full thickness of the skin (i.e., exposes layers of skin) requires cleaning and sutures. A horizontal laceration (i.e., across the limb) is

[1] All Maine Wardens are deputized Federal Agents.

[2] Non-compound fractures of smaller bones were not included as requiring veterinary attention because of the difficulty of assessing (or inability to assess) these breaks in the field.

more dangerous than a vertical laceration and should be assessed by a veterinarian.

- ***Puncture wound*** -- Wounds that extend into the body cavity or puncture wounds with swelling and edema. A puncture wound can be differentiated from a laceration by the lack of clean edges and the triangular or v-shaped appearance of the wound.
- ***Frozen digits*** -- When temperatures are below freezing, the foot/toes/appendage below the trap are susceptible to frostbite. Digits or tissues that are cold and stiff may be indicative of frostbite.
- ***Dislocation of shoulder or hip***

Injuries not requiring veterinarian care

- ***Edema*** -- Swelling of capture foot
- ***Tooth injuries*** -- tooth chipping, broken teeth without drooling or salivation
- ***Mouth injuries*** -- minor bleeding
- ***Laceration*** -- longitudinal on the limb and a laceration that only penetrates the dermis of the skin (i.e. not the full thickness of the skin)
- ***Broken toes*** -- Broken toes most likely will not be detectable in the field.
- ***Minor bleeding*** -- slow bleeding or drying blood
- ***Puncture wounds*** -- in limb with no swelling or edema
- ***Hypothermia*** -- (e.g., body temperature < 95º F, shivering) ***Note:*** a lynx that's coat is wet and/or the animal is shivering, but has no other signs of injury should be released without chemical immobilization, as these drugs will further depress the animal's body temperature.

Assessment of lynx in trap by IFW staff

All incidentally captured lynx will be chemically immobilized by MDIFW staff trained, certified, and skilled in the use of chemical immobilizing drugs and their delivery systems, following MDIFW lynx chemical immobilization protocols. All injuries will be documented on capture forms and photographed. Lynx with major injuries will be taken to a veterinarian for treatment (see contact list below). If it is unsafe to travel to the site, obtain an assessment based on below criteria from an observer at the site.

Obvious visible signs of injury

- Compound fracture (i.e., observe bone protruding through skin)
- Blood
- Limping, dragging limb
- Unresponsive

Potential for injury

- Capture leg is contorted (may indicate a break or dislocation)

- Animal is caught at or above the ankle
- Animal is entangled in vegetation
- Weather: Cold ambient temperatures (below freezing) or precipitation in combination with cold temperatures (< 32° F)
- An injured lynx with a wet, soaked pelt
- All lynx caught in conibears

Physical restraint of lynx (only when MDIFW staff cannot respond)
All information listed below must be applicable to **release lynx on site without chemical immobilization** and additional health assessment by MDIFW staff.

- Animal is caught at the foot below the ankle.
- Animal is sitting calmly in trap when not disturbed by people or vehicles.
- Animal moves without sign of injury when approached by people/vehicles.
- Lynx is not entangled in vegetation or other obstruction on the site.
- There is no visible sign of injury.
- The lynx was in the trap ≤ 28 hrs.
- Current and overnight temperatures were above freezing.
- There has been limited disturbance at the site (e.g., low or no vehicle or human traffic).

Acceptable methods for physically restraining a lynx to release the trap from the animal's foot

- ***Noose pole*** -- The catch loop should only be tightened sufficiently to hold the lynx without restricting the animal's ability to breathe (i.e., do not choke the lynx). The end of the pole (closest to the loop) should then be pinned to the ground to restrain the head. Once the head is restrained, lightly place your foot on the lynx's hind legs to secure the hindquarters. Once the animal is secured to the ground, remove the trap from the animal's foot.
- ***Forked stick*** -- A forked stick can be placed over the neck to pin the animal head and shoulders to the ground. After the animal's head is immobilized lightly place your foot on the hindquarters to further restrain the lynx. Once the animal is secured to the ground, remove the trap from the animal's foot.
- ***Plywood*** -- To pin a lynx to the ground, a piece plywood can be placed lightly over the animal. Light pressure should be applied to the plywood to immobilize the animal. Once the animal is immobilized, remove the trap from the animal's foot.

Assessment of chemically restrained lynx

IFW personnel will further evaluate the animal to identify injuries and severity of injuries.

- Body temperature obtained with a rectal thermometer.
- Examine the mouth (swelling, redness, broken teeth, chipped teeth, bleeding gums).
- Signs of shivering
- Signs of bleeding
- Feel all bones for compound or non-compound fractures
- Extremities cold to touch
- Body condition score (see datasheet: SOAP)

Lynx with minor injuries will be treated with antibiotics, minor wounds will be cleaned, and the animal will be released on site.

Lynx with major injuries will be taken to veterinarian for treatment and held at approved and licensed wildlife rehabilitator at the advisement of the veterinarian.

Situations when lynx should be euthanized on site

The decision to euthanize a lynx having the injuries described below was based on the low probability that the animal would survive the injury and corresponding treatments. These injuries would likely occur secondarily to the animal being trapped (e.g., predation attempt on the trapped animal).

- ***Evisceration***- i.e., intestines are protruding from abdominal cavity
- ***Massive tissue/limb trauma***
- ***Broken back or neck***
- ***Cranial vault***

Acceptable methods for euthanasia (Kreeger 1999, AVMA 2001)

- ***Gunshot*** (.22 caliber bullet is sufficient)
  - For physically or chemically restrained lynx: place muzzle of gun between the intersection of two imaginary lines drawn between the eyes and the ears of the lynx.
  - For unrestrained lynx: Head and neck shots are preferred to lung or heart shots.
- ***Beuthanasia D or Fatal Plus***
  - Only IFW staff trained and certified in the use of these euthanasia drugs will deliver these chemicals.
  - Administered intravenously or through the peritoneal cavity (IP). An IP injection can be delivered by a dart to an unanesthetized animal as the therapeutic value is sufficient.
- ***Supersaturated solution of KCl;*** Note this is only administered to an animal that has been anesthetized.

Literature cited

American Veterinary Medical Association. 2001. 2000 report of the AVMA Panel on Euthanasia. Journal of the American Veterinary Medical Association 218:669-696.

T.J. Kreeger, DVM. 1999. Handbook of Wildlife Chemical Immobilization. Wildlife Pharmaceuticals, Inc. Fort Collins, Co.

Appendix 1:Guidelines when MDIFW staff cannot travel to the capture site on whether an injured lynx should be released or euthanized

The most likely circumstance that would prevent MDIFW staff from responding on-site to an injured lynx caught in a trap would be extreme weather conditions (e.g., freezing rain, heavy snow). These extreme weather conditions may also jeopardize the survival of the trapped animal to a greater extent if the animal is left in the trap, than if it were released. In circumstances where the nature of the injury is such that the lynx has a low probability of survival, even if it were released from the trap, the animal should be euthanized to minimize any pain and suffering.

If IFW staff CAN'T get to the site

- ***Broken bones*** -- Any bone that sustains a compound fracture (bone protrudes through skin) or any fracture of long bones (femur, ulna, radius, tibia)
  - ✓ **If the lynx has a compound fracture or badly broken bone the animal should be euthanized rather than released if IFW staff can't get to the site.**
- ***Dislocation of shoulder or hip***
  - ✓ **The animal should be euthanized rather than released if IFW staff cannot get to the site.**
- ***Unresponsive to stimulus*** – Lynx are often observed sleeping in a trap but will respond to being touched. Prior to anesthesia, a lynx that does not move when touched, but is breathing likely has an underlying life threatening injury.
  - ✓ **The animal should be euthanized rather than released if IFW staff cannot get to the site.**
- ***Severe bleeding*** -- i.e., pulsing, spraying bright red blood (arterial blood)
  - ✓ **The animal should be euthanized rather than released.**
- ***Puncture wound*** -- Wounds that extend into the body cavity or puncture wounds with swelling and edema. A puncture wound can be differentiated from a laceration by the lack of clean edges and the triangular or v-shaped appearance of the wound.
  - ✓ **The animal can be released with this injury, unless the wound exposes a major body cavity (e.g., abdominal).**
- ***Laceration*** -- The direction and depth of the laceration should be assessed; length of laceration is of less importance. A laceration that is at least the full thickness of the skin (i.e., exposes layers of skin) requires cleaning and sutures. A horizontal laceration (i.e., across the limb) is more dangerous than a vertical laceration and should be assessed by a veterinarian.
  - ✓ **The animal can be released with this injury.**

Appendix 1:Guidelines when MDIFW staff CANNOT travel to the capture site on whether an injured lynx should be released or euthanized.

- ***Tooth Injuries*** -- A lynx that is visibly drooling or salivating indicates a tooth injury that deeply disturbs the roots and nerves.
  - ✓ **The animal can be released with this injury.**
- ***Mouth Injuries*** -- excessive bleeding, swelling, redness, odor
  - ✓ **The animal can be released with this injury.**
- ***Frozen digits*** -- When temperatures are below freezing, the foot/toes/appendage below the trap are susceptible to frostbite. Digits or tissue that are cold and stiff may be indicative of frostbite.
  - ✓ **The animal can be released with this injury when IFW staff cannot get to the site.**
- ***Hypothermia*** -- (e.g., body temperature < 95º F, shivering) ***Note:*** a lynx that's coat is wet and/or the animal is shivering, but has no other signs of injury should be released without chemical immobilization, as these drugs will further depress the animal's body temperature.
  - ✓ **The animal can be released with this injury.**

AT A GLANCE: Lynx Physical Exam and Care

Major Injuries requiring veterinarian care

- ***Broken bones*** -- This is <u>any</u> bone that sustains a compound fracture (bone protrudes through skin) or any fracture of long bones (femur, ulna, radius, tibia)[3].
- ***Tooth injuries*** – Prior to anesthesia, a lynx that is visibly drooling or salivating indicates a tooth injury that deeply disturbs the roots and nerves.
- ***Mouth injuries*** -- excessive bleeding, swelling, redness, odor
- ***Unresponsive to stimulus*** -- lynx are often observed sleeping in a trap but will respond to being touched. Prior to anesthesia, a lynx that does not move when touched, but is breathing should be evaluated by a veterinarian.
- ***Severe bleeding*** -- i.e., pulsing, spraying bright red blood (arterial blood)
- ***Laceration*** -- The direction and depth of the laceration should be assessed; length of laceration is of less importance. A laceration that is at least the full thickness of the skin (i.e., exposes layers of skin) requires cleaning and sutures. A horizontal laceration (i.e., across the limb) is more dangerous than a vertical laceration and should be assessed by a veterinarian.
- ***Puncture wound*** -- Wounds that extend into the body cavity or puncture wounds with swelling and edema. A puncture wound can be differentiated from a laceration by the lack of clean edges and the triangular or v-shaped appearance of the wound.
- ***Frozen digits*** -- When temperatures are below freezing, the foot/toes/appendage below the trap are susceptible to frostbite. Digits or tissues that are cold and stiff may be indicative of frostbite.
- ***Dislocation of shoulder or hip***

Injuries not requiring veterinarian care

- ***Edema*** -- Swelling of capture foot
- ***Tooth injuries*** -- tooth chipping, broken teeth without drooling or salivation
- ***Mouth injuries*** -- minor bleeding
- ***Laceration*** -- longitudinal on the limb and a laceration that only penetrates the dermis of the skin (i.e. not the full thickness of the skin)
- ***Broken toes*** -- Broken toes most likely will not be detectable in the field.
- ***Minor bleeding*** -- slow bleeding or drying blood
- ***Puncture wounds*** -- in limb with no swelling or edema
- ***Hypothermia*** -- (e.g., body temperature < 95º F, shivering) ***<u>Note:</u>*** a lynx that's coat is wet and/or the animal is shivering, but has no other signs of injury should be released <u>without</u> chemical immobilization, as these drugs will further depress the animal's body temperature.

[3] Non-compound fractures of smaller bones were not included as requiring veterinary attention because of the difficulty of assessing (or inability to assess) these breaks in the field.

Objective Exam of Sedated Wildlife (SOAP): Dr. Stewart Sherburne, DVM

- Quickly run hands along body to note changes in temperature, fluids, swelling
- **Start at nose and work to tail (**use same procedure every time):
  1. **Nose:** blood, fluid, foreign objects
  2. **Mouth**: blood, tooth fractures/avulsions, tongue lacerations, mandibular fracture
     a. Mandibular fracture: lightly squeeze lower canines and watch lower jaw for separation; or fracture will be obvious
  3. **Eyes**: Lids, conjunctiva, cornea are clean of foreign material
  4. **Ears**: fluid, blood, debris (cotton ball on fingertip to swab ear) lacerations
  5. **Neck**: asymmetry, swelling, hair loss, edema, lacerations, subcutaneous emphysema
  6. **Chest and abdomen**: lacerations, abrasions, subcutaneous fluid, body wall hernia, asymmetry, bloat, rib fractures
  7. **Extremities**: lacerations, hair loss, swelling, fractures, digital pulse, nail bed perfusion, deviations from normal orientation/flexion and extension of claws/digits. (use the opposite leg/foot to identify normal)
  8. **Anus/perineum**: bleeding diarrhea, temperature

Note: For animals with obvious non-recoverable injuries (e.g. evisceration) nose to tail assessment is not necessary and the animal should be euthanized immediately to minimize suffering.

Additionally, wet, soaked animals with no obvious/evident wounds/trauma should be released without chemical restraint.

Example: Lynx has swelling on capture foot and minor laceration

Subjective Body Condition:
Poor □ Fair □ Good □ Excellent ⊗

Objective	Normal	Abnormal
Eyes/Ears	□	□
Nose/Mouth	□	□
Neck/Torso	□	□
Skin	□	□
Extremities	□	⊗

Assessment: *Left front foot – abnormal, capture foot is swollen and has shallow and small laceration.*

Plan: Release/no sedation, Euthanize
Sedation: Treat in field, or Transport to

Mark abnormal area below:

⊗

Normal – 101-102.5

Body Temp	Time
102.5 F	11:00 am
102.0 F	11:10 am
102.0 F	11:20 am

Note: although the animal has a minor injury on capture foot, body condition is excellent because animal is well fleshed and body weight is appropriate for age and gender.

Supportive care of sedated lynx:

1. Monitor body temperature (Normal is **101-102.5 degrees**)
    a. Monitor immediately following sedation and every 5-10 minutes thereafter.
    b. Frequency is determined by whether body temp is stable or fluctuating.
2. Monitor breathing/pulse during sedation and assure airway is open and unobstructed.
3. Lubricate eyes after complete nose to tail assessment (SOAP)
4. Administer Antibiotic: (0.5 cc/10lbs)
    a. Shake bottle vigorously to prevent particulates from blocking needle
    b. Administer subcutaneously by tenting the skin over the beveled end of 18 g needle
5. Administer Subcutaneous fluids: (3 to 4 syringes of fluid in a 60 ml syringe totaling 180-200 cc of fluid)
    a. Draw the fluids from the bag of 0.9% sodium chloride with a 60 ml syringe with an 18 g needle (saline bag needle)
    b. Insert the needle in the beige port on the bag and draw out 35 ml
    c. Replace needle with sterile 18 g needle for administering to animal
    d. Tent the skin (shoulder blade, neck) over the beveled end of the needle and slowly administer fluids.
    e. Repeat the process several times, always replace animal needle with saline needle to avoid contaminating the saline bag when drawing fluids.
    f. Note: Consider warming saline over heat vents in truck if body temperature is low (see treatment of hypothermia below).

Treatment of sedated lynx:

Compression to alleviate swelling on capture foot

a. Tightly apply vet wrap to capture foot starting from the toe
b. Remove vet wrap after 10-15 minutes of compression
c. Examine foot for injuries (compare with opposite foot for normal/abnormal assessment).

Care of minor abrasions (hair loss)/lacerations (not through the full thickness of skin)

a. Subcutaneous antibiotics as administer for supportive care, no additional dose required
b. If necessary irrigate with saline (use 18 g needle to puncture 6-8 holes in lid) to flush all dirt/debris from wound

Care of moderate lacerations (longitudinal skin wounds that are <1", not located on joint/tendon, don't gape open, don't involve tissue below skin).

a. Irrigate with saline (use 18 g needle to puncture 6-8 holes in lid) to flush all dirt/debris from wound

b. Close laceration that don't gape open and show no sign of infection with aluspray

Care of major lacerations (located over joint/tendon, >1" long, involve tissue below skin, gape open)

a. Irrigate wound with saline (use 18 g needle to puncture 6-8 holes in lid)
b. Cover with bandage for transport and treatment by veterinarian

Administering SAM Splint on dislocations/fractures for transport to veterinarian

a. Mold the SAM splint on the opposite uninjured leg
b. Cut the SAM splint to the appropriate length
c. SAM Splint should extend beyond the joint that is above and below the fracture or dislocated joint (can't splint a femur fracture)
d. Wrap with vet wrap (using a SAM splint will stabilize the injury and prevent you from wrapping the leg too tightly)

Hyperthermia (elevated body temp)

1. Start cooling when body temperature reaches **102.5-103 degrees by:**
    a. Uncovering animal from sleeping bag
    b. Moving animal into shade
    c. Consider putting animal in direct contact with ground
2. Body temperature **104 degrees**
    a. Place ice packs on inside of legs (armpit/groin) near blood vessels or;
    b. Douse inside of legs near blood vessels with rubbing alcohol (evaporative cooling that allows fur to dry quicker than if doused with water) or;
    c. Ice or rubbing alchol not available, douse inside of legs with water.

Hypothermia (low body temperature)

1. Dry animal if wet and place in sleeping bag to prevent hyperthermia
2. Body temp **≤100 degrees**
    i. Start warming with heat pads/hot water bottles wrapped in thin cloth placed on inside of legs near blood vessels (armpit/groin).
    ii. Wrap animal in space blanket
    iii. Consider moving animal into heated vehicle especially in adverse weather.
    iv. Administer warm saline subcutaneously as part of supportive care

Incidental Lynx Capture Form

DATE:_____
Observers:_____
Recorder:_____ Town:_____
Road Name:_____ County:_____
UTMe_____ UTMn_____ Datum: WGS84 NAD27 NAD83

Incidental Lynx Capture Form

Lynx ID#

Time when manageable:

Time of recovery/ release:

Mix Used:	Ketaset Concentration: ___mg/ml	Xylazine Concentration: ___mg/ml	5:1 Ket/Xyl Concentration: ___mg/ml	Time	Delivery Method	Additional Drug (If Needed)	Amount
1st Dose	m l	m l	m l			Antibiotic (SCorIM) 0.5cc/10lbs	
2nd Dose	m l	m l	m l			Yohimbine(IVorIM)0.5cc/20lbs	
3rd Dose	m l	m l	m l			Midazelam(IVorIM) 0.5cc/slowly	
4th Dose	m l	m l	m l			Epinephrine(SCorIM) 0.5cc/10lb	
						Doxapram (IVorSL) 1.0cc/22lbs	

Comments:_____

EarTag#(Left) _____ (Right)_____ Tag Color: Yellow Green Red Other:_____

Radio Collared: Y N **Initial/Previously Collared** **Collar Works:** Y N **Make**: *LT Sirtrack ATS* GPS SAT VHF

Radio Collar Frequency:_____ Replacement Collar Freq.:_____ Collar Life:____months

Leather Circumference:_____mm

PHYSICAL INFORMATION

Sex: M F Year Born(if known)_____

Estimated Age: Kitten Subadult Adult

Teeth: Normal ☐ Missing ☐ Broken ☐ Worn ☐
Describe:

Photo of Teeth? side view (2) ___ front view___

Coat Condition: Prime ☐ Summer ☐
Shedding☐ Mange☐ Bare/Worn

Capture Foot? Front: L, R or Hind: L, R
Capture Foot Injuries? Y N
Describe:_____

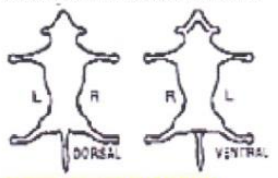
Subjective Body Condition:
Poor ☐ Fair ☐ Good ☐ Excellent ☐

Objective	Normal	Abnormal
Eyes/Ears	☐	☐
Nose/Mouth	☐	☐
Neck/Torso	☐	☐
Skin	☐	☐
Extremities	☐	☐

Assessment: _____

Plan: Release/no sedation, Euthanize
Sedation: Treat in field, or Transport to Vet;

Mark abnormal area below:



Normal – 101-102.5

Body Temp	Time
F	
F	
F	
F	
F	

BODY MEASUREMENTS

Weight (Actual or Estimate)	lbs	**Tail Banding Pattern**	No Bands	1 Band	2 Bands	3 Bands
Neck Circumference	mm	**Color of tip of tail**	Completely Black		Black on top/white beneath	
Chest Girth	mm	**Hind Foot Coloration**	Dark Brown Grey Other:_____			
Shoulder Height	mm					
Tail Length (tip of bone)	mm	**Toe Coloration**	**Inside**	**Middle**	**Middle**	**Outside**
Tail Length (tip of tail)	mm	Left Front				
Total Length	mm	Right Front				
Zygomatic Arch	mm	Left Rear				
Ear Tuft Length	mm	Right Rear				

Scars: Y N Description_____

DNA: Hair Sample Y N
Tissue Sample Y N
Blood Sample Y N

Parasites: Y N
Sample: Y N
Rare Light Common

Photos? YES NO Photo Number_____
Reviewed Data Sheet? YES NO

Comments:

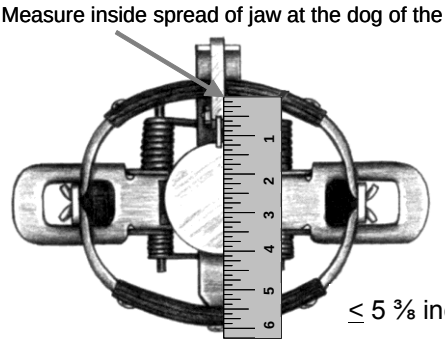
Lynx Anesthesia Dosage Chart

(5:1 ketamine/xylanzine; adapted from Kreeger 1990).

	Ketamine		Xylazine		Reversing agent for Xylazine	Antibiotic
Concentration	100 mg/ml	200mg/ml	100mg/ml	400mg/ml		Combi Pen
Kitten ~ 10 lbs	0.45 cc	0.20 cc	0.09 cc	0.02 cc	0.25 cc	0.50 cc
Adult Female 20 lbs	0.90 cc	0.45 cc	0.18 cc	0.05 cc	**0.50 cc**	**1.0 cc**
Adult Male 30 lbs	1.35 cc	0.70 cc	0.27 cc	0.07 cc	**0.75 cc**	**1.50 cc**
Delivery needle	18 gauge, 1" needle				20 gauge	Draw: 18 gauge Delivery: 20 gauge
Delivery site	IM hind quarter				IM or IV (slowly)	subcutaneous /IM
Delivery	Pole syringe				Hand syringe	Hand syringe

Draw ketamine with a 1cc syringe and 20 gauge needle and then deposit dose in pole syringe
With a fresh needle and syringe draw the xylazine from the bottle and deposit in pole syringe

2012 Trapping Regulations and Recommendations to Avoid Lynx Capture



Regulations

- **Foothold traps** in **WMDs 1-6 and 8-11** set on dry ground can NOT have an inside jaw spread greater than **5 ⅜ inches** and must have at least one swivel.
- **Cage-type live traps** in WMDs 1-6 and 8-11 with dimensions of 13 X 13 inches or greater are prohibited.
- **Killer-type traps*** (conibears with an inside jaw spread up to 8 inches) when set on land in **WMDs 1-11** and **14, 18 and 19** must be set at least 4 feet above ground or snow level and 4 feet away from any bank. The pole or tree that the trap is affixed to must be:
  1) no greater than 4 inches wide at 4 feet above the ground and
  2) at an angle of 45º or greater to the ground the entire distance from the ground to the trap.
  3) The area within 4 feet of the trap in all directions must be
     - free of objects greater than 4 inches wide and
     - free of trees or poles slanted less than 45° between the ground & the height of the trap.
  4) If using a pole, the pole must be a natural section of tree which has not been planed or sawed to create a flat surface**.**

*Some exceptions are made for killer-type traps used in blind sets & set under overhanging banks (see IFW law book).

- **Killer-type traps** (conibears #220 or smaller) in **WMDs 7, 14, 18 and 19** can be set on the ground with a lynx exclusion device; see page 36 of IFW's law book for more information.

Trappers are required to report the capture of lynx to a Game Warden or Department biologist as soon as possible and prior to removing the animal from the trap, unless a Department official cannot be reached in time to prevent injury to the lynx. Any lynx released under this provision must be reported to the Department within 24 hours from the time it was discovered. **Report Lynx Captures to (207) 592-4734** (24 hours a day and 7 days a week). In remote areas, phones are available at NMW checkpoints, custom gates, sporting camps, and logging operations.

Recommendations

- Stake foothold traps with chains less than 9 ½ inches long
- Set foothold traps where the potential for entanglement in vegetation/debris is low
- Attach the chains on foothold traps at the center of the trap frame

Appendix 9. IFW's Predator Management Program

2012 Predator Management Program

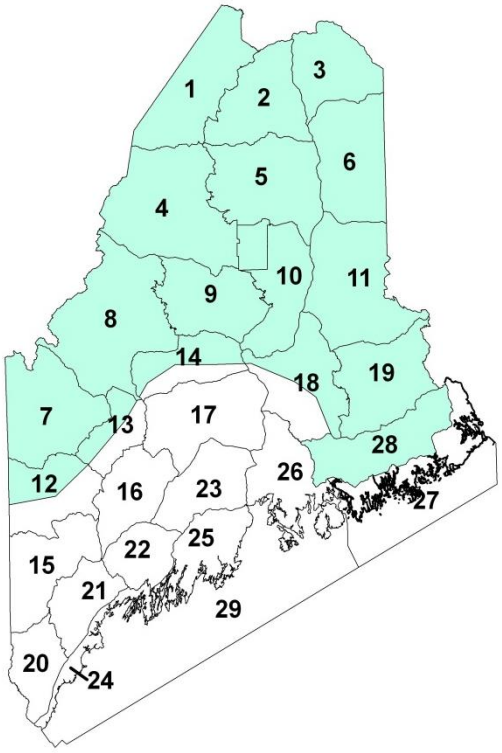
Recommendations to the Commissioner by Working Committee:
(Regional Wildlife Biologists Tom Schaeffer, Mark Caron, and Warden Sgt. Dave Craven)
Reviewed and modified by Wildlife Division: 8/1/2012
Approved by Commissioner: 8/10/12

Committee Charge:

The working committee was charged with reviewing the scope of the predation management program that is evolving after its initial implementation in 2010 by the Commissioner of Inland Fisheries & Wildlife, Chandler Woodcock. The objective of the current program is to reduce the impact of predation by coyotes on wintering deer in active, priority areas supporting deer as identified by Regional Wildlife Biologists.

Program Scope:

The predation management program is focused on "Designated Areas" that currently support populations of wintering deer, and that lie within the defined NEWME Deer Recovery Area. The objective is to proactively reduce coyote density in these Designated Areas between early-autumn and early-winter that may be present during winter periods of vulnerability. This will be followed by reactive winter efforts to monitor coyote presence and manage predation events as needed through winter.



Over the past two years, Regional Wildlife Biologists have been directed to prioritize areas that actively support deer in their respective Regions, as well as to identify and contract with qualified trappers and hunters that are known to be capable and available to conduct coyote removals in these specified areas.

Many of these Designated Areas are remote and may not receive significant levels of trapping and/or hunting effort. In addition, this program requires a consistent, sustained effort through to spring breakup to ensure anticipated benefits are realized. For these reasons compensation will be offered to program participants for their time and extra effort to access these areas. This effort is not expected to significantly increase statewide trapping effort but rather redirect existing efforts to these specific Designated Areas.

Operational Recommendations

Designated Priority Areas:

Each Region should identify the top 5 priority areas that currently support deer during restrictive winter conditions with an initial target of deploying agents to 4 designated areas per Region. Designated areas may be added or operations modified/curtailed depending on budgetary limitations, as well as deer-coyote activity.

Justification: *The Regions should prioritize wintering habitats that support deer based on various criteria including size population supported, size of area, accessibility, strategic location within general recovery area, spatial distribution, inclusion in a co-op agreement, etc. Because this program will operate within the confines of a fixed budget, the number of prioritized areas ultimately designated will be dependent on factors that include budget ceiling, winter severity, access difficulties, number of assigned agents, etc.*

Timing:

The trapping phase of the predator management program will commence on October 17, 3 days after the commencement of the early coyote season (October 14) and run continuously through November 30, 2012 if favorable conditions prevail.

The hunting phase of the predator management program will generally commence in December if/when there is sufficient snow cover or ground conditions that render land trapping ineffective, and provides for effective monitoring of coyote activity and their interactions with deer. The predation management program will end when spring dispersal of deer occurs, or by May 15, 2013 whichever occurs first.

The two operational phases of the program may overlap as directed by the Regional Wildlife Biologist as conditions warrant.

Justification: *The Committee is sensitive to the role that recreational (i.e. volunteer) trappers play in removal of coyotes within some of the designated areas. Rather than create controversy, our recommendation is focused on using the abilities and contributions of both groups to remove coyotes in areas accessible and normally targeted by recreational trappers. We recommend allowing them the first 3 days of the early season before deploying agents. Further, agents should be encouraged to initially avoid areas targeted by regular trappers as they can best determine, and assess/trap the periphery or backlands of the Designated Area.*

Note: The Committee is aware of various interests in commencing hunting activities as early as September 1. Our recommendation is to allow Regional Wildlife staff in consultation with Warden Service and other competent sources to make management determinations in the best interest of the resource and in consideration of the regional variables at play. A broad application of an early start date may strain the program

budget, especially in a year when winter conditions may favor predatory efficiency and challenge general deer survival … when the most valuable protection may be that which is provided as a winter progresses rather than loading control efforts on the front end.

Trapping:

Qualified trappers will be identified by the Regional Wildlife Biologist, endorsed by the district game warden and maintain a positive working relationship with Department staff. Qualified trappers enlisted in the predator management program will be by contract and permit for assignment to one or more Designated Areas. Participants in the program must be known to Department field personnel to have a demonstrated ability to perform the following: to selectively catch coyotes, to work cooperatively with Department personnel, to abide by hunting and trapping rules and regulations, and to perform the required work and reporting per contractual agreement. Consideration will be given to a participant's residence in relation to a Designated Area(s).

With the possible exception of seasons, all trapping regulations remain in effect including lynx restrictions in WMDs 1 through 11. For trappers being deployed in lynx-sensitive districts, the Department will require review and training on BMPs and lynx avoidance techniques with the assistance of the RAS and other supports as required.

This program is focused on the removal of coyotes from Designated Areas. All non-target animals shall be released immediately unless (1) a debilitating injury has occurred to the animal, or (2) the species is of rare, threatened, or endangered status. If (1), the animal shall be humanely dispatched and a Department official notified ASAP. The carcass will then be surrendered to a Department official as a program animal. If (2), and a lynx, bald eagle, or golden eagle is caught, a Department official will be contacted immediately and prior to any attempt to release the animal. Department personnel will respond to such a notification in a manner consistent with established Department guidelines and policy.

As part of this program, all coyotes taken within designated areas by deployed agents shall be tagged as ADC fur with the tagging fee waived. Allowances for time and mileage will be provided for agents to tag program fur only, once during the program period if the fur is not able to be tagged by a Department official otherwise as part of their routine duties.

Efforts will be made by Regional and Warden Service personnel to account for volunteer/recreational removals within the designated areas by routine fur tagging procedures, normal field contacts, etc.

Justification: *Regional and Warden Service personnel within WMDs 1- 11 should collaborate to establish strategic locations for sufficient training sessions to accommodate program trappers specifically, to review/train on lynx and other non-target avoidance techniques prior to the commencement of the 2012-13 program. Key*

personnel with RAS, as well as other qualified resources, should be involved in the presentation of avoidance techniques and BMPs.

This program is focused on the selective removal of coyotes from designated areas and therefore will not support or compensate participants for the removal of non-target species. Regional personnel should collaborate to establish agreements with fur buyers/processors strategically located that are willing to take possession of non-target raw fur from Department officials, process, and sell the fur with net funds being returned to the program account.

Program participants should meet the same minimum standard of qualifications required for ADC agents with a focus on a demonstrated ability to selectively and effectively remove coyotes. Regional Wildlife Biologists will consult with appropriate Warden Service personnel in determining a candidate's qualifications. In the interest of maximizing program funds and efficiency, Regional personnel should give consideration to a candidate's base location in relation to the Designated Area(s) assigned.

For program accounting, all coyotes will be required to be tagged as ADC, and may be retained by the program participant. Participants may be compensated for their time and mileage, if needed (i.e. unable to get fur tagged at residence by Department official, or to tag with other acquired fur) to tag program carcasses only. A participant can make a total of one such claim for compensation during the course of the program. These claims cannot be made to tag other carcasses or fur taken recreationally.

Hunting:

Qualified hunters will be identified by the Regional Wildlife Biologist, endorsed by the district game warden and maintain a positive working relationship with Department staff. Qualified hunters enlisted in the predator management program will be by contract and permit for assignment to a Designated Area(s). Participants in the program must be known to Department field personnel to have a demonstrated ability to perform the following: to be able to selectively remove coyotes, to work cooperatively with Department personnel, to abide by hunting and trapping rules and regulations, and to perform the required work and reporting per contractual agreement. Consideration will be given to a participant's residence in relation to a Designated Area(s).

For program purposes, agents may be deployed to monitor and hunt as directed by the Regional Wildlife Biologist, but generally when persistent snow pack first develops through the period of spring dispersal or May 15, whichever occurs first, and if conditions warrant. Hunting may overlap the period where program trapping is in effect. Trapping and hunting agents within a Designated Area will be encouraged to actively communicate findings with each other and enhance / target efforts to remove coyotes.

Night hunting may be employed as a tactic by program agents as permitted by the Regional Wildlife Biologist. During the period of September 1 through December 15,

this activity may only occur in and adjacent (1/4 mile) to Designated Areas and only if an agent notifies the District Game Warden of their intended activities and locations.

As part of this program, all coyotes taken within designated areas by deployed agents shall be tagged as ADC fur with the tagging fee waived. Allowances for time and mileage will be provided for agents to tag program fur only, once during the program period if the fur is not able to be tagged by a Department official otherwise as part of their routine duties. Efforts will be made by Regional and Warden Service personnel to account for volunteer/recreational removals within the designated areas by routine fur tagging procedures, normal field contacts, etc.

Justification: *Consideration for contracting with qualified hunters will be the same as trappers.*

Hunting may fill a niche during the same period that directed trapping is occurring, but can generally be considered when conditions begin to transition to frozen ground and persistent snow cover. Regional Wildlife Biologists in consultation with Warden Service personnel will have the flexibility to deploy and direct agents when and where needed to best accomplish program objectives. Earlier starting dates by special exception may be employed at the discretion of the Regional Wildlife Biologist where factors such as remoteness, accessibility, coyote densities, etc. dictate earlier deployment.

Monitoring:

Monitoring will be an essential part of the trapping and hunting phases of this program. Monitoring will consist of an agent assessing a Designated Area and its immediate periphery for evidence of coyote presence, activity, and/or interactions with deer. Based on these observations, an agent is expected to provide an appropriate response, as allowed by permit, to remove target animals. Sufficient monitoring should occur such that a Designated Area is assured reasonable coverage sufficient to detect and alleviate predatory losses to resident deer. If permitted methods are insufficient to relieve the effects of predation, or if other losses are identified, the agent is expected to report such to the Regional Wildlife Biologist as soon as practical.

Agents may also be compensated to monitor, identify, and report other mortality sources of resident, wintering deer within a Designated Area. This may include data collection, in those affected Designated Areas, to supplement the Department's ongoing effort to assess vehicle caused (unreported) mortalities as well as to supplement the Department's deer recruitment potential by fetus analysis.

Agents are expected to report the results of their monitoring activities, along with results of removal efforts, on a bi-weekly basis to the Regional Wildlife Biologist.

Justification: *Sufficient monitoring should be employed to effectively guide coyote removal efforts within and immediately adjacent to Designated Areas. These efforts*

should be used to provide general monitoring of the resident deer herd as well and to gauge general wintering conditions and other sources of mortality.

Houndsmen:

Qualified houndsmen identified by the Regional Wildlife Biologist, endorsed by the district game warden and that maintain a positive working relationship with Department staff may be enlisted in the predator management program by contract and permit for assignment to one or more Designated Areas. Participants in the program must be known to Department field personnel to have a demonstrated ability to perform the following: to be able to selectively run and remove coyotes, to work cooperatively with Department personnel, to abide by hunting and trapping rules and regulations, and to perform the required work and reporting per contractual agreement. Consideration should be given to a participant's residence in relation to Designated Area(s).

Unless specifically permitted otherwise, the use of hounds is limited to the period of December 15, 2012 until spring dispersal or May 15, whichever occurs first; and is restricted to areas that are peripheral or outside of the Designated Area during the wintering period; i.e. between ¼ to 2 miles from a Designated Area's boundary. For the purposes of this program, only coyotes may be run and/or taken and no dog(s) may be started or initially released on bait or coyote track unless it is within this defined buffer. All dogs utilized for this purpose will be experienced and broken of running deer. No young or inexperienced dogs will be deployed for the purposes of training as part of this program.

As part of this program, all coyotes taken within designated areas by deployed agents shall be tagged as ADC fur with the tagging fee waived. Allowances for time and mileage will be provided for an agent to tag program fur only, once during the program period if the fur is not able to be tagged by a Department official otherwise as part of their routine duties. Efforts will be made by Regional and Warden Service personnel to account for volunteer/recreational removals within the designated areas by routine fur tagging procedures, normal field contacts, etc.

Justification: *Experienced handlers with trained hounds are an asset that can be deployed to run, harass, and remove coyotes from and near Designated Areas. Most houndsmen normally refrain from running until after mid-December and the advent of snow pack. Regional Wildlife Biologists in consultation with Warden Service personnel will have the flexibility to deploy and direct agents when and where needed to best accomplish program objectives. The ability to avoid unintended harassment or stress to wintering deer will be a primary consideration in the permitting and deployment of houndsmen near a Designated Area.*

Volunteer Efforts:

Volunteer efforts should be encouraged when and where possible to facilitate coyote removals within and peripheral to Designated Areas, as well as in secondary or other lower priority areas supporting wintering deer.

Regional and Warden Service personnel will collaborate to identify volunteer removals of coyotes from Designated Areas during the course of fur tagging and routine field contacts.

Justification: *Volunteer or recreational users can provide positive contributions to program objectives. Potential contributions can be expanded by providing information to direct activities to secondary or lower priority areas with wintering deer. Department efforts should include accounting for recreational and/or volunteer efforts.*

Contracts, Permits, and Compensation:

A CTV Blanket Contract will be created to cover participants of this program. A spreadsheet will be attached to the contract which list Participants, whether they are being compensated mileage, hourly, neither or both, VC# and contract period.

Permits will be developed to specify expectations and the type of activity allowed per individual contract agreement. Separate permit templates will be developed for hunting, trapping, and hounding; and will include specific provisions on the deployment of bait, tagging requirements, etc. Unless otherwise specified in the program guidelines, Regional Wildlife Biologists, in consultation with Warden Service personnel, will have the ability to modify individual permit conditions so as to enhance the effectiveness and efficiency of individual agents in their Designated Areas.

Contract services will be provided by permit issued by the Regional Wildlife Biologist and may include: trapping, hunting, hounding, placing and maintaining bait, monitoring to assess coyote activity and document coyote-deer interactions and predation incidents, as well as other deer mortality incidents.

Compensation to agents for their contractual services will be $7.50 / hour and $0.44 / mile for vehicle and equipment (atv, snowsled). Houndsmen will be compensated at a flat rate of $100.00/day plus mileage for one vehicle and/or one snowsled or ATV.

Justification: *Recommend no change from previous year's program except for updated standard language of various permits.*

Reporting:

Timely and accurate reporting will be required for all contracted program participants. Report forms will be developed that provide minimally for disclosure of hours, mileage, efforts/findings/results, and a breakdown of coyotes killed by gender on a daily basis.

Report forms will be provided in digital (preferred) or hardcopy format. It will be required that forms be submitted bi-weekly to the Regional Wildlife Biologist via e-mail (preferred) or UPS. Based on their approval of submitted reports, invoices will be generated and submitted to the Regional Wildlife Management Section Supervisor for processing.

Justification: *Reports will be an important tool for program accountability in terms of costs, effort and gauging program objective. Reports will also aid the Department in assessing wintering conditions, coyote/deer interactions, and other mortality sources and levels. Department field personnel will be expected to maintain good communications and interactions with program participants to assure quality control and compliance. Further assessment of this program with regards to broader goals or objectives is beyond the scope of this directed effort, and will require independent funding and staff involvement.*

Program Assessment:

A final report will be developed which will include a summation of the total number of coyotes removed by method, a breakdown of program costs by Designated Area, agent, and method, numbers of deer mortalities by Designated Area and cause if know, and any other pertinent information to help assess winter deer mortalities within Designated Areas.

Justification: *Required to provide overall accounting of program for comparative analysis of methods, cost / efficiency variables, etc.*

FORMS

STATE OF MAINE, DEPARTMENT OF INLAND FISHERIES AND WILDLIFE **#2012-X-YYY**

PERMIT for DEPLOYED HUNTING and BAITING of COYOTES

(X-Region, Y-number)

ISSUED TO:

EFFECTIVE:

EXPIRATION:

DATE ISSUED:

PURPOSE: To deploy HUNTERS to proactively remove coyotes from a Designated Area used by deer for the period specified. When snow cover exists, permittee will monitor coyote activity and their interactions with deer and continue to remove coyotes within the immediate vicinity (1/4 mile) of the Designated Area. Also, the permittee will:

LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED (attach map):

PERMIT CONDITIONS:

1. **Only coyotes may be taken under this permit from the Designated Area.**
2. **Hunting may utilize: calling, baiting, scent posts/markers, and night-hunting**
3. **Permittee must have a valid hunting license and follow all laws and rules except as otherwise noted.**
4. **Night hunting with/without illumination will be allowed between September 1st and December 15th if permittee acquires prior approval from the District Game Warden (DGW) for the specific location(s) and time(s) of activity. No restriction for calling or illumination device. Unless otherwise provided, failure to notify DGW will result minimally in loss of this permit allowance.**
5. **If baiting; 1] Permittee must secure written permission from the landowner to place bait and present to a Department official upon request, 2] bait will be labeled with a 2x4 inch tag including name and address, 3] to avoid lead poisoning, no carcass or animal parts may be used that show evidence of having been shot or otherwise contaminated with lead, 4] bait may be placed in the Designated Area or within ¼ mile, 5] baits placed in or within ¼ mile of the Designated Area must be actively monitored and hunted, or completely removed.**
6. **All carcasses or furs of coyotes removed from the Designated Area(s) by this permit will be tagged as ADC using this permit number. Compensation for time and mileage will be allowed only for tagging of program animals or fur, and on 1 occasion if a Department official cannot otherwise provide tagging services. ADC tagging fees are waived.**
7. **Failure to comply with these conditions is a violation of the Commissioner's Rules and this permit, and will cause this instrument to be void as well as expose the holder to possible legal penalties.**
8. **Attach sheet with additional provisions, if required.**

REPORTING REQUIREMENTS: Completed reports of hunting and monitoring efforts on provided forms are to be sent bi-weekly to the Regional Wildlife Biologist.

SIGNATURE OF AUTHORIZED AGENCY REPRESENTATIVE:

_____

SIGNATURE OF PERMITTEE:

_____

COPIES TO: WARDEN, SERGEANT, FILE.

STATE OF MAINE, DEPARTMENT OF INLAND FISHERIES AND WILDLIFE **#2012-X-YYY**

PERMIT for DEPLOYED TRAPPING of COYOTES

(X-Region, Y-number)

ISSUED TO:

EFFECTIVE:

EXPIRATION: November 30,

DATE ISSUED:

PURPOSE: To deploy TRAPPERS to proactively remove coyotes from a Designated Area used by deer for the period specified. To file reports as required and communicate with the Regional Wildlife Biologist (RWB) and the District Game Warden (DWG) on identified or other causes of deer mortalities for appropriate action. Also, the permittee will:

LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED (attach map):

PERMIT CONDITIONS:

1. **Permittee must have a valid trapping license and follow all laws and rules unless specifically waived as a condition of this permit.**
2. **Only coyotes may be taken under this permit. All other non-targets will be released unless (1) a debilitating injury has occurred to the animal, or (2) a lynx, bald eagle, or golden eagle is involved. If (1), the animal shall be humanely dispatched and a Department official notified ASAP. The carcass will then be submitted either to a Department official or a designated processor/fur buyer. If (2), and a Department official will be contacted immediately and prior to any attempt to release the animal.**
3. **<u>If baiting:</u> 1] Permittee must secure written permission from the landowner to place bait and present to a Department official upon request, 2] bait will be labeled with a 2x4 inch tag including name and address, 3] to avoid lead poisoning, no carcass or animal parts may be used that show evidence of having been shot or otherwise contaminated with lead 4] bait may be placed in the Designated Area or within ¼ mile, 5] baits placed in or within ¼ mile of the Designated Area must be actively monitored and trapped, or completely removed.**
4. **All carcasses or furs of coyotes removed from the Designated Area(s) by this permit will be tagged as ADC using this permit number. Compensation for time and mileage will be allowed only for tagging of program animals or fur, and on 1 occasion if a Department official cannot otherwise provide tagging services. ADC tagging fees are waived.**
5. **Failure to comply with these conditions is a violation of the Commissioner's Rules and this permit, and will cause this instrument to be void, as well as expose the holder to possible legal penalties.**
6. **Attach sheet with additional provisions, if required.**

REPORTING REQUIREMENTS: Completed reports of trapping and monitoring efforts on provided forms are to be sent bi-weekly to the Regional Wildlife Biologist.

SIGNATURE OF AUTHORIZED AGENCY REPRESENTATIVE:

_____

SIGNATURE OF PERMITTEE:

_____

COPIES TO: WARDEN, SERGEANT, FILE.

STATE OF MAINE, DEPARTMENT OF INLAND FISHERIES AND WILDLIFE **#2012-X-YYY**

PERMIT for HUNTING of COYOTES with HOUNDS

ISSUED TO:

EFFECTIVE:

EXPIRATION:

DATE ISSUED:

PURPOSE: To utilize selected HOUNDSMEN, during winter periods with snow pack, in areas peripheral to the Designated Area(s) assigned, to proactively bait and/or monitor, and initiate hunts for coyotes with trained, experienced dogs for the period specified.

LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED (attach map):

CONDITION OF PERMIT:

1. **Only coyotes may be taken under this permit.**
2. **Permittee must have a valid hunting license, as well as all participants in his hunting party, and must follow all laws and rules with the following exceptions:**
   a. **<u>Houndsmen:</u> 1] All dogs utilized for this purpose will be experienced and will have been broken to running deer. This exercise will not be used to train young or inexperienced dogs, and 2] Houndsmen will only start dogs off bait or tracks encountered outside ¼ mile but within 1.5 miles of a Designated Area boundary.**
   b. **<u>If using bait;</u> 1] Permittee must first obtain written permission from the landowner to place bait and provide a copy to a Department official upon request, 2] bait will be labeled with a 2x4 inch tag including name and address; 3] to avoid lead poisoning, no carcass or animal parts may be used that show evidence of having been shot or otherwise contaminated with lead, 4] bait may be placed in a zone at least ¼ mile, but no more than 1.5 miles from a Designated Area; and 5] placed baits will be actively monitored and/or hunted, or completely removed.**
3. **Failure to comply with these conditions is a violation of the Commissioner's Rules and this permit, and will cause this instrument to be void, as well as expose the holder to possible legal penalties.**
4. **Attach additional provisions below or on attached sheet**

REPORTING REQUIREMENTS: Completed reports of hunting and monitoring efforts on provided forms are to be sent bi-weekly to the Regional Wildlife Biologist.

SIGNATURE OF AUTHORIZED AGENCY REPRESENTATIVE:

_____

SIGNATURE OF PERMITTEE:

_____

COPIES TO: WARDEN, SERGEANT, FILE.

Coyote Reduction Effort Hunter Checklist
Region * 2012

Name: _____ Date: _____

Address: _____

_____

_____

Home Phone #: _____ Cell #: _____

How many years have you hunted/trapped coyotes? _____

What is the average number of coyotes that you take annually? _____

How many hours/week are you available to hunt/trap coyotes? _____

How far from your residence are you willing to travel to hunt/trap coyotes? _____

What methods are you proficient at to take coyotes?

Trapping? _____ Hunting over bait? _____ Calling? _____ Dogs? _____

What types of equipment do you have to hunt coyotes? (ex: ATVs, Snowsleds, Hunting shacks, calls etc.)

_____

_____

Have you ever been convicted of a fish or wildlife violation? _____

MDIFW Comments: _____

_____

_____

_____

MDIFW Staff: _____

Name:

VC#:

Reporting Period:

DWA Name:

Maine Department of Inland Fisheries and Wildlife

Coyote Hunting Reporting Form

Date	Town	Indicate Hours Spent:				Mileage/day (0.44¢/mile)	# of Coyotes Killed		# of dead deer found	Non-Target Species:	
		Trapping	Hounds	Hunting	Monitoring		Male	Female		Released	Dispatched
Ex: 5/8/11	My Town	0	5	0	0	36	2	1	0	1 Fox	0

Appendix 10. Excerpts from IFW's (2012) Animal Damage Control Program.

General Operating Procedures

Human/wildlife conflicts will be assessed by Department staff, ADC agents, or USDA\Wildlife Services to determine if there is a bona fide problem, the nature of the problem and the appropriate solution. Consideration will be given to human health and safety, protection of domestic animals and property, significant habitats and applicable species management systems that may apply. Whenever possible, the complainant will be encouraged to resolve the problem with information and technical assistance developed by the Department and provided to the complainant by Department staff, ADC agents or USDA\Wildlife Services.

Except as otherwise provided in Section §12401 and §12402 (see attachment A), human/wildlife conflicts will be assessed and addressed in the following order of descending priority. A person who violates a condition or restriction placed on an authorization granted under this policy invalidates that authorization and is subject to applicable laws.

1. **Education and Extension** – Landowners will be encouraged to take reasonable precautions to prevent human/wildlife conflicts, and when necessary, appropriate directions or information will be provided which will enable the property owner to both alleviate the problem and to avoid it in the future. If the complainant is not taking, or has not been willing to take, the recommended preventive measures, he will be advised of the possible consequences which may include:

    a. withholding of further assistance by the Department,
    b. denial of permits to kill potential problem animals, and
    c. possible civil or criminal action for actions undertaken without approval.

    Information or technical guidance will be provided and will include: one-on-one technical advice, handouts, pamphlets and information on the Department's website to alleviate nuisance wildlife problems and to promote the positive aspects of wildlife.

2. **Prevention** – Where effective and economically reasonable, measures will be taken to neutralize the attraction or to exclude problem wildlife from areas or attractions to which they cause damage or pose a health or safety issue. Information on appropriate prevention techniques will be provided by Department staff, ADC Agents, and the USDA\Wildlife Services.

3. **Use of Hunting and Trapping Regulations** – Many wildlife species are managed through regulation of harvests to maintain healthy individuals and population levels within a range that provides appropriate public use, while minimizing conflicts. Therefore, the extent of human/wildlife conflicts will be

regularly (at least annually) discussed between the Wildlife Division and Warden Service so that those problems will be considered in relationship to harvest regulations and management system goals.

4. **Non-Lethal Control** – In most cases attractants can be removed and/or preventative measures taken to prevent the conflict from reoccurring. In these cases the animal can be successfully released back on site. When animals cause a problem and must be removed (except as provided in Sections §12401 and §12402), non-lethal measures must be considered first, except as noted with specific species. The feasibility and the biological and social consequences of non-lethal vs. lethal removal will be considered.

   Relocation activities should avoid utilizing the same site for numerous releases of the same species. These situations could lead to locally high population levels that add stress and create conditions for disease transmission and/or added mortality. The Regional Wildlife Biologist should be consulted for direction depending on the species group.

5. **Lethal Control** – Lethal control is justified when the above procedures are not applicable, practical, or are prohibitively costly (except as otherwise provided by Statutes §12401 and §12402).

   If appropriate and whenever possible, lethal removal will be timed to hunting or trapping seasons for that species.

I. Home and Garden Species (H&G)

These animals include moles, voles, mice, chipmunks, English sparrows, European sparrows, pigeons (rock doves) and European starlings. These species are not protected by law and may be handled by the property owner or an agent without permit, conditions, or permission from MDIFW or any federal jurisdiction.

1. **Education and Extension** – Most H&G species problems can often be resolved by the landowner or complainant with technical guidance provided by MDIFW Resource and Assessment Staff, Maine Warden Service Staff, MDIFW Help Desk, MDIFW Website, ADC agents, or USDA\Wildlife Services. Problems generally involve social aversions (people don't like a particular animal around), health hazards and minor garden/crop damage. Many problems can be resolved by dispelling unfounded fears or misconceptions.

   In addition to the Department's website and brochures, a variety of bulletins are available through the U.S. Fish and Wildlife Service and the University of Maine Cooperative Extension Service (County Office).

2. **Prevention** – Many problems can be resolved or avoided by "Wildlife Proofing" buildings, property, animals, or crops with fencing, barriers, corrals, improving sanitation, or use of repellents. These have the advantage of

providing long-term relief by dissuading or preventing the next wildlife visitor from causing problems or damage.

3. **Use of Hunting and Trapping Regulations** – Not applicable

4. **Non-lethal Removal** – Homeowners may address the problem themselves, or they may employ the services of an ADC agent.

5. **Lethal Removal** – Statutes §12401 and §12402 provide the conditions under which a landowner may take or kill wild animals. H&G complaints may be directly referred to USDA\Wildlife Services or ADC agents by regional dispatchers with no direct involvement of regional wildlife biologists or Warden Service. Monthly ADC activity report satisfies any permit requirements. Note: Animals that are trapped to be killed will be killed humanely. The Department recommends this be done by gunshot to the head or the use of CO2 chamber, unless the animal is being tested for rabies, in which case a gunshot to the head is not an option.

II. Mammals and Birds Having Open and Closed Seasons

These animals include woodchucks, porcupines, gray squirrels, red squirrels, skunks, opossums, and raccoons. Additional species are discussed individually.

1. **Education and Extension** – Most problems can be and should be resolved by the landowner or complainant with technical assistance provided by MDIFW Resource and Assessment Staff, Maine Warden Service Staff, MDIFW Help Desk, MDIFW Website, ADC agents, or USDA\Wildlife Services. Problems generally involve social aversions (people don't like a particular animal around), health hazards and minor garden/crop damage. Many problems can be resolved by dispelling unfounded fears,

   In addition to the Department's website and brochures, a variety of bulletins are available through the U.S. Fish and Wildlife Service and the University of Maine Cooperative Extension Service (County Office).

2. **Prevention** – Many problems can be resolved or avoided by "Wildlife Proofing" buildings, property, animals, or crops with fencing, barriers, corrals, improving sanitation, or use of repellents. These have the advantage of providing long-term relief by dissuading or preventing the next wildlife visitor from causing problems or damage.

3. **Use of Hunting and Trapping Regulations** – If a problem occurs within or near an upcoming open season, problems may be resolved by harvesting problem wildlife during an open season by a recreational hunter or trapper. MDIFW staff can be resources to identify or direct such persons. This has the dual advantage of being free of any expense to the complainant as well as utilizing a valuable natural resource.

Some problems may also be addressed through changes in season lengths, methods of take, or bag limits.

4. **Non-lethal Removal** – When animals cause a problem and must be removed (except as provided in Sections §12401 and §12402), non-lethal measures must be considered before lethal except as noted with specific species. The biological and social consequences of non-lethal vs. lethal removal will be considered. Non-lethal removal will have priority when reasonable and practical.

   Relocation activities should avoid utilizing the same site for numerous releases of the same species. These situations could lead to locally high population levels that add stress and create conditions for disease transmission and/or added mortality. Raccoons and skunks should not be relocated more than five miles from the capture site. The Regional Wildlife Biologist or Game Warden will be consulted for prior approval and direction except for **gray squirrels, opossums, raccoons, and skunks**. All species handled will be documented on activity reports.

5. **Lethal Removal** – Sections §12401 and §12402 provide the conditions under which a landowner may take or kill wild animals. The Regional Wildlife Biologist or Game Warden will be consulted for prior approval and direction except for **gray squirrels, opossums, raccoons, and skunks**. Lethal removal is warranted when an animal shows aggression (fight vs. flight behavior), clinical signs of rabies or other disease, or shows obvious signs of poor health. All species handled will be documented on activity reports.

   Note: Animals that are trapped to be killed will be killed humanely. The Department recommends this be done by gunshot to the head or the use of CO2 chamber, unless the animal is being tested for rabies, in which case a gunshot to the head is not an option.

III. Mammals, Birds, Reptiles, and Amphibians with No Open Season and are Not State or Federally Listed Threatened or Endangered

These animals include…

1. **Education and Extension** – Most problems can be and should be resolved by the landowner or complainant with technical assistance provided by MDIFW Resource and Assessment Staff, Maine Warden Service Staff, MDIFW Help Desk, MDIFW Website, ADC agents, or USDA\Wildlife Services. Problems generally involve social aversions (people don't like a particular animal around), health hazards and minor garden/crop damage. Many problems can be resolved by dispelling unfounded fears,

In addition to the Department's website and brochures, a variety of bulletins are available through the U.S. Fish and Wildlife Service and the University of Maine Cooperative Extension Service (County Office).

2. **Prevention** – Many problems can be resolved or avoided by "Wildlife Proofing" buildings, property, animals, or crops with fencing, barriers, corrals, improving sanitation, or use of repellents. These have the advantage of providing long-term relief by dissuading or preventing the next wildlife visitor from causing problems or damage.

3. **Use of Hunting and Trapping Regulations** – Not Applicable

4. **Non-lethal Removal** – When animals cause a problem and must be removed (except as provided in Sections §12401 and §12402), non-lethal measures may be considered.

   The Regional Wildlife Biologist or Game Warden must be consulted for approval and direction. Many species in this category will require a state or federal permit in order to capture, handle, or transport.

5. **Lethal Removal** – Sections §12401 and §12402 provide the conditions under which a landowner may take or kill wild animals. In most cases lethal removal will not be allowed or approved.

IV. Mammals, Birds, Reptiles, and Amphibians with no Open Season and are State or Federally Listed Threatened or Endangered

Visit http://www.fws.gov/endangered/ for a current listing of federally listed threatened and endangered wildlife in Maine using the "Species in Your State" search feature. Visit http://www.maine.gov/ifw/wildlife/species/endangered_species/state_list.htm for a current listing of state listed threatened and endangered wildlife or contact your Regional Wildlife Biologist.

1. **Education and Extension** – Most problems can be and should be resolved by the landowner or complainant with technical assistance provided by MDIFW Resource and Assessment Staff, Maine Warden Service Staff, MDIFW Help Desk, MDIFW Website, ADC agents, or USDA\Wildlife Services. Problems generally involve social aversions (people don't like a particular animal around), health hazards and minor garden/crop damage. Many problems can be resolved by dispelling unfounded fears,

   In addition to the Department's website and brochures, a variety of bulletins are available through the U.S. Fish and Wildlife Service and the University of Maine Cooperative Extension Service (County Office).

2. **Prevention** – Many problems can be resolved or avoided by "Wildlife Proofing" buildings, property, animals, or crops with fencing, barriers, corrals, improving sanitation, or use of repellents. These have the advantage of providing long-term relief by dissuading or preventing the next wildlife visitor from causing problems or damage.

3. **Use of Hunting and Trapping Regulations –** Not Applicable

4. **Non-lethal Removal** – Not allowed without appropriate state or federal permits to capture, possess, handle, or transport these species.

5. **Lethal Removal** – It is not legal to harass, injure, or kill any of these species.

Appendix 11a. Memorandum of Understanding between the Maine Department of Inland Fisheries and Wildlife and the Maine Department of Agriculture, Conservation, and Forestry Division of Parks and Public Lands for Canda Lynx Habitat Mitigation.

Memorandum of Understanding

Between

Maine Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands and

Maine Department of Inland Fisheries and Wildlife

for Canada Lynx Habitat Management

Habitat Management Goal

The Bureau of Parks and Lands (BPL)[1] of the Department of Agriculture, Conservation and Forestry (DACF) will provide at least 6,200 acres of high quality hare habitat (HQHH), which is enough HQHH to support three Canada lynx. This will be done by managing existing large patches of mid-regeneration forest that are dominated by softwoods using silvicultural techniques that maintain or prolong the use of mid-regeneration softwood stands by snowshoe hare. Optimum snowshoe hare habitat is comprised of dense regenerating softwoods having between 6,000 and 14,000 stems per acre. Where present, BPL will retain coarse woody material for potential lynx denning sites. It is understood that not all areas receiving management may result in HQHH during the 15-year period of this agreement, but these areas are expected to provide HQHH into the future. Therefore, the management objectives of this agreement will be (1) no net loss of HQHH during the permit period, and (2) to create the conditions necessary to produce HQHH on at least 6,200 acres by 2029 (i.e., the end date for IFW's ITP) on the Habitat Management Area (HMA).

Habitat Management Area (HMA)

The area that will be managed for Canada lynx and snowshoe hare is located in portions of Seboomook Township (TWP) and Little W TWP in central Somerset County. The area is bounded on the east by the Little W/Northeast Carry town line, on the south and west by Moosehead Lake, and on the north by the Golden Road, and is approximately 22,046 acres in size (Figures 5.3.4 in the Maine Department of Inland Fisheries and Wildlife's (IFW) 2013 Incidental Take Plan). The area is commercial forest land with no development except for some seasonal camps located along the shore of Moosehead Lake.

[1] Divisions and Bureaus within the Maine Department of Agriculture, Conservation and Forestry's were reorganized after MDIFW's incidental take plan application dated July 23, 2013 was submitted to the USFWS. Thus, the Division of Parks and Public Lands (DPPL) referenced in MDIFW's application has been restructured to the Bureau of Parks and Land (BPL). The commitments in MDIFW's application remain the same.

Forest Management Guidelines

Roads

Existing roads within the HMA will be maintained as needed for management access and public safety. No new roads, snowmobile, ATV, or horse-riding trails will be constructed within high quality hare cover or lynx foraging habitats during the term of this agreement without the consent of IFW. Existing roads are lightly used, gravel logging roads; approximately 25 feet wide. These roads provide public access for recreational activities such as hunting, fishing, and trapping. There are approximately 11 miles of interior roads within the HMA which comprises 0.9 miles of road per square mile.

Habitat distribution

Currently, 36% (3,798 acres) of the HMA is comprised of softwood patches in mid-regeneration stage (Figure 5.3.4 in IFW's 2013 Incidental Take Plan).

Habitat connectivity

By policy the BPL designates riparian zones of 75 feet or 330 feet dependent on the size of the water feature. Riparian zones (RZ) are managed using multi-age methods where possible and tree retention is greater inside the RZ than outside. All wildlife features are retained within RZ's. These RZ's will provide travel corridors for lynx and other wildlife through areas of sub-optimal habitat.

Den sites

Lynx den sites generally have complex structure in the form of fallen trees, alive or dead, and leaning trees with basal diameters of 6 inches or more often layered one to four feet off the ground. As with many habitat features, larger diameter trees create better habitat. Den sites typically have north or northeast aspects. Where these stand features occur they will be maintained.

Monitoring and research

BPL will provide logistical support and natural resource information on the HMA to IFW to the extent its budget priorities allow. This includes timber cruising data prior to any timber harvesting within the HMA. BPL is a member of the Maine Cooperative Forest Research Unit (CFRU) which financially supports many wildlife research projects.

Term of this agreement

This agreement will be in effect for 15 years from the date of signing. The agreement may be renewed with the mutual consent of both parties.

Roles and responsibilities of the parties

- By July 31st 2015, BPL will finalize the western boundary of the additional mitigation area and insure that the entire 22,046 acre mitigation area can meet the 6,200 acre HQHH requirement. Updated maps will be provided to the USFWS by July 31st 2015.
- BPL will inventory the 22,046 acre HMA and cross-walk the inventory to HQHH within 3 years of issuance of an ITP to MDIFW.
- BPL does not currently have forest models for their ownership. However, BPL expects this capability will be available in the next few years and will implement a forest model to assess the trajectory of the existing habitat and demonstrate when, where, and how sufficient HQHH habitat will be maintained and or created when it becomes available.
- BPL will provide an updated table 5.3.3 by July 31st 2015, for the 22,046 acre area demonstrating how the mitigation will achieve the net conservation benefit to compensate for the loss of at least three lynx.
- BPL will develop a detailed forest management plan (compartment exam and harvest prescriptions) for at least the HQHH portion of the HMA with the assistance of MDIFW Research and Assessment Section (RAS) staff within 3 years of the issuance of an ITP. This plan will include provisions for avoiding take of northern long-eared bats in the event that it is listed under ESA or MESA. MDIFW and BPL will meet at least every 3 years to review the status of this forest management plan.
- Within 15 years of issuance of an ITP to MDIFW (~2029), BPL will have implemented harvest prescriptions (e.g., overstory removal) to maintain or create forest conditions that will lead to HQHH on the HMA; and
- By the end of the permit period (~2029), BPL will have increased the acreage of HQHH on the HMA to at least 6,200 acres.
- BPL will complete compartment exams (i.e., timber cruises) to update forest maps and management plans every 15 years. This inventory will be used to calculate the acreage of HQHH on the HMA and to ensure the mitigation objectives are achieved. The IFW wildlife biologist assigned to BPL will be the primary contact between BPL and IFW, and the person responsible for communicating developments on the HMA to IFW's RAS.
- For the first 5 years and every 5 years thereafter, IFW will conduct surveys (e.g., winter snow track surveys) to monitor whether lynx are present and estimate the number of lynx on the HMA.
- BPL will annually provide an update to IFW on the forest management activities conducted on the HMA and every 5 years provide an estimate of HQHH on the HMA.
- IFW will provide technical assistance to BPL to facilitate the implementation and completion of this MOU, when requested.
- BPL is responsible for the performance of any studies and/or surveys that may be required to ensure compliance with the National Historic Preservation Act (Sec. 106) for mitigation related activities.
- BPL will initiate consultation with the SHPO promptly following execution of the MOU in order to assess the potential for effects on historic properties from mitigation related activities and will take appropriate actions to avoid or resolve adverse effects to identified historic properties.

Walter Whitcomb, Commissioner
Department of Agriculture, Conservation and Forestry

Chandler E. Woodcock, Commissioner
Department of Inland Fisheries and Wildlife

Appendix 11b. Memorandum of Understanding for lynx habitat mitigation, justification from Maine Assistant Attorney General.

JANET T. MILLS
ATTORNEY GENERAL

TEL: (207) 626-8800
TTY USERS CALL MAINE RELAY 711

STATE OF MAINE
OFFICE OF THE ATTORNEY GENERAL
6 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0006

REGIONAL OFFICES
84 HARLOW ST. 2ND FLOOR
BANGOR, MAINE 04401
TEL: (207) 941-3070
FAX: (207) 941-3075

415 CONGRESS ST., STE. 301
PORTLAND, MAINE 04101
TEL: (207) 822-0260
FAX: (207) 822-0259

14 ACCESS HIGHWAY, STE. 1
CARIBOU, MAINE 04736
TEL: (207) 496-3792
FAX: (207) 496-3291

March 15, 2013

David Rothstein, Esq.
Northeast Regional Office
U.S. Fish and Wildlife Service
300 Westgate Center Drive
South Hadley, MA 01035-9587

Re: Lynx Habitat Mitigation Memorandum of Understanding

Dear Mr. Rothstein:

I am writing at your request to provide information supporting our conclusion that a memorandum of understanding ("MOU") is the most appropriate instrument to embody the habitat mitigation component of the State's Incidental Take Permit ("ITP") application. As explained in more detail below, there are a variety of both legal and pragmatic considerations that make a MOU the only realistic option for achieving the desired mitigation.

1. **Summary of Habitat Mitigation.** The State is proposing to create a Habitat Management Area ("HMA") containing approximately 8,000 acres within the 40,000 acre Seboomook Unit in central Somerset County. Generally, the HMA consists of commercial forestland with large patches of softwood-dominated, mid-regeneration forest. The HMA requires management of the land using silvicultural techniques that maintain or prolong the existence of these softwood stands in order to create high density populations of snowshoe hares. In practice, this will likely mean refraining from thinning these stands as would typically occur in order to maximize commercial stumpage value on the land. The HMA would remain in place for at least 15 years.

2. **The State's Acquisition of the Seboomook Unit.** The funding that the State relied upon to acquire the Seboomook Unit limits the State's ability to convey the acquired interests subsequently. These limitations are relevant to an analysis of the relative advantages and disadvantages of legal mechanisms that could be employed to make effective the State's commitment to the HMA.

   The Seboomook Unit was acquired in 1994 relying on a combination of funding sources that include federal Forest Legacy Program grant money,[1] and state grant

[1] 16 U.S.C. § 2103(c), Federal Agricultural Improvement and Reform Act of 1996, Public Law 1064-127, Title III, Subtitle G, Section 374.

money under the Land for Maine's Future Program.[2] In accordance with Forest Legacy Program requirements, the deed for the Seboomook Unit includes a stipulation that the Secretary of the U.S. Department of Agriculture ("the Secretary") "may exercise discretion to consent" to any subsequent sale of those property interests by the State.[3] The State's reliance on Land for Maine's Future funding means that any subsequent sale of the acquired interests would require approval by a 2/3 vote of the Legislature.[4]

3. **The Legal Designation of the Seboomook Unit Under Maine Law.** The Seboomook Unit, including the portion that will serve as the HMA, is Public Reserve Land under Maine law.[5] The statutory provisions designating the Unit as Public Reserve Land implement Article IX, § 23 of the Maine Constitution.[6] For the purposes of this letter, the significance of the Seboomook Unit's designation as Public Reserve Land is twofold. First, lands so designated may not be "reduced or substantially altered, except by a 2/3 vote of the Legislature."[7] Second, Maine law requires that its Public Reserve Lands be managed in accordance with comprehensive management plans,[8] which plans must be prepared and revised consistent with guidelines set forth in statute.[9] Under the Maine Department of Agriculture, Conservation and Forestry's ("DACF") Integrated Resource Policy, these management plans are reviewed and updated in comprehensive fashion every 15 years, and are subject to interim review and updating every five years.[10]

4. **The Most Appropriate Legal Mechanism to Make the State's Commitment to the HMA Effective.** We have considered a variety legal and legislative means to embody the terms of the HMA and provide assurance that the State will fulfill its habitat mitigation commitment. One possibility would be for the Governor to introduce a bill that, if enacted, would codify the terms of the HMA, or otherwise set forth the State's commitment to it in statute. We have declined to pursue this approach for several reasons. First, although the enactment of a statute is one form in which a state may express its commitment to a chosen policy, statutes can be changed at the will of the Legislature, and there is no constitutional means by which a sitting legislature may bind its successors to maintain the law in any particular form. It should also be self-evident that the legislative process is inherently unpredictable. The mere act of introducing proposed legislation may unintentionally create

---

[2] 5 M.R.S. §§ 6200 *et seq.*

[3] *See* Exhibit A, attached (Seboomook Unit deed).

[4] 5 M.R.S. § 6209(6).

[5] 12 M.R.S. §§ 598-A(6), 1801(8)(D).

[6] Maine Conts. Art. IX, § 23 reads in its entirety as follows: "**State park land.** State park land, public lots or other real estate held by the State for conservation or recreation purposes and designated by legislation implementing this section may not be reduced or its uses substantially altered except on the vote of 2/3 of all the members elected to each House. The proceeds from the sale of such land must be used to purchase additional real estate in the same county for the same purposes."

[7] 12 M.R.S. § 598-A.

[8] 12 MR.S. § 1847(2).

[9] 12 M.R.S. Ch. 220, sub-Ch. 4 (§§ 1845 *et seq.*).

[10] *See* Exhibit B, attached (relevant excerpts from Integrated Resource Policy).

controversy where none now exists. All of this could delay the State from moving ahead with its ITP application, or otherwise produce an outcome that complicates the matter. Since even successful enactment of a statute would not produce a result that is necessarily more enduring than a MOU, we have concluded that the disadvantages of this approach clearly outweigh the advantages.

We also considered the possibility of incorporating the terms of the HMA into an easement or restrictive covenant. In a different context, either option might be an effective means of demonstrating a party's commitment to habitat conservation. Here, however, the State is operating under constitutional, statutory and deed provisions that make these real estate transactions unworkable. An easement is an interest in land that would be conveyed to some third party. Even assuming a willing third party could be readily found to accept the responsibilities associated with holding the easement, such a conveyance would effect a "substantial reduction or alteration" in the State's interest in this Public Reserve Land, thus triggering the requirement of approval by a 2/3 vote of the Legislature.[11] The State's reliance on Land for Maine's Future funding to acquire this land may also trigger the same super-majority, legislative approval requirement.[12] Additionally, it is not clear whether the Secretary would regard the State's conveyance of an easement on this land to be a transaction to which he may "exercise his discretion to consent" under the terms of the deed.[13] If so, this would at a minimum delay the process, and may frustrate it entirely.

All of the difficulties described above with the conveyance of an easement apply with equal force to the imposition of a restrictive covenant. Under principles of Maine property law, an owner of land may restrict the property's use by imposing covenants that apply either to a development area in common ownership, or to one or more lots for the benefit of another lot of the same owner. Cowan & Scannell, *Maine Real Estate Law and Practice* § 9:1. In either scenario, the covenant benefits and burdens appurtenant estates. Here, there is no second appurtenant estate that would benefit from the terms of a covenant embodying the terms of the HMA. If the benefitted and burdened estates are held by the same owner, those estates merge and thereby render the restrictions a nullity.[14] Even if it were possible to overcome the limitations on the use of restrictive covenants in Maine property law, imposing such deed restrictions here would cause a "substantial reduction or alteration" in the State's interest that would require super-majority legislative approval.[15] For all of these reasons we have rejected an easement or restrictive covenant as a potential solution.

That leaves the possibility of a MOU. The ability of the Executive Branch to enter into a MOU has obvious advantages because it avoids the constitutional, statutory and

[11] Maine Conts. Art. IX, § 23; 12 M.R.S. § 598-A.
[12] *See* 5 M.R.S. § 6209(6) (requiring 2/3 vote of Legislature for "sale" of interests acquired with Land for Maine's Future funding).
[13] *See* n. 3 and accompanying text, above.
[14] 20 Am. Jur. 2d Covenants § 227.
[15] Maine Conts. Art. IX, § 23; 12 M.R.S. § 598-A.

deed-based constraints discussed above. No legislative approval, by super-majority or otherwise, is required. For the same reasons, executing a MOU would not create an occasion for the Secretary to review or consent to anything. And importantly, because the habitat mitigation provisions of the MOU relate to the manner in which the land is managed, DACF will incorporate those provisions into the Comprehensive Management Plan for the Seboomook Unit. By law, DACF is required to manage Public Reserve Land in accordance with such plans, and in this way the terms of the MOU will effectively take on the force of law.[16] Therefore, the MOU could not simply be abandoned at the whim of the agency official (or her successor) who signed it. Taking all of these considerations into account, we have concluded that an MOU is the only realistic option available for achieving the desired mitigation.

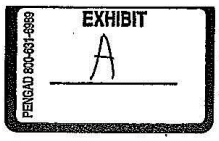
I hope you find this letter helpful and informative, and please feel free to contact me with any additional questions.

Sincerely,

Gerald D. Reid
Assistant Attorney General
Chief, Natural Resource Division

cc: Chandler Woodcock, Commissioner, Maine Department of Inland Fisheries and Wildlife
James Connolly, Maine Department of Inland Fisheries and Wildlife
Tom Morrison, Maine Department of Agriculture, Conservation and Forestry
Katherine Eickenberg, Maine Department of Agriculture, Conservation and Forestry

[16] *See* n. 8 & 9 and accompanying text, above. DACF will revise, and maintain, the Comprehensive Management Plan in a manner that reflects the 15-year term of the HMA. In other words, each and every revision of the Comprehensive Management Plan that occurs during the15 years that the HMA remains in effect will ensure that the HMA's provisions remain incorporated in the Plan for at least its full 15-year term.



Doc #: 20421
Bk: 3247 Pg: 111

TRANSFER TAX PAID

QUITCLAIM DEED WITH COVENANT

Merriweather, LLC, a Delaware limited liability company with a mailing address c/o Wagner Forest Management, Ltd., P.O. Box 160, Lyme, NH 03768, for consideration paid, grants to the **State of Maine**, acting by and through the Department of Conservation, Bureau of Parks and Lands, 22 State House Station, Augusta, Maine 04333 (acting under its authority pursuant to Title 12, Maine Revised Statutes Annotated, Section 1850(1)), with quitclaim covenant, certain lots or parcels of land in Somerset County located in **Township 2 Range 4 NBKP (Pittston Academy Grant), Township 4 Range 18 WELS (Comstock), Township 4 Range 17 WELS, Township 1 Range 4 NBKP (Plymouth or Boyd Township), Seboomook Township, Township 1 Range 3 NBKP (West Middlesex Canal Grant), and Little W Township**, being the Seboomook Block, so called; in **Township 4 Range 17 WELS and Township 4 Range 18 WELS (Comstock)**, being the Headwaters Block, so called; in **Township 7 Range 17 WELS**, being the Baker Lake Block, so called; and in **Township 2 Range 4 NBKP (Pittston Academy Grant) and Township 2 Range 3 NBKP (Soldiertown)**, being the Canada Falls Block, so called; all such lots and parcels being described in Exhibit A attached hereto and made a part hereof, subject to those matters, exceptions and reservations set forth herein.

The Premises herein conveyed are being acquired by Grantee with funds from the Land for Maine's Future Fund in accordance with the Land for Maine's Future Act, as Title 5, Maine Revised Statues Annotated, Chapter 353, as amended, for administration by the Maine Department of Conservation, Bureau of Parks and Lands, as a natural area important for recreation, hunting and fishing, conservation, wildlife habitat and scenic beauty.

The Premises are acquired for the conservation of natural resources, including, but not limited to, the preservation and protection of loon habitat and nesting areas, North Atlantic salmon habitat, public recreation and sustainable forestry, as appropriate, and in accordance with Exhibit D attached herewith and incorporated herein by reference.

The Premises herein are acquired, in part, with federal funds from the Forest Legacy Program in accordance with the provisions of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990 (16 United States Code ("U.S.C.") Section 2103c), as amended, which was enacted to protect environmentally important private forest areas threatened by conversion to non-forest uses and for promoting forest land protection and other conservation opportunities. In the event that these lands acquired with Federal funds under the Forest Legacy Program (16 USC Section 2103c) are ever sold, exchanged or otherwise disposed, the United States shall be reimbursed the fair market value at the time of disposal in proportion to the original Federal investment. Provided, however, the Secretary of Agriculture may exercise discretion to consent to such sale, exchange, or disposition upon the State's tender of equal valued consideration acceptable to the Secretary.

MAINE DEPARTMENT OF CONSERVATION
Bureau of Parks and Lands

INTEGRATED RESOURCE POLICY

For Public Reserved and Nonreserved Lands, State Parks, and State Historic Sites

December 18, 2000

IV. TERM AND AMENDMENT PROCEDURES

The *Integrated Resource Policy* will be reviewed and updated at 10-year intervals, subject to public review and comment.

It is important to note that this policy attempts to project, in a single document, procedures for managing lands administered by the Bureau of Parks and Lands over time and changing circumstances. It may be necessary, therefore, to modify certain provisions prior to periods of scheduled review. To facilitate this process, the Bureau will provide notice in advance of any significant changes by giving interested parties an opportunity to comment.

These policies will be amended as necessary to comply with existing state laws.

AMENDMENT ADOPTION

In accordance with the Term and Amendment Procedures outlined on page 5 of the *Integrated Resource Policy*, the following amendment is hereby adopted as follows:

Resource Management Plans (page 7)
On the basis of the Resource Allocation System… it is the Bureau's objective to develop a ~~10~~ 15-year management plan for each Public Reserved and Nonreserved Land Unit, State Park, and Historic Site. ***At five-year intervals, the Bureau will report to the Advisory Committee on accomplishments and changing conditions that may warrant amendments to the plan.*** **Existing plans will be revised following the initial ~~10~~-15-year period and amended according to the policies in place at that time.**

RECOMMENDED: _____ DATE: March 7, 2007
Willard R. Harris
Director
Bureau of Parks and Lands

APPROVED: _____ DATE: 3/7/07
Patrick K. McGowan
Commissioner
Department of Conservation

Appendix 11c. Dispute Resolution Process in the event that disputes concerning implementation of the ITP or the permit arise.

1.0 Dispute Resolution. The parties recognize that disputes concerning implementation of the ITP or the permit may arise from time to time. The parties agree to work together in good faith to resolve such disputes, using the following dispute resolution processes.

1.1 Dispute Resolution Process for Implementation. Unless the parties agree in writing upon another dispute resolution process, or unless a party has initiated administrative proceedings or suit in Federal court, the parties may use the following informal process to attempt to resolve disputes:

Step 1

(a) The party wishing to institute dispute resolution will notify the other party in writing of the dispute and its desire to institute the processes called for in this section. Notification during Step 1 shall be addressed to and from the Supervisor, Maine Field Office, USFWS and Wildlife Division Director, representing MDIFW.

(b) The party claiming a dispute shall identify in its notice the specific objection that it claims, the basis for the objection, and a proposed remedy to address the objection.

(c) The party receiving the notice of dispute shall respond in writing to the notice within thirty (30) days, or at such other time as may be mutually agreed in writing by both parties. In doing so, the responding party shall either propose a remedy to resolve the objection or, alternatively, explain why the objection is unfounded. During this time the responding party may seek clarification of the information provided in the initial notice from the objecting party. The objecting party will use its best efforts to provide any information then available to it that may be responsive within ten (10) days from receipt of such a request for clarification.

Step 2

(a) If the response to an objection resolves the issue to the satisfaction of the objecting party, then the objecting party shall so notify the responding party in writing, and the responding party shall implement the agreed remedy, if any.

(b) If the response to an objection does not resolve the issue to the satisfaction of the objecting party, then the objecting party shall so notify the other party in writing, describing the reasons why the response does not resolve the objection. Thereafter, both parties shall meet and attempt to resolve the dispute. This meeting between the Supervisor, Maine Field Office, USFWS, Wildlife Division Director, representing MDIFW, shall occur within thirty (30) days after the responding party receives the objecting party's response, or at such other time as may be mutually agreed in writing by both parties.

Step 3

(a) If the parties are unable to resolve a dispute through Steps 1 and 2 above, then an objecting party may elevate the dispute to be handled through a meeting of the chief executives of both parties. For purposes of this provision, "chief executive" shall mean the Director, Bureau of Resource Management, Maine Department of Inland Fisheries & Wildlife, the Director, Bureau of Public Land, Maine Department of Agriculture, Conservation and Forestry, and the Assistant Regional Director of Ecological Services, Northeast Region, USFWS when disputes are related to the mitigation section of the ITP or permit. When disputes involve other sections of the ITP or permit, "chief executive" shall mean the Director, Bureau of Resource Management, Maine Department of Inland Fisheries & Wildlife, and the Assistant Regional Director of Ecological Services, Northeast Region, USFWS. Each party shall be represented in person by its chief executive at the meeting, and the meeting shall occur within forty five (45) days of the notice of an objecting party following completion of Step 2 above.

(b) If the dispute cannot be resolved through these elevated negotiations, the parties may seek non-binding mediation or other alternative dispute resolution processes.

If at any time either party determines that circumstances so warrant, it may seek any available remedy without waiting to complete the informal dispute resolution process.

1.2 Dispute Resolution Process for Permit Violations. If USFWS has reason to believe that MDIFW may have violated the Permit, or the Plan with respect to any Covered Species, it will notify MDIFW in writing of the specific provisions which may have been violated, the reasons USFWS believes MDIFW may have violated the provision, and the remedy the USFWS proposes to resolve the alleged violation. MDIFW will then have sixty (60) days, or such longer time as may be mutually acceptable to both parties, to respond in writing to the allegation. During this time MDIFW may seek clarification of the information provided in the notice from the USFWS, and the USFWS will use its best efforts to respond to the request for clarification. If the dispute cannot be resolved within thirty (30) days after MDIFW's response is due, or such longer time as may be mutually agreed in writing by both parties, the parties may consider non-binding mediation or other alternative dispute resolution processes to resolve the dispute.

1.3 The parties reserve their right, at any time without completing informal dispute resolution, to use whatever enforcement powers and remedies are available by law or regulation, including but not limited to, in the case of the USFWS, suspension or revocation of the ITP and civil or criminal penalties, or in the case of MDIFW, relinquishment of the ITP, or review of USFWS action by a court of competent jurisdiction.

Appendix 12. Comments from IFW Commissioner Lee Perry to USFWS on the proposal to list lynx as a threatened species.

Craig McLaughlin

ANGUS S. KING, JR.
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES AND WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0041

LEE E. PERRY
COMMISSIONER

September 24, 1998

Mr. Kemper McMaster, Field Supervisor
Montana Field Office
US Fish & Wildlife Service
100 N. Park Avenue, Suite 320
Helena, MT 59601

Dear Mr. McMaster:

This is in reference to the recent proposal by the U. S. Fish and Wildlife Service to list lynx as threatened throughout its range in the lower 48 states. Maine is opposed to the listing of lynx as proposed by the U.S. Fish and Wildlife Service.

Maine is proud of its outdoor heritage and its proactive fisheries and wildlife management programs. The state has had an Endangered Species Act since 1975. We recognize the benefits provided by the federal Endangered Species Act. But, more importantly, we recognize the need to manage fish and wildlife populations so that listing is not required. Since 1968, Maine has taken a proactive, comprehensive, systematic approach to managing fish and wildlife resources. Population assessments have identified information gaps and the need for more conservative and intensive management. When necessary, we have established more protective regulations, initiated research studies, and established programs to restore diminished populations.

Lynx has received careful consideration and management attention in Maine. Through our analyses and field work, we cannot conclude that the lynx is threatened. We have always had low numbers of lynx present, and continue to have low numbers. However, as a state, Maine has taken several measures over the last several years to ensure that lynx will not be impacted by other activities. Lynx are important to the people of Maine and we have had no open season on lynx since 1968. We have worked closely with FWS Region 5 staff to ensure that all reasonable and practical management is being applied to lynx. We will continue to expand our ongoing efforts to assess the status and habitat requirements of lynx in the northeast. The result is that Maine is already doing all that can be done to ensure that lynx will continue to exist in the state.

PRINTED ON RECYCLED PAPER

FISH AND WILDLIFE ON THE WEB: www.state.me.us/ifw/homepage.htm
PHONE: (207) 287-5202
E-MAIL ADDRESS: ifw@state.me.us

We have concerns that the justification given for listing according to the Service's five criteria, have serious biological deficiencies and do not reflect the situation in the northeastern United States. This could lead to erroneous pressure to manage for factors that are not ecologically pertinent for lynx in Maine. We also have concerns that the Service did not propose a 4(d) provision for lynx, along with the listing proposal, to allow states to cooperatively recognize and implement management that minimizes incidental take.

As a result of the absence of data supporting the Fish and Wildlife Service's proposal to list lynx as threatened, and the concerns we have with the justification for listing as detailed in the enclosed review of the Service's proposal, we cannot support the proposed listing. We urge you to carefully evaluate the factual basis for the conclusions presented in your proposal. We think that you will agree that your proposal to list can not be substantiated.

For the record, there was a comment by Jym St. Pierre of RESTORE: The North Woods, at the public hearing held in Old Town, Maine on September 15, 1998, where he quoted a Maine Department of Inland Fisheries and Wildlife staff memo stating that "it would be counterproductive to oppose listing (of lynx) at this time". This memo was written in response to the court decision last March that stated that the Service would propose listing of lynx by June 30, 1998. At the time that the memo was written, the justification for listing by the Service had not yet been made publicly available, and to oppose listing before seeing the Service's justification would have been counterproductive.

Thank you for the opportunity to present our views.

Sincerely,

Lee E. Perry
Commissioner

LEP:cs

Enclosure

Maine Department of Inland Fisheries and Wildlife

Review of the proposal to list lynx as Threatened by the U.S. Fish & Wildlife Service
September 24, 1998

After reviewing the June, 1998 proposal by the US Fish and Wildlife Service to list Canada lynx in the contiguous United States as threatened under the federal Endangered Species Act (ESA), we have several concerns about the interpretation of biological data used to justify the listing proposal. Most of our comments are directed at the five factors identified as affecting the status of lynx within the contiguous United States. Most attention is focused on the status of lynx in Maine, but certain discussions are expanded to include the northeastern states and even the entire listing range. Furthermore, we encourage the US Fish and Wildlife Service to reconsider the primary question under the Endangered Species Act of whether listing is warranted at all considering the historic and present status of lynx and associated habitat conditions and the lack of information supporting listing according to the 5 listing criteria of the Endangered Species Act..

Concerns and comments include:

1. In the proposal, the historic boundary of lynx range in the northeastern United States is poorly documented and arbitrary, and leads to a pessimistic assessment of the reduction in lynx range in recent history.

2. The proposal determines that lynx in the contiguous US constitute a Distinct Population Segment as defined within the ESA, without credible supporting biological data.

3. The legal mandate for the USFWS to consider lynx throughout the entire contiguous US for listing appears unrealistic, when in fact lynx occur in 3 distinct regions that are geographically isolated, and probably have different factors affecting lynx.

4. The proposal determines that Maine has a resident (defined as self-supporting, viable) population of lynx, without credible supporting data. There is no evidence to indicate that lynx in Maine are either isolated from lynx range in Quebec or not dependent on lynx immigration from Canada.

5. The proposal assumes that forestry practices and associated road networks are detrimental to lynx and their habitat. This has not been demonstrated in Maine. Although no studies of lynx habitat relationships exist, snowshoe hare are associated with early successional forests, such as regenerating stands following clear cutting. Logging operations in Maine's expansive northern forests produce a mosaic of stands of mixed age and species composition, they do not isolate forested stands. Private, unpaved logging roads in the State have low traffic volumes and should not be barriers to lynx.

6. There is no evidence that the low incidence of incidental shooting or trapping of lynx has impacted lynx numbers in Maine or that the likelihood of incidental shooting or trapping has or will increase in Maine.

7. Existing regulatory mechanisms are adequate in Maine. Lynx remain fully protected from take, and several laws govern the use of private forest lands in northern Maine and assure the long-term availability of lynx habitat.

8. There is no evidence to support the assumption that bobcat or coyote competition with lynx has increased in Maine or that competition would negatively affect lynx in Maine. Lynx have always been rare in Maine, even before coyotes were present. Also, there is no evidence that bobcat or coyote distribution in Maine is linked to the distribution of roads or trails.

GENERAL ASSESSMENT OF THE PROPOSAL

The listing proposal assumes that nearly all historic occurrences of lynx within the forested northeastern United States indicated the presence of self-sustaining populations. This arguable interpretation is the basis of the proposal's assessment of a drastic reduction of lynx range in the region, followed by the conclusion that lynx are facing imminent threats in the northeast and require protection under the ESA. The proposal's line of reasoning ignores the well-documented behavior of lynx to disperse long distances through unsuitable habitat, and is an overly conservative interpretation of largely anecdotal information on the status of lynx in Maine and neighboring states.

The proposal established the southern limit of historic lynx range in the northeastern states to include Maine, New Hampshire, Vermont, Massachusetts, New York, and Pennsylvania on the basis of a few records of occurrence and the opinions of a sample of biologists. It used the present geographic range of snowshoe hare, the primary prey of lynx as supporting data. This determination is based on the untested hypothesis that lynx historically ranged *in self-supporting populations* wherever snowshoe hare were found in the contiguous US. There is no data to support this assumption.

Without supporting data, the proposal determined that Maine has a resident, *self-sustaining population* of lynx within its borders, that has persisted without augmentation, or need of augmentation, by transient lynx from populations in southeastern Quebec. In addition, the Service has determined that the *self-sustaining population* of lynx in Maine is now threatened by habitat alterations and man-induced factors, including past over-exploitation, expansion of the range of competitors (bobcat and coyote), and elevated levels of human access into lynx habitat. It therefore concludes that lynx in Maine require additional protection under the ESA. This conclusion is not substantiated by any data on lynx population viability and no documentation of threats to lynx or their habitat within the state.

Throughout recent history, Maine has recorded the greatest incidence of lynx in the northeast. However, we have not documented reproduction, and do not know if lynx encountered in the State are resident or transient animals. We can only speculate about the prospects for a viable lynx population in Maine, which appears to mark the extreme southern limit of lynx occurrence in eastern North America. Changes in weather or prey abundance might cause a shift in the range boundary, the number of lynx in Maine is unknown, and if lynx are present, the population may or may not be able to maintain genetic diversity without regular influx of lynx from Canada.

The proposal determined that the Canada lynx occurring in the contiguous 48 states constitute a single Distinct Population Segment, as defined under the Endangered Species Act, based on the international boundary with Canada. This determination hinges on the previous determination that resident, self supporting populations of lynx are present in the contiguous states, and that resident

populations are defined as viable, self-supporting populations not dependent on immigration from Canada (see footnote in Federal Register page 36995). This is not likely over most of the proposed lynx range in the lower 48, and there is no evidence from Maine that suggests that lynx can survive independent of Canadian poulations.

REVIEW OF PROPOSED FACTORS AFFECTING LYNX

1. **Present or threatened destruction, modification, or curtailment of lynx habitat or range**.

Forestry is the major land use affecting the habitat used by lynx in Maine, as modern fire suppression has all but eliminated fires that burn large acreages. Most of northern and western Maine is covered with expanses of commercial forests, comprised of a mixture of coniferous and deciduous stands of various ages and structures. Both clear cutting and partial cutting practices are common, and the landscape is dissected by a network of unpaved private roads with low traffic volumes. Maine's northern forest lands have not been fragmented into islands of habitat through permanent removal of tree cover and construction of man-made barriers such as land clearing for agriculture, recreational development, high volume and high speed roadways, or urbanization. This difference has not been clarified in the listing proposal, which perceives the habitat used by lynx in Maine to be vulnerable to degradation. No studies of the relationship between timber harvesting and lynx habitat quality have been conducted in the region. However, snowshoe hare, the major prey of lynx, are closely associated with early successional forests, such as regenerating clear cut areas. Therefore, continued even-aged management on a rotational basis is expected to maintain usable habitat for hare and lynx.

Logging operations have produced a mosaic of stands, fracturing large areas of mature forest into smaller stands of various age classes and species composition. The resulting mosaic of stands has not been determined to be detrimental to lynx. Snowshoe hare, and thus lynx, can be expected to inhabit regenerating clear cuts within 5-10 years of tree removal. If it occurs, avoidance of cut areas by lynx is likely to be short-lived. Maine's Forest Protection Act limits the size of clear cut areas, assuring most of the landscape remains in forest cover. Partial cutting of stands also creates patches of younger-aged forests, although the effect of partial cutting on snowshoe hare is not well documented. At present, snowshoe hare are abundant throughout northern, eastern , and western Maine.

Maine's forest lands remain connected to the lynx population inhabiting the Gaspe Peninsula, with corridor to north and east through New Brunswick.

The increased road densities associated with human-caused forest *stand* fragmentation in Maine have not produced a measurable negative impact on lynx, as implied by the listing proposal. In much of northern Maine where lynx occur, few paved roads exist, traffic volume on existing roads is very low, and no increases in incidental take or other losses associated with increased access by man are known.

Neither forest practices, nor the systems of extremely low-traffic forest roads, fragment lynx habitat in Maine. It does not appear that habitat is limiting for lynx in Maine.

2. **Overutilization for commercial, recreational, scientific, or education purposes**

Despite increased vehicular access to northern Maine, there is no evidence of excessive accidental take in the State. Since the lynx season was closed 30 years ago (1967), there have only been 3 lynx reported killed by mistake or accident. Bobcat trapping is confined to a two-month period in the fall. Bobcats are hunted by pursuit with hounds during December and January. Hunters usually locate bobcat by driving plowed roads and identifying tracks crossing the roadway. The obvious difference between bobcat and lynx tracks allows hunters to avoid pursuing lynx. Most bobcats are harvested in eastern and central Maine, outside of the area of lynx occurrence.

There is no documentation of over-exploitation of lynx in Maine. The species has always been uncommon, and despite full protection for the last 30 years, records of lynx occurrence have not increased in number, despite a 15-year period of protection prior to high lynx pelt prices in the 1980s. With no open hunting or trapping seasons on lynx in Maine (and the rest of the Northeast) and virtually no records of incidental take, legal take of other wildlife species has not impacted the number of lynx in the State. Illegal take does not appear to be an issue, as no lynx are known to have been taken illegally (G. Sargeant, Warden Service, pers. comm.).

3. **Disease or predation**

There is no evidence of either disease or predation impacting lynx in Maine

4. **Inadequacy of existing regulatory mechanisms**

Lynx have been fully protected from hunting or trapping under State law since 1967. Only 3 lynx have been taken incidentally since then. Management and conservation of lynx habitat is accomplished through Maine's comprehensive environmental laws that address forestry practices, site development, and soil and water quality protection. In addition, cooperative wildlife management agreements with large, corporate landowners guide forest management outcomes on thousands of acres of forestlands. Existing provisions to protect wildlife appear to provide forest cover that is acceptable for lynx.

5. **Other natural or manmade factors affecting lynx's continued existence**.

As the St. Lawrence Seaway and surrounding region in Canada became settled and urbanized over the past century, northern Maine forest lands used by lynx probably became partially isolated from lynx habitat in Quebec as forested corridors to lynx populations north of the St. Lawrence river in Canada were removed. The forested corridor stretching northeast from northern Maine to the Gaspe region of Quebec is still intact. Habitat fragmentation at the landscape scale is not an issue in Maine, as the forest is only dissected by private logging roads, and clear cut stands regenerate to sapling stands capable of supporting lynx and hare within a decade. Road densities and human access have increased, but there is no evidence of increased mortality of lynx. In any event, these changes over the past century are not known to have affected our Maine population of lynx.

Increasing competition to lynx in Maine by bobcats and coyotes is assumed but undocumented, and is likely complicated by annual differences in snowfall. Lynx have always been rare in Maine, even

when bobcats were far more numerous than now and before coyotes were present. The influence of roads and snowmobile trails on allowing competitors to access lynx habitat has not been documented in Maine, and it is highly unlikely that the distribution of coyotes and bobcats in the state are linked to road and snowmobile trail systems. Recreational development and agricultural fragmentation have not occurred in a large portion of northern and western Maine. Human activity in northern Maine has increased since the turn of century, but it is still low with few permanent residences or towns in the region.

The densely-populated and agricultural region surrounding the St. Lawrence seaway in Quebec may have reduced potential for lynx to move into Maine from occupied habitat to the northwest. Maine's forest lands, however, remain connected to occupied lynx range in the Gaspe region of Quebec through a corridor extending northeast into New Brunswick.

Conclusion

The proposal does not present sufficient evidence to warrant listing lynx as a threatened species in the northeast, presents unsupported and unlikely biological interpretations of existing data, and, generally, does not present specific reasons why the Fish and Wildlife Service believes that listing is necessary.

Appendix 13. Implementation plan for the use of non-lethal cable restraints in Maine.

Currently trappers are not permitted to set lethal snares or non-lethal cable restraints on land in Maine. IFW will use the Commissioner's authority to allow select PM or ADC trappers (i.e., those that have met certification requirements described below) to initially test the use of non-lethal cable restraints; the sam device tested in Wisconsin. IFW anticipates that the injury rate will be low using these devices based on initial testing conducted in Wisconsin (Olson and Tischaefer 2004).

Brief device description

Cable restraints are a live capture trap that is passively triggered by the animal's neck passing through a loop suspended in the trail. When the animal applies pressure to the loop, the loop closes; the animal then backs away and activates a relaxing lock designed to hold the animal without causing injury to the animal. A cable restraint is composed of a cable or loop, relaxing lock, swivels, stake, and a breakaway device. The breakaway device allows larger non-target species to pull free, the relaxing lock prevents the loop from closing too tightly, and the swivel prevents twisting. IFW will require a cable diameter of 1/8 inch or 3/32 inch, a relaxing mechanical lock of a reverse-bend washer with a minimum diameter of 1 ¼ inches, and at least one swivel on all cable restraints. Cable restraints will have two stops: one to restrict the loop size to avoid capturing large ungulates (deer and moose) or livestock and one stop to restrict the loop when fully closed to prevent capturing the animal by the foot. Because coyotes in Pennsylvania were larger than in Wisconsin and broke free of cable restraints with a breakaway device set at 285 pounds, Pennsylvania requires a breakaway device with a resistance at 350 pounds.

Non-lethal Cable Restraint Regulations

IFW will require a cable diameter of 1/8 inch or 3/32 inch, a relaxing mechanical lock of a reverse-bend washer with a minimum diameter of 1 ¼ inches, and at least one swivel on all cable restraints. Since coyotes in Maine are more similar in size to Pennsylvania coyotes, IFW will require a breakaway device with a resistance set at 350 pounds. Cable restraints will be required to have two stops: one to restrict the loop size to no larger than a 12 inch loop when fully open to avoid capturing large ungulates (deer and moose) or livestock and one stop to restrict the loop to 2 ½ inches when fully closed to prevent capturing the animal by the foot. IFW will require that cable restraints be checked at least once every 24 hours. Cable restraints will have to be staked solidly and set where the extended cable and restrained animal cannot become entangled in vegetation. Thus, all woody vegetation ½ inch or larger in diameter within reach of the restrained animal must be removed before setting a cable restraint.

Training

IFW education staff will develop a cable restraint certification course similar to courses in other states where these devices are allowed. During the first phase (described below), IFW will hire a qualified instructor to provide instruction on the use of cable

restraints. This instructor will be required to have experience using and setting cable restraints for coyotes and have previous experience teaching a cable restraint certification course. Thereafter, an instructor will need to meet the requirements for a trapper education instructor in Maine (see Section 5.2) and have also completed a certification course on the use of cable restraints.

Implementation

Because this is a new trapping technique in Maine, IFW will use a phased approach for implementation that allows testing and evaluation at a limited and controlled scale before making the technique available for the broader trapping community.

During the first phase, IFW will test this new trapping technique by allowing PM or ADC trappers targeting coyotes to use cable restraints (per the regulatory specifications and training explained above) in WMDs that occur outside the lynx zones. PM or ADC trappers will be required to report all capture efforts and both target and non-target capture events that occur during the use of cable restraints. If after one year, PM or ADC trappers have demonstrated proficiency in setting cable restraints, compliance with the regulatory specifications, and the ability to safely release non-target animals they are not permitted to keep, IFW could permit the use of non-lethal cable restraints by all licensed fur trappers that have completed the appropriate training (i.e., certified trappers) in areas outside lynx WMDs. Although it is not anticipated to occur, any lynx caught in a cable restraint outside lynx WMDs will be covered by the Service's incidental take permit.

During the second phase, IFW will allow PM or ADC trappers targeting coyotes to expand the use cable restraints in lynx WMDS. During this phase, IFW will evaluate injury and assign injury scores of any incidentally captured lynx (see minimization measure IM 3 in section 5.2 of this Plan). After 2 years of evaluation in lynx WMDS, if PMC and ADC trappers demonstrate similar proficiency in setting cable restraints, compliance with the regulatory specifications, ability to safely releasing non-target animals, and similar or lower injury scores of lynx caught in foothold traps, IFW will implement the final phase. However, if these conditions are not met, IFW will not allow the use of non-lethal cable restraints in lynx WMDs.

During the final phase, if conditions are met in lynx WMDs, IFW may elect to make regulatory changes that allow the use of cable restraints in lynx WMDs by all licensed fur trappers that have completed the appropriate training (i.e., certified trappers). This plan will take into account harvest goals for the target species and may restrict the timing, season length, location, and trapper effort. If at any time, certified trappers demonstrate lower proficiency or higher incidental lynx take or injury than PM or ADC trappers, IFW will either restrict the use of cable restraints by certified trappers or require additional training. In addition, if additional research on cable restraint devices conducted by IFW or AFWA identifies changes to the cable restraint configuration that improves animal welfare and/or efficacy of the device, IFW will modify the regulatory specifications explained above to reflect such recommendations.

Timeline: At this time, IFW has no time-line for implementing this program. Although, it could be implemented as early as the 2015 trapping season, it is very unlikely that even the first phase of this program could be implemented that quickly. When available, IFW will provide the USFWS with a time-line for implementation.