



**U.S. Fish & Wildlife Service**

# **Eastern Massachusetts National Wildlife Refuge Complex**

## *Hunting Plan*



*Credit: Ryan Hagerty*

## *August 2020*

*Appendix A – Hunting Compatibility Determination*

*Appendix B – Environmental Assessment*

*Appendix C – Intra-Service Section 7 Evaluation*

*Appendix D – Summary of Public Comments*

*Appendix E – Finding of No Significant Impact*

Estimated Lead Agency Total Costs  
Associated with Developing and  
Producing the EA (per ERM 10-12):  
\$16,908

# Eastern Massachusetts National Wildlife Refuge Complex Hunting Plan

August 2020

U.S. Fish and Wildlife Service

Assabet River National Wildlife Refuge  
Great Meadows National Wildlife Refuge  
Oxbow National Wildlife Refuge

Headquartered at  
73 Weir Hill Road  
Sudbury, MA 01776

Submitted By:  
Project Leader

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**I. Introduction**

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), the purposes of an individual refuge, U.S Fish and Wildlife Service (Service) policy, laws and international treaties. Relevant guidance includes the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997, the Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations (CFR) and Service Manual. The Eastern Massachusetts National Wildlife Refuge Complex (NWRC, Complex) is made up of eight refuges, three of which are covered in this plan. Each national wildlife refuge is established under specific legislation. Similarly, each refuge has one or more specific legal purposes for which it was established. The establishing legislation and purposes for the three covered in this plan are given below.

**Table 1. Refuge Purposes and Establishing Authorities**

| <b>Refuge</b>                                | <b>Establishing Authorities</b>   | <b>Refuge Purposes</b>  |
|--|---|---|
| Assabet River National Wildlife Refuge (NWR) | ...was established September 28, 2000, under an Act Authorizing the Transfer of Certain Real Property for Wildlife, or Other Purposes. (16 U.S.C. 667b).    | ... purpose is its “...particular value in carrying out the national migratory bird management program.” (16 U.S.C. 667b-d, as amended)   |
| Great Meadows NWR                            | ...was established May 3,1944, under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715d) and Refuge Recreation Act (16 U.S.C. § 460k-1) | ... “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. § 715d),<br><br>“... suitable for – incidental fish and wildlife-oriented recreational development,” (16 U.S.C. § 460k-1),<br><br>“the protection of natural resources,” (16 U.S.C. § 460k-1),<br>“and the conservation of threatened or endangered species...” (16 U.S.C. § 460k-1) |
| Oxbow NWR                                    | ...was established May 24, 1974, under an Act Authorizing the Transfer of Certain Real Property for Wildlife, or Other Purposes (16 U.S.C. 667b).           | ... is its “...particular value in carrying out the national migratory bird management program.” (16 U.S.C. 667b-d, as amended)   |

These refuges are managed as part of the Refuge System whose mission, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), and as amended by the Refuge System Improvement Act (16 U.S.C. 668dd et seq.) is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997).

The NWRSA mandates the Secretary of the Interior in administering the Refuge System to (16 U.S.C. 668dd(a)(4):

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- Ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the Refuge System described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the Refuge System are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

This plan sets forth guidance on the expansion and implementation of hunt programs at Assabet River, Great Meadows, and Oxbow NWR. All three refuges are currently opened for hunting.

**Assabet River NWR**, formerly referred to as the U.S. Army Fort Devens Sudbury Training Annex, is a 2,357-acre parcel of land located approximately 20 miles west of Boston and 4 miles west of the Complex headquarters. It is located in portions of the towns of Hudson, Maynard, Stow, and Sudbury and covers approximately 3.5 square miles. Assabet River NWR consists of two separate pieces of land. The larger northern section is just north of Hudson Road. The smaller southern section is located to the south of Hudson Road. The land, centered in a developed area, has been protected by the Army for the last 58 years. That protection has



allowed the maturation of extensive, structurally diverse wetland habitats, whose ecological integrity is enhanced by its surrounding upland forests and grasslands. The refuge provides important habitat for migrating and resident wildlife. The refuge supports a diverse mix of migratory birds including waterfowl, wading birds, raptors, passerines, as well as resident mammals, reptiles, amphibians, fish and invertebrates. There are extensive and regionally important wetlands occurring on and adjacent to the refuge, including their associated tributary drainages and headwaters. With the exception of occasional (most likely wintering) bald eagles, no federally listed threatened or endangered species are known to inhabit Assabet River NWR.

The refuge's geographic position, diverse biological resources, and accessibility to local and regional communities make it highly attractive for wildlife dependent recreational uses including environmental education, interpretation, hunting, and fishing. While many lands adjacent to the refuge are State, town, or private conservation lands, there are also many residential areas near the refuge. Additional development in the area is increasing the urban-wildland interface and can lead to management conflicts. Assabet River NWR is currently open for deer, turkey, and upland game (cottontail rabbit, gray squirrel, ruffed grouse, and woodcock) hunting.

**Great Meadows NWR** is a 3,874-acre collection of parcels of land located approximately 20 miles west of Boston, in the historic towns of Concord, Sudbury, Bedford, Billerica, Lincoln, Carlisle, and Wayland. It comprises two divisions: lands south of State Route 117 compose the Sudbury Division (2,321 acres) and lands north of State Route 117 compose the Concord Division (1,542 acres). Great Meadows NWR stretches 12 miles from State Route 4 in Billerica to the Framingham/Wayland town line along the Concord and Sudbury Rivers. The refuge provides habitat for a variety of species, including migrating waterfowl, shorebirds, wading and marsh birds. The upland areas support woodcock, songbirds, and many raptors. The marsh habitats are utilized by amphibians and reptiles. With the exception of occasional (most likely wintering) bald eagles, no federally listed threatened or endangered species are currently known to inhabit Great Meadows NWR. Great Meadows NWR is currently open for deer (archery-only) and waterfowl (duck and goose) hunting.

**Oxbow NWR** is a 1,697-acre collection of parcels of land located approximately 35 miles northwest of Boston, in the towns of Ayer and Shirley in Middlesex County and the towns of Harvard and Lancaster in Worcester County. The refuge consists of three sections; the northern end of the refuge abuts the former Fort Devens; Shirley Road/West Main Street in Ayer separates the northern and middle portions of the refuge; Massachusetts Route 2 bisects the middle and southern parcels with the refuge's southern boundary at Still River Depot Road in Harvard. Oxbow NWR was formed by three land transfers from the former U.S. Army, Fort Devens Military Installation and the purchase of private land. The refuge supports a diverse mix of migratory birds including waterfowl, wading birds, raptors, shorebirds, passerines, as well as resident mammals, reptiles, amphibians, fish and invertebrates. With the exception of occasional (most likely wintering) bald eagles, no federally listed threatened or endangered species are currently to inhabit Oxbow NWR. Oxbow NWR is currently open for deer, snipe, turkey, upland game (cottontail rabbit, gray squirrel, ruffed grouse, and woodcock), and waterfowl (duck and goose) hunting.

Assabet River, Great Meadows, and Oxbow NWRs are managed as part of the Complex, which also includes Mashpee, Massasoit, Monomoy, Nantucket, and Nomans Land Island NWRs. The refuges of the Complex, which is headquartered in Sudbury, Massachusetts, total 17,187 acres. Assabet River, Great Meadows, and Oxbow NWRs received approximately 919,980 recreational visitors in 2017. We estimate that hunting accounted for only 2,353 of those visits (USFWS 2017). The original hunt plans for Assabet River, Great Meadows, and Oxbow NWRs were completed in 2005. As the previous hunt plans are over 10 years old, the Service has created this new plan to address existing and expanded hunting opportunities. Opening hunt plans for Mashpee and Monomoy NWRs were completed in 2019 for the 2019-2020 hunt season.

## **II. Statement of Objectives**

The objectives of the hunting programs at Assabet River, Great Meadows, and Oxbow NWRs are to:

1. Provide the public with a high-quality recreational experience on refuge lands/waters and increase opportunities and access for hunters;
2. Design a hunting program that is administratively efficient and manageable with existing staffing levels and in alignment with Massachusetts Division of Fisheries and Wildlife (MassWildlife) regulations when possible;
3. Implement a hunting program that is safe for all refuge users;
4. Provide hunting opportunities for youth, disabled, veteran, apprentice hunters, and other underrepresented groups; and
5. Design a hunting program that aligns with refuge habitat management objectives.

To help meet these objectives, we propose expanding existing hunting opportunities for deer, turkey, small game, and waterfowl, as well as opening new opportunities for bear, coyote, and fox on refuge lands. These efforts will maintain a historic, wildlife dependent public use and provide accessible hunting opportunities in cooperation with local accessibility experts and organizations. We will enhance public understanding of refuge hunting and fishing opportunities by providing quality maps, signs, and wording within outreach materials and on the refuge web pages. Finally, we will increase the visibility of refuge law enforcement and hunter adherence to Federal and State regulations to ensure high quality ethical hunting and safe hunting experience.

## **III. Description of Hunting Program**

### **A. Areas to be Opened to Hunting**

#### **Assabet River NWR**

The Assabet River NWR totals 2,357 acres (Figure 1). Under the new hunting plan an additional 123 acres will be open for the first time bringing the total area open to hunting to 2,273 acres.



Those areas include the North Unit A, North Unit B (for Archery Only), Unit C (archery only except waterfowl) and South Unit (archery only). The Safety Zone (80 acres) and the Closed Area (4 acres) will continue to be closed for hunting. See Table 2: Assabet River NWR Hunting Units for a list of specific hunt units, species, and acres. The parcels along the Assabet River in Unit C (123 acres) that were acquired in 2008 will be opened to hunting for the first time, providing new opportunities for waterfowl and archery only deer, turkey, bear, coyote, and fox hunting. New opportunities for bear, coyote and fox will be made available in North Units A and B as well as South Unit, with the exception of no rifles or handguns allowed across the refuge. Coyote and fox hunting will be allowed concurrent with deer season with the corresponding method of take allowed for deer. In addition, North Unit A will be opened for special waterfowl hunts for targeted user groups including, youth, women, veterans, and underserved groups on a limited basis. Portions of the refuge will be closed during the hunt to maintain a safe, quality hunt for targeted user groups. There are areas that are designated for “archery only” due to their proximity to densely populated residential areas, schools, or other areas of safety concern. These archery areas include North Unit B, Unit C (except for Waterfowl), and South Unit.

**Table 2: Assabet River NWR Hunting Units**

| Hunt Unit          | Acres        | Bear <sup>1</sup> | Coyote <sup>2</sup> | Deer  | Fox <sup>2</sup> | Grouse | Rabbit | Squirrel | Turkey | Waterfowl | Woodcock |
|--------------------|--------------|-------------------|---------------------|-------|------------------|--------|--------|----------|--------|-----------|----------|
| North Unit A       | 1,332        | X                 | X                   | C     | X                | C      | C      | C        | C      | S         | C        |
| North Unit B       | 520          | X                 | X                   | C     | X                |        |        |          | C      |           |          |
| Unit C             | 123          | X                 | X                   | X     | X                |        |        |          | X      | X         |          |
| South Unit         | 298          | X                 | X                   | C     | X                |        |        |          | C      |           |          |
| <b>Total Acres</b> | <b>2,273</b> | 2,273             | 2,273               | 2,273 | 2,273            | 1,332  | 1,332  | 1,332    | 2,273  | 1,455     | 1,332    |

*C = Currently Opened, X = New Opportunity, S = Special Hunts Only*

1- Bear hunting is only open during 2nd and shotgun season only

2- Coyote and Fox is only open concurrent with deer season; not baiting, no night hunting

**Great Meadows NWR**

Great Meadows NWR totals 3,874 acres and is comprised of two divisions, the Concord Division (Figure 2) and the Sudbury Division (Figure 3), which span 14 miles across 7 towns along the Sudbury and Concord Rivers. Surrounding the refuge is suburban residential housing and mixed use development areas. Within the two divisions, there are 11 units that current allow archery-only deer hunting. Under the new hunting plan an additional 778 acres will be open, increasing the total hunting acreage to 3,401 acres.

Approximately 2,280 acres of the refuge are currently opened to archery deer hunting. Areas

open for white-tailed deer hunting in the Concord Division include all refuge lands in Bedford, Billerica, and Carlisle. Route 225 serves as the southern border of this hunt area, and the Concord River bisects the area. There is currently no deer hunting on refuge lands south of Route 225 in Bedford or anywhere in Concord. The majority of the land currently open for white-tailed deer hunting on the refuge is located in the Sudbury Division (total of 1,707 acres in Sudbury Division). This includes all refuge lands south of Sherman’s Bridge in Sudbury and Wayland, with the exception of lands south of Stonebridge Road in Wayland. We will be opening an additional 778 acres of lands in two units for archery deer hunting. These areas are located on refuge lands North of Sherman’s Bridge Road in Sudbury and South of Route 225 in Bedford and Concord. Additionally, Great Meadows NWR will open all deer hunting units to turkey and coyote using archery equipment only. The refuge will also be open to black bear hunting in all units except South of SR 225 and North of Sherman Bridge Rd using archery equipment only. See Table 3: Great Meadows NWR Hunting Units for a list of specific hunt units, species, and acres.

During fall migration and into the winter, waterfowl are found on the Sudbury and Concord Rivers and associated wetlands and in refuge impoundments. The refuge is currently open to waterfowl hunting in portions of four units along the Sudbury and Concord River. The total riverine and associated wetland acreage currently open to hunting is approximately 334 acres. The refuge’s Concord Impoundments will remain closed to hunting.

In the Concord Division, waterfowl hunting is permitted in the Concord River Waterfowl Unit, which is about 86 acres of land and water from Route 225 stretching north to the boundary of the “O’Rourke Farm” in Carlisle. In the Sudbury Division, waterfowl hunting is permitted in three areas. The first area is approximately 136 acres from south of Sherman’s Bridge Road along the Sudbury River to just south of the intersection of the Water Row and Plymouth Road. The second area is approximately 38 acres of Sudbury River and associated wetlands between Routes 27 and 20. The third area includes approximately 74 acres of wetlands along the southern portion of Heard Pond and along the Sudbury River south of Heard Pond. Under this expansion plan, we would open up an additional 670 acres to waterfowl hunting including 376 acres at Pelham Island and 294 riverine acres north of Sherman Bridge Road.

**Table 3: Great Meadows NWR Hunting Units**

| Hunt Unit               | Acres | Bear | Deer | Coyote | Turkey | Waterfowl* |
|-------------------------|-------|------|------|--------|--------|------------|
| <b>CONCORD UNIT</b>     |       |      |      |        |        |            |
| Bedford                 | 279   | X    | C    | X      | X      |            |
| Carlisle                | 259   | X    | C    | X      | X      |            |
| Concord River Waterfowl | 109   | X    | C    | X      | X      | C          |
| Kinnelly                | 53    | X    | C    | X      | X      |            |

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|                            |              |       |       |       |       |       |
|----------------------------|--------------|-------|-------|-------|-------|-------|
| South of SR 225            | 484          |       | X     | X     | X     |       |
| <b>SUDBURY UNIT</b>        |              |       |       |       |       |       |
| North of Sherman Bridge Rd | 294          |       | X     | X     | X     | X     |
| Water Row                  | 628          | X     | C     | X     | X     |       |
| Sudbury River Waterfowl    | 274          | X     | C     | X     | X     | C     |
| Wolbach Strand             | 237          | X     | C     | X     | X     |       |
| Pelham Island              | 376          | X     | C     | X     | X     | X     |
| Stone Bridge               | 303          | X     | C     | X     | X     |       |
| South of Heard Pond        | 105          | X     | C     | X     | X     | C     |
| <b>Total Acres</b>         | <b>3,401</b> | 2,623 | 3,401 | 3,401 | 3,401 | 1,004 |

*C = Currently Opened, X = New Opportunity*

\* All hunting units are archery only except for waterfowl

\* Acres open to waterfowl may only reflect a portion of the hunt unit to reflect riverine and wetland areas. See Figures 2 and 3 for specific waterfowl hunting areas.

**Oxbow NWR**

Oxbow NWR currently includes 1,695 acres along the Nashua River (Figure 4). Portions south of Route 2 have been open to hunting of turkey, gray squirrel, cottontail rabbit, ruffed grouse, snipe and American woodcock since 1976, under previous ownership. Hunting is currently allowed on 1,543 acres which includes all units except the Closed Area and Hospital Road North. Under the new hunting plan an additional 128 acres will be open, increasing the total hunting acreage to 1,671, with exception of no rifles or handguns allowed refuge wide.

In the north units, we are proposing to maintain hunting opportunities in the portion of the refuge located on the westerly side of the Nashua River north of Shirley Road/West Main Street (Walker Road, 158 acres) for deer, turkey, upland game (grouse, rabbit, squirrel) and woodcock. All legal methods of take in alignment with State and refuge regulations, would be allowed for deer, turkey, and woodcock. Only non-toxic shot is permitted for upland game. Opportunities for waterfowl and bear hunting will also be added to Walker Road Unit in alignment with State Regulations, with exception of no rifles or handguns allowed. The portion of the refuge on the easterly side of the Nashua River north of Shirley Road/West Main Street (Bishop Road area, 234 acres) is currently only open for archery deer and turkey hunting. Bishop Road area will be opened for new opportunities for upland game (grouse, rabbit, and squirrel), migratory birds (woodcock and waterfowl), turkey, and bear. The methods of take at Walker Road and Bishop Road areas for current and new species will come into alignment for method of take for deer, turkey, bear, grouse, rabbit, squirrel, woodcock, and waterfowl in these two units, with exception of no rifles or handguns allowed. Coyote and fox opportunities will be added only concurrent with deer season and the corresponding method of take allowed for deer season. Following these changes we will combine Walker Rd and Bishop Rd and rename it the North Unit. See Tables 4 and 5: Oxbow River NWR Hunting Units 1 and 2 for a list of specific hunt units, species, and acres.

The Central units at Oxbow NWR from the Route 2 underpass north to Hospital Road (Sheridan Road, 142 acres, and Hospital Road South Unit, 169 acres) are currently open for archery deer

hunting and shotgun grouse, rabbit, squirrel, turkey and waterfowl. Woodcock hunting is also allowed on Sheridan Road. We will expand hunt opportunities to include bear, coyote, and fox as well as come into alignment for method of take, with the exception of no rifles or handguns allowed for current and newly proposed species in the Sheridan Road and Hospital Road South Units.

Hospital Road North Unit will be opened for the first time. Due to the proximity to sport fields, hunting opportunities for bear, coyote, deer, fox, and turkey will be by archery only following State regulations in addition to refuge-specific regulations.

The Route 2 South Unit at Oxbow NWR (248 acres) is currently open for white-tailed deer, turkey, woodcock, snipe, and upland game hunting. The Waterfowl area totals 466 acres and is open to hunt opportunities for the same species as the adjacent Route 2 South Unit which also includes waterfowl. We propose combining Route 2 South Unit and the Waterfowl Area and renaming it all Route 2 South, and offering the same hunting opportunities. We will expand waterfowl hunting opportunities to the adjacent Route 2 South Unit. With the newly combined Route 2 South Unit, coyote and fox opportunities will be added only concurrent with deer season and the corresponding method of take allowed for deer season. Bear hunting will also be added in alignment for state seasons and method of take, with the exception of no rifles or handguns allowed. The Still River Depot Area is currently open and will be maintained as an archery only hunting area for deer and turkey. Archery only bear opportunities will be added following refuge-specific regulations. Coyote and fox opportunities at Still River Depot will be added only concurrent with deer season for archery only.

The portions of Oxbow NWR from Hospital Road north to Shirley Road/West Main Street, and from Shirley Road/West Main Street to the north side of the railroad tracts crossing MacPherson Road will remain closed to hunting.

**Table 4. Oxbow NWR Hunting Units 1**

| <b>Hunt Unit</b>  | <b>Acres</b> | <b>Bear</b> | <b>Deer</b> | <b>Turkey</b> | <b>Coyote</b> | <b>Fox</b> |
|---|--------------|-------------|-------------|---------------|---------------|------------|
| North Unit (Walker Rd & Bishop Rd combined)               | 392          | X           | C           | C             | X             | X          |
| Hospital Road North                                       | 128          | X           | X           | X             | X             | X          |
| Hospital Road South                                       | 169          | X           | C           | C             | X             | X          |
| Sheridan Road   | 142          | X           | C           | C             | X             | X          |
| Still River Depot Area                                    | 126          | X           | C           | C             | X             | X          |
| Route 2 South (Waterfowl Area and Route 2 South combined) | 714          | X           | C           | C             | X             | X          |
| <b>Total Acres</b>  | 1,671        | 1,671       | 1,671       | 1,671         | 1,671         | 1,671      |

*C = Currently Opened, X = New Opportunity*

**Table 5. Oxbow Hunting Units 2**

| Hunt Unit   | Acres | Grouse | Rabbit | Snipe | Squirrel | Waterfowl | Woodcock |
|---|-------|--------|--------|-------|----------|-----------|----------|
| North Unit<br>(Walker Rd & Bishop Rd combined)            | 392   | X      | X      |       | X        | X         | X        |
| Hospital Road North                                       | 128   | X      | X      |       |          |           |          |
| Hospital Road South                                       | 169   |        |        |       | C        | C         |          |
| Sheridan Road   | 142   | C      | C      |       | C        |           | C        |
| Still River Depot Area                                    | 126   |        |        |       |          |           |          |
| Route 2 South (Waterfowl Area and Route 2 South combined) | 714   | C      | C      | C     | C        | C         | C        |
| <b>Total Acres</b>  | 1,671 | 1,417  | 1,417  | 714   | 1,417    | 1,275     | 1,248    |

*C = Currently Opened, X = New Opportunity*

**B. Species to be Taken, Hunting Periods, Hunting Access**

**Table 6. Refuge Specific Regulations by Species**

| Species       | Assabet River  | Great Meadows                                     | Oxbow  |
|---------------|--|---|--|
| <b>Deer</b>   | Archery only in North Unit B, Unit C, South Unit   | Archery only                                      | Archery only Hospital Road North and Still River Depot   |
| <b>Turkey</b> | Archery only in North Unit B, Unit C, South Unit. Open fall and spring seasons                                     | Archery only                                      | Archery only Hospital Road North and Still River Depot   |
| <b>Bear</b>   | Archery only in North Unit B, Unit C, South Unit. Only open second season (no rifles) and shotgun season           | Archery only                                      | Archery only Hospital Road North and Still River Depot. All Refuge: No rifles or handguns.   |
| <b>Fox</b>    | Open concurrent with deer season and corresponding method of take. Recommend voluntary use of non-toxic ammunition | N/A   | Open concurrent with deer season and corresponding method of take, except archery only at Hospital Road North and Still River Depot. Recommend voluntary use of non-toxic ammunition |
| <b>Coyote</b> | Open concurrent with deer season and corresponding method of take. Non-toxic ammunition only                       | Open concurrent with deer season and archery only | Open concurrent with deer season and corresponding method of take except archery   |

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|                                 |  |   |  |
|---------------------------------|--|---|--|
|                                 |  |   | only at Hospital Road North and Still River Depot. Non-toxic ammunition only   |
| <b>Grouse, Rabbit, Squirrel</b> | North Unit A: Open in alignment with State for seasons and method of take, except no rifles or handguns. Non-toxic ammunition only | N/A   | Open in alignment with State for seasons and method of take, except no rifles or handguns. Non-toxic ammunition only |
| <b>Waterfowl</b>                | Open in alignment with State for seasons and method of take in Unit C. Open North Unit A for special waterfowl hunt events only    | Open in alignment with State for seasons and method of take | Open in alignment with State for seasons and method of take  |
| <b>Woodcock</b>                 | North Unit A: Open in alignment with State for seasons and method of take.   | N/A   | Open in alignment with State for seasons and method of take.   |
| <b>Snipe</b>                    | N/A  | N/A   | Open in alignment with State for seasons and method of take.   |

**Big Game**

*Deer and Turkey*

At Assabet River NWR, white-tailed deer and turkey hunting would be permitted at North Unit A, North Unit B, Unit C, and the South Unit. North Unit A will maintain opportunities for the archery, muzzleloader, and shotgun seasons established annually by the State. North Unit B and the South Unit would be maintained as archery only hunt areas. Unit C will open for archery only deer and turkey hunting for the first time.

At Great Meadows NWR, all areas opened to white-tailed deer and turkey hunting will be maintained as archery only following State regulations.

At Oxbow NWR, the Still River Depot Unit will remain open for archery only deer and turkey hunting. Route 2 South and Waterfowl Area will remain open for the archery, muzzleloader, and shotgun seasons established annually by the State. Oxbow NWR units of Bishop Road, Walker Road, Hospital Road South and Sheridan Road will be opened to all legal methods of take, with exception of rifles or handguns, for deer and turkey during the respective seasons. Hospital Road North will be opened for the first time to archery only deer and turkey hunting.

For all three refuges, archers may also hunt during the shotgun and muzzleloader seasons in accordance with State regulation. Turkey hunting is currently allowed in the spring only. All three refuges will open for the fall turkey season (following refuge restrictions in some areas) and in accordance with State regulations.

*Black Bear*

Assabet River, Great Meadows, and Oxbow NWRs will be open for black bear hunting for the first time in designated units and in accordance with State regulations, with exception of no rifles or handguns allowed on all three refuges and subject to the following:



At Assabet River NWR, the North Unit B, Unit C, and South Unit will open to black bear hunting for archery only. North Unit A will open to all methods of take in alignment with State regulations, with exceptions of rifles or handguns, for bear hunting. For all units bear hunting will only be open during the second bear and shotgun seasons. This restriction will mitigate potential conflicts with other user groups and other youth environmental education programs that take place during first State bear seasons.

At Great Meadows NWR areas open to deer and turkey hunting (except North of Sherman Bridge Road and South of SR 225) will be open to bear hunting via archery only for all State seasons.

At Oxbow NWR, the Route 2 South, Waterfowl Area, Sheridan Road, Hospital Road South, Hospital Road North, Bishop Road and Walker Road units will open to black bear hunting in alignment with State regulations for method of take and seasons, with exception of no rifles or handguns. Hospital Road North Unit and Still River Depot will be open to bear hunting via archery only for all State seasons.

## **Upland Game**

### *Coyote and Fox*

Assabet River NWR will open 2,273 acres to coyote and fox hunting following refuge specific and State regulations, with the exception of no rifles or handguns allowed. These opportunities will open concurrent with the deer season to mitigate conflicts with other user groups and to conserve refuge resources. Hunting for coyote and fox in Unit B, Unit C, and the South Unit will be limited to archery only. Unit A will open concurrent with the deer season with the corresponding method of take.

Great Meadows NWR will open all deer and turkey units to coyote hunting for the first time via archery only, concurrent with the deer season.

Oxbow NWR will open 1,671 acres to coyote and fox hunting concurrent with the deer season with the corresponding method of take allowed, with the exception of no rifles or handguns allowed. The Route 2 South, Sheridan Road, Hospital Road South and North Unit (formerly Bishop Road and Walker Road) units will open concurrent with deer season with the corresponding method of take, with the exception of no rifles or handgun allowed. Hospital Road North and Still River Depot Units will open to archery hunting only.

### *Other Upland Game*

At Assabet River NWR, hunt seasons for ruffed grouse, cottontail rabbit and gray squirrels in North Unit A will be maintained in alignment with State and refuge regulations including use of non-toxic ammunition only. No rifles or handguns would be allowed.

At Oxbow NWR, shotgun hunting for ruffed grouse, cottontail rabbit and gray squirrels is currently allowed on the portions of the refuge and will be expanded to include all legal methods of take in alignment with State and refuge regulations, with exception of rifles and handguns.

Under this plan the Bishop Road Unit would also open to ruffed grouse, cottontail rabbit, and gray squirrel hunting for all legal methods of take in alignment with State and refuge regulations.

## **Migratory Game Bird**

### *Waterfowl*

Under the current management, the only migratory bird open to hunting on Assabet River NWR is the American woodcock. Assabet River NWR Unit C will be opened for waterfowl hunting for the first time since its acquisition in 2008. Wetlands in Hunt Unit A will also be opened to waterfowl hunting for special events to aid in recruitment, retention and reactivation of new hunters. Portions of the refuge will be closed to hold special hunts for youth, women, veterans and underserved groups on a limited basis to maintain a safe, quality hunt for specific targeted user groups.

At Great Meadows NWR, a total of 334 acres are currently opened for waterfowl hunting. New opportunities will be opened at Pelham Island (376 acres) and riverine and wetland portions North of Sherman Bridge Road (294 acres).

At Oxbow NWR, waterfowl hunting currently only occurs in the Waterfowl area (466 acres). The new opportunities at Oxbow NWR for hunting of migratory birds consist of opening Route 2 South, Bishop Road and Hospital Road South to waterfowl hunting, totaling 809 acres.

The waterfowl hunt program will be conducted in alignment with State regulations in units open to waterfowl. Hunting seasons will generally begin in early September with the early Canada goose season and extend through late-February with the late snow and blue goose season. Ducks are generally hunted mid-October to late November. Most of the hunter activity will occur during the duck and goose seasons.

### *Snipe and Woodcock*

Snipe and American woodcock hunting is currently permitted on portions of Oxbow NWR as noted in Section B of the hunt plan. At Oxbow, Bishop Road Unit (234 acres) will be opened as a new opportunity for woodcock. Woodcock hunting generally occurs from mid-October to mid-November. No changes to snipe hunting are being proposed.

## **Hunter Access**

The refuge will make a reasonable effort to allow hunters access to all portions of the hunt areas. The intention is to provide safe, quality hunting opportunities that consider the welfare of the refuge wildlife resources. Hunters must mark tree stands/blinds with refuge permit number. All access points including hunter parking lots and boat ramps will be delineated on refuge hunt maps and will be included in the hunt brochures.

## **C. Hunter Permit Requirements**

All persons hunting on the refuge will be required to obtain the necessary State licenses, permits

and stamps. In addition, all hunters on any of the three refuges (Great Meadows, Oxbow and Assabet River NWRs) will need to purchase and possess an annual refuge hunting permit. Individual hunting permits are required for each of the deer, migratory bird, turkey, and upland game hunting seasons and cover those species at Assabet River, Great Meadows, and Oxbow NWRs. Youth hunters (between the ages of 12 to 17) are required to obtain a single permit at no cost that covers all hunting seasons. Discounted permits are offered to active-duty members of the military, permanently disabled hunters, and senior citizens (at least 62 years of age).

To maintain a quality hunt, the number of permits made available for shotgun and muzzleloader deer season are limited and disbursed through a lottery system. Permits for all hunts are sold online through a 3rd-party vendor. Additional information will be available at each respective refuge website ([https://www.fws.gov/refuge/assabet\\_river](https://www.fws.gov/refuge/assabet_river), [https://www.fws.gov/refuge/great\\_meadows](https://www.fws.gov/refuge/great_meadows), and <https://www.fws.gov/refuge/oxbow>). Fees collected from permit sales are used to support the hunting program. Hunters are required to have their refuge-issued permits and state license with them at all times when hunting or scouting on the refuges and must provide those documents when requested.

#### **D. Consultation and Coordination with the State**

National wildlife refuges, including Assabet River, Great Meadows, and Oxbow NWR, conduct hunting programs within the framework of State and Federal regulations. The refuge has moved forward with developing this hunting plan based upon earlier formal coordination with the MassWildlife as well as the intervening informal discussions.

In developing this plan, the Complex reviewed the operations and regulations for neighboring State wildlife management areas to find consistency where possible. Refuge leadership met with Michael Huguenin (Assistant Director of Wildlife Research) and Johnathan Regosin (Deputy Director) in May 2019 to discuss proposed changes to the Complex's hunting plans. In September of 2019, MassWildlife provided a letter with formal comments to the proposed changes and these comments were considered in drafting the hunt plan expansions. A follow up correspondence summarizing areas of expansion was sent to MassWildlife in November 2019.

The Complex staff will continue to consult and coordinate with MassWildlife to maintain consistent regulations and programs, monitor populations of proposed hunt species, and set harvest goals. We will work together to ensure safe and enjoyable recreational hunting opportunities. The Environmental Assessment (EA) (appendix B) associated with this hunting plan was shared with MassWildlife.

#### **E. Law Enforcement**

Refuge law enforcement officers work closely with State Environmental Police Officers (EPOs), as well as other State and local Police Departments, to conduct patrols, safeguard hunters and visitors, and protect both game and nongame species. .

Federal Wildlife Officers will patrol the refuge during hunting season. The frequency of patrols

will be determined by hunter use, the level of compliance observed during patrols, information obtained from participants, and other sources. Refuge boundaries and hunt area boundaries will be clearly posted. As needed, the refuge will hold voluntary hunter meetings to answer questions from hunters and listen to feedback on the hunt program.

**F. Funding and Staffing Requirements**

**Table 7. Initial Costs of New Hunting Programs at Eastern Massachusetts NWRC**

| <b>Activity</b>      | <b>Material Costs</b> | <b>Labor Costs</b> | <b>Total</b>    |
|----------------------|-----------------------|--------------------|-----------------|
| Document Preparation | \$500                 | \$5,000            | \$5,500         |
| Posting/Signs        | \$3,000               | \$1,000            | \$4,000         |
| Administration       | \$500                 | \$5,000            | \$5,500         |
| Outreach             | \$500                 | \$2,000            | \$2,500         |
| Law Enforcement      | \$1000                | \$30,000           | \$31,000        |
| <b>Totals</b>        | <b>\$5,500</b>        | <b>\$43,000</b>    | <b>\$48,500</b> |

**Table 8. Annual Costs of New Hunting Programs at Eastern Massachusetts NWRC**

| <b>Activity</b>      | <b>Material Costs</b> | <b>Labor Costs</b> | <b>Total</b>    |
|----------------------|-----------------------|--------------------|-----------------|
| Document Preparation | \$500                 | \$1,800            | \$2,300         |
| Posting/Signs        | \$500                 | \$1,500            | \$2,000         |
| Administration       | \$1000                | \$3,000            | \$4,000         |
| Outreach             | \$500                 | \$1,800            | \$2,300         |
| Law Enforcement      | \$1,000               | \$30,000           | \$31,000        |
| <b>Totals</b>        | <b>\$3,500</b>        | <b>\$38,100</b>    | <b>\$41,600</b> |

There are sufficient funds within the annual operating budget of the Eastern Massachusetts NWRC to conduct the expanded refuge hunting program as proposed. There will be little difference in the amount of law enforcement needed under the previous hunting plan and this proposed expanded plan at Assabet River, Great Meadows, and Oxbow NWRs. During the hunt season, current law enforcement efforts are focused on compliance with State and refuge regulations, reducing user conflicts in the refuge and ensuring a safe hunt. The refuge has successfully implemented hunting programs on all three refuges for over 10 years.

Not all hunters will hunt every day, and some hunters will receive refuge permits but hunt just a few days. Hunter pressure on most days is expected to be low.

#### **IV. Conduct of the Hunting Program**

##### **A. Hunter Permit Application, Selection, and/or Registration Procedures**

All refuge hunt permits are sold online through a 3rd-party vendor and information will be available at each respective Refuge's website. To purchase a permit and/or enter a hunt lottery, individuals must create an account on the 3rd-party vendor's website. Once an account has been created, individual hunting permits (archery deer, migratory birds, turkey, upland game, youth hunter) are available for purchase. Permits cover Assabet River, Great Meadows, and Oxbow for the specific season. To ensure a quality hunt, a lottery system is administered by the 3rd-party vendor for access to shotgun deer and muzzleloader deer permits. Youth hunter permits are available at no cost. Discounted permits are made available to active-duty members of the military, permanently disabled hunters, and senior citizens (at least 62 years of age). Permits may be printed after purchase or displayed on a smart phone or tablet to satisfy law enforcement officer requests. All hunters are also responsible for obtaining their State hunting license through the appropriate channels.

##### **B. Refuge-Specific Hunting Regulations**

Listed below are refuge-specific regulations that pertain to hunting on Assabet River, Great Meadows, and Oxbow NWR. These regulations may be modified as conditions change or if refuge expansion continues/occurs. To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting must be conducted in accordance with State and Federal regulations, as supplemented by refuge-specific regulations (50 CFR,). Refuge-specific stipulations are also detailed in the hunting Compatibility Determination (appendix A).

- Refuge lands are closed to night hunting. Refuge hunting hours are half hour before sunrise to half hour after sunset, except for migratory waterfowl which is open to sunset.
- Hunters may enter the refuge 1.5 hours before legal hunting time and must leave the refuge within 1.5 hours after legal sunset.
- We allow the use of dogs consistent with State regulations when hunting migratory birds and upland game species.
- On Great Meadows NWR, only archery equipment may be used to hunt white-tailed deer, bear, turkey and coyote.
- Scouting can occur once the hunter has obtained a refuge permit. Scouting can begin no earlier than 4 weeks from the opening day of the hunt season from half hour before sunrise to half hour after sunset.

### **C. Relevant State Regulations**

Hunters are responsible for knowing and complying with all Massachusetts regulations and hunter safety training requirements.

### **D. Other Refuge Rules and Regulations for Hunting**

- Eastern Massachusetts NWRC only permits non-toxic ammunition for migratory bird and upland game hunting.
- Based on input we received during the public comment period, we adjusted the proposed alternative discussed in the draft plan and EA, primarily with changes regarding method of take by removing handguns and rifles on Oxbow and Assabet River NWRs.

### **V. Public Engagement**

#### **A. Outreach for Announcing and Publicizing the Hunting Program**

The Complex will disperse information about the hunting program in a number of ways. Special announcements will be published in local newspapers, as well as on refuge websites and social media pages. Friends groups for the Complex manage mailing lists and mass emails can be sent through those channels. Hunt brochures containing information about the rules and regulations for hunters are available at kiosks across Assabet River, Great Meadows, and Oxbow NWRs, as well as at the Complex headquarters and online at the refuge webpages and on the permit webpage managed by the 3rd-party vendor. Public information meetings will be held as needed.

The plan has been thoroughly coordinated with all interested and/or affected parties, including MassWildlife. On March 16, 2020, we distributed a press release to news organizations and alerted the public about the availability of the hunting plan with postings on the respective refuge's websites. We also notified local town representatives and partners as well as emailed to members of the Friends of Assabet River NWR mailing lists. No public meetings were held due to bans on public gatherings due to COVID-19. The Refuge Manager did answer questions on the hunt plan during a Monthly River Stewardship Council Meeting of the Sudbury, Assabet, and Concord River Wild and Scenic Partnership, attended by representatives from seven towns and three partner groups. Upon request, the public comment period was extended from April 24, 2020 until May 22, 2020, for a total comment period of 68 days.

#### **B. Anticipated Public Reaction to the Hunting Program**

Hunting is a priority public use of the Refuge System, and it has been found compatible at Assabet River, Great Meadows, and Oxbow NWRs. In developing each refuge's CCP, hunting surfaced as a key issue. At that time, members of the public in opposition were primarily against the idea of hunting in general. Those that were not against hunting, generally expressed support



for archery-only deer hunting for specific proposed species, citing safety and user conflict concerns. Some form of hunting has now been an ongoing activity at each of these refuges for over 10 years, so the public is familiar with the presence of hunters on the refuge landscape during certain times of year.

During creation of individual hunt plans for each refuge (2005), it was identified that the greatest potential visitor use conflict is between hunters and non-consumptive refuge users. Information on kiosks and brochures remind all consumptive and non-consumptive users of the other activities that may be ongoing at the same time. Additionally, hunting is also not allowed in the State of Massachusetts on Sundays, thereby decreasing user conflicts. Some people are too uncomfortable to walk on the refuge during any hunt season. Others are or will become comfortable walking on the refuge during archery-only seasons. Because the majority of hunting occurs early in the morning and later in the afternoon, non-hunters might decide to restrict their visit to the refuge to mid-day. Non-hunters who have access to the refuge on a daily basis will have to accommodate hunters on certain days. There will be some resentment over this accommodation. It is possible that we will lose the support of some individuals, but we will gain support from the State and other individuals who will be pleased to have expanded opportunities to hunt on the refuge.

Since the initiation of the refuge hunt program in 2005, several of the neighboring towns and conservation groups have implemented deer hunting programs of their own in an effort to reduce local deer populations and their impacts to the environment. Therefore, we anticipate far less resistance from those groups who may have been opposed to our initial opening.

We anticipate the greatest level of controversy to stem from the opening up to hunting of black bear on all three refuges since neither of them have a current population and sightings of bear in these areas may still be considered a novelty to the public. Upon release of the draft hunt plan and associated documents, a total of 189 unique comments representing 501 individuals or entities were submitted to the refuge. Among these were two petitions: an online Care2.com petition with 262 signatures representing 40 people from Massachusetts, 55 people from other states, and 167 people living in other countries; and, a mailed petition representing 25 Massachusetts people. Appendix D of the hunting plan summarizes the substantive comments received on the proposal, and the Service's responses.

### **C. How Hunters Will Be Informed of Relevant Rules and Regulations**

General information regarding hunting can be obtained at the Complex headquarters in Sudbury or from the hunt brochures available in refuge kiosks. Hunting information is also available on the refuge websites and on the permit webpage managed by the 3rd-party vendor. Information will also be sent to hunters on our emailing lists. Refuge staff also plan to host annual meetings to announce rule/regulations updates, orient new hunters, and solicit feedback from previous hunts. Dates, forms, hunting unit directions, maps, and permit requirements about the hunt will be available on the station websites at:

[https://www.fws.gov/refuge/assabet\\_river/](https://www.fws.gov/refuge/assabet_river/)

[https://www.fws.gov/refuge/great\\_meadows/](https://www.fws.gov/refuge/great_meadows/)  
<https://www.fws.gov/refuge/oxbow/>

## **VI. Compatibility Determination**

Hunting and all associated program activities proposed in this plan are found compatible with the purposes of the refuge. Allowing hunting for the previously mentioned species on Assabet River, Great Meadows, and Oxbow NWR contributes to, and does not materially interfere with, or detract from, the mission of the Refuge System and the purposes for which the refuge was established. See appendix A for the complete compatibility determination for hunting on Assabet River, Great Meadows, and Oxbow NWR.

## **REFERENCES**

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- Massachusetts Division of Fisheries and Wildlife. 2018. Annual Report. *MassWildlife*. 182 pp.
- U.S. Fish and Wildlife Service. 2017. *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*. 32 pp.
- U.S. Fish and Wildlife Service. 2017. *Waterfowl: Population Status, 2017*. USFWS, Laurel, MD. 74pp.

Figure 1. Assabet River NWR

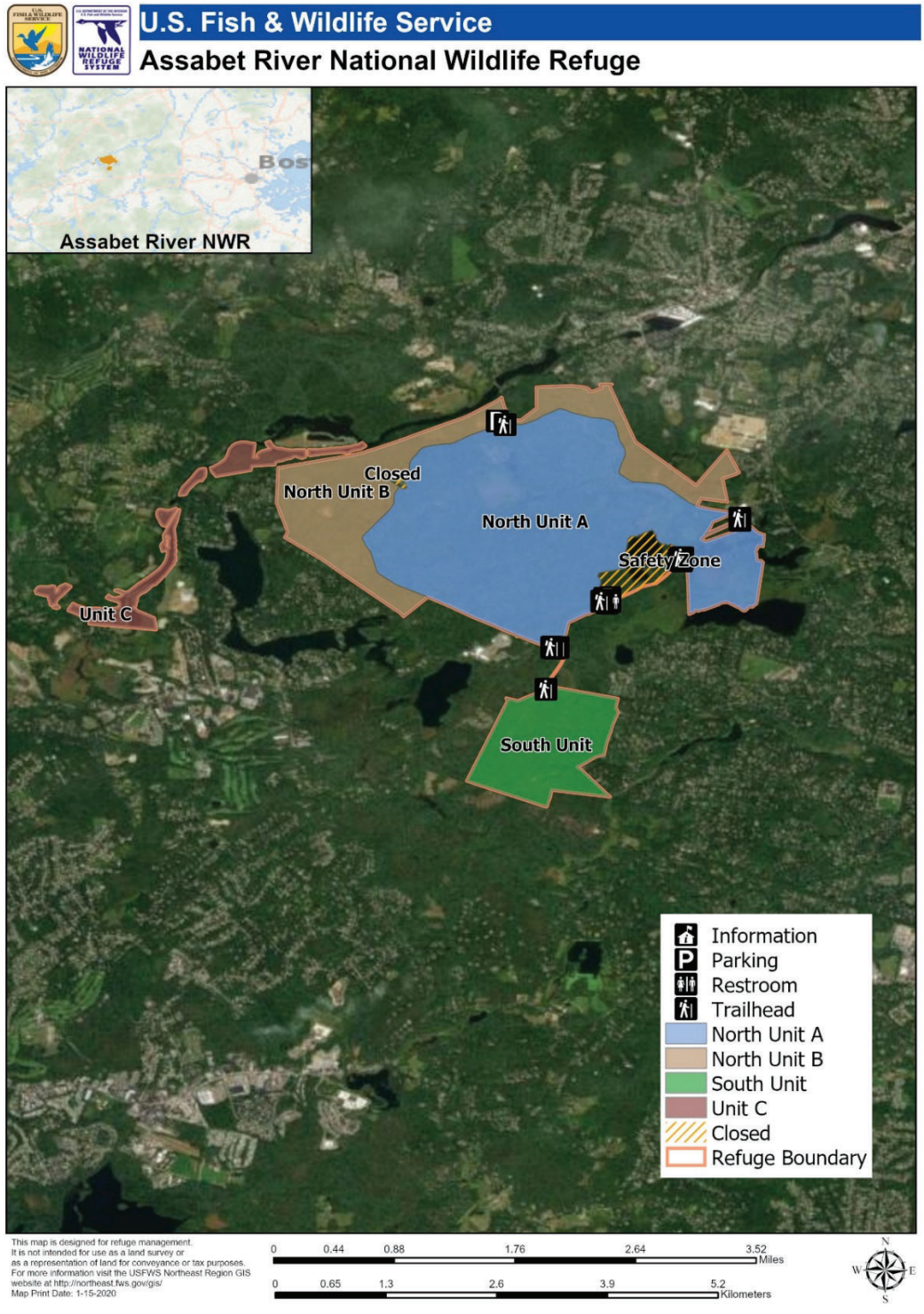




Figure 2. Great Meadows NWR, Concord Unit

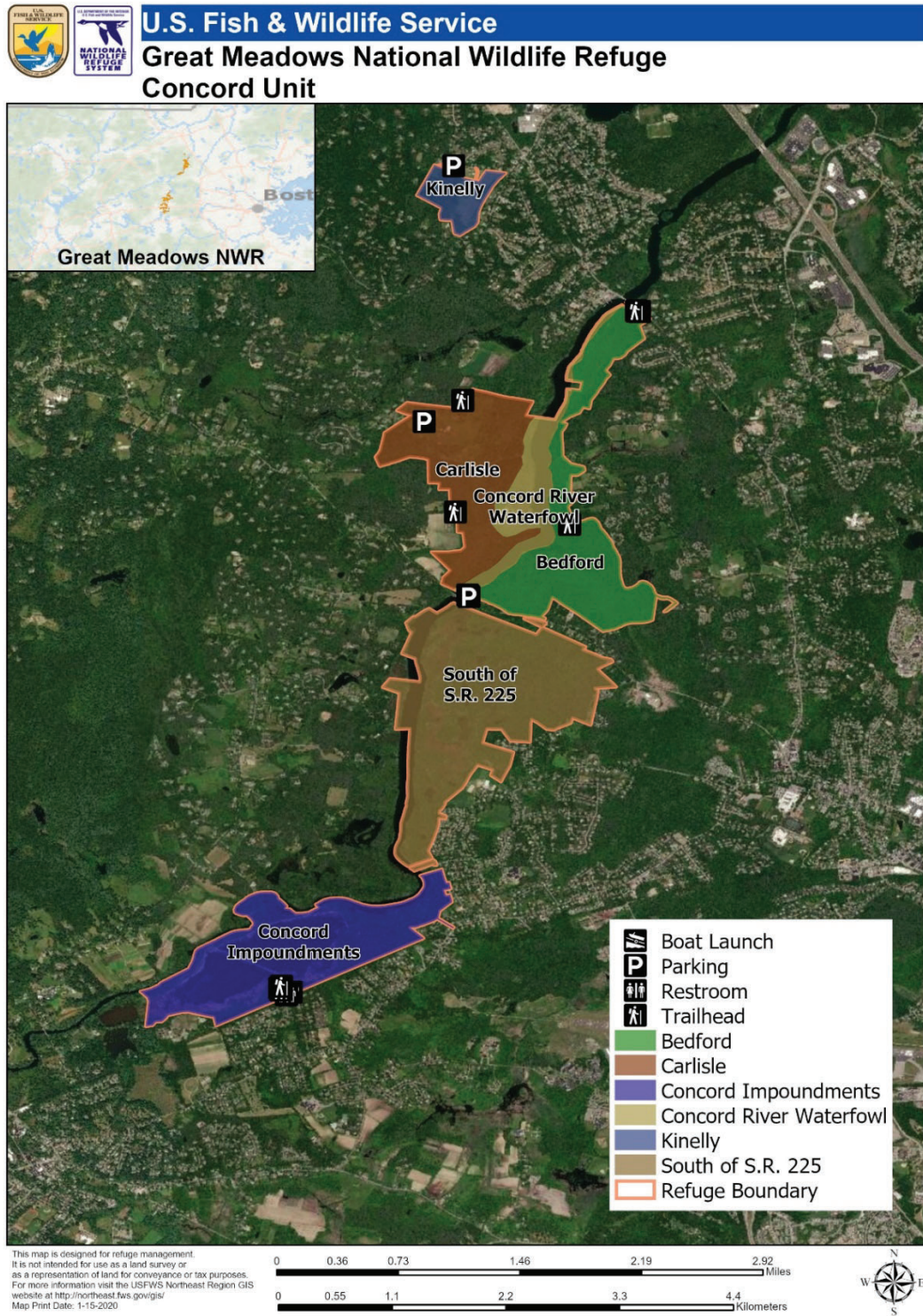




Figure 3. Great Meadows NWR, Sudbury Unit

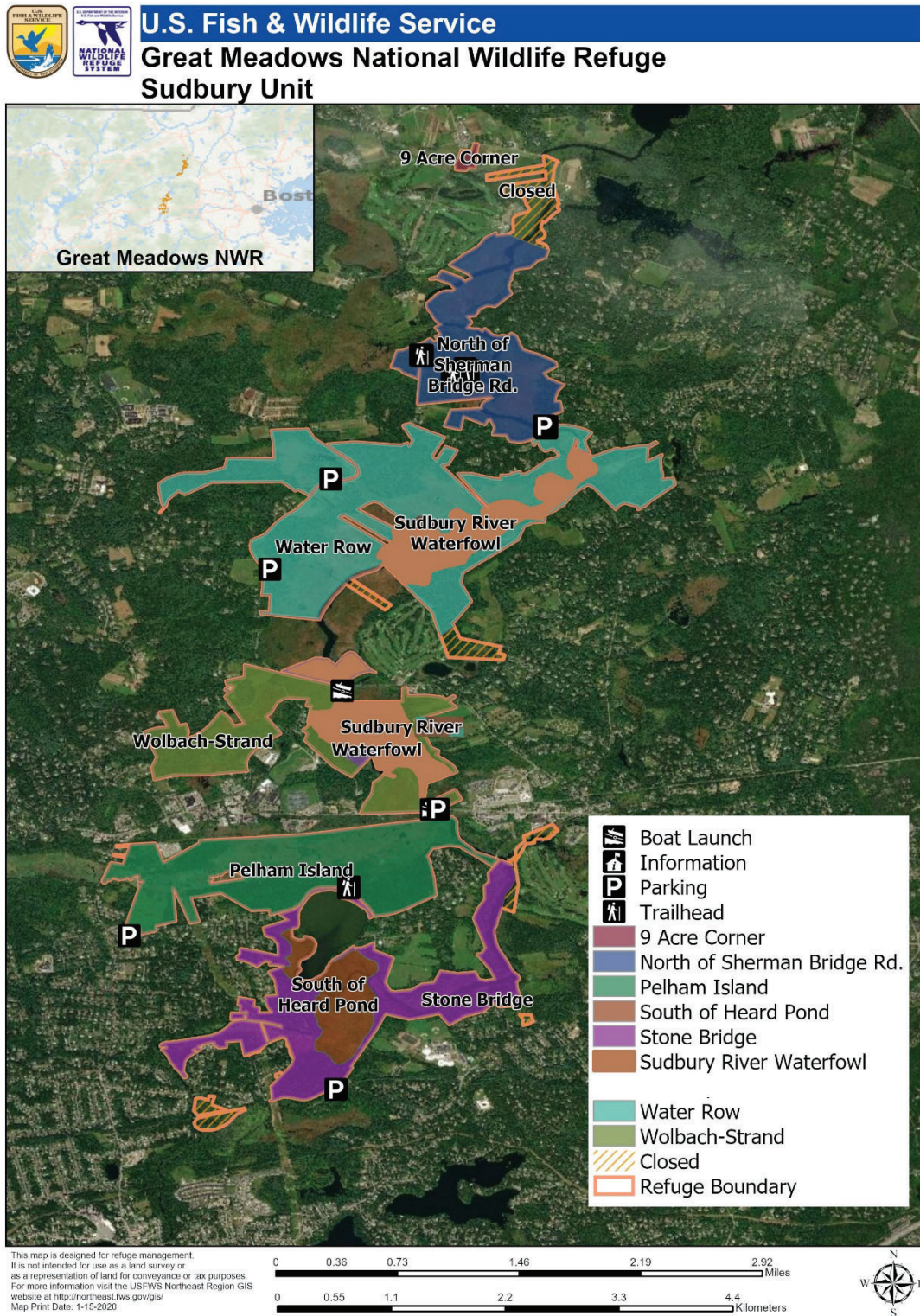




Figure 4. Oxbow NWR

