



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Wisconsin-Minnesota Ecological Services Field Office
4101 American Boulevard East
Bloomington, Minnesota 55425
Telephone 612-725-3548
FAX 612-725-3609

In Reply Refer To:
FWS/WI-MN ESFO

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Memorandum

TO: Industrial Economics, Incorporated (IEc)
Cambridge, Massachusetts

FROM: *actg* Field Supervisor, Twin Cities Field Office *Lisa Mandell*
U.S. Fish and Wildlife Service, Bloomington, Minnesota

SUBJECT: Incremental Effects Memorandum for the Economic Analysis
of the Proposed Rule to Designate Critical Habitat for the Dakota skipper
(*Hesperia dacotae*) and the Poweshiek skipperling (*Oarisma poweshiek*)

Introduction

The purpose of this memorandum is to provide information to serve as a basis for conducting an economic analysis for the proposed designation of critical habitat for the Dakota skipper and Poweshiek skipperling. Section 4(b)(2) of the Endangered Species Act (Act) requires the Secretary of Interior (Secretary), and therefore by delegation the U.S. Fish and Wildlife Service (Service), to consider the economic, national security, and other impacts of designating a particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of exclusion outweigh the benefits of including the area as critical habitat, unless the exclusion will result in the extinction of the species. To comply with section 4(b)(2) of the Act and consider the economic impacts of a proposed critical habitat designation, the Service prepares an economic analysis that describes and monetizes, where possible, the probable economic impacts of the proposed regulation. The data in the economic analysis are then used to inform the discretionary balancing evaluation under section 4(b)(2) of the Act to consider any particular area for exclusion from the final designation.

Determining the economic impacts of a critical habitat designation involves evaluating the “without critical habitat” baseline versus the “with critical habitat” scenario, to identify those effects expected to occur solely due to the designation of critical habitat and not from the protections that are in place due to the species being listed under the Act. Effects due to solely

the critical habitat designation equal the difference, or increment, between these two scenarios, and include the costs of both changes in management and increased administrative efforts that result from the designation. These changes are often thought of as “changes in behavior” or the “incremental effect” that would most likely result from the designation if finalized. Specific measured differences between the baseline (without critical habitat) and the designated critical habitat (with critical habitat) may include, but are not limited to, the economic effects stemming from changes in land or resource use or extraction, environmental quality, or time and effort expended on administrative and other activities by Federal landowners, Federal action agencies, and in some instances, State and local governments or private third parties. These are the incremental effects that serve as the basis for the economic analysis.

There are a number of ways that designation of critical habitat could influence activities, but one of the important functions of this memorandum is to explain any differences between actions required to avoid jeopardy to the species versus actions that may be required to avoid adverse modification of critical habitat. The Service is working to update the regulatory definition of adverse modification since it was invalidated by several Courts of Appeal, including the Ninth Circuit and the Fifth Circuit. At this time (without updated regulatory language) the Service is analyzing whether destruction or adverse modification would occur based on the statutory language of the Act itself, which requires the Service to consider whether the agency’s action is likely “to result in the destruction or adverse modification of habitat which is determined by the Service to be critical” to the conservation of the species. To perform this analysis, the Service considers how the proposed action is likely to affect the function of the critical habitat unit to serve the intended conservation role. The information provided below is intended to identify the possible differences for these species under the two different section 7 standards (i.e., jeopardy to the species and adverse modification of critical habitat). Ultimately, however, a determination of whether an activity may result in the adverse modification of critical habitat is based on the effects of the action to the designated critical habitat in its entirety. The information provided below is intended to identify the possible differences for the Dakota skipper and Poweshiek skipperling under the different section 7 standards for jeopardy to the species and adverse modification of critical habitat.

BACKGROUND

Extant populations of the Dakota skipper and Poweshiek skipperling are restricted to native prairie remnants and prairie fens; native tallgrass prairies have been reduced by 85 to 99.9 percent of their former area throughout the historical range of both species and native mixed grass prairies have been reduced by 72 to 99 percent.

Habitat loss and degradation of native prairies and prairie fens contributed to the decline of the Dakota skipper and Poweshiek skipperling; factors leading to habitat loss and degradation include conversion of native prairie to cropland or development; ecological succession to woody vegetation; encroachment of invasive species; past and present fire, haying, or grazing management that degrades or destroys the species’ habitats; flooding; and groundwater depletion, alteration, and contamination.

The Dakota skipper's range once included native prairie in five states and Canada, extending from Illinois to Saskatchewan; it now occurs only in native prairie remnants in portions of three states and two Canadian provinces.

Once common and abundant throughout native prairies in 8 states and at least one Canadian province, the Poweshiek skipperling is now limited to 2 small and isolated native prairie remnants in Wisconsin, 10 small and isolated prairie fen remnants in Michigan, and a prairie complex in Manitoba.

DAKOTA SKIPPER (*Hesperia dacotae*)

The Dakota skipper is proposed to be listed as a threatened species under the Act concurrently with the proposed designation of critical habitat. The Dakota skipper is a small- to mid-sized butterfly that inhabits high-quality tallgrass and mixed-grass prairie in Minnesota, North Dakota and South Dakota in the United States, and the provinces of Manitoba and Saskatchewan in Canada. The species is presumed to be extirpated from Iowa and Illinois and from many sites within occupied its range in the United States. Threats identified to the Dakota skipper include degradation of its native prairie habitat by overgrazing (for a more detailed characterization of over grazing, see the proposed rule), invasive species, gravel mining, and herbicide applications; inbreeding, population isolation, and prescribed fire are threats to some populations.

In total, we proposed 27,782 acres (ac) (11,243 hectares (ha)) for designation as Dakota skipper critical habitat, located in the following states and counties:

Minnesota: Chippewa, Clay, Kittson, Lincoln, Murray, Norman, Pipestone, Polk, Pope, and Swift Counties;

North Dakota: McHenry, McKenzie, Ransom, Richland, Rolette, and Wells Counties;

South Dakota: Brookings, Day, Deuel, Grant, Marshall, and Roberts Counties.

Thirty-one of the proposed critical habitat units, encompassing approximately 18,825 ac (7,618 ha) for the Dakota skipper are currently occupied by the Dakota skipper. Twenty unoccupied units, encompassing approximately 8,957 ac (3,625 ha) were also determined to be essential for the conservation of the Dakota skipper because they fulfill the requisite representation, resiliency, and redundancy of habitat for the species' viability. All unoccupied units were historically occupied by the species (*i.e.*, unoccupied units were all occupied within the past 20 years, with records in 1993 or more recently). Units where we are uncertain whether they are occupied or not were considered to be unoccupied for the purposes of the critical habitat proposal.

Both occupied and unoccupied units contain lands under various ownerships (Table 1); some units may contain multiple owners.

Unit Descriptions

For a detailed description of the 51 proposed Dakota skipper critical habitat units, see attachment (Text Descriptions of Proposed Critical Habitat Units for the Dakota Skipper and Poweshiek Skipperling).

Table 1: Proposed critical habitat for the Dakota skipper by ownership and occupancy. The percentage of the total amount of critical habitat (CH) proposed is also given for each ownership and occupancy category. Exact totals may not sum due to rounding. For a detailed description of the 51 proposed Dakota skipper critical habitat units, see attachment (Text Descriptions of Proposed Critical Habitat Units for the Dakota Skipper and Poweshiek Skipperling).

Ownership Types	Proposed Occupied CH (ac)	Percentage of Total Proposed CH that is Occupied	Proposed Unoccupied Critical Habitat (ac)	Percentage of Total Proposed CH that is Unoccupied	Total Proposed CH (ac)	Percentage of Total Proposed CH
Federal	2,946	11%	1,875	7%	4,821	17%
Tribal	1,267	5%	770	3%	2,037	7%
State	4,276	15%	3,561	13%	7,837	28%
County	463	2%	6	0%	469	2%
Private	8,221	30%	723	3%	8,944	32%
Private Conservation	1,649	6%	2,023	7%	3,672	13%
Total	18,822	68%	8,958	32%	27,781	100%

POWESHIEK SKIPPERLING (*Oarisma poweshiek*)

The Poweshiek skipperling is proposed to be listed as an endangered species under the Act concurrently with the proposed designation of critical habitat. Poweshiek skipperlings are small butterflies most often found in remnants of native prairie or in fens (in Michigan). The Poweshiek skipperling is historically known from native prairies in Illinois, Indiana, Iowa, Minnesota, North Dakota, South Dakota, Wisconsin and one Canadian province, but is now considered extirpated from Illinois, Indiana, and large portions of its historical distribution in all states except Michigan and Wisconsin. During preparation of a status assessment in 2005, there was evidence that populations were declining throughout its range, particularly in Iowa and Minnesota. Data since then confirms sharp population declines in most of its range. Of particular concern is its apparent disappearance from the

majority of sites in the heart of its range in Iowa, Minnesota, and South Dakota. Threats identified to the Poweshiek skipperling include loss and degradation of its native prairie habitat by overgrazing, invasive species, gravel mining, and herbicide applications; inbreeding, population isolation, and prescribed fire are threats to some populations.

For the Poweshiek skipperling, we proposed approximately 26,184 acres as critical habitat in the following states and counties:

Iowa: Cerro Gordo, Dickinson, Emmet, Howard, Kossuth, and Osceola Counties;

Michigan: Hillsdale, Jackson, Lenawee, Livingston, Oakland, and Washtenaw Counties;

Minnesota: Chippewa, Clay, Cottonwood, Douglas, La Qui Parle, Lincoln, Lyon, Mahnomen, Murray, Norman, Pipestone, Pope, Swift, and Wilkin Counties;

North Dakota: Richland and Sargent Counties;

South Dakota: Brookings, Day, Deuel, Grant, Marshall, Moody, and Roberts Counties;

Wisconsin: Green Lake and Waukesha Counties.

Ten proposed critical habitat units, encompassing approximately 3,542 ac (1,433 ha) are currently occupied by the Poweshiek skipperling. Fifty-one unoccupied units, encompassing approximately 22,643 ac (9,163 ha) were also determined to be essential for the conservation of the Poweshiek skipperling, because they fulfill the requisite representation, resiliency, and redundancy of habitat for the species' viability. All unoccupied units were historically occupied by the species (*i.e.*, unoccupied units were all occupied within the past 20 years, with records in 1993 or more recently). Units where we are uncertain whether they are occupied or not were considered to be unoccupied for the purposes of the critical habitat proposal.

Both occupied and unoccupied units contain lands under various ownerships (Table 2); some units may contain multiple owners.

Unit Descriptions

For a detailed description of the 61 proposed Poweshiek skipperling critical habitat units, see attachment (Text Descriptions of Proposed Critical Habitat Units for the Dakota Skipper and Poweshiek Skipperling).

Table 2: Proposed critical habitat for the Poweshiek skipperling by ownership and occupancy. The percentage of the total amount of critical habitat proposed is also given for each ownership and occupancy category. Exact totals may not sum due to rounding. For a detailed description of the 61 proposed Poweshiek skipperling critical habitat units, see attachment (Text Descriptions of Proposed Critical Habitat Units for the Dakota Skipper and Poweshiek Skipperling).

Ownership Types	Proposed Occupied CH (ac)	Percentage of Total Proposed CH that is Occupied	Proposed Unoccupied Critical Habitat (ac)	Percentage of Total Proposed CH that is Unoccupied	Total Proposed CH (ac)	Percentage of Total Proposed CH
Federal			2,537	10%	2,537	10%
Tribal			1,280	5%	1,280	5%
State	1,872	7%	8,881	34%	10,753	41%
County	244	1%	565	2%	809	3%
Private	1,099	4%	4,106	16%	5,205	20%
Private Conservation	303	1%	5,289	20%	5,601	21%
Total	3,518	13%	22,666	87%	26,185	100%

Overlap of Proposed Critical Habitat with Other Listed Species

There are no areas of proposed critical habitat that overlap with critical habitat of other federally listed species.

Overlap in Proposed Critical Habitat Between Dakota Skipper and Poweshiek Skipperling

The ranges of the Dakota skipper and Poweshiek skipperling overlap in some areas. Several of the areas that are proposed as critical habitat for the Dakota skipper, are also proposed as critical habitat for the Poweshiek skipperling. Thus, in total, about 39,035 ac (15,797 ha) is being proposed as critical habitat for both species combined; 14,931 ac (6,042 ha) of the proposed critical habitat is common to both species. See Table 3 for a list of units that contain proposed critical habitat for both species.

Table 3: Corresponding list of units that contain proposed critical habitat for both the Dakota skipper and Poweshiek skipperling.

Dakota Skipper Unit	Poweshiek Skipperling Unit	Area of Proposed Unit (Acres)
DS Minnesota Unit 1	PS Minnesota Unit 1	2,887
DS Minnesota Unit 2	PS Minnesota Unit 2	905
DS Minnesota Unit 3	PS Minnesota Unit 3	126
DS Minnesota Unit 4	PS Minnesota Unit 4	1,875
DS Minnesota Unit 5	PS Minnesota Unit 5	1,470
DS Minnesota Unit 6	PS Minnesota Unit 6	275
DS Minnesota Unit 7, Subunit A	PS Minnesota Unit 7	1,313
DS Minnesota Unit 8	PS Minnesota Unit 8	352
DS Minnesota Unit 9	PS Minnesota Unit 9	415
DS Minnesota Unit 10	PS Minnesota Unit 10	967
DS North Dakota Unit 1	PS North Dakota Unit 1	119
DS South Dakota Unit 1	PS South Dakota Unit 1	451
DS South Dakota Unit 2	PS South Dakota Unit 2	169
DS South Dakota Unit 3	PS South Dakota Unit 3, Subunit A	516
DS South Dakota Unit 4	PS South Dakota Unit 4	292
DS South Dakota Unit 5	PS South Dakota Unit 5	119
DS South Dakota Unit 6	PS South Dakota Unit 6	31
DS South Dakota Unit 7	PS South Dakota Unit 7	470
DS South Dakota Unit 8	PS South Dakota Unit 8	501
DS South Dakota Unit 9	PS South Dakota Unit 9	160
DS South Dakota Unit 10	PS South Dakota Unit 10	117
DS South Dakota Unit 11	PS South Dakota Unit 11	89
DS South Dakota Unit 12	PS South Dakota Unit 12 (portion)	531

DS South Dakota Unit 13	PS South Dakota Unit 13	56
DS South Dakota Unit 14	PS South Dakota Unit 14	189
DS South Dakota Unit 15	PS South Dakota Unit 15	188
DS South Dakota Unit 16	PS South Dakota Unit 16	348
Total Acres		14,931

BASELINE ANALYSIS

The following discussion describes the existing regulatory circumstances that are anticipated without critical habitat designation for these species. In the baseline scenario, section 7 of the Act requires Federal agencies to consult with the Service to ensure that any action authorized, funded, or carried out will not likely jeopardize the continued existence of these species.

Concurrent with the proposed designation of critical habitat, the Dakota skipper and Poweshiek skipperling are being proposed for listing as threatened and endangered species, respectively under the Act. Listing provides for conservation and protection under sections 6, 7, 9, and 10 of the Act. These include cooperative actions with States (section 6), consultation with Federal agencies for actions that may affect the species (section 7(a)(2)), protection against take of the species (take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct) (section 9), and cooperative actions with other entities and landowners for the purpose of scientific or enhancement of survival activities involving take (section 10(a)(1)(A)).

Conservation Plans/Efforts

The following are ongoing conservation efforts that provide some benefits to the Dakota skipper or Poweshiek skipperling and are considered part of the baseline because these activities will occur with or without critical habitat designation. The conservation efforts below are occurring now and may continue to happen regardless of the listing or critical habitat designation.

Voluntary Grazing Agreements:

Native prairie grasslands are the foundation of the ranching and livestock industry, but are increasingly being destroyed through conversion to row crops, such as corn and soybeans. Voluntary conservation programs, administered through USDA's Natural Resources Conservation Service and the Service's Partners for Fish and Wildlife Program, that focus on helping ranchers manage their native-prairie grasslands to stay economically viable and preserve grassland condition are vitally important to maintaining grassland dominated landscapes, particularly in North Dakota and South Dakota. Such conservation programs provide financial cost-share assistance and prescribe managed grazing on native prairie grasslands for periods of time varying from 3 to 10 years and provide incentives for ranchers

to conserve wildlife habitat; this can be a benefit for the ranching community and the Dakota skipper and Poweshiek skipperling. These voluntary grazing programs may benefit the Dakota skipper and Poweshiek skipperling to the extent that native prairie that meets the habitat needs of these species is protected. Voluntary grazing agreements may occur in privately owned areas of proposed critical habitat, particularly in Minnesota, North Dakota, and South Dakota.

Federal Regulations or Acts

The following Federal laws and regulations provide some benefits to the Dakota skipper or Poweshiek skipperling and are considered part of the baseline because these benefits will continue with or without critical habitat designation. These Federal laws and regulations apply to unoccupied and occupied habitats throughout the range of both species.

Pittman-Robertson/Dingell Johnson Federal Aid Laws

The Federal Aid in Wildlife Restoration Act (Pittman-Robertson Act) uses an excise tax on firearms and ammunition to provide funds to states for the management of animals and their habitats, primarily focusing on lands used for hunting. The Pittman-Robertson Act may benefit the Dakota skipper and Poweshiek skipperling to the extent that native prairie that meets the needs of these species may be protected.

Clean Water Act

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

Section 404 of the CWA regulates the discharge of dredged or fill material into waters, including wetlands. Activities in waters of the U.S. regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the U.S., unless the activity is exempt from Section 404 regulation. Many normal farming practices, such as plowing, cultivating, and minor drainage are exempt from Section 404.

Section 319 of the CWA regulates nonpoint source (NPS) pollution. Through a variety of programs (including, as appropriate, non-regulatory or regulatory programs), states assist and encourage producers to use best management practices to reduce or prevent instances of nonpoint source pollutants migrating into waters. States manage the nonpoint source program on a watershed-by-watershed basis whenever possible.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) is an environmental law that established a U.S. national policy promoting the enhancement of the environment. The effect of NEPA is to set up procedural requirements for all federal government agencies to prepare environmental impact statements and environmental assessments, which analyze the environmental effects of proposed federal agency actions.

Migratory Bird Treaty Act

Large native grass tracts with good wetland complexes are given the highest priority when Migratory Bird Treaty Act funds are used to purchase grassland easements, which may be beneficial to the Dakota skipper and Poweshiek skipperling to the extent that native prairie that meets the habitat needs of these species is protected (See Grassland Easement discussion below).

Land and Water Conservation Fund

The United States' Land and Water Conservation Fund (LWCF) provides funds and matching grants to federal, state and local governments for the acquisition of land and water, and easements on land and water, for the benefit of all Americans. The LWCF is primarily set up to fund recreation and the protection of national natural treasures in the forms of parks and protected forest and wildlife areas. As such, the LWCF may be used to preserve native prairie habitats, thereby benefiting the Dakota skipper and Poweshiek skipperling (see Grassland Easement discussion below).

North American Wetlands Conservation Act

North American Wetlands Conservation Act (NAWCA Funds) provides funds and matching grants to state and local governments and private entities for the conservation of land and water resources, and easements on land and water, for the benefit of all Americans.

Federal Land Management

The following Federal agencies own and manage lands within some of the areas proposed as critical habitat. Their ongoing land management activities are considered part of the baseline because they will provide some benefits to the Dakota skipper or Poweshiek skipperling with or without critical habitat designation. For those future proposed activities that may affect the Dakota skipper or Poweshiek skipperling or its critical habitat, section 7 consultation has or will occur and may be considered as part of the incremental effects of critical habitat designation (see further discussions that follow).

U.S. Fish and Wildlife Service

Waterfowl Production Areas (WPA) are a small component of the National Wildlife Refuge System and primarily focus on the production of waterfowl, but also provide some benefit to the Dakota skipper and Poweshiek skipperling. In general, prairie habitat management on WPAs and Refuges is directed towards improving and maintaining native prairie and planted grasslands using short-duration intensive cattle grazing, haying, periodic prescribed burning and planting of native grasses. A combination of chemicals, mowing, haying, and burning are used to control invasive plant species. Some Refuge lands are managed as crop land to benefit wildlife, primarily waterfowl. Both the Dakota skipper and Poweshiek skipperling have been documented on several areas that are managed as WPA or National Wildlife Refuges.

Grassland Easement Program

In 1989, the Service began a grassland easement program to help prevent conversion of grassland to cropland. A grassland easement transfers limited perpetual rights to the Service for a onetime, lump-sum payment; perpetual easements are bought from willing landowners. The program was developed and is carried out by managers, biologists, and realty specialists with an interest in protecting resources at the landscape scale. Grassland easements generally prohibit the cultivation of grassland habitat, while still permitting the landowner traditional livestock uses. Grassland easements restrict the landowner from altering the grass by digging, plowing, disking, or otherwise destroying the vegetative cover. Haying, mowing, and seed harvest are restricted until July 16 of each year. Grassland easements are inspected yearly for possible violations of the easement contract. Grassland easements that are part of the Refuge system are subject to NEPA requirements.

The grassland easement program further advanced the philosophy of protecting working landscapes that provide conservation benefits in the agricultural environment. The Service intended the grassland easement and management policy to reflect a partnership between the Service and the surface owner of the property. Each potential easement is evaluated for its value to wildlife. Large native grass tracts with good wetland complexes are given the highest priority when Migratory Bird Treaty Act funds are used to purchase the easement. Land and Water Conservation Funds are also used to preserve northern tallgrass prairie. This program may benefit the Dakota skipper and Poweshiek skipperling to the extent that native prairie meeting the habitat needs of these species is protected.

U.S. Forest Service

The U.S. Forest Service (Forest Service) has designated the Poweshiek skipperling and the Dakota skipper as sensitive species (a species identified by a Regional Forester for which population viability is a concern) in North Dakota (USDA Forest Service 2011). The Forest Service's objectives for sensitive species benefit Dakota skipper and Poweshiek skipperling where they occur (or could occur) on Forest Service lands; however, the majority of populations of both species do not occur within Forest Service lands. The Poweshiek skipperling has been documented at two sites on the Sheyenne National Grasslands; however, it has not been observed

since 2001 at one site and 1996 at the other. Therefore, these Forest Service objectives, although promising, have little ability to affect the range wide status of the species. If Forest Service lands were to be occupied by either species in the future, these objectives may benefit the species at a local scale.

North Dakota Army National Guard

The North Dakota Army National Guard (NDARNG) operates two training sites in North Dakota; Camp Grafton South, a 8,977 ac (3,633 ha) tract of North Dakota State owned grasslands in Eddy County, ND and the Garrison Training Area (also known as the Douglas Creek Military Reservation), a leased 706 ac (286 ha) site in Mclean County, ND managed by the U.S. Army Corps of Engineers (USACE). The NDARNG has developed Integrated Natural Resource Management Plans (INRMP) for both Camp Grafton South and the Garrison Training Area in accordance to the Sikes Act. NDARNG regularly consults with the Service for activities related to training or other military missions. The NDARNG view themselves as good stewards of the natural resources at both training sites. The NDARNG has considered the Dakota Skipper as a candidate species in their land management operations under the INRMP, prepared under section 101 of the Sikes Act. Neither the Garrison Training Area nor Camp Grafton South were included in lands proposed as critical habitat. The Dakota skipper has been documented at Camp Grafton and the Garrison Training Area in 2003; however, it has not been observed since 2003 at either site, and these records had little associated habitat or other information that verified the species' presence. Therefore, the NDARNG efforts, although promising, have little ability to affect the range wide status of the species. If these lands were to be occupied by either species in the future, these objectives may benefit the species at a local scale.

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) holds lands in trust for Native American Tribes and provides management oversight for numerous tribally owned or allotted tracts within the range of these species. Some actions occurring on Tribal trust lands require BIA permits or authorizations.

Federal Highway Administration

Working through the State Departments of Transportations, the Federal Highway Administration (FHWA) participates in and contributes funding for highway and road construction and maintenance. This infrastructure often borders or divides occupied and unoccupied butterfly areas, including critical habitat units. Suitable butterfly habitat may also be found in the road ditch of some roads and highways that can be subject to routine activities by the road departments.

U.S. Department of Agriculture Farm Services Administration

The United States Department of Agriculture Farm Service Agency (FSA) oversees a number of voluntary conservation-related programs that work to address a large number of farming and ranching related conservation issues, such as drinking water protection, reducing soil erosion, preserving wildlife habitat, preserving and restoring forests and wetlands, and aiding farmers whose farms are affected by natural disasters. The FSA accomplishes those goals through conservation programs such as the Conservation Reserve Program, Conservation Reserve Enhancement Program, Emergency Conservation Program, Farmable Wetlands Program, Grassland Reserve Program, Voluntary Public Access and Habitat Incentive Program, and others.

The Conservation Reserve Program (CRP) offers an annual rental payment to farmers in exchange for removal of environmentally sensitive land from agricultural production and planting species that will improve environmental quality. An offshoot of CRP, the Conservation Reserve Enhancement Program (CREP), provides an annual rental payment in exchange for the removal of farm land that falls under high-priority conservation issues identified by government and non-government organizations.

The Emergency Conservation Program (ECP) provides financial aid and technical assistance for farmers and ranchers to restore farmland damaged by natural disasters and for emergency water conservation measures during severe droughts.

The Farmable Wetlands Program (FWP) provides annual rental payments to farmers and ranchers in return for restoring farmed wetlands and wetland buffer zones that are farmed.

The Grassland Reserve Program (GRP) provides a rental payment to farmers in return for voluntary limitations on future development of their land. This program works to prevent grazing and pasture land from being converted into cropland or used for urban development.

The Voluntary Public Access and Habitat Incentive Program (VPA-HIP) encourages farm owners to make their land accessible to the public for recreation.

The FSA programs may benefit the Dakota skipper or Poweshiek skipperling to the extent that native prairie meeting the habitat needs of these species may be protected or managed in a way that is conducive to the species.

U.S. Department of Agriculture National Resources Conservation Service

National Resources Conservation Services (NRCS) provides programs to help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters.

The NRCS provides financial assistance to agricultural producers, landowners, historically underserved, and Tribes to address various conservation issues through several programs including the following: Agricultural Management Assistance (AMA) provides assistance to

practices that help control erosion and improve water quality, Conservation Stewardship Program (CSP) provides assistance to install new or help maintain existing conservation activities and systems, and Environmental Quality Incentives Program (EQIP) provides assistance to implement conservation practices to address natural resource concerns. The Agricultural Act of 2014 no longer authorizes new assistance through the Wildlife Habitat Incentive Program (WHIP) - the provisions of WHIP have been incorporated into EQIP. AMA is not applicable to Minnesota.

The NRCS offers easements programs to landowners who want to protect and enhance their lands to benefit agriculture and the environment. These easement programs include the following: Farm and Ranch Lands Protection Program (FRPP) protects agricultural productivity and related conservation values of the land, Grasslands Reserve Program (GRP) restores and protects rangeland, pastureland, and other grasslands while maintaining the land's suitability for grazing, Healthy Forest Reserve Program (HFRP) is in place to help restore, protect and enhance forest ecosystems to promote recovery of threatened and endangered species, and the Wetlands Reserve Program (WRP) is in place to restore, protect, and enhance wetlands on eligible lands.

The EQIP Conservation Innovation Grants (CIG) program awards grants through a competitive process to non-Federal governmental or nongovernmental organizations, including Tribes, or individuals to develop new innovative approaches to conservation and conservation technologies.

The NRCS programs may benefit the Dakota skipper or Poweshiek skipperling to the extent that native prairie meeting the habitat needs of these species may be protected or managed in a way that is conducive to the species.

Tribal Regulations

Nine Dakota skipper units and seven Poweshiek skipperling units are at least partially owned and managed by Native American entities. Those areas include both occupied and unoccupied units. Critical habitat designation is unlikely to change types or intensities of activities on Tribal lands because most of these areas are generally managed in a manner that is conducive to the two species, such as alternate year fall haying.

The Sisseton Wahpeton Oyate (SWO) Office of Environmental Protection develops and implements environmental policies and regulations to protect, preserve, and enhance the environment for the health and safety of the people of the Lake Traverse Reservation. The SWO implements several programs that may provide some protections to the Dakota skipper and Poweshiek skipperling and their habitats. The SWO Lake Traverse Reservation is located in the Northeastern part of South Dakota and southeastern North Dakota. The Reservation boundaries include two North Dakota counties and five South Dakota counties.

The SWO Office of Environmental Protection implements the Clean Water Act (CWA) Section 106 Water Pollution Prevention Program to collect water quality data to assess the existing and potential non-point sources of surface water pollution on the Reservation with the intention to develop a comprehensive plan to restore and protect tribal water resources. Implementation of the CWA may protect some Dakota skipper and Poweshiek skipperling habitat (e.g., wetland prairies) from pollution.

The SWO Office of Environmental Protection implements Section 103 Tribal Air Program to maintain National Ambient Air Quality Standards for the criteria pollutants: Ozone, Carbon Monoxide, Nitrogen Oxides, Particulate Matter, Sulfur dioxide and lead. Air borne agriculture chemicals and particulate matter (dust) are the pollutants common to rural areas, such as Dakota skipper and Poweshiek skipperling habitat. It is not known if these human standards are protective of the two butterflies.

The SWO Office of Environmental Protection receives an Environmental Protection Agency (EPA) grant to fund their Indian Environmental General Assistance Program (GAP), which has the objectives to strengthen environmental capacity in the technical, legal, and administrative infrastructure on the Lake Traverse Reservation. The specific objectives of the GAP program are to provide oversight and build new environmental programs; develop environmental codes; and draft an Environmental Management Plan; develop a comprehensive environmental outreach program; act on Tribal Council directives for unforeseen environmental problems; assist in the establishment of a Tribal Historic Preservation office; and implement solid waste projects on the Lake Traverse Reservation. Approval of the Environmental Codes provides the SWO with regulatory authority and control over the environment on tribal lands within the exterior boundaries of the Lake Traverse Reservation. The Environmental Codes gives the SWO a tool to decelerate, modify or prevent environmentally degrading operations and to seek remediation of existing pollution. These Codes may provide some protections to the Dakota skipper and Poweshiek skipperling. Furthermore, the SWO Office of Environmental Protection currently administers grants from the EPA (Brownsfield Tribal Response Grant) and the Bureau of Indian Affairs (BIA Solid Waste Grant) to manage solid waste on the Lake Traverse Reservation.

The mission of the Three Affiliated Tribes is to conserve, protect, and enhance fish, wildlife and plants within the Fort Berthold Indian Reservation boundaries for the continuing benefits of the members of the tribe and those that reside on the reservation.

State Wildlife Laws

The following wildlife laws by the states where the Dakota skipper or Poweshiek skipperling occurs provide some benefits to the Dakota skipper or Poweshiek skipperling and are considered part of the baseline because these benefits will continue with or without critical habitat designation.

The Dakota skipper is listed as endangered under Minnesota's endangered species statute, a change from its previous status of threatened. The change became effective on August 19, 2013. Under the Minnesota statute, a person may not take, import, transport, or sell any portion of an endangered species of wild animal or plant, or sell or possess with intent to sell an article made with any part of ... an endangered species of wild animal or plant" except as permitted by the Minnesota DNR (Minnesota Statutes 2012, 84.0895). Until recently, the Poweshiek skipperling

was listed as a species of special concern in Minnesota, which conveys no prohibitions against take of the species, however, on August 19, 2013, the Minnesota DNR updated its list of Endangered, Threatened, and Special Concern species and now Poweshiek skipperling is listed as endangered.

The Poweshiek skipperling is listed as threatened under state endangered species statutes in Iowa and Michigan and as endangered in Wisconsin. South Dakota has an endangered species act, but no invertebrates are currently listed. South Dakota put forth a proposal to add the Dakota skipper to the state endangered species act list, but it was not finalized. Although the Dakota skipper is not listed as threatened or endangered under South Dakota's endangered species statute, the State natural heritage program considers the species to be imperiled because of rarity due to very restricted range and very few populations. Both species are considered nongame species in South Dakota – a scientific collector's permit is required for collection of nongame species. North Dakota does not have a mechanism for conferring protection to threatened or endangered species at the State level.

State Endangered species statutes provide state natural resource or conservation agencies with the authority to regulate collection of individuals and related activities (for Poweshiek skipperling in Iowa, Michigan, Minnesota and Wisconsin and Dakota skipper in Minnesota), but we have no information to suggest that collection is a stressor that impacts populations of the species. With the exception of the regulation of some incidental take in Wisconsin and Minnesota, the statutory protections afforded by these state statutes may do little to protect or mitigate Poweshiek skipperling or Dakota skipper from non-collection threats. While some threats may result in direct mortality of both species, such as ill-timed fires, most threats to the species are indirect and state laws that regulate direct harm to the species do not address these threats. In Iowa, for example, Poweshiek skipperling populations are likely now extirpated due to habitat destruction and conversion and other undetermined threats, despite its presence on the State's list of threatened species since 1994. In Wisconsin, where threats from actions that may incidentally take Poweshiek skipperlings may be addressed in conservation plans, state endangered species protections do not protect the species from stochastic events and habitat fragmentation that are threats to the State's small and isolated populations.

Minnesota's Native Prairie Tax Exemption

The Prairie Tax Exemption program exempts eligible lands from property taxes and is administered by the MN DNR in cooperation with local County Tax Assessors. To be eligible for Native Prairie Tax Exemption, a parcel of land must meet several criteria: Has never been plowed, cultivated, or reseeded; Has not been severely altered by heavy grazing or herbicides; Is dominated throughout by native prairie vegetation with no, or limited, tree cover; Has at least 5 native-prairie species of grasses or sedges and 12 native prairie forb species present; Is not in use as pasture (annually hayed tracts may still qualify); and Has at least 5 acres (smaller tracts with important rare species habitat or other significant prairie features may still qualify). This program may benefit the Dakota skipper and Poweshiek skipperling by providing a financial incentive to protect native prairie that meets habitat needs of these species.

Minnesota Native Prairie Bank Program

The Minnesota Native Prairie Bank Program allows landowners, through a conservation easement with the MN DNR, to protect native prairie on their property that has never been plowed. Landowners receive payment for their native-prairie land while keeping it in private ownership. Certain agricultural practices are included in some easements, such as livestock grazing, mowing for hay, or harvesting of native seed. Because funding for the program is limited, the MN DNR prioritizes tracts for funding based on the quality of the prairie, the variety of plants and animals present, and its proximity to other prairie units. Payments for permanent Prairie Bank easements are based on a percentage of the average value of cropland in the township as recorded in tax assessment records. This program may benefit the Dakota skipper and Poweshiek skipperling to the extent that native prairie that meets the habitat needs of these species is protected. Approximately 112 acres in MN Unit 3 for the Dakota skipper and Poweshiek skipperling is enrolled in the Minnesota Native Prairie Bank Program.

Federal agencies and other project proponents that are likely to consult with the Service under section 7 absent the critical habitat designation

In the baseline scenario, section 7 of the Act requires Federal agencies to consult with the Service to ensure that any action authorized, funded, or carried out will not likely jeopardize the continued existence of the Dakota skipper or Poweshiek skipperling. Some of the Federal agencies and projects that would likely go through the section 7 consultation process whether or not critical habitat is designated include the following:

The following is a list of Federal Agencies with a brief description of the types of consultation that they may request.

Army Corps of Engineers may request consultation on Clean Water Act Section 404 permit applications to discharge dredge or fill of wetlands, and activities associated with mineral leasing in the Bakken oil area.

Bureau of Indian Affairs may request consultations for roads; housing developments; mineral rights development; developing conservation, land and water management plans; rangeland improvements; noxious weed control, and projects related to grants administered by this agency.

The Bureau of Land Management (BLM) may request consultation through administration of subsurface mineral rights, particularly in the Bakken area of North Dakota.

Department of Agriculture may request consultations for grants and loans for farm loans, housing assistance, rural development, utility services, crop and livestock insurance, and others.

Department of Energy may request consultation on energy development, construction, and upgrades. Western Area Power Administration (WAPA) may request consultation on wind power developments, transmission line corridors, and maintenance projects or upgrades.

Department of Health may request consultation on various development projects.

Department of Housing and Urban Development may request consultation on housing and commercial development, wastewater pipeline construction and upgrades, wastewater facility construction and upgrades.

Department of Transportation may request consultation on road construction and upgrades, land drainage, oil or gas pipeline development projects.

Environmental Protection Agency may request consultation on pesticide registrations, Section 319 permits applications for nonpoint source pollution, and activities under the SPCC program, wastewater management, construction and upgrades wastewater pipeline construction and upgrades, drinking water treatment, distribution, and storage facilities, and land and water management plans.

Farm Service Agency (USDA) may request consultation on administration, funding and implementation of conservation and agricultural assistance programs such as the Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), Grassland Reserve Program, Emergency Conservation Program, Farmable Wetlands Program, other water, soil, and habitat conservation programs, and the Disaster Assistance Program.

Federal Aviation Administration may request consultation for construction and maintenance of communication towers and airport transportation development and upgrades.

Federal Communications Commission may request construction and maintenance of communications towers.

Federal Emergency Management Agency may request consultation on bridge construction and maintenance, power lines, levees or dike construction, wastewater pipelines, roads and highway construction, storm-water and water quality modification projects.

Federal Energy Regulatory Commission may request consultation on oil and gas exploration, production and development and renewable energy (e.g., wind energy) exploration, production and development.

Federal Highway Administration may request consultation on road and highway construction maintenance, and upgrades.

The Fish and Wildlife Service may request intra-service consultation on land and water management activities such as prescribed fires, construction and maintenance of outdoor recreation facilities, noxious weed control, livestock grazing and pesticide/chemical use, and HCP development.

The Forest Service may request consultation on land and water management activities such as prescribed fires, livestock grazing, recreation construction and maintenance, mineral leasing in the Bakken oil area, noxious weed control and pesticide/chemical use, and vegetation management activities.

Natural Resources Conservation Service (USDA) may request consultation on activities funded, administered, or implemented through conservation programs such as the Conservation Reserve

Program, and other water, soil, and habitat conservation programs such as, Environmental Quality Incentives Program (EQIP), Emergency Watershed Protection Program (EWPP) and Conservation Stewardship Program (CSP) and conservation practices.

North Dakota Army National Guard may request consultation on for activities related to training or other military missions, such as related construction or development.

Public and Indian Housing may request consultation on housing development activities.

Rural Development (USDA) may request consultation on wind power development, residential development, water supply delivery and wastewater pipeline construction, upgrades, modification, replacement, and maintenance.

Rural Housing Service (USDA) may request consultation on projects associated with loans and grants for housing and community facilities administered through this program.

Rural Utilities Service (RUS) (USDA) may request consultation on water, waste treatment, electric power (e.g., electrical transmission line construction and maintenance) and telecommunications services, construction and maintenance. RUS may also request consultation on projects associated with grants and loans administered through this program.

Consultation History Within The Critical Habitat Designation Area

To date, no section 7 formal consultations have occurred for the Dakota skipper or Poweshiek skipperling because these species are not yet listed under the Endangered Species Act (Act). However, one or both species have been mentioned in several section 7 informal consultations for other listed species because they may have been present in the county or area of the project. Poweshiek skipperling was considered in approximately 60 informal consultations; most of these were of medium complexity and have resulted in a concurrence with a no comment, no-effect, or not likely to adversely affect determination for the species. Similarly, the Dakota skipper was considered in approximately 7 informal consultations; most of these were of medium complexity and have resulted in a concurrence with a no comment, no-effect, or not likely to adversely affect determination for the species. The types of projects that were consulted on included: commercial and residential development; land management plans; recreation construction and maintenance; wastewater pipelines and discharge; transportation projects; transmission lines; oil and gas pipelines; land drainage; vegetation management; wind power; levees and dikes; water treatment plants and water supply; communication towers; and stream-bank stabilizations. Projects addressed through informal consultations were of medium complexity and involved staff time necessary to determine site-specific information on species status and potential project impacts and draft written responses to the appropriate lead agency.

One formal conference is currently active for the Dakota skipper regarding an Intra-Service State Wildlife project to survey for prairie butterflies in Iowa –there are no proposed critical habitat units for Dakota skipper in Iowa. Another conference is trending towards a formal conference due to a wind development project that is not expected to be constructed until after the listing decision has been finalized. Six informal conferences have been completed since the Dakota skipper was a candidate for listing for the following types of projects; a proposed grazing plan in

a Minnesota WPA, storm water discharge, monitoring for the Minnesota Wildlife Action Plan, a Federal Aid Grant, and an Intra-Service conference regarding a right-of-way easement in a few Minnesota WPAs. The proposed grazing plan and the right-of-way easement were not within proposed critical habitat areas. One informal conference been completed since the Poweshiek skipperling was a candidate for listing, on a proposed burn project in Wisconsin (with proposed unit PS Wisconsin Unit 1). Species lists were generated for approximately 220 projects for Dakota skipper and 3 projects for Poweshiek skipperling. Technical assistance was provided for Dakota skipper on approximately 656 projects and approximately 27 projects for Poweshiek skipperling. Species lists and technical assistance was provided for the following types of projects: agriculture; land management plans; land acquisition; wastewater stormwater and discharge; transportation projects; transmission lines; wind power; and communication towers. Projects addressed through technical assistance and informal conference were of medium complexity and involved staff time necessary to determine site- specific information on species status and potential project impacts, develop recommendations to avoid or minimize potential impacts, and draft written responses to the appropriate lead agency.

Once Critical Habitat Is Designated, Will The Outcome Of Section 7 Consultations In Occupied Habitat Be Different?

What Types of Project Modifications Are Currently Recommended Or Will Likely Be Recommended By The Service To Avoid Jeopardy (i.e., The Continued Existence Of The Species)?

When proposing or carrying out actions that affect areas in occupied habitat, there are a variety of ways to avoid or minimize impacts to both species. Conservation guidelines have been developed for the Dakota skipper - see attachment (Dakota skipper Conservation Guidelines). No conservation guidelines have been developed for the Poweshiek skipperling, however Poweshiek skipperling conservation guidelines are expected to be very similar to the Dakota skipper guidelines. There may be some differences between the guidelines for the two species, however, to take into account the vulnerability of Poweshiek skipperling larvae in early spring (because the dormant larvae are present above ground) and the differences that prairie fen habitat may pose for conservation. In general, these conservation guidelines would be recommended to avoid jeopardy to the species and may result in some recommended project modifications. However, if take is reasonably certain to occur from actions in occupied habitat, then permitting mechanisms (section 7 consultation or HCPs) may be needed, even if conservation guidelines are followed, unless the proposed 4(d) rule that exempts take of Dakota skipper for certain activities is applicable.

Conservation of the Dakota skipper and Poweshiek skipperling relies on careful implementation of management practices that conserve the species' habitat, but that also minimize adverse effects on the species' survival and reproduction. In the absence of grazing, fire, or haying, Dakota skipper and Poweshiek skipperling habitat is likely to become too brushy or wooded to support the species. Nevertheless, management must be implemented carefully to avoid

excessive mortality or interfering with reproductive activities that occur during the flight period in late June or early July. Minimizing adverse effects of management is especially important for populations that inhabit small and isolated habitat patches.

The litter-dwelling habits of Dakota skipper and Poweshiek skipperling larvae, the single annual flight period, and habitat fragmentation require managers to carefully plan and implement habitat management activities. Dakota skippers and Poweshiek skipperling are larvae for the vast majority of their annual life cycle. Fire is assumed to kill some percentage of larvae and under certain conditions mortality may be high. Poweshiek skipperling larvae are likely more vulnerable to fire since the larvae stay above ground level, whereas Dakota skipper larvae build shallow shelters underground. Post-fire recovery in the burned area may take years, depending on the proportion of the local population affected, immigration from unburned areas, and the degree of population isolation. When Dakota skipper and Poweshiek skipperling larvae metamorphose into adults in late June or early July, habitats must provide nectar sources that are sufficient in quality and quantity to meet the butterflies' water and nutritional requirements. Although brief, the adult flight period is crucial – failure to reproduce is likely to result in extirpation in isolated habitat patches. Therefore, it is essential that managers consider the likely impacts on both larvae and adults within the management area when planning and implementing management actions. This is likely to require at least an initial assessment of the site and its Dakota skipper or Poweshiek skipperling population by a species expert, and periodic reevaluation.

The recommended Dakota skipper conservation measures include the timing and intensity of prescribed fires; the timing and intensity of haying and native seed harvest; the intensity of grazing, habitat preservation and restoration, invasive species control, coordinated management and genetic considerations. Details of each conservation measure are in the Dakota skipper Conservation Guidelines attachment.

INCREMENTAL IMPACT ANALYSIS

The following discussion describes the regulatory circumstances that are anticipated with critical habitat, as proposed, for the Dakota skipper and Poweshiek skipperling. Under section 7 of the Act, a jeopardy analysis focuses on the effects to the species' reproduction, numbers, or distribution. An adverse modification analysis focuses on a project's impacts to the species' essential physical and biological features (PBFs) and primary constituent elements (PCEs), or other habitat characteristics in areas determined by the Secretary to be essential for the conservation of the species, and analyze impacts to the capability of the critical habitat unit to maintain its conservation role and function for the species. When consulting under section 7 of the Act in designated critical habitat, independent analyses are made for jeopardy and adverse modification.

Occupied Critical Habitat Areas

In consultations on projects that might impact areas where the Dakota skipper or Poweshiek skipperling is present, any adverse modification decision would likely be coincident to a jeopardy determination for the same action. Projects that are modified to minimize impacts to occupied critical habitat will also minimize impacts to individuals; therefore, it is unlikely that we will be able to distinguish measures implemented solely to minimize impacts to the

critical habitat from those implemented to minimize impacts to individuals in occupied areas. Therefore, the incremental costs in these consultations will likely be limited to administrative costs.

Under limited circumstances, it may be possible to differentiate between measures implemented to minimize impacts to individuals and to avoid jeopardy to the species range-wide, and measures implemented to minimize impacts to habitat characteristics (PCEs/PBFs) and avoid adverse modification of critical habitat. For most temporary – and almost all permanent – impacts to habitat or genetic connectivity, the Service, in coordination with the lead Federal agency, may recommend compensatory habitat enhancement and protection. Permanent impacts would include actions that limit connectivity between populations, fragment habitat, destroy native remnant prairie by plowing or development that change the hydrology of a native prairie fen. Conservation measures recommended by the Service will protect or enhance habitat features described as PCEs (PBFs) within the proposed critical habitat areas. In critical habitat, compensatory measures should be within or, possibly adjacent to, the same critical habitat unit to ensure that the unit would continue to serve its recovery function within the larger critical habitat designation. An example might include measures to manage and improve the native grassland structure and composition of dispersal habitat instead of leaving land to become overgrown by woody vegetation or invasive species. In such circumstances, the cost of implementing such measures could be attributable to minimizing impacts to critical habitat.

In rare instances, even after measures to minimize and compensate for impacts of a project are considered, we might determine that a project would not jeopardize the species but would result in adverse modification of critical habitat in occupied areas. Any costs of implementing reasonable and prudent alternatives associated with such a consultation would be incremental costs beyond those attributable to this species being listed.

Of particular importance when analyzing impacts to the PBFs and PCEs is the location of a project within a critical habitat unit and the proportion of the unit affected. Projects that 1) significantly impact the features essential to the conservation of the species or 2) isolate habitat segments within a critical habitat unit might result in adverse modification if the impacts affect the ability of that unit to continue to function and support occupancy. For example, a partial loss of dispersal grasslands dominated by nonnative plant species may not result in a determination of adverse modification, whereas significant losses of native remnant prairies central to the conservation of a population of Dakota skipper or Poweshiek skipperling is more likely to result in a determination of adverse modification if not offset by conservation actions.

If we determine during consultation that an adverse modification finding may be likely, we would suggest to the action agency changes to the project or reasonable and prudent alternatives to eliminate or reduce the impacts. These measures or alternatives may include modifying the project such that (1) less land use would occur within critical habitat; (2) it would avoid specific areas important to these species; (3) a range of conservation guidelines to protect the species' habitat are incorporated; or (4) measures to enhance and protect habitat within the same critical habitat unit are adopted.

Unoccupied Critical Habitat Areas

Of the 112 units proposed as critical habitat for both species as critical habitat, 71 units are considered unoccupied in the proposed rule. There are two categories of habitat proposed as unoccupied critical habitat: Areas where we know the species is absent, and areas where we are uncertain whether the species may still be present. For purposes of the critical habitat proposal, we considered both types as unoccupied. However, for purposes of section 7 consultation, we may consider the species to be present in those areas with uncertain occupancy. In this section, we discuss those unoccupied areas where we believe the species is truly absent (a discussion on the uncertain areas follows).

In consultations involving unoccupied critical habitat where we believe the species to be truly absent, all costs associated with section 7 consultations would be attributable to the designation of critical habitat. There may also be incremental project modification costs that would be attributable to the designation of critical habitat and additive to incremental administrative costs. In these cases, we believe a reasonable method to determine the potential incremental economic impacts of these activities would be to assume that if activities with a Federal nexus would alter the PBFs to an extent that appreciably reduces the conservation value of critical habitat for the Dakota skipper or Poweshiek skipperling, the costs associated with conservation measures implemented to mitigate those impacts would be attributable to the critical habitat designation. In cases where we determine that an adverse modification finding may be likely, we work with the Federal agency involved to identify reasonable and prudent alternatives that would eliminate or reduce those impacts to a point where adverse modification is no longer likely. The resulting project modifications would appropriately be considered to be an incremental cost of the critical habitat designation.

In truly unoccupied areas that are designated as critical habitat, additional conservation efforts may be recommended to avoid adverse modification that restrict the types or intensity of land or water use activities or) result in delays of greater than two weeks. Such conservation efforts may affect the following: The amount of land available for development; the intensity or volume of resource extraction (*e.g.*, gravel mining); development of renewable energy projects (*e.g.*, wind); agricultural activities (*e.g.*, grazing intensity, haying time restrictions), including the application of pesticides or herbicides; or water use via restrictions on groundwater withdrawals or water diversions. For example, we may recommend that haying occur after July 16 in some unoccupied critical habitat areas to facilitate the regeneration of flowering herbaceous plants. In addition, for some unoccupied critical habitat areas that contain grassland dispersal areas, we may recommend that dispersal habitat is not planted with agricultural crops that the species cannot traverse.

The unoccupied critical habitat units where the Dakota skipper is truly absent include: DS Minnesota Unit 10 and DS South Dakota Units 1, 15, and 16. The units that are unoccupied by Poweshiek skipperling include: PS Iowa Units 2-11, PS South Dakota Units 1, 4,6, 8, 9, 11, 12, 14-16 and 18.

Unoccupied Units Where We Are Uncertain of the Occupancy

The status of the species is unknown at a number of sites where the species may be present at densities that are so low that it has not been recently detected or where it may actually be absent. Additional surveys are needed at these sites to confirm the status of one or both species. For the purposes of critical habitat, these areas were considered unoccupied, but for the purposes of section 7 consultation, we might consider the species may be present. In those areas where we are uncertain of the presence of the species, the Service may consult on activities regardless of the critical habitat designation because there is still a sufficient likelihood of the species' presence. Therefore, consultation may be required on these areas due to the potential for effects to the species, regardless of the critical habitat designation.

Surveys for adult Dakota skipper and Poweshiek skipperling will be constrained by the short duration and timing of the adult flight period. Even if the species is not present within a project footprint when the surveys occur, the Service will still need to analyze any effects to prairie habitats and dispersal areas within designated critical habitat regardless of survey results. Under these circumstances, it is possible to differentiate between measures implemented to minimize any such impacts to the habitat characteristics and measures implemented to minimize impacts to individuals and to avoid jeopardy to the species range-wide. In such circumstances, virtually all recommended project modifications would be attributable to minimizing impacts to designated critical habitat.

Project proponents conducting activities on land under Tribal, Federal, State, and private conservation organization ownership are likely to be aware that the species may be present on lands proposed for critical habitat, because surveys for these species are often funded or planned with their participation. Furthermore, the results of such surveys are typically reported to these entities. Project proponents who may not have been aware of the species' presence if critical habitat had not been proposed on their land may include persons who did not have a survey for the species on their land but are adjacent to land where one or both species were detected.

The units identified as unoccupied for purposes of critical habitat but where the Dakota skipper may be present include: DS Minnesota Units 3,6, 7A, 7B, 7C, 8, 11, 13A, 13B, 14 – 15, DS North Dakota Units 1, 2, 9 -10, and DS South Dakota Units 3, 5, 13, and 18. The units identified as unoccupied for purposes of critical habitat but where the Poweshiek skipperling may be present include: PS Iowa Unit 1, PS Michigan Unit 5, PS Minnesota Units 1 – 6, 7A, 8 - 18, PS North Dakota Units 1 -3, PS South Dakota Units 2, 3A, 3B, 5, 7, 13 and 17. Descriptions of the units that are proposed as unoccupied critical habitat but where the species may be present are given in the supporting attached document "Text descriptions of proposed critical habitat units for Dakota skipper and Poweshiek skipperling.pdf".

Identical Units Occupied by One Species but Unoccupied by the Other

The Dakota skipper and Poweshiek skipperling have overlapping ranges in Minnesota, South Dakota, and North Dakota and, therefore, have some overlapping proposed critical habitat units in those states. Approximately 6,042 ha (14,931 ac) of proposed critical habitat is common to both species. Most units that are common to both species have the exact same footprint, with a

few exceptions. In some instances, the occupancy status may differ by species, for example, there may be a unit that is occupied by the Dakota skipper but is unoccupied by the Poweshiek skipperling, but is proposed as critical habitat for both species. Descriptions of which units correspond to one another are given in the attached supporting document “Text descriptions of proposed critical habitat units for Dakota skipper and Poweshiek skipperling.pdf” and in Table 3. In the areas that are designated as critical habitat for both species, but where only one species is present, the Service may consult on activities regardless of the critical habitat designation because of the presence of the one species (activities may affect both species similarly).

Critical habitat designation may trigger other regulatory requirements or conservation recommendations pursuant to other non-ESA laws, regulations, or policies. This may occur, for example, where state or local government agencies change their land management or permitting practices specifically because of the presence of critical habitat. Whereas no Best Management Practices (BMPs) have been defined specifically for the Dakota skipper or Poweshiek skipperling, the Service has developed conservation guidelines and recommendations. Dakota skipper conservation guidelines are attached to this memo. If we determine that an adverse modification finding might be likely, we would outline reasonable and prudent conservation measures that would minimize potential impacts to sensitive prairie habitat, mainly through the implementation of established conservation guidelines.

There are two types of habitat for the Dakota skipper and Poweshiek skipperling: (1) high quality native remnant prairie and (2) dispersal habitat. For consultations in both types of habitat, in most instances, we would first seek to avoid impacts. Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Dakota skipper and Poweshiek skipperling. These activities include, but are not limited to:

- (1) Actions that would significantly alter the native plant community such that native grasses or flowering forbs are not readily available during the adult flight period or larval stages in the life cycle of the species. Such activities could include, but are not limited to, conversion to agriculture or for nonagricultural development, heavy grazing, haying prior to July 15, broadcast or indiscriminate spraying of herbicides or pesticides, and some fire. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of these species by reducing larval and adult food sources that could result in direct or indirect adverse effects to individuals and their life cycles.
- (2) Actions that would significantly disturb the unplowed (untilled) soils and thereby reduce the coverage of native plants and increase the extent of nonnative plant and woody vegetation within the prairie habitat. Such activities could include, but are not limited to, plowing (tilling), heavy grazing, mining, development, and other disturbances to the soil such that the native plant community is reduced in extent in favor of nonnative plants and woody vegetation. These activities can result in the loss of the native plant community necessary for adult and larval food sources to levels below the tolerances of the species.
- (3) Actions that would significantly alter the hydrology of the prairie or prairie fen habitat. Such activities could include but are not limited to water withdrawal or diversion, agricultural tilling, urban development, mining, and dredging. These activities may lead to changes in water levels that would degrade or eliminate the native prairie plants and their habitats to levels that are beyond the tolerances of the species and invasion by aggressive non-native plant species.

Federal agency actions within designated critical habitat that may require consultation include, but are not limited to, management and any other landscape-altering activities on Federal lands; land management by the U.S. Forest Service; issuance of section 404 Clean Water Act permits by the U.S. Army Corps of Engineers; land management by the U.S. Fish and Wildlife Service; construction and management of gas pipeline, wind facilities and associated infrastructure, and power line rights-of-way by the Federal Energy Regulatory Commission; construction and maintenance of roads or highways by the Federal Highway Administration. Examples of these types of actions include activities funded or authorized under the Farm Bill Program, Environmental Quality Incentives Program, Clean Water Act (33 U.S.C. 1251 *et seq.*), and Partners for Fish and Wildlife Program.

Other than agricultural assistance programs under the Farm Services Administration or the National Resources Conservation Service (as discussed above), we expect few activities on non-Federal lands to have a Federal nexus (e.g., Federal funding or permits) that allow for U.S. Fish and Wildlife Service involvement through the section 7 process and require conservation measures.

BEHAVIOR CHANGES

Will the designation provide new information to stakeholders resulting in different behavior?

In an era of high commodity prices and expanding agricultural technological innovations, a critical habitat designation may influence some owners to sell or plow their grasslands or it may erode landowner interest and acceptance of conservation programs, which would undermine butterfly and prairie conservation. For example, some private stakeholders and conservation agencies are concerned that designating critical habitat on private lands may harm existing or future conservation partnerships necessary to conserve a range of prairie species, including the Dakota skipper and Poweshiek skipperling, especially in light of the factors that may be relaxing some of the “natural constraints” (e.g., soil quality and slope) on conversion of prairie to cropland. Continued private landowner acceptance of conservation programs has been identified as one of the most important factors determining whether efforts to protect prairie from conversion will succeed—more than 90 percent of land in the range of the Dakota skipper may be privately owned, and protection of remaining grassland by conservation easements is now the primary tool used to slow their conversion to cropland (Doherty et al. 2013, p. 13).

Permission to survey some private lands for these butterflies may be curtailed in the future, due to the critical habitat designation. Some landowners have publicly cautioned others that they should be careful about allowing surveys for rare species on their lands. Additionally, there is a strong belief among landowners that designation of private lands as critical habitat would impact property values. Landowners indicated that land brokers or auctioneers should be contacted to get a sense of how much impact a critical habitat designation may have on resale value of that property.

Describe How Local Agencies Might Change Project Requirements.

To avoid conflicts or project delays local agencies may alter their plans when they may be involved with proposed actions that are also administered, funded or carried out by one or more Federal agencies. This may be done in an attempt to minimize the time that it may take to secure the cooperation of a sponsoring or permitting federal agency that must comply with section 7 consultation requirements with the ESA.

How Many New Consultations May Result from the Critical Habitat Alone?

New consultations for critical habitat alone may occur, particularly for proposed projects in unoccupied habitat. Unoccupied Dakota skipper units include DS Minnesota Unit 10 and DS South Dakota Units 1, 15, and 16. Unoccupied Poweshiek skipperling units include: PS Iowa Units 2-11, PS South Dakota Units 1, 4, 6, 8, 9, 11, 12, 14-16, and 18. PS Iowa Units that are owned by The Nature Conservancy and Iowa Department of Natural Resources, and some private areas are protected areas managed as native prairie – although it may be uncommon, those units may require section 7 consultations on land management and land management plans. The remaining units that are privately owned without protection will likely not require consultations unless there is a Federal nexus on a proposed project. In South Dakota, most of the unoccupied units are at least partially owned by Native American entities or private landowners. They may become applicants for federal programs that may affect critical habitat, such as federally funded grassland easement or agricultural assistance programs, although easements that preclude plowing or other activities that damage native grassland may have only beneficial impacts. Projects with entirely beneficial effects to critical habitat would always be eligible for the informal consultation process, which involves minimal administrative work. PS South Dakota units 1,4,6, 8, 15, 16 and 18 are owned by South Dakota Game, Fish and Parks or the Service and may require consultation on land management, such as prescribed fire, grazing management, or invasive species control. Management activities in lands owned by South Dakota Game, Fish, and Parks that are supported with funds from a Federal agency may result in the need for section 7 consultations, but this may not be common and the agency may have discretion with regard to the funds used for any specific management activities.

Based on comments received, NRCS believes the following regarding new consultations that may result from critical habitat:

Minnesota: Critical habitat will not significantly change the number of section 7 consultations, due to the limited acreage under private ownership.

North Dakota: Anticipate 2-3 consultations per year due to critical habitat. ND NRCS also anticipated additional costs to conduct surveys for the species in potential project areas.

South Dakota: Aware of 23 existing program contracts or applications, but do not specify which would be attributed to critical habitat alone.

Wisconsin: Expect few new or reinitiated consultations.

How Many New HCPs May Be Undertaken Or Reinitiated As A Result Of The Critical Habitat Designation Alone?

We are unaware of new HCPs that may be undertaken or reinitiated as a result of critical habitat alone. Most likely, the presence of one or both species would be the primary factor prompting a land owner or agency to develop an HCP.

Will There Be Changes In Permitting Processes By Other State Or Local Agencies Or Other Land Managers?

Changes in permitting processes by state or local agencies may occur in states in which a federally listed species then automatically becomes state listed, however this is not the state regulations in most of the states in which we proposed critical habitat for either species. In Michigan, federally listed species automatically receive protection under state law, but the Poweshiek skipperling is already state-listed in Michigan.

In Michigan, the state administers the CWA Section 404 permit program. If critical habitat is designated, the Michigan Department of Environmental Quality will be required to consider effects to critical habitat in order to comply with CWA Section 404(b)(1) guidelines prohibiting a permit that would result in adverse modification of critical habitat.

Upon Federal listing, some South Dakota state laws automatically apply to federally listed species. These laws apply to transportation of federally listed species and some permitting processes.

Lands with Conservation Areas or Preserves

Some proposed critical habitat areas may be all or partially owned and managed by a private conservation agency, state, or federal agency that may offer some protections to the species and its habitat even absent critical habitat designation. Approximately 14 proposed units for Dakota skipper and 25 proposed units for Poweshiek skipperling contain areas that are at least partially owned and managed as a conservation or preserve area. These areas may already provide some protections for the species and their habitats. Additional units may contain areas that provide some protections for the species and their habitats, for example, Service-owned Waterfowl Production Areas. Descriptions of the units that contain areas with existing conservation or preserve areas are given in the supporting document "Text descriptions of proposed critical habitat units for Dakota skipper and Poweshiek skipperling.pdf" (available online http://www.fws.gov/midwest/endangered/insects/dask/pdf/TextDescriptionsOfPCH_DASKandP OSKwithLitCited.pdf). In rare instances, in unoccupied areas, additional conservation efforts may be recommended to avoid adverse modification that (1) restrict the types or intensity of land

or water use activities, or (2) result in time delays of greater than two weeks. For example, we may recommend that haying occur after July 16 in some unoccupied critical habitat areas, particularly in those areas where we are uncertain of the species presence. In addition, for some unoccupied critical habitat areas that contain grassland dispersal areas, we may recommend that dispersal habitat is not planted with agricultural crops that the species cannot traverse, if it were to recolonize the area. These recommendations may result in changes to existing land management plans in some areas.

Dakota skipper critical habitat units with conservation areas or preserves include: DS Minnesota Units 1, 2, 4 -6, 7A-7C, 8, 10, 13A, 13B, and 15, DS North Dakota Unit 2, and DS South Dakota Unit 16. The critical habitat units with conservation areas or preserves that may provide some protections for Poweshiek skipperling include: PS Iowa Units 1 -4, PS Michigan Units 3, 4, 5, 7, 8, PS Minnesota Units 1, 4,-6, 7A, 8, 10, 11, 15, 17, and 18, PS North Dakota Units, PS South Dakota Units 3B, 6, 16, and 17; and PS Wisconsin Units 1 and 2.

The following additional Dakota skipper units may also contain areas that provide some protections for the species and their habitats: DS Minnesota Units 3, 5, 9, 11, and 14; DS North Dakota Units 1, 5, 11 – 13, and DS South Dakota Units 1, 3 – 8, and 15-18. The following additional Poweshiek skipperling units may also contain areas that provide some protections for the species and their habitats: PS Iowa Units 7 and 11, PS Michigan Units 1, 2, and 6. PS Minnesota Units 3, 9, 12, and 13, PS North Dakota Units and PS South Dakota Units 1, 3A, 4, 5, 7, 8, 15 and 18.

CONCLUSION

In summary, although the outcomes of individual consultations under section 7 of the Act will vary, we believe a reasonable method to determine the potential incremental impacts of this proposed critical habitat would be based on the following:

Proposed projects in areas where uncertainty exists over whether the Dakota skipper or Poweshiek skipperling is currently present at a specific site, may result in section 7 consultations and associated costs because the species may still be present and, thus, a proposed project would have some potential to affect the species. It might be difficult to determine occupancy before a project may be implemented due to the short adult flight period during which surveys may be conducted.

We are proposing to designate 20 and 51 critical habitat units for the Dakota skipper and the Poweshiek skipperling, respectively, which are considered to be unoccupied. These unoccupied units actually contain sites with a range of likelihoods of species presence. Due to the possibility that the species is present at 19 of the 20 units that are considered unoccupied by Dakota skipper, there is still sufficient likelihood of the species' presence that section 7 consultation may be required based solely on the potential for impacts to the species, regardless of the presence of critical habitat. The same is true for 31 of the 51 unoccupied units for the Poweshiek skipperling. At the remaining unoccupied units – where we consider the species to be truly absent – section 7 consultations would not occur absent the designation of critical habitat or the rediscovery of the species at the site. Thus, in those 21 units, all cost associated with those consultations are attributable

to the critical habitat designation.

In areas designated as critical habitat for both species, but considered occupied by one and unoccupied by the other, the Service would consult on activities, regardless of the critical habitat designation.

In rare instances, a project would not jeopardize the species but could result in adverse modification of critical habitat. In these instances, the costs of implementing reasonable and prudent alternatives would be attributable to critical habitat.

Approved:

Actg. Lisa Mandell

Field Supervisor, Wisconsin-Minnesota Field Office
U.S. Fish and Wildlife Service

3-27-14

Date

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