

# **SOUTH DAKOTA MAPPING CONVENTION UPDATE**

## **ENVIRONMENTAL ASSESSMENT**



**MA[ '49. 2010**

**SOUTH DAKOTA  
NATURAL RESOURCES CONSERVATION SERVICE**

**2010 SOUTH DAKOTA MAPPING CONVENTION UPDATE  
ENVIRONMENTAL ASSESSMENT**

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## SECTION 1

### 1.0 INTRODUCTION

The concept of the South Dakota (SD) Mapping Conventions (SDMC) was first introduced and agreed upon in a 1994 Memorandum of Agreement (MOA) between the Soil Conservation Service (SCS)/Natural Resources Conservation Service (NRCS), the United States Army Corps of Engineers (USACE), the US Environmental Protection Agency (USEPA), and the United States Fish and Wildlife Service (USFWS). The MOA provided coordination procedures between the USACE and the NRCS concerning the delineation of wetlands for the purposes of the Food Security Act of 1985, as amended (Act), and Section 404 of the Clean Water Act (CWA).

This MOA stated, *“Accurate and consistent wetland delineations are critical to the success of this MOA. For this reason, the signatory agencies will work cooperatively at the field level to: 1) achieve interagency concurrence on mapping conventions used by SCS for wetland delineations on agricultural lands.”* Furthermore, *“Each SCS State Conservationist (STC) will take the lead in convening representatives of the USACE, USEPA, USFWS, and SCS to obtain the written concurrence of each of the signatory agencies... on a set of mapping conventions for use in making wetland delineations. Only mapping conventions concurred upon by all signatory agencies will be used by SCS for wetland delineations.”* Lastly, *“For the purposes of this MOA, the term agricultural lands means those lands intensively used and managed for the production of food or fiber to the extent that the natural vegetation has been removed and cannot be used to determine whether the area meets applicable hydrophytic vegetation criteria in making a wetland delineations.”*

The 1994 MOA was dissolved through the issuance of a 2005 joint memorandum. In February 2005, the NRCS and the USACE issued a memorandum providing guidance on conducting wetland determinations for the Act and the CWA. Section III(D)(2) of this Memorandum states, *“The agencies will use the appropriate procedures in the current National Food Security Act Manual or the current USACE or Federal Wetland Delineation Manual applicable to the region, including current national guidance, to make wetland determinations.”* Although the 1994 MOA was dissolved in February 2005, the concept of a wetland mapping convention remains a valid concept according to NRCS regulations (see Section 1.2) and NRCS Circular Number 4 dated December 23, 2009.

The SDMC was last revised in 2002. Since 2002, the 1994 MOA was dissolved and the USACE has updated the current federal wetland delineation procedures. The Interim Regional Supplement to the USACE Wetland Delineation Manual: Great Plains Region was published in March 2008 by the USACE. On April 18, 2008, the USACE released a Public Notice adopting this supplement for use in the Omaha District which includes SD. Additionally, the Interim Regional Supplement to the USACE Wetland Delineation Manual: Midwest Region was published in September 2008 by the USACE. On October 30, 2008, the USACE released a Public Notice adopting this supplement for use in the Omaha District which includes SD.

## 1.1 PURPOSE AND NEED

According to the SDMC preamble, mapping convention updates are required when policy, regulations, laws, and/or procedures change. Therefore, a multi-disciplinary panel of experts, known as the Mapping Convention Workgroup (Workgroup), was assembled to identify improvements to the current state mapping conventions. Notable among the potential areas of improvement is for the SD NRCS to retain the ability to use offsite wetland determination procedures. Efforts to include optional offsite wetland procedures would be a substantial improvement to the NRCS' ability to complete quality work in a timely manner, while continuing to meet the purposes and intent of the Wetland Conservation (WC) provisions of the Act.

The purposes of this Environmental Assessment (EA) are:

1. Investigate opportunities to increase wetland determination efficiency within the limitations of existing policy, regulations, and law, while maintaining high quality wetland determination products.
2. Formulate and evaluate methods to address improvement opportunities.
3. Recommend effective improvements for implementation.

## 1.2 WETLAND CONSERVATION STATUTE, REGULATIONS, AND POLICY

The Act, as amended through Public Law 104-130 (April 9, 1996,) and Public Law 108-498 (December 23, 2004,) provide the Secretary of Agriculture with sole authority and responsibility to administer the Act. The Secretary of Agriculture assigned the NRCS the role of conducting the technical determinations associated with the Act.

The NRCS promulgated regulations to administer the Act. Title 7 (Agriculture) of the Code of Federal Regulation (CFR), Part 12 – Highly Erodible Land (HEL) and Wetland Conservation (WC), establishes the NRCS regulations used in carrying out the HEL/WC provisions of the Act. The purpose of the provisions of this part are to remove certain incentives for persons to produce agriculture commodities on HEL or converted wetland and to thereby: 1) Reduce soils loss due to wind and water erosion; 2) Protect the nation's long-term capability to produce food and fiber; 3) Reduce sedimentation and improve water quality; and 4) Assist in preserving the functions and values of the nation's wetlands (7 CFR 12.1 (b)).

The regulations outline specific circumstances as to when and how wetland determinations will be conducted. Pursuant to 7 CFR 12.30 (c), "*Certification of a wetland determination shall be completed according to delineation procedures agreed to by the COE, EPA, USFWS, and NRCS.*" And, pursuant to 7 CFR 12.6 (c) (5), "*A determination of whether or not an area meets the highly erodible land criteria or whether wetland criteria, identified in accordance with the current Federal wetland delineation methodology in use at the time of the determination and **that are consistent with current mapping conventions**, may be made by the NRCS representative based upon existing records or other information and **without the need for an onsite determination.***"

In order to implement the regulations and the Act, the NRCS developed the National Food Security Act Manual (NFSAM). The NFSAM has been and will continue to be revised to reflect the latest policy guidance. According to Part 514.1 A (3), "*To identify and label wetlands*

*subject to the wetland conservation provisions, NRCS uses offsite [(7 CFR 12.6 (c) (5))] and onsite [(7CFR 12.6 (c) (6))] methods. Site visits are conducted only in following circumstances:*

- 1. Before withholding any USDA benefits [7 CFR 12.30 (c) (4)].*
- 2. When a USDA program participant requests an onsite determination [7 CFR 12.6 (c) (7)].*
- 3. When there is an appeal [7 CFR 12.6 (c) (6)].*
- 4. When a USDA program participant requests a pre-conversion minimal effect determination [7 CFR 12.31 (d)].*
- 5. In response to an FSA-569 or a whistleblower complaint.*
- 6. In conjunction with a compliance status review.*
- 7. If there is inadequate information to make determinations offsite [7 CFR 12.6 (c) (6)].*

When and where appropriate, the NRCS relies on the current federal wetland delineation methodology found in the 1987 USACE Wetland Delineation Manual, Technical Report Y-87-1 ('87 Manual), and its Regional Supplements. According to pages 44-45, (Part IV, Section C) of the '87 Manual, there are three levels of routine wetland determinations:

1. Level 1 – Onsite Inspection Unnecessary: This level may be used when information is sufficient for making a determination for the entire project area.
2. Level 2 – Onsite Inspection Necessary: This level must be employed when there is insufficient information already available to characterize the vegetation, soils, and hydrology of the entire project area.
3. Level 3 – Combination of Levels 1 and 2: This level should be used when there is sufficient information already available to characterize the three factors on a portion but not all of the project area. Methods for Level 1 may be applied to portions of the area where adequate information already exists and Level 2 must be applied to the remainder of the project area.

### **1.3 SCOPE**

According to Part 514.0 of the NFSAM, the Act requires the NRCS to delineate, determine, and certify wetlands located on land subject to the WC provisions on a farm or ranch in order to establish a producer's eligibility for certain United States Department of Agriculture (USDA) program benefits [16 U.S.C., Section 3822, and 7 CFR 12.30]. Policy and procedures concerning NRCS technical and financial assistance is beyond the scope of this document. Therefore, wetland resources not associated with the WC provisions of the Act may be affected by actions outside the NRCS' purview and are not considered within this document.

The NRCS is required to conduct an Environmental Evaluation (EE) on all actions to determine if there is a need for an EA or an Environmental Impact Statement (EIS). The EE process results in a "Finding" or conclusion that, either further National Environmental Policy Act (NEPA) analysis is required (EA or EIS) or that no EA or EIS is required because: 1) There is no federal action; 2) The action is categorically excluded; or 3) There is an existing NRCS NEPA document that has sufficiently analyzed the effects of this action. The NRCS-CPA-52 form is used to document the results of the evaluation and show compliance with NRCS regulations implementing NEPA at 7 CFR Part 650. The EE is located in Appendix A. The EE identified that the need for the action is controversial in nature and the scope of substantial impacts or extraordinary circumstances to

multiple special environmental concerns including wetlands and threatened and endangered species is beyond the EE (Section 5.1). Therefore, the NRCS proceeded to prepare this EA.

#### **1.4 PRIOR STATE MAPPING CONVENTIONS**

The use of mapping conventions and their updates has occurred since the NRCS “Wetland Inventory” process was initiated after passage of the Act. Between 1988 and 1991, a wetland inventory was conducted in SD. Shortly thereafter, the 1994 SDMC was developed. The 1994 SDMC contained information regarding certification and update procedures and provided for the use of “offsite” determinations under certain conditions (Page 8). Subsequently, the 1998 Northern Plains Region Wetland Determination and Delineation Procedures (1998 NPR) were developed and replaced the 1994 SDMC. The 1998 NPR procedures provided for the use of “offsite” determinations under certain conditions (Step 6, Page 4). However, the 2000 SDMC required an “onsite” verification of potential wetlands as does the current 2002 SDMC.

## SECTION 2

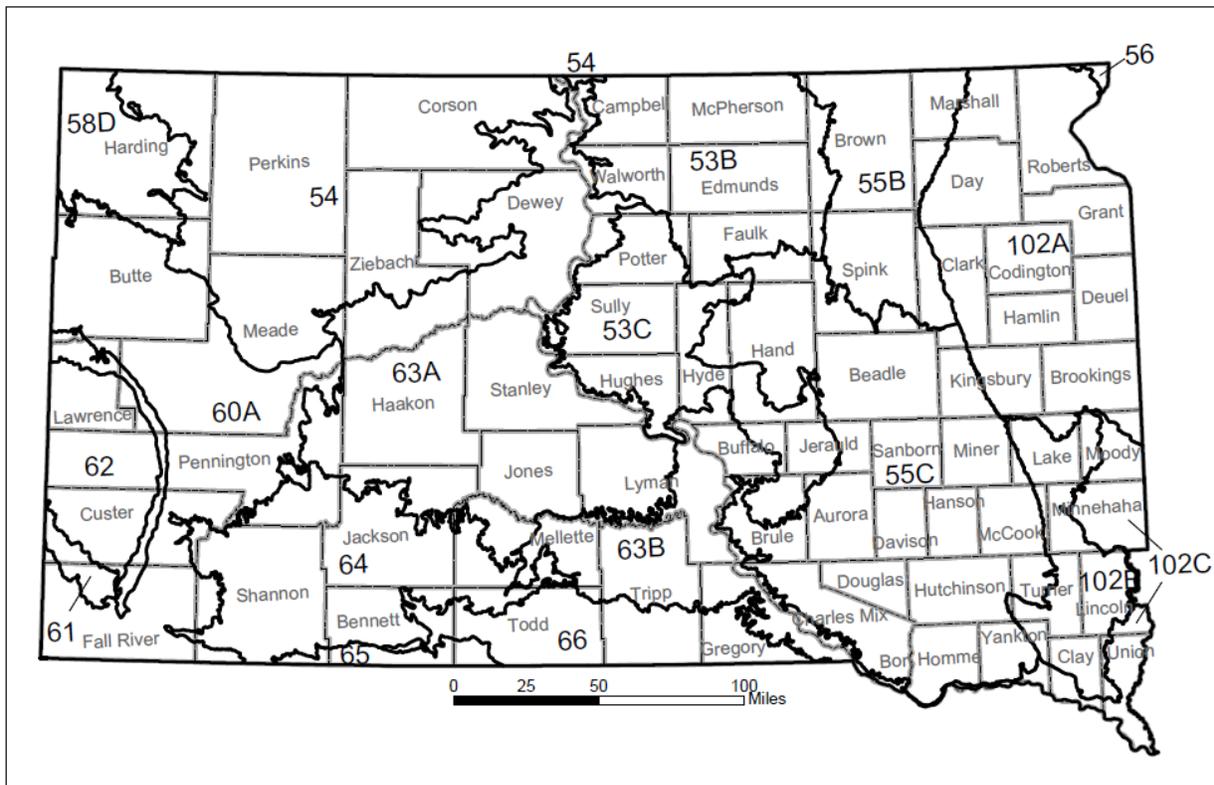
### 2.0 EXISTING AND WITHOUT-PROJECT CONDITIONS

This section describes the existing, without-project, conditions in the State of SD to the extent possible within the context of Section 1 above. The State of SD is the limit of the study area or region of influence. This chapter is a description of the resources as they currently exist and are forecasted to exist in the future without changes to the SDMC.

### 2.1 MAJOR LAND RESOURCE AREAS

Major Land Resource Area (MLRA) information was obtained from Agriculture Handbook 296 (2006), Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin, and a detailed MLRA report, for SD, is located in Appendix B. The MLRAs are geographically associated land resource units (LRUs).

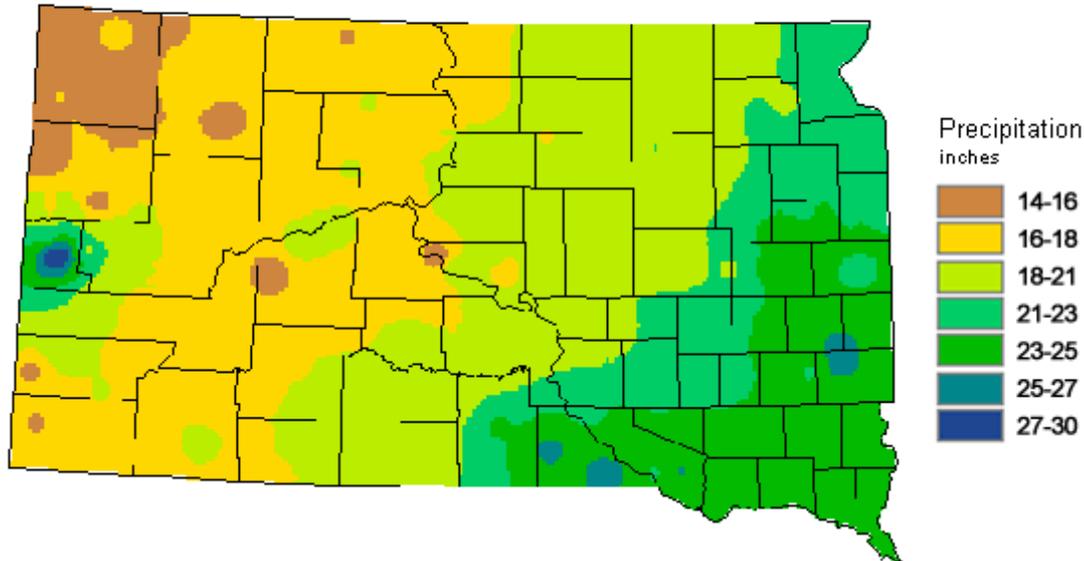
The dominant physical characteristics of the MLRAs are described such as physiography, geology, climate, water, soils, and land use. Major cities, highways, and culturally significant federal and state owned lands within each MLRA are also listed. The SD MLRA map is provided below.



Specific physiographic information described includes: 1) physiographic section, 2) province, 3) major division, and 4) topography. Specific geology information described includes bedrock and surficial geology.

Specific climate information described includes: 1) a range of the average annual precipitation for the driest to the wettest parts of the area; 2) the shortest distribution of precipitation, 3) a range of the average annual air temperature; and 4) the shortest, longest, and average length of the frost-free period for each resource area. A general precipitation map is provided below.

Precipitation Normals for 1971 through 2000



Specific water information described includes United States Geological Survey (USGS) publications of estimated surface and ground water use and the location of surface and ground water resources. Specific soils information includes: 1) dominant soil moisture and temperature regimes; 2) mineralogy; and 3) texture of the dominant soils.

Specific land use information described includes: the NRCS National Resources Inventory (NRI) 1997; 2) the relative extent of the federally or privately owned land is indicated; 3) the extent of the land used for cropland (including hayland), range, forest, industrial and urban developments, water, and other special purposes is indicated; and 4) a list of the principal crops grown and the type of farming practiced.

The NRCS NRI land cover/land use data was updated in 2003. Table 2.1 below provides an estimate of the revised NRI. Land cover and land use classes, in SD, includes cropland, pastureland, rangeland, Conservation Reserve Program (CRP) land, forest land, developed land, water, federal land, and other rural land.

**Table 2.1 2003 National Resources Inventory Total Surface Area by Land Cover/Use by State, in Thousands of Acres, with Margins of Error**

<u>Land Cover/Use</u>	<u>Acres (in 1,000s)</u>
Cropland	17,807
CRP Land	1,297
Pastureland	1,985
Rangeland	22,054
Forest Land	503
Other Rural Land	1,458
Developed Land	981
Water Areas	880
Federal Land	3,112

## 2.2 AIR QUALITY

Ambient air quality is determined by measuring the ambient pollutant concentrations of particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, etc., and comparing the concentration to the corresponding standards as determined by the USEPA. According to the SD Department of the Environment and Natural Resources (SD DENR) Air Quality Program (Internet search on January 29, 2010; <http://denr.sd.gov/des/aq/>.) there are no nonattainment areas in SD.

## 2.3 WATER RESOURCES

### 2.3.1 Surface Water and Surface Water Quality

The SD DENR prepared an integrated 305(b) and 303(d) report (draft, *The 2010 South Dakota Integrated Report for Surface Water Quality Assessment*) pursuant to Sections 305(b), 303(d), and 314 Federal Water Pollution Control Act (P.L. 95-217) otherwise known as the CWA. This document provides an assessment of the quality of SD's surface water resources and identifies the impaired waterbodies that need Total Maximum Daily Load (TMDL) restrictions.

South Dakota has approximately 9,289 miles of perennial rivers and streams (Table 2.2) and approximately 85,841 miles of intermittent streams. Approximately 6,021 of the stream miles have been assessed in the past five years (October 2004 to September 2009). During this 5-year interval, 33 percent of assessed stream miles were found to support the assigned beneficial use while 67 percent did not support one or more beneficial uses. Fifty percent of stream miles designated for immersion recreation supported that beneficial use. A total of 108 different streams or stream segments are listed as impaired and require TMDL development.

In addition to rivers and streams, SD has 569 lakes and reservoirs with specific aquatic life and recreational beneficial use classifications. The four Missouri River mainstem reservoirs were not included in the total lake acres but were included in the monitored river mileage. The SD DENR assessed 132 of the 569 classified lakes. The assessed lakes account for 70 percent of the total classified lake acreage. Approximately 79 percent of the assessed lake acreage was considered to support all beneficial uses. A total of 45 lakes are listed as impaired and require TMDL development. Sediment and nutrients conveyed in surface water runoff are the main nonpoint source pollutants impacting SD lakes and reservoirs. Similar to previous reporting periods, nonsupport for fishery/aquatic life uses was caused primarily by total suspended solids (TSS)

from agricultural nonpoint sources (NPS) and natural origin. Nonsupport for recreational uses was primarily caused by fecal coliform and *E. coli* contamination from livestock and wildlife contributions.

South Dakota has an estimated 1.78 million acres of small depression wetlands with shallow water habitat. South Dakota Surface Water Quality Standards contain provisions to include wetlands as “waters of the state.” Wetlands are assigned the beneficial use of fish and wildlife propagation, recreation, and stock watering, which provides protection under existing narrative and numeric water quality standards. (SD DENR 2010)

**Table 2.2 2010 SD DENR Integrated Report for Surface Water Quality Assessment Summary**

Total number of river/stream miles	95,130*
Number of perennial river miles (subset)	9,289*
Number of intermittent stream miles (subset)	85,841*
Number of border river miles of shared river/streams (subset)	360**
Miles of ditches and canals (artificial waterways)	424**
Number of classified lakes/reservoirs/ponds	569
Acres of classified lakes/reservoirs/ponds	193,298*
Acres of freshwater wetlands	1,780,859***

\*Estimated from the National Hydrography Dataset (1:100,000 scale)

\*\*USEPA 1991, \*\*\*National Wetlands Inventory

### 2.3.2 Wetlands

In 1984, the USFWS (Tiner 1984) estimated approximately 2,000,000 wetland acres covered SD and by 1984 35 percent (700,000 acres) of those wetland acres were lost. For the purposes of this document, wetland resources will be discussed within the geographic areas of eastern SD (east of the Missouri River) and western SD (west of the Missouri River).

#### Eastern South Dakota Wetlands

The following wetland information is summarized from Johnson, R. R. and K.F. Higgins (1997) *Wetland Resources of Eastern South Dakota*. Wetland information was reported using the USFWS Classification of Wetlands and Deepwater Habitats of the United States (USFWS 1979) and USFWS National Wetland Inventory (NWI) data analysis. The majority of eastern SD is encompassed by the glaciated Prairie Pothole Region (PPR). By the mid-1980s, wetlands and deepwater habitats accounted for approximately 2,222,000 acres or 10 percent of the landscape. Of this total, palustrine system wetlands constitute approximately 80 percent (1,781,000 acres); lacustrine system wetlands and deepwater habitats approximately 17 percent (372,000 acres); and Riverine system wetlands approximately 3 percent (69,000 acres).

Approximately 933,000 wetland basins covering approximately 2,129,000 acres are either palustrine or lacustrine systems. Temporary basins account for approximately 56 percent (521,000 acres) of the total number of basins and approximately 18 percent (391,000 acres) of the total area. Seasonal basins account for approximately 36 percent (335,000 acres) of the total number of basins and 26 percent (554,000 acres) of the total area. Semipermanent basins make up about 8 percent (76,000 acres) of the total basins and 34 percent of the total area. Permanent

basins comprise less than 1 percent of the total number of basins and about 20 percent of the total area. A total of 603 permanent basins are impoundments, mostly in the Missouri River reservoirs. The typical (median) size of basins is very small at less than 0.5 acres (0.4 acres). Temporary and seasonal basins are most abundant in the James River Lowland and Minnesota-Red River Lowland physiographic regions. Natural semi-permanent and permanent basins are most abundant on the Prairie Coteau physiographic region.

### **Western South Dakota Wetlands**

The following wetland information is summarized from Rieger et al. (2006) *Demographics of Western South Dakota Wetlands and Basins*. Wetland information was reported using the USFWS Classification of Wetlands and Deepwater Habitats of the United States (USFWS 1979) and NWI data analysis.

Surface water accounts for approximately 2.5 percent of western SD and is divided into palustrine (50 percent), lacustrine (42 percent), and Riverine (8 percent) systems. There are 30 percent fewer hectares of NWI-delineated wetlands in western SD than in the eastern half of the state (1.0 hectares equals about 2.47 acres). Approximately 173,000 wetland basins occur in the west half of the state. Temporary basins account for approximately 36 percent; seasonal basins represent approximately 29 percent; semipermanent basins represent 34 percent; and permanent basins account for about 1 percent of the total number of basins. There are fivefold fewer basins in the western versus eastern SD.

## **2.4 WILDLIFE**

Wildlife includes terrestrial and aquatic invertebrates (e.g., insects, worms, and mussels) and terrestrial and aquatic vertebrates (e.g., fish, birds, mammals, reptiles, and amphibians). Wildlife animals encompass game (e.g., deer, ducks, and pheasants) and nongame (e.g., butterflies, baitfish, songbirds, and toads). South Dakota is home to 46 species of reptiles and amphibians (Kiesow 2006); more than 100 fish species (Neumann and Willis 1994); more than 400 species of birds (Tallman et al. 2002); more than 175 species of butterflies (Marrone 2002); and approximately 95 species of mammals (Higgins et al. 2000).

Listing all the wildlife species in this EA would be impractical. However, the SD Department of Game, Fish and Parks (SD GF&P) has numerous books available concerning SD wildlife. Specific publications include:

1. Field Guide to Amphibians and Reptiles of South Dakota
2. Guide to the Common Fishes of South Dakota
3. History of Fisheries and Fishing in South Dakota
4. Field Guide to Butterflies of South Dakota
5. Wild Mammals of South Dakota
6. Birds of South Dakota

The PPR is globally unique and nationally important (Brooks et al. 2009). According to the North American Waterfowl Management Plan - Prairie Pothole Joint Venture (internet search on January 29, 2010; <http://www.ppjv.org/facts.htm>) and others (Leitch and Danielson, 1979; Ogaard et al. 1981 as cited in Mitsch and Gosselink 1993), up to 75 percent of all North American waterfowl breed in the PPR during any given year. According to the American Bird Conservancy (ABC) Prairie Pothole Bird Conservation Region plan (BCR 11), breeding dabbling duck density may exceed 100 pairs per square mile in some areas during years with

favorable wetland conditions (Internet search on January 29, 2010; <http://www.abcbirds.org>). A substantial portion of SD's wildlife may be associated with wetland ecosystems for at least a portion of their life history. Wetlands provide habitat for more than 200 species of wildlife that live in or migrate through SD, 7 of which are threatened or endangered Johnson and Higgins (1997).

The SD GF&P has developed state wildlife management plans for birds, bats, Topeka shiners, and black-tailed prairie dogs. These plans may be accessed on the SD GF&P Internet site (<http://www.sdgifp.info/Wildlife/Diversity/index.htm>). The SD GF&P also further developed the South Dakota Comprehensive Wildlife Action Plan (Plan, SD GF&P 2005). The Plan is intended to provide a framework to encourage a more coordinated and proactive approach to wildlife management and takes a broad view of landscapes from the fish and wildlife perspective. The Plan uses essential habitat types and species of greatest conservation concern as its focal point. The Plan identifies several species of greatest conservation concern, including: 28 birds, 10 mammals, 7 freshwater mussels, 4 gastropods (snails), 9 insects, 20 fishes, and 12 reptiles or amphibians to help determine a successful wildlife habitat approach. For a more detailed list, please consult the Plan ([http://www.sdgifp.info/Wildlife/Diversity/Comp\\_Plan.htm](http://www.sdgifp.info/Wildlife/Diversity/Comp_Plan.htm)).

Concerning migratory birds, the Migratory Bird Treaty Act, 1918 as amended, makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird, including feathers, parts, nests, or eggs. Executive Order (E.O.) 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds" requires the NRCS to consider the impacts of planned actions on migratory bird populations and habitats for all planning activities. Reasonable measures may be designed to avoid impacts or where avoidance is not practicable, minimize impact, rectify the impact, reduce or eliminate the impact over time, or compensate for impacts. Migratory birds include all native wild birds found in the United States (U.S.) except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkeys. Resident game birds are managed separately by each state. A reference list of migratory game birds is found in Title 50, CFR, Part 10.

The Bald and Golden Eagle Protection Act (1962) provides further protection to all bald and golden eagles. The USFWS developed the National Bald Eagle Management Guidelines to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. The NRCS alternatives should be designed and implemented in a manner that avoids or minimizes, to the extent practicable, adverse impacts on migratory bird resources.

## **2.5 PLANTS**

South Dakota is home to approximately 1,650 vascular plant species (Gary Larson, personal communication) with about 1,000 species in the Black Hills area alone (Larson and Johnson 1999). There are approximately 500 species that inhabit South Dakota wetlands (Larson 1993).

Variations in topography and plant cover provided a rich diversity of plant species and habitats in SD. Listing all the plant species in this EA would be impractical and not serve a purpose. However, the SD State University offers numerous books on SD flora. Specific publications include:

1. Flora of South Dakota
2. Grassland Plants of South Dakota and the Northern Great Plains

3. Plants of the Black Hills and Bear Lodge Mountains
4. Aquatic and Wetland Vascular Plants of the Northern Great Plains

A LANDFIRE report (NatureServe 2008) was generated for SD and is located in Appendix C. The report classified over 30 major ecological systems, in SD, ranging from Forest and Woodland; Upland Shrubland; Savanna and Shrub-Steppe; Upland Grassland and Herbaceous; Woody Wetlands and Riparian; to Herbaceous Wetland; and Mixed Upland and Wetland. The LANDFIRE report contains brief definitions of the NatureServe terrestrial ecological systems currently identified as occurring in SD.

Terrestrial ecological systems concepts form the basis for three map products from the inter-agency LANDFIRE effort. First, they define the map legend for mapping Existing Vegetation Type (EVT); i.e., the current locations of vegetative components of each terrestrial ecological system are mapped in that layer. Second, Environmental Site Potential (ESP) is a spatial model of environments that constrain the possible locations where a given ecological system could occur, without including natural disturbance regime as a factor. Third, Biophysical Settings (BpS) provide another spatial model depicting the probable location of each ecological system type, assuming the inclusion of natural disturbance regimes as a factor.

Executive Order 13112 (1999) directs federal agencies to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. An invasive species is an alien species whose presence does or is likely to cause economic or environmental harm or harm to human health. Alien species include species which are not native to a particular continent, as well as, not native to a particular ecosystem. Invasive species encompass terrestrial and aquatic life forms including plants, animals, and fungi and microbial organisms. The NRCS policy (General Manual 190, Part 414) requires that the NRCS not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere.

## **2.6 THREATENED AND ENDANGERED SPECIES**

According to the USFWS and SD GF&P, state and/or federally listed or proposed endangered or threatened species are known to exist in within SD. There are approximately 212 state and/or federally listed rare, threatened or endangered animal species within the state. There are approximately 213 state and/or federally listed rare, threatened or endangered plant species within the state.

According to the USFWS, there are 12 federally listed species for the state. The federally listed species are the: 1) Topeka shiner, 2) least tern, 3) whooping crane, 4) Eskimo curlew, 5) American burying beetle, 6) scale-shell mussel, 7) Western prairie-fringed orchid, 8) piping plover, 9) black-footed ferret, 10) pallid sturgeon, 11) Higgins eye pearl mussel, and 12) gray wolf. Critical habitat has also been identified for the piping plover. The Eskimo curlew and gray wolf are considered extirpated from the state; however, transient wolf sightings have occurred within the state. The Topeka shiner, whooping crane, and Western prairie-fringed orchid require wetland habitats for all or part of their life history. The pallid sturgeon, piping plover, and least tern are associated with major river systems such as the Missouri River.

Additional information about federally listed species may be obtained from the USFWS ([http://www.fws.gov/southdakotafieldoffice/endangered\\_species.htm](http://www.fws.gov/southdakotafieldoffice/endangered_species.htm)). The State of SD does not regulate state listed rare species.

## **2.7 PRIME AND UNIQUE FARMLANDS**

Prime farmland is land having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. Prime farmland is designated independently of current land use, but it cannot be areas of water or urban or built-up land as defined for the NRI. Map units that are complexes or associations containing components of urban land or miscellaneous areas as part of the map unit name cannot be designated as prime farmland. Soil survey map units that meet the soil requirements for prime farmland are identified, coordinated, and listed, and are available to users of soil survey information.

There are approximately 5,801,000 acres of federally-designated prime or unique farmlands (i.e., those areas designated as agricultural security areas and preserved farmlands) and 16,652,000 acres of farmland of statewide importance in SD.

## **2.8 WILD AND SCENIC RIVERS**

The Wild and Scenic Rivers Act, P. L. 90-542, (as amended) (16 U.S.C. 1271-1287) states:

*“It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.”*

The National Wild and Scenic Rivers System (Internet search on January 29, 2010; <http://www.rivers.gov/>) lists designated rivers by state. South Dakota has multiple federally designated wild and scenic river reaches on the lower Missouri River.

## **2.9 CULTURAL RESOURCES**

The NRCS is required by the Section 106 of the National Historic Preservation Act and E.O. 11593 to identify all properties within a project’s area of potential effect that are eligible for listing in the National Register of Historic Places, and to assess the project’s effect on those properties, should they exist. Multiple Tribal, state, and federal cultural resources exist within the state including but not limited to National Register eligible or listed historic or archaeological properties. The state’s cultural resources are located on Tribal, public, and private land.

## **2.10 HAZARDOUS, TOXIC, AND RADIOACTIVE SUBSTANCES**

According to the SD DENR, there are multiple “Superfund” sites within SD ([http://denr.sd.gov/des/gw/Superfund/Super\\_Fund.aspx](http://denr.sd.gov/des/gw/Superfund/Super_Fund.aspx)). Superfund site information contains

information on hazardous waste sites, potentially hazardous waste sites, and remedial activities across the state, including sites that are on the National Priorities List (NPL) or being considered for the NPL.

## 2.11 SOCIO-ECONOMIC CONDITIONS

According to the U.S. Census Bureau (Census) (Internet search on January 29, 2010; <http://www.census.gov/census2000/states/sd.html>), the total state population was 754,844. In 1999, the median household income for SD totaled \$35,282. The state demographics are summarized in Table 2.2 and Table 2.3 below.

**Table 2.3 Races for South Dakota (2000 Census).**

Race	Percent number of Persons
Caucasian (only)	88.7%
African American (only)	0.6%
American Indian/Alaska Native (only)	8.3%
Asian (only)	0.6%
Native American/Pacific Islander (only)	0.1%
Other (2 or more races)	1.3%

**Table 2.4 Age percentages for South Dakota (2000 Census).**

Population Age (Years)	Percentage of Population
Under 5 years old	6.8%
Under 18 years old	30.2%
65 years and older	14.3%

## 2.12 ENVIRONMENTAL JUSTICE

On February 11, 1994, President Clinton issued E.O. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The E.O. requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

As defined by the "Final Guidance for Addressing Environmental Justice Under NEPA"(CEQ, 1997), "minority" includes persons who identify themselves as Asian or Pacific Islander, Native American or Alaskan Native, black (not of Hispanic origin), or Hispanic. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations are identified using the Census Bureau's statistical poverty threshold, which is based on income and family size. The Census Bureau defines a "poverty area" as a Census tract with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level (2000 Census). In SD, 9.3 percent of the population is below the poverty level. It is possible that there are "extreme poverty areas" within the state and poverty is certainly a concern on Tribal lands.

### 2.12.1 Child Health and Safety

In recognition of mounting scientific information demonstrating that America's children suffer disproportionately from environmental health and safety risks, President Clinton issued E.O.

13045 on April 21, 1997. Under this E.O., each federal agency “shall (a) make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities and standards address disproportionate risks to children that result from environmental health risks or safety risks.” Approximately 7 percent (2000 Census) of persons living, in SD, are under 5 years old, and 30 percent of the total population is under the age of 18.

### **2.13 FLOODPLAIN PROTECTION EXECUTIVE ORDER COMPLIANCE**

On May 24, 1977, President Carter issued E.O. 11988 “Floodplain Management.” This E.O. requires federal agencies to provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains. Due to the purpose and need of the technical determination, decisions could occur within floodplain areas.

## SECTION 3

### 3.0 PROBLEMS, NEEDS, AND OPPORTUNITIES

The current SDMC require onsite investigations in all wetland technical determinations. As stated in Section 1, the NRCS regulations and policy do not require an onsite investigation in all circumstances. The NRCS maintains that requiring a site visit in every instance does not necessarily result in a higher level of wetland protection. The NRCS further maintains that requiring site visits in all instances increase staff workload and decreases wetland work efficiency.

Within the eastern third (21 counties) of the state, the NRCS has completed approximately 12 percent of total estimated certified wetland determinations out of all estimated cropland acres within the same area. The NRCS estimates that it will cost the agency approximately \$48 million dollars to conduct onsite wetland investigations in all circumstances within the same 21-county area. The NRCS carried forward a backlog of approximately 1,200 certified wetland determinations into Fiscal Year (FY) 2009. In FY2009, the NRCS received approximately 2,000 certified wetland determination requests. The NRCS completed approximately 1,700 of the 3,200 requests (about 50 percent), not including conservation program (e.g., CRP and Wetlands Reserve Program) activities. The certified wetland determination backlog is projected to continue into the future and possibly become worse as crop production expands to unbroken agriculture lands.

The NRCS has a need to conduct high quality and timely wetland determinations. According to Section 1.2, if the agency determines there is adequate information available to make an offsite wetland determination then the agency may do such. Therefore, there exists an opportunity to enhance the NRCS' ability to process wetland determinations in a high quality and timely manner by allowing the agency to utilize offsite wetland determinations.

### 3.1 GOAL AND OBJECTIVES

The Workgroup identified two main problems with the current mapping conventions: 1) lack of flexibility as provided by regulation and 2) substantial backlog of producer requests. Both of these issues directly affect the NRCS ability to produce high quality and timely products that will protect the wetland resource and serve the customer. Considering the problems previously discussed and the certainty that the problems will remain if not corrected, the Workgroup developed the following goal: ***Identify a mapping convention procedure that will result in high quality and timely products that serve both the customer and the resource.***

In support of this goal, the following objectives were established:

1. Develop a SDMC that reduces the number of site visits per tract by at least approximately 25 percent.
2. Develop a SDMC that does not result in more than a 10 percent change in wetland label.
3. Identify mapping conventions that are consistent in principle to North Dakota agencies (NRCS and USFWS).

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## SECTION 4

### 4.0 PLAN FORMULATION AND ALTERNATIVES EVALUATION

This section describes the plan formulation process, the criteria used to identify alternatives to solve the problem, and the results of the plan formulation process. The criteria necessary to be a useful offsite resource is as follows: 1) capture the adequate scale on the landscape (both large and small scale), 2) have regularly occurring updates, 3) be user-friendly (e.g., digital and reproducible), 4) afford protections to the environment, and 5) have the potential to reduce the number of site visits per tract/field.

The resources and criteria considered in the methods and formulation of alternatives occurs after “potential wetlands” are identified. All offsite tools are considered to identify potential wetlands. The four core offsite tools are: 1) soil survey (hydric lists, hydric map units, and hydric inclusions, and conventional wetland symbols); 2) the NRCS wetland inventory mapping and official determinations; 3) the NWI mapping, and 4) Farm Service Agency (FSA) slides. Any other inventory tool may be reviewed as available. Therefore, altering the potential wetland review is beyond the scope of this analysis.

#### 4.1 PLAN FORMULATION

The Workgroup used the goal and objectives to identify, develop, and ultimately select an acceptable method for conducting wetland determinations. The following five steps outline the plan formulation process used for this assessment:

1. *Inventory and forecast conditions (Section 2).*
2. *Identify problems and opportunities (Section 3).*
3. *Formulate technically feasible alternatives (Section 4).*
4. *Evaluate and compare alternatives (Section 4).*
5. *Recommend an acceptable wetland determination process for the state (Section 4).*

#### 4.2 FORMULATION OF ALTERNATIVES

##### 4.2.1 Offsite Method Identification and Formulation

The Workgroup prepared and utilized a matrix to organize the resources and criteria relevant to this assessment. Table 4.1 shows the possible offsite resources and important criteria. Data accuracy and precision is a very important component to any resource; however, due to the variability in dataset accuracy and precision (e.g., extent of ground-truthing), accuracy, and precision are not appropriate criteria to consider. The resource that addresses the most criteria (the most Yes's) are the resources carried forward into alternatives development. The possible methods consist mostly of previously used materials (e.g., soils maps, NWI maps, and official wetland determinations).

**Table 4.1 Possible Resources and Important Criteria to Consider in Offsite Methods Alternatives.**

Resource	Criteria				
	Adequate Scale	Updated	User Friendly	Environment Protected	Workload Reduced
<b>Hydric Soils Map</b>	<b>YES</b>	<b>YES &amp; NO</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>
Official / Wetland Inventory	YES	NO	NO	YES	NO
NWI Mapping	YES	NO	YES	YES	NO
<b>FSA Imagery</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>

**4.2.2 Preliminary Offsite Method Identification and Formulation**

The Workgroup preliminarily identified two scenarios thought to achieve the goal and objectives of this assessment. The first scenario the Workgroup considered was to assess each potential wetland with three of the core offsite tools (hydric soils mapping, the NRCS official determination, wetland inventory, and NWI). If the site is not found on any of the three core offsite tools, then the site is a nonwetland. If the site is noted on all three of the core offsite tools, then the site is a wetland. If the site is noted in one or two of the three core offsite tools or on imagery, then a site field visit is required. After further consideration, the Workgroup decided that due to the extensive potential wetland coverage associated with the soil survey, official wetland maps, and NWI; the likelihood of any meaningful reduction in the number of site visits per tract/field is well below 25 percent (7 percent).

The second scenario is the same as the first scenario except that FSA crop compliance photography was added as the fourth core offsite tool. If the site was only observed on the FSA core offsite tool, then the site could be labeled a nonwetland without a site visit. After further consideration, the Workgroup decided that this scenario is similar to the first scenario in that the soils mapping, NWI mapping, and previous NRCS determinations covered a substantial area and that the likelihood that a site would occur on an FSA slide and not the other core offsite tools is minimal. Therefore, any meaningful reduction in the number of site visits per tract/field is well below 25 percent (10 percent). Therefore, neither of the first two scenarios discussed above were carried forward to the alternatives analysis.

After the consideration of the first two scenarios, the Workgroup realized that any substantial workload reduction would only be achieved if the Workgroup considered analyzing the threshold values associated with the resource (offsite tool). Specifically, the Workgroup evaluated the questions as outlined in Table 4.2 during alternatives development.

**Table 4.2 Offsite Tool Threshold Values.**

Resource	Threshold Value
NWI	Is the site on NWI?
Imagery, soils, survey, BPJ	Is the site a depression (includes potholes)?
NRCS official / Prior S&E	Is the site manipulated or not?
Imagery (FSA)	Does the site exhibit 30 percent or less normal year wetland signatures?
Imagery (FSA)	Does the site exhibit 65 percent or greater normal year wetland signatures?

## 4.3 ALTERNATIVES DEVELOPMENT

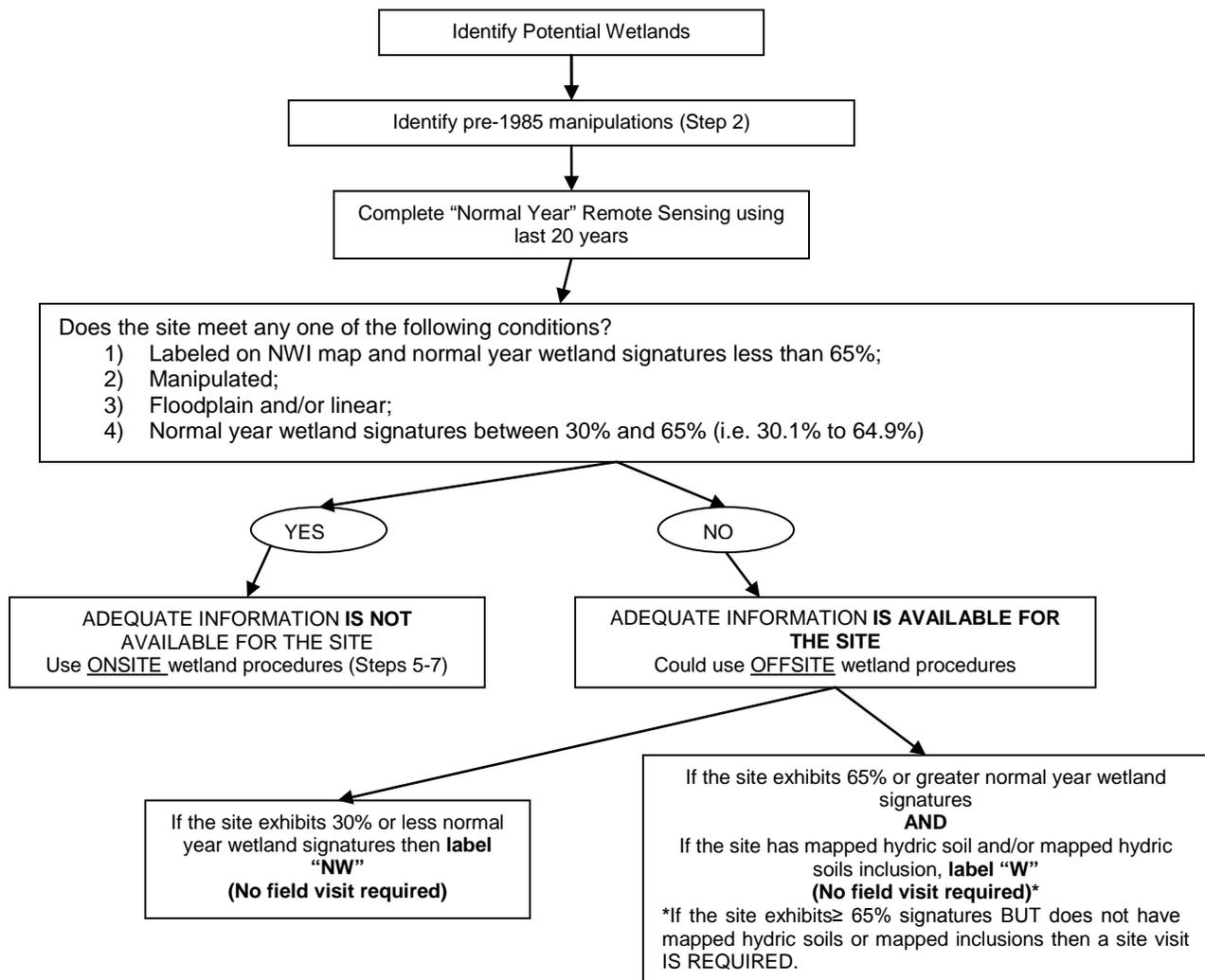
### 4.3.0 Alternative 1: Offsite Method A

This offsite procedure (Figure 4.1) could be applied to potential wetlands that are depressional and not manipulated and either:

- 1) Have wetland signatures less than or equal to 30 percent and are not mapped NWI, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

Potential wetlands that are depressional, not manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled as nonwetland (NW). Potential wetlands that are depressional, not manipulated, may or may not be mapped on NWI, and have greater than or equal to 65 percent wetland signatures would be labeled as wetland (W) if the soil was mapped hydric or had mapped hydric inclusions.

**Figure 4.1 Alternative 1: Offsite Method A Flowchart.**



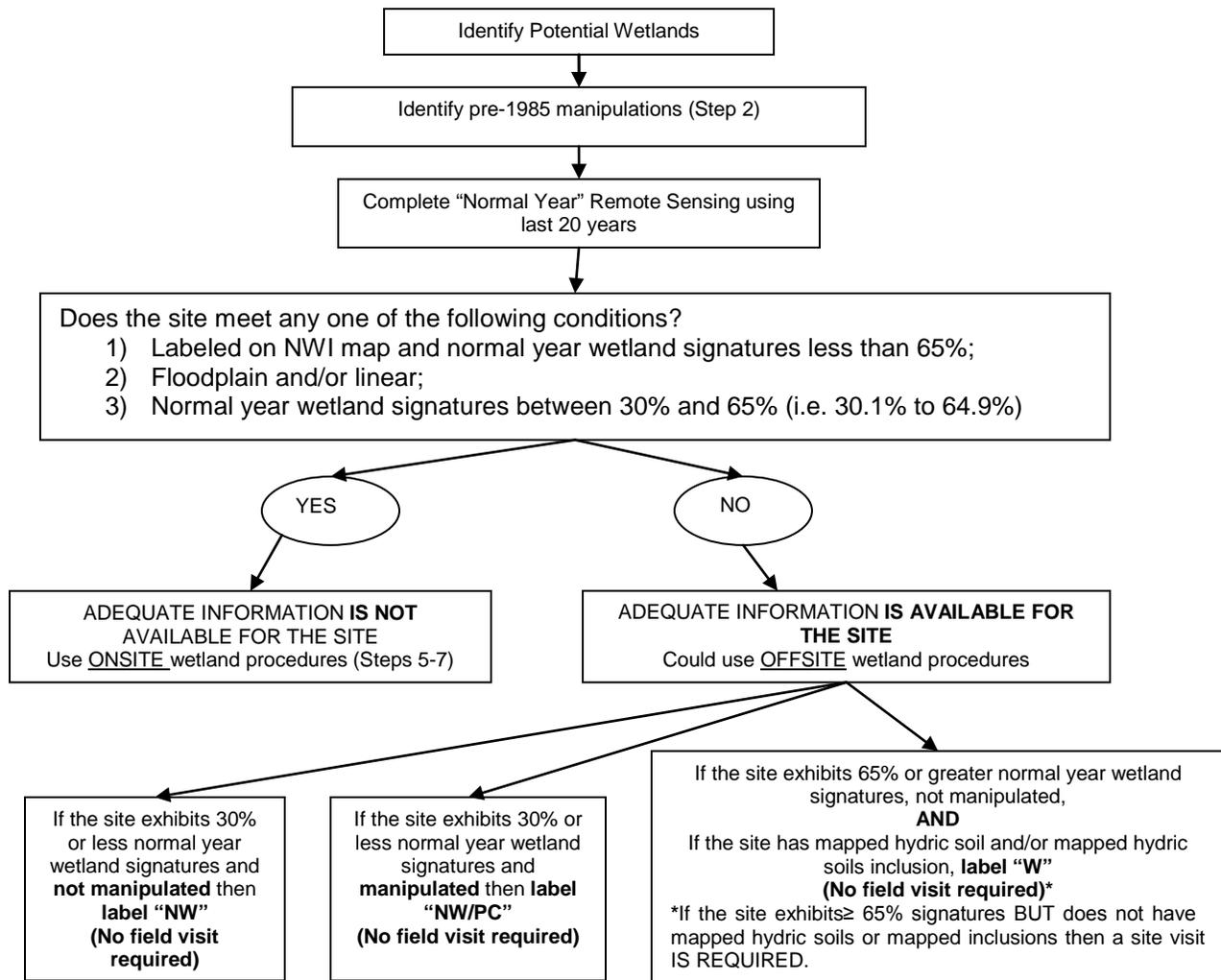
### 4.3.1 Alternative 2: Offsite Method B

This offsite procedure (Figure 4.2) could be applied to potential wetlands that are depressional and not manipulated and either:

- 1) Have wetland signatures less than or equal to 30 percent and are not mapped NWI, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

This offsite procedure also would be applied to potential wetlands that are depressional, manipulated, are not mapped NWI, and have wetland signatures less than or equal to 30 percent. Potential wetlands that are depressional, not manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled as NW. Sites that are depressional, manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled NW/Prior Converted (PC). Potential wetlands that are depressional, not manipulated, have greater than or equal to 65 percent wetland signatures regardless of NWI status would be labeled as W if the soil was mapped hydric or had mapped hydric inclusions.

**Figure 4.2 Alternative 2: Offsite Method B Flowchart.**



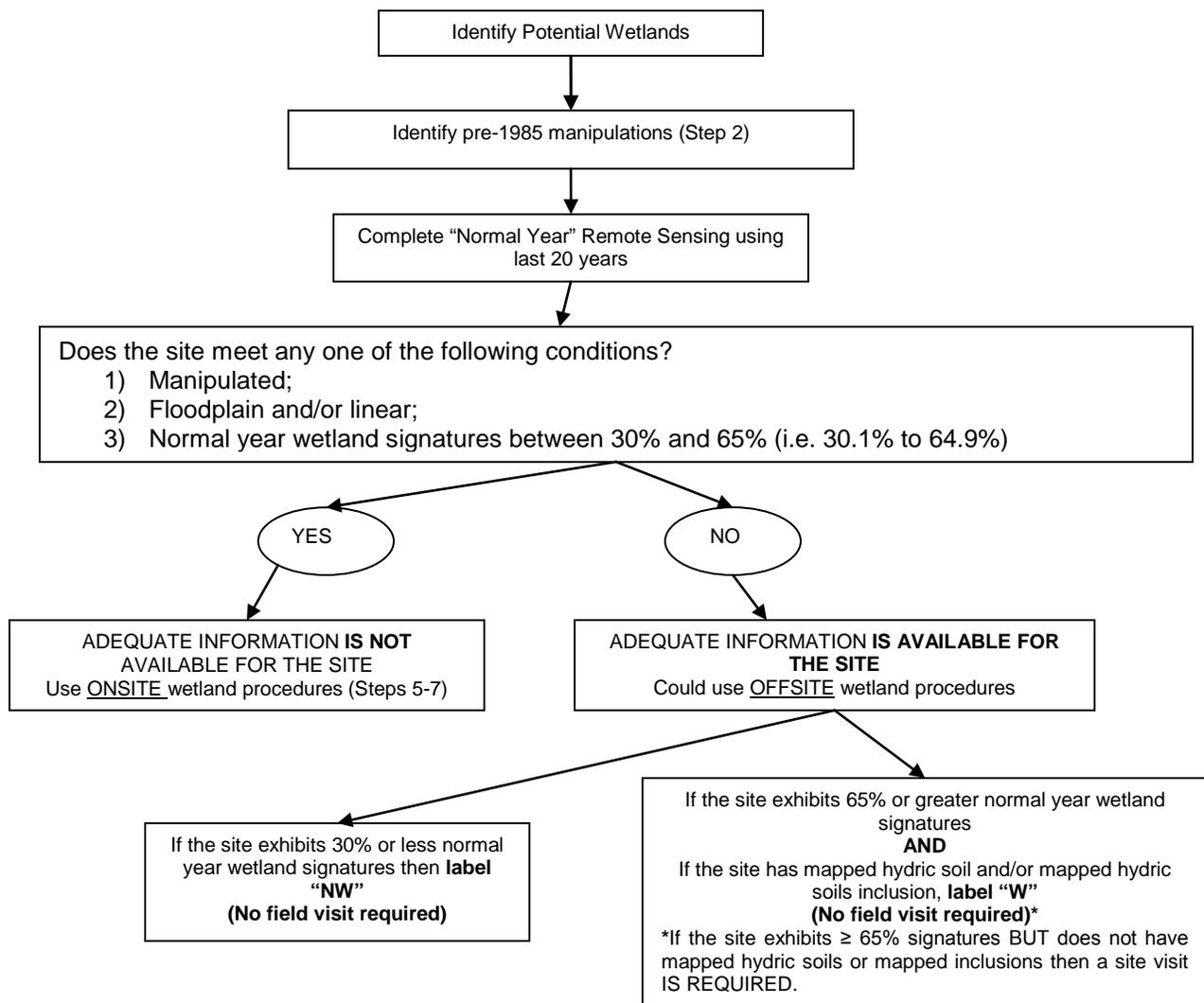
### 4.3.3 Alternative 3: Offsite Method C

This offsite procedure (Figure 4.3) could be applied to potential wetlands that are depressional and not manipulated and either:

- 1) Have wetland signatures less than or equal to 30 percent, regardless of NWI status, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

Potential wetlands that are depressional, not manipulated, and have less than or equal to 30 percent wetland signatures regardless of NWI status would be labeled as NW. Potential wetlands that are depressional, not manipulated, and have greater than or equal to 65 percent wetland signatures regardless of NWI status would be labeled as W if the soil was mapped hydric or had mapped hydric inclusions.

**Figure 4.3 Alternative 3: Offsite Method C Flowchart.**



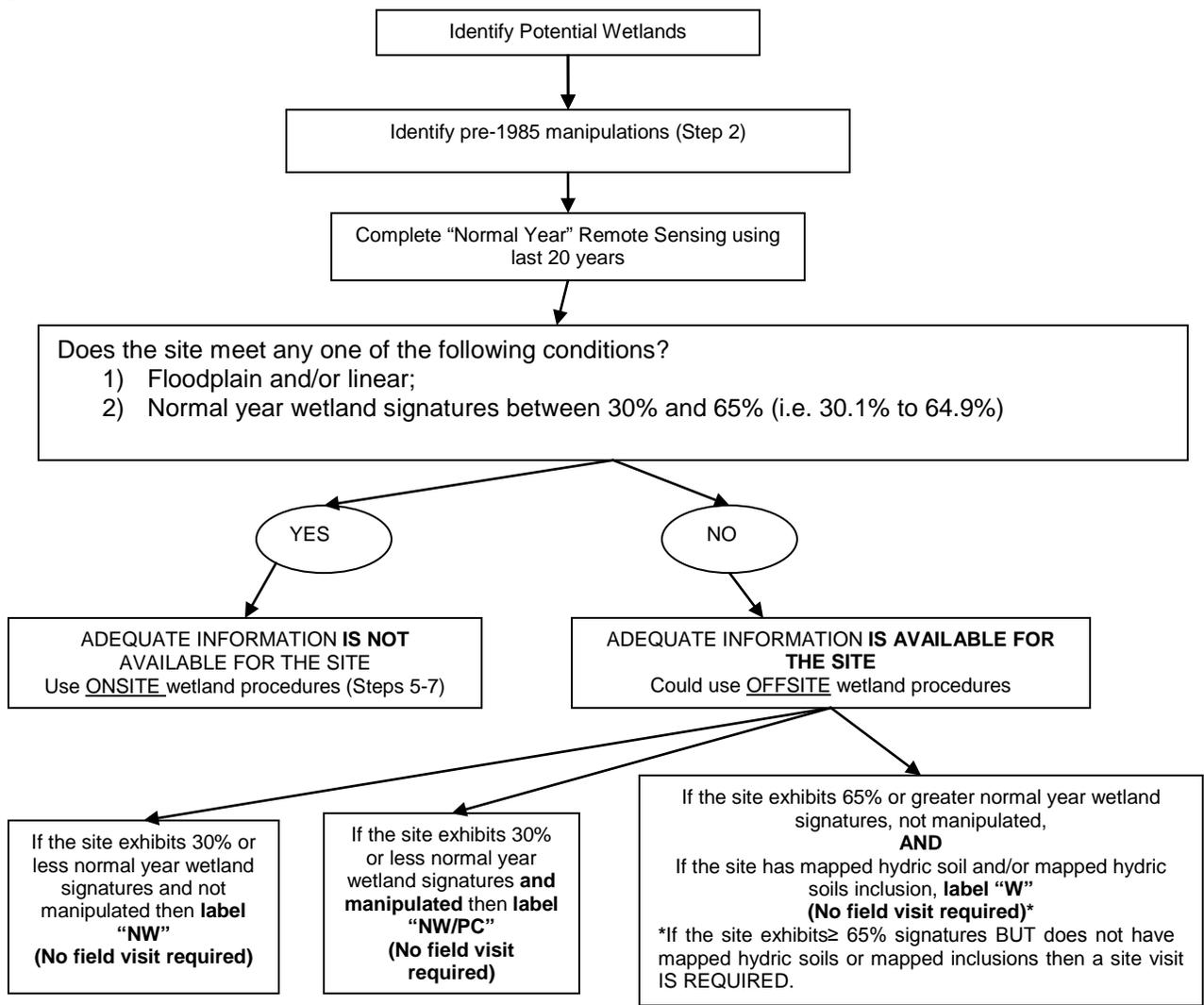
#### 4.3.4 Alternative 4: Offsite Method D

This offsite procedure (Figure 4.4) could be applied to potential wetlands that are depressional and not manipulated regardless of NWI status and either:

- 1) Have wetland signatures less than or equal to 30 percent, regardless of NWI status, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

This procedure also would be applied to potential wetlands that are depressional, manipulated, and have wetland signatures less than or equal to 30 percent, regardless of NWI status. Potential wetlands that are depressional, not manipulated, and have less than or equal to 30 percent wetland signatures regardless of NWI status would be labeled as NW. Sites that are depressional, manipulated, and have less than or equal to 30 percent wetland signatures regardless of NWI status would be labeled NW/PC. Sites that are depressional, not manipulated, and have greater than or equal to 65 percent wetland signatures regardless of NWI status would be labeled as W if the soil was mapped hydric or had mapped hydric inclusions.

**Figure 4.4 Alternative 4: Offsite Method D Flowchart.**



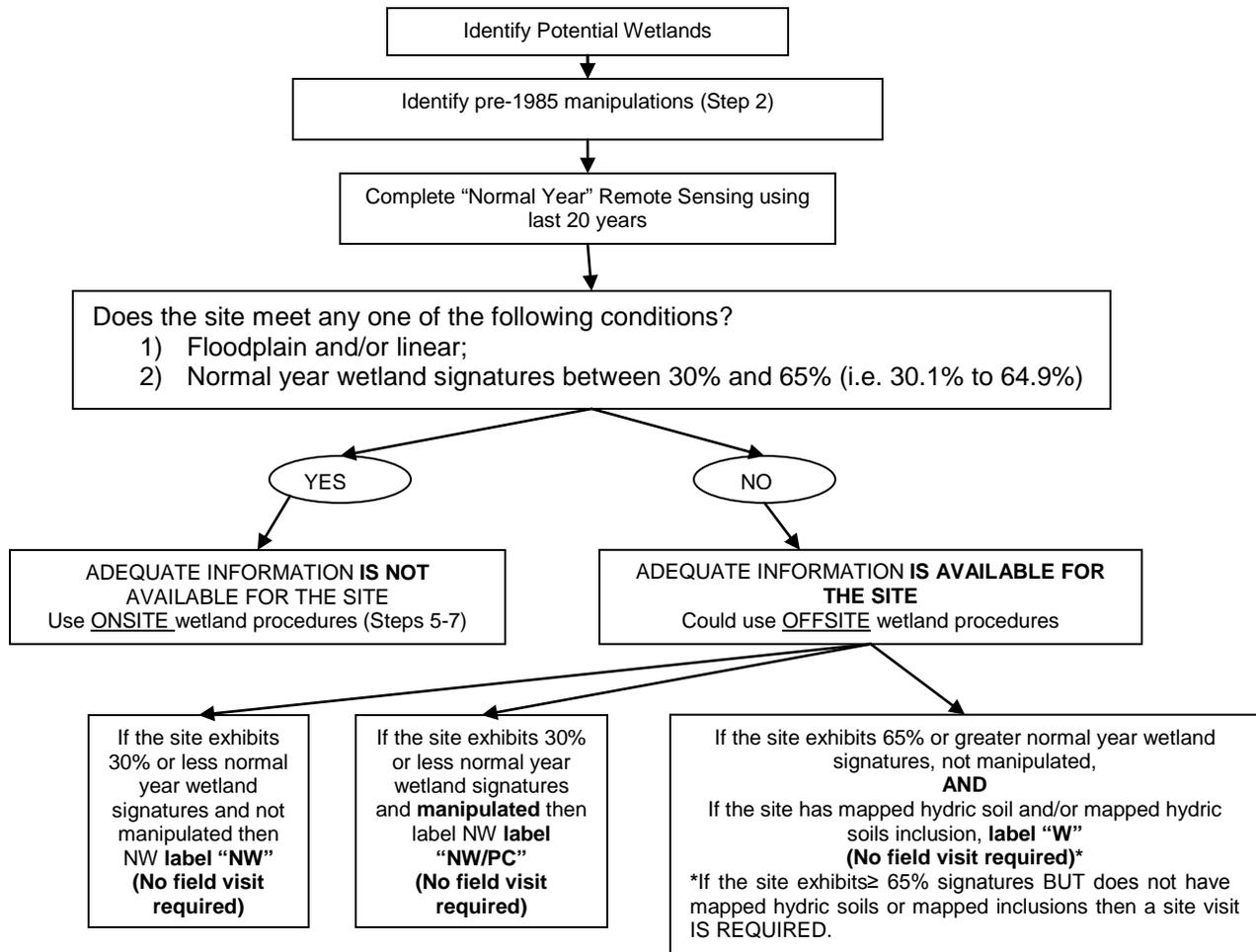
### 4.3.5 Alternative 5: Offsite Method E

This offsite procedure (Figure 4.5) could be applied to potential wetlands that are depressional and not manipulated and either:

- 1) Have wetland signatures less than or equal to 30 percent, regardless of NWI status, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

This offsite procedure also would be applied to potential wetlands that are depressional, manipulated, are not mapped NWI, and have wetland signatures less than on equal to 30 percent. Potential wetlands that are depressional, not manipulated, and have less than or equal to 30 percent wetland signatures, regardless of NWI status would be labeled as NW. Potential wetlands that are depressional, manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled as NW/PC. Sites that are depressional, not manipulated, and have greater than or equal to 65 percent wetland signatures regardless of NWI status would be labeled as W if the soil was mapped hydric or had mapped hydric inclusions.

**Figure 4.5 Alternative 5: Offsite Method E Flowchart.**



### 4.3.6 Alternative 6: Without Project Condition

The Without Project Condition alternative would forego all of the previously stated benefits (improved efficiency, workload reduction, high quality products, and continued resource protection.). The existing workload and backlog issues would continue to be a major problem. Due to the high workload staff will continue to be pressured and may not be able to consistently produce high quality products for the customer or the resource.

### 4.4 PREFERRED ALTERNATIVE PLAN

The NRCS conducted an analysis to determine the extent, if any, in label change and site visitation based on previously collected wetland determination data. In SD, considering only counties with at least 50 wetlands (any label) in the dataset, the NRCS identified approximately 35,000 potential sites (all labels) of which 18,000 sites were either W or NW. However, the majority of the available sites were from wetland determinations conducted prior to 2000 and did not have the documentation necessary to conduct the data analysis.

Nineteen counties were selected for analysis based on the following: 1) integrity of the data, 2) quantity of wetland determination polygons, and 3) geographic locations in high density pothole areas and major waterfowl breeding counties. Roberts and Spink Counties were selected but the data records were incomplete. The NRCS determined there was a large enough dataset without including Roberts and Spink Counties. Several prime pothole and/or waterfowl breeding counties did not contain adequate quantities of wetland determinations with the necessary forms for analysis (e.g., Edmunds, Faulk, Hand, and Marshall Counties). The 17 usable counties and the number of sites evaluated per county are outlined in Table 4.3.

**Table 4.3 Summary of South Dakota County data Used in Offsite Wetland Analysis.**

County	Number of Sites Considered	Number of Sites Meeting Offsite Conditions	Number of W Sites	Number of NW Sites	Number of NW/PC Sites
Beadle	41	21	19	2	0
Brookings	43	12	8	2	2
Brown	42	35	32	3	0
Clark	47	24	18	6	0
Codington	13	2	1	0	1
Davison	69	25	8	16	1
Deuel	26	15	5	8	2
Grant	43	26	4	17	5
Hamlin	63	40	25	9	6
Jerauld	76	23	10	10	3
Lake	223	58	25	26	7
Lincoln	262	147	14	32	101
McCook	44	20	3	10	7
McPherson	102	76	44	31	1
Moody	246	76	20	31	25
Sanborn	64	35	16	18	1
Turner	55	32	1	1	30
<b>Total</b>	<b>1,459</b>	<b>667</b>	<b>253</b>	<b>222</b>	<b>192</b>

The NRCS selected over 1,400 sites (4 percent) out of the 35,000 data points covering the identified counties. Of the over 1,400 sites, 667 (46 percent) sites met the offsite conditions necessary to proceed with data analysis. The offsite wetland data is summarized in Table 4.4

below. It should be noted that when the data analysis revealed a difference between the offsite and onsite labels that the change would be just as likely to result from human error during the wetland determination as it would be from the offsite alternative analyzed. The data analysis further showed that the estimated potential net change in wetland labeled as W ranged from +3 to -22, meaning that two alternatives actually slightly increase the number of wetlands while three alternatives substantially decrease the number of wetlands.

**Table 4.4 Summary of South Dakota Offsite versus Onsite Wetland Analysis (Data is Estimated).**

Alternative Number	Alternative Name	Percent of Site Visits Reduced	Number of Site Labels Changed from NW to W	Number of Site Labels Changed from W to NW	Net Change In W	Total Number of Offsite Sites Analyzed
1	Offsite Method A	29%	13 (3.1%)	10 (2.4%)	+3 (+0.7%)	417
2	Offsite Method B	38%	13 (2.2%)	10 (1.7%)	+3 (+0.5%)	583
3	Offsite Method C	33%	13 (2.7%)	35 (7.4%)	-22 (-4.6%)	475
4	Offsite Method D	46%	13 (1.9%)	35 (5.2%)	-22 (-3.3%)	667
5	Offsite Method E	47%	13 (2.1%)	35 (5.7%)	-22 (-3.6%)	611
6	Without Project (No Action)	0%	0%	0	0	Not Applicable

The Workgroup determined that a workload (site visit) reduction up to 50 percent would be ideal. Therefore, workload (site visit) reduction was classified into three categories: High (33.1 percent to 50 percent), Medium (16.1 percent to 33 percent), and Low (<16 percent). Similarly, the Workgroup determined that the environment (wetland resources) would still be protected and label changes would be acceptable if a net label change occurred less than 10 percent of the time. Therefore, environmental protection (wetlands) was classified into three categories: High (0.0 percent to 3.3 percent), Medium (3.4 percent to 6.6 percent), and Low (>6.6 percent). When establishing this threshold, the Workgroup fully realized that the extent of label changes could be substantially lower because there was probably human error or different mapping conventions used in the original slide review.

Alternatives that classified as low workload reduction and/or low environmental protection were dropped from further analysis (Table 4.5). All alternatives except the No Action alternative were carried forward for further analysis. Alternatives 4 and 5 exhibited a higher potential site visit reduction; however, their environmental protection value was the lowest among all alternatives. Therefore, Alternatives 4 and 5 were dropped from further analysis (Table 4.6). Alternative 3 resulted in varying degrees of potential site visit reduction when compared to Alternatives 1 and 2 and when considering environmental protection Alternative 3 could result in 22 fewer wetlands identified. Therefore, Alternative 3 was not chosen as the recommended alternative.

**Table 4.5 Intended and Unintended Effects of Most Production Efficient Alternatives.**

Alternative Number	Alternative Name	Extent workload (site visits) is reduced?	Is the environment (wetlands) still protected?
1	Offsite Method A	MEDIUM	HIGH
2	Offsite Method B	HIGH	HIGH
3	Offsite Method C	MEDIUM	MEDIUM
4	Offsite Method D	HIGH	HIGH
5	Offsite Method E	HIGH	MEDIUM
6	Without Project (No Action)	LOW	HIGH

**Table 4.6 The South Dakota Wetland Mapping Convention Update Recommended Alternative.**

Alternative Number	Alternative Name	Extent workload (site visits) is reduced?	Is the environment (wetland) still protected?
1	Offsite Method A	MEDIUM (29%)	HIGH (+3)
2	Offsite Method B	HIGH (38%)	HIGH (+3)
3	Offsite Method C	MEDIUM (33%)	MEDIUM (-22)
4	Offsite Method D	HIGH (46%)	LOW (-22)
5	Offsite Method E	HIGH (47%)	LOW (-22)
6	Without Project (No Action)	LOW (0%)	HIGH (0)

Both Alternatives 1 and 2 have acceptable site visit reduction potentials and both alternatives afford a similar high level of protection to wetland resources. Alternatives 1 and 2 were carried forward for further analysis. To further assist with the decision-making process, an additional NWI analysis was conducted (Table 4.7). Table 4.7 shows that for the remaining alternatives (1 and 2), all NWI sites with at least 65 percent wetland signature “hits” were labeled as W using the offsite procedures. The NWI analysis did not differentiate between Alternatives 1 and 2. However, the NWI analysis for Alternative 2 did demonstrate an approximate one-to-one ratio of sites labeled W or FW (666) to NWI sites (630). Therefore, the Workgroup selected Alternative 2 as the tentatively selected alternative because this alternative has a higher site visit reduction potential when compared to Alternative 1.

**Table 4.7 South Dakota National Wetland Inventory Sample Analysis (Data is Estimated).**

Sample Size	Number of Sites Labeled on NWI	Number of NWI Sites Field Labeled W or FW	Number of NWI sites Field Labeled NW or PC	Number of non-NWI Sites field Labeled as W or FW	Alternatives 1 and 2		
					Number of NWI Sites with ≥ 65% “Slide Hits”	Number of NWI Sites with ≥ 65% “Slide Hits” Labeled as W (Offsite)	Number of Sites Labeled W (Offsite) Not Labeled on NWI
1,459	630 (43%)	423 (67%)	205 (33%)	243 (29%)	178 (100%)	178 (100%)	75

Based on public input from the SD Corn Growers (SDCG) and SD Farm Bureau (SDFB), the Workgroup analyzed various scenarios associated with wetland signature percentages for Alternative 2. The scenarios were: 1) 35%/65%, 2) 30%/70%, and 3) 25%/75% in no particular order. The scenario analysis is summarized in Table 4.8. Scenario 1 (35%/65%) had a slightly higher site visit reduction (1%) than Alternative 2. However, Scenario 1 exhibited an unacceptable label changes. Therefore, Scenario 1 was dropped from further consideration. Both Scenario 1 and Scenario 2 exhibited a high level of environmental protection; however, neither of these scenarios had a higher site visit reduction potential. After analyzing these scenarios, the Workgroup determined that the originally selected plan (Alternative 2) provided

the highest site visit reduction potential while providing the least potential change in labeled wetlands. Therefore, Alternative 2 was carried forward for a larger landscape analysis.

**Table 4.8 Recommended Plan (Alternative 2) Wetland Signature Scenarios (Data is Estimated).**

<b>Scenario Name (% Wetland Signatures)</b>	<b>Extent Workload (Site Visits) is Reduced</b>	<b>Level of Environmental Protection</b>
Alternative 2 (30%/65%)	HIGH (38%)	High (little to no change in wetland label)
Scenario 1 (35%/65%)	HIGH (39%)	Low (unacceptable increase in label change)
Scenario 2 (30%/70%)	HIGH (37%)	High (little to no change in wetland label)
Scenario 3 (25%/75%)	MEDIUM (32%)	High (little to no change in wetland label)

Using Alternative 2, the tentatively selected alternative, the Workgroup considered the broader landscape of the PPR in neighboring North Dakota (ND). Therefore, the ND NRCS analyzed 368 wetland sites covering 10 counties (Richland, Sargent, Ransom, Eddy, Steele, Ramsey, Pembina, Ward, Burke, and Mountrail) using Alternative 2 conditions. Of the over 350 sites, 185 (50 percent) sites met the offsite conditions necessary to proceed with data analysis. As with the SD NRCS analysis, when the ND analysis revealed a difference between the offsite and onsite labels that the change would be just as likely to result from human error during the wetland determination as it would be from the offsite alternative analyzed. Of the 185 ND sites, 164 (89 percent) of the site labels matched when comparing the field label to the Alternative 2 offsite label resulting in a net change of +1 (+0.5 percent) W sites (W to NW (-11, -5.9%) and NW to W (+12, +6.5%), respectfully). When using the ND data, Alternative 2 still resulted in a high level of environmental protection (+0.5 percent net W change) and high level of workload reduction (49 percent site visits reduced).

Given the detailed wetland potential label change analysis, stated benefits, and high level of environmental protection, the Workgroup selected Alternative 2 as the recommended plan.

#### **4.5 DESCRIPTION OF RECOMMENDED ALTERNATIVE PLAN**

Alternative 2 is the recommended alternative plan. The offsite procedure described in alternative 2 and shown in Figure 4.2 could be applied to potential wetlands that are depressional and not manipulated and either:

- 1) Have wetland signatures less than or equal to 30 percent and are not mapped NWI, or
- 2) Have wetland signatures greater than or equal to 65 percent, regardless of NWI status.

This offsite procedure also could be applied to potential wetlands that are depressional, manipulated, are not mapped NWI, and have wetland signatures less than or equal to 30 percent.

Potential wetlands that are depressional, not manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled as NW. Sites that are depressional, manipulated, not mapped on NWI, and have less than or equal to 30 percent wetland signatures would be labeled NW/Prior Converted (PC). Potential wetlands that are depressional, not manipulated, have greater than or equal to 65 percent wetland signatures regardless of NWI status would be labeled as W if the soil was mapped hydric or had mapped hydric inclusions.

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## SECTION 5

### 5.0 IMPACTS OF RECOMMENDED PLAN

#### 5.1 SCOPE OF ANALYSIS

Resource agencies and the public identified potential issues which helped the NRCS fulfill one of the NEPA's goals which is to have environmental analyses evaluate "environmental issues deserving of study (and to) deemphasize insignificant issues," thereby "making the NEPA process more useful to decision makers and the public" (40 CFR 1500.4(g) and 1500.2B)). Listed below are concerns identified by agencies, the public, and the NRCS determined relevant and analyzed in this EA:

ITEM/CONCERN	Relevant to the proposed action?		RATIONALE
	YES	NO	
<b>SOIL</b>			
Prime and Unique Farmland		X	Prime and Unique Farmland is present in the state. However, no alternatives contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.
<b>WATER</b>			
Water Quality		X	The purposes of the WC provisions of the Food Security Act include: 1) Reduce sedimentation and improve water quality; and 2) Assist in preserving the functions and values of the Nation's wetlands (7 CFR 12.1 (b)). No alternatives involve construction or pollution discharge.
Clean Water Act		X	No alternative involves or will likely result in the discharge of dredged or fill material or other pollutants into "Waters of the United States." Therefore, the alternatives do not require USACE 404 permit or WQC.
Coastal Zone Mgt. Areas		X	None present in the Area of Potential Effect (APE) (entire state of SD).
Floodplain Management		X	Over the short- or long-term, the alternatives will not likely result in an increased flood hazard, incompatible development, or other adverse effect to the existing natural and beneficial values of the floodplain or lands adjacent or downstream from the floodplain.
Wetlands	X		Potential for loss or gain of labeled wetlands.
Wild & Scenic Rivers		X	No alternatives involve construction activities. The alternatives will not have an effect on the natural, cultural and recreational values of any designated Wild, Scenic, or Recreational River (reaches).
<b>AIR</b>			
Air Quality		X	The entire state is in attainment. The alternatives do not produce emissions.

ITEM/ CONCERN	Relevant to the proposed action?		RATIONALE
	YES	NO	
<b>PLANTS</b>			
E&T Species	X		The Western prairie-fringed orchid may be affected.
Essential Fish Habitat		X	No designated areas in the APE (SD).
Invasive Species		X	The alternatives do not involve equipment, earthwork, or disturbance; therefore, no potential for introduction. No alternative will affect invasive plant species differently than the No Action alternative.
Natural Areas		X	There are multiple designated areas in the APE (SD). The alternatives will neither positively or negatively affect these areas because the alternatives do not change the natural characteristics of the area.
Riparian Areas		X	The alternatives do not conflict with the conservation values/functions of the riparian area. Purposes of the Food Security Act include: 1) Reduce sedimentation and improve water quality; and 2) Assist in preserving the functions and values of the nation's wetlands (7 CFR 12.1 (b)).
<b>ANIMALS</b>			
Wildlife Habitat	X		Potential for wildlife habitat change.
Coral Reefs		X	None present in the APE (SD)
E&T Species	X		The Topeka shiner and whooping crane may be affected.
Invasive Species		X	The alternatives do not involve equipment, earthwork or disturbance, therefore no potential for introduction. No alternative will affect invasive animal species differently than the No Action alternative.
Migratory Birds/Bald and Golden Eagles		X	Purposes of alternatives are not to take migratory birds or eagles. The alternatives do not involve equipment, earthwork, or disturbance.
<b>HUMANS</b>			
Cultural Resources		X	No "Undertakings" proposed.
Environmental Justice		X	The alternatives will not disproportionately affect subject populations.
Land Use, Capital, Labor, Management Level, Profitability, Risk, & Social Well-being		X	No construction action or landuse change. USDA program participants retain wetland appeal rights as before. The alternatives will not affect any of these considerations.
Public Health and Safety		X	No potential for loss of life associated with the alternatives.
Recreation		X	No construction action or landuse change. Alternatives will not affect recreational opportunities.
Scenic Beauty/ Parklands		X	There are parklands in APE (SD). The alternatives will neither positively or negatively affect these parklands or scenic beauty because the alternatives do not change the scenic quality of the general landscape. No construction action.

Wetlands, endangered and threatened species, and wildlife habit were the concerns determined to be relevant to a further impact analysis. This Section is an assessment of the impacts from the recommended plan. This section presents *direct* and *indirect* impacts resulting from the action.

Direct impacts are those that occur directly as a result of the project while indirect impacts would occur as a result of natural or other processes modifying the project or adjacent areas.

The magnitudes of the direct or indirect impacts are also considered. *Insignificant* impacts are those impacts having little effect on the environment. Insignificant impacts range from *minor to moderate* and may be referred to as such throughout this document. *Significant* impacts are those impacts having a substantial effect on the environment. Significant impacts are the same as *major* impacts and may be referred to as such throughout this document. Further, the direct or indirect impacts are evaluated from the standpoint of whether they are *short-term or long-term*. Short-term or temporary effects would last only during the project construction period while long-term effects would persist for many years.

This section also investigates the *cumulative impacts* of the project. Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or nonfederal) or person undertakes such actions.

## 5.2 WETLANDS

The proposed action is a change in wetland determination convention, currently allowed within the regulations, and does not directly impact wetland resources. Implementing the WC provisions under the proposed action may indirectly impact wetlands on the SD landscape. Minor amounts of wetlands may be missed using any offsite technique and the NRCS acknowledges that personnel with wetland job approval authority have various levels of skill and experience that may result in some discrepancies, just as existed within the NWI program. Human error is equally likely in the field and in the office and is not changed by the proposed action. No offsite technique is 100 percent accurate or complete. However, additional wetlands may be identified as well. The quantity of quality wetland determination products may actually increase due to the potential site visit reduction and subsequent relief of workload pressure. When considering the data analyzed in section 4.4, the proposed action actually results in a moderate (n=3, less than 1 percent) net gain in sites labeled as W. Therefore, no significant impact to wetland resources is expected.

While in the tract/field to investigate other sites, the NRCS personnel are authorized to adjust the offsite determination based on known site conditions. For example, a site was labeled nonwetland using offsite procedures but upon conducting scope and effect on another site the field investigator noticed a well-vegetated, small temporary wetland, and that wetland was the same site previously labeled nonwetland. The field investigator would change the label to wetland based on the field visit. The same would be true if a site was labeled wetland and upon field inspection, for other reasons, the site was discovered to be a nonwetland (e.g., rock pile).

Temporary wetlands unique to the SD landscape and prairie potholes in general, may frequently be considered under “difficult wetland situations” in the USACE Regional Supplements. Specifically, SD wetlands may periodically lack indicators of wetland hydrology during the field visit. In these circumstances, the USACE recommends a procedure to follow to verify hydrology. One of these procedures is the NRCS hydrology tools (slide review). Arguments can be made that NWI photography (flown once) represents the true wetland picture because it was flown in the spring. On the other hand, a 20-plus year period of record of FSA imagery (flown in July/August) may represent the longer term climate conditions of the state.

In either argument, the NRCS has found that most of the small temporary wetlands occur in crop fields that have been tilled and/or sprayed and wetland vegetation most likely absent; therefore, the likelihood of finding two secondary hydrology indicators will be limited. A vegetative reference site may be used and mapped hydric soils and/or hydric indicators are usually present to satisfy the hydrophytic vegetation and soils criteria. However, most hydrology decisions would still be based on the SDMC hydrology Step 3 (slide review) process.

The NRCS believes the FSA imagery is the best information available because they represent the long-term site condition; temporary hydrologic impacts should appear even into July; imagery will most likely be used to make the final decision on cropped sites; and the FSA imagery is easily updated. Therefore, the USACE and the NRCS are both using the best available science to identify wetland hydrology and hence wetland signatures.

### **5.3 WILDLIFE**

The proposed action is a change in wetland determination convention, currently allowed within the regulations, and does not directly impact wildlife resources. Implementing the wetland conservation provisions under the proposed action may indirectly impact wetland habitats. When considering the data analyzed in Section 4.4, the proposed action actually results in a moderate (n=3, less than 1 percent) net gain in sites labeled as W. Wildlife will continue to be able to use the wetland habitat to the extent that it will exist under altered (including manipulated) and unaltered conditions.

### **5.4 THREATENED AND ENDANGERED SPECIES**

The proposed action is a change in wetland determination convention, currently allowed within the regulations, and does not directly impact wetland resources. Implementing the WC provisions under the proposed action may indirectly adjust labeled wetland acreages on the SD landscape. The NRCS endangered species evaluation is a site specific function and is beyond the scope of this document except in general terms. The Topeka shiner, whooping crane, and Western prairie-fringed orchid would most likely be affected by a change in the scope or effect of wetland determinations. When considering the data analyzed in Section 4.4, the proposed action actually results in a moderate (n=3, less than 1 percent) net gain in sites labeled as W. This action may affect but is not likely to adversely affect threatened or endangered species.

### **5.5 ENVIRONMENTAL COMPLIANCE**

The proposed action does not require a Section 401 (CWA) State Water Quality Certification from the state, Section 404 (CWA) permit or Section 10 (Rivers and Harbors Act) permit from the USACE, or an endangered species permit from the USFWS. According to the USFWS (electronic mail dated February 12, 2010), since this action is not a construction action, the Fish and Wildlife Coordination Act does not apply. Nor does this action require any other federal or state permits. Refer to Table 5.1 for a summarized list of environmental compliance.

### **5.6 WITHOUT PROJECT IMPACTS**

The Without Project Condition alternative would forego all of the previously stated benefits (improved efficiency, workload reduction, and high quality products.). Indirect environmental impacts will continue to occur. The existing workload and backlog issues would continue to be a

major problem. Due to the high workload, staff will continue to be pressured and may not be able to consistently produce high quality products for the customer or the resource.

## **5.7 CUMULATIVE IMPACTS**

Cumulative impacts are those combined effects on quality of the human environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what federal or nonfederal agency or person undertakes such other actions [40 CFR 1508.7, 1508.25(a), and 1508.25(c)]. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time or taking place within a defined area or region, or from these minor impacts combined with major impacts. It is the combination of these effects and any resulting ecosystem degradation that should be the focus of cumulative impact analysis. Thus, the cumulative impacts of an action are viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource. ‘Effects’ include both direct effects and indirect effects, as defined in Section 2. Consistent with the CEQ regulations, effects and impacts are used synonymously. Effects include ecological (e.g., the effects on natural resources and affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects include those resulting from actions that may have both beneficial and detrimental effects; even if on balance the agency believes that the effect will be beneficial (40 CFR 1508.8).

Cumulative impacts to the state from the proposed action will result in no substantial net change in wetland resources identified on the landscape. The NRCS is the only agency that regulates non-jurisdictional (USACE) wetlands for USDA program participants. The State of SD does not have a state wetland regulatory program. The USACE is limited in its jurisdiction to “Waters of the United States.” The improved wetland determination efficiency in combination with the USACE wetland regulation activities will not result in any substantial or noticeable effect to the SD landscape. Based on the proposed action and the actions by other agencies within the state, there is minimal concern about adverse or beneficial cumulative impacts as a result of the proposed action.

**Table 5.1 Compliance of the Proposed Action with Environmental Protection Statutes and Other Environmental Requirements**

<b>Federal Statutes</b>	<b>Level of Compliance<sup>1</sup></b>
Archeological and Historic Preservation Act	Full
Bald and Golden Eagle Protection Act	Full
Clean Air Act	Full
Clean Water Act	Full
Coastal Barrier Resources Act	N/A
Coastal Zone Management Act	N/A
Comprehensive Environmental Response, Compensation, and Liability Act	N/A
Endangered Species Act	Full
Estuary Protection Act	N/A
Farmland Protection Policy Act	Full
Federal Water Project Recreation Act	N/A
Fish and Wildlife Coordination Act	Full
Land and Water Conservation Fund Act	N/A
Magnuson-Stevens Act	N/A
Marine Mammal Protection Act	N/A
National Historic Preservation Act	Full
National Environmental Policy Act	Full
Resource Conservation and Recovery Act	Full
Rivers and Harbors Act	Full
Water Resources Planning Act	Full
Watershed Protection and Flood Prevention Act	Full
Wild and Scenic Rivers Act	Full
<b>Executive Orders, Memoranda, etc.</b>	
Invasive Species (E.O. 13112)	Full
Migratory Bird (E.O. 13186)	Full
Protection and Enhancement of Environmental Quality (E.O. 11514)	Full
Protection and Enhancement of Cultural Environment (E.O. 11593)	Full
Floodplain Management (E.O. 11988)	Full
Protection of Wetlands (E.O. 11990)	Full
Prime and Unique Farmlands (CEQ Memorandum, 11 Aug. 80)	Full
Environmental Justice in Minority and Low-Income Populations (E.O. 12898)	Full
Protection of Children from Health Risks & Safety Risks (E. O. 13045)	Full

<sup>1</sup>Level of Compliance:

*Full Compliance (Full):* Having met all requirements of the statute, E.O., or other environmental.

*Not Applicable (N/A):* No requirements for the statute, E.O., or other environmental requirement.

## SECTION 6

### 6.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

The NRCS initiated agency coordination and public involvement on November 30, 2009, with a telephone call to Kurt Forman at the USFWS. The NRCS presented its initial SDMC update idea to the USFWS to facilitate discussion with the environmental groups involved in the “2000 Settlement Agreement” (National Wildlife Federation, SD Wildlife Federation, SD Resources Coalition, Izaak Walton League of America, National Audubon Society, and the Flandreau Santee Sioux Tribe). The USFWS agreed to speak to some of the environmental groups (Izaak Walton League, SD Wildlife Federation, and SD Resources Coalition) concerning the proposed updates. On the same date, the NRCS electronically mailed the USFWS, the USEPA, and the USACE a written copy of the SDMC update proposal and to coordinate a December meeting to discuss the update.

On December 10, 2009, the USFWS contacted the NRCS and stated that the environmental groups were concerned about the NRCS conducting wetland determinations using offsite procedures. At this time, the USFWS recommended a further data analysis and coordination with the NRCS and the USFWS in ND. In the meantime, the NRCS (Kevin Luebke) contacted both the SD Wildlife Federation and the National Audubon Society. However, a voice message had to be left with each group and a request was made to return the call but the request has been unsuccessful to date. On December 14, 2009, the USACE contacted the NRCS and stated they would be unable to meet in 2009 and suggested the three agencies try to meet in January or February 2010. During this same call, the USACE agreed that the USFWS should act as the lead non-USDA agency to coordinate with the NRCS on this matter. The USEPA concurred that the USFWS should act as the lead non-USDA agency to coordinate with the NRCS on a separate phone call earlier in the month.

Based on the December 10, 2009, USFWS (environmental groups) recommendations, the NRCS held an agency working meeting in Aberdeen, SD, on January 12 and 13, 2010. The purpose of this meeting was to discuss the SDMC update with the ND NRCS and the ND and SD offices of the USFWS. This meeting established the SDMC update “Workgroup.” The Workgroup identified the need for additional data correlation analysis to support the Workgroup’s position that the SDMC updates will not result in a significant loss of wetlands on the landscape.

On March 29, 2010, the NRCS met with the SDCG to discuss the use of offsite determinations as part of the SDMC. The NRCS explained that a set of criteria were developed and data analyses were performed. The SDCG requested additional data analysis which the NRCS conducted (end of Section 4.4.) The same request was made during a meeting with the SDFB on May 4, 2010.

The recommended plan was briefed to the State Technical Committee (STC) on May 11, 2010. Discussion was held and questions were answered to the extent practicable. The STC members were advised that a public notice will be sent to various agencies, organizations, elected officials, and published in multiple media outlets.

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## SECTION 7

### 7.0 REFERENCES

- Brooke, R., G. Fogel, A. Glaser, E. Griffin, and K. Johnson. 2009. Corn ethanol and wildlife: How increases in corn plantings are affecting habitat and wildlife in the Prairie Pothole Region. A University of Michigan study published by the National Wildlife Federation.
- Council on Environmental Quality, Executive Office of the President. Federal Actions to Address Environmental Justice in Minority Populations. December 10, 1997. Populations and Low-Income Populations, <http://www.whitehouse.gov/CEQ/>
- Higgins, K.F., E. Dowd-Stukel, J.M. Goulet, and D.C. Backlund. 2000. Wild Mammals of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, SD. 278pp.
- Johnson, R.R. and K.F. Higgins. 1997. Wetland resources of eastern South Dakota. Brookings: South Dakota State University. 102pp.
- Kiesow, Alyssa. 2006. Field Guide to Amphibians and Reptiles of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, SD. 178pp.
- Larson, Gary E. 1993. Aquatic and wetland vascular plants of the northern Great Plains. General Technical Report RM-238. Fort Collins, CO: USDA, Forest Service, Rocky Mountain Forest and Range Experiment Station. 681pp.
- Larson, G.E. and J.R. Johnson. 1999. Plants of the Black Hills and Bear Lodge Mountains: a field guide with color photographs. Brookings: South Dakota State University. 608pp.
- Marrone, Gary M. 2002. Field Guide to Butterflies of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, SD. 478pp.
- Mitsch, W. J. and J.G. Gosselink. 1993. Wetlands. Van Nostrand Reinhold, New York, NY. 722pp.
- NatureServe. 2008. International Ecological Classification Standard: Terrestrial Ecological Classifications. NatureServe Central Databases. Arlington, VA, USA. Data current as of 10 October 2008.
- Neumann, R.M. and D.W. Willis. 1994. Guide to the Common Fishes of South Dakota. EC899, Cooperative Extension Service, SD. 60pp.
- Rieger, B.A., K.F. Higgins, J.A. Jenks, and M.L. Kjellsen. 2006. Demographics of western South Dakota wetlands and basins. Brookings: South Dakota State University. 124pp.
- South Dakota Department of Game, Fish and Parks. 2005. South Dakota Comprehensive Wildlife Conservation Plan. South Dakota Dept. of Game, Fish and Parks, Pierre, Wildlife Division Report 2005-07.

South Dakota Department of Environment and Natural Resources. 2010. The 2010 South Dakota Integrated Report for Surface Water Quality Assessment. 232pp.

Tallman, D.A., D.L. Swanson, and J.S. Palmer. 2002. Birds of South Dakota. South Dakota Ornithologist's Union, Aberdeen SD. 441pp.

Tiner, Ralph W. 1984. Wetlands of the United States: Current Status and Recent Trends, National Wetland Inventory Project. United States Fish and Wildlife Service, Washington, D.C. 34pp.

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. 682pp.

United States Department of Interior, Fish and Wildlife Service. 1979. Classification of wetlands and deepwater habitats of the United States. Biological Services Program: FWS/OBS-79/31. 103pp.