Chapter 3—Alternatives

FWS

Whooping cranes are a spectacular sight in the Missouri River basin.

This chapter describes the management alternatives for the proposed NCCA and PBCA. These alternatives are different approaches to management that are designed to achieve project purposes, vision, and goals; the mission of the Refuge System; the legislated mandates of the Wild and Scenic Rivers Act; the mission of the FWS; and the mission of the NPS. Alternatives are formulated to address significant issues, concerns, and problems that we identified with input from cooperating agencies, interested groups, tribal governments, and the public during public scoping and throughout the development of the LPP. Chapter 1 provides a summary of these issues.

3.1 Criteria for Alternatives Development

Following the initial public scoping process in the winter of 2012, we held meetings and workshops with the cooperating agencies and identified a reasonable range of preliminary alternatives. Some ideas were eventually dismissed; those are discussed below in section 3.6. We carried forward the following four alternatives and analyzed them in detail in this EIS:

- "Alternative A—No Action"
- "Alternative B—Minimal Conservation Action"
- "Alternative C—Moderate Conservation Action" (preferred alternative)
- "Alternative D—High Conservation Action"

These alternatives provide different levels of permanent protection and restoration for fish, wildlife, plants, habitats, culturally significant sites, recreation access, and other resources and different opportunities for the public to engage in compatible wildlife-dependent recreation. The action alternatives—alternatives B through D—incorporate spe-

cific actions intended to achieve the goals described in chapter 2. However, the no-action alternative—alternative A—represents the current management direction, which may not meet future goals and objectives. The no-action alternative provides a baseline against which to compare alternatives B, C, and D.

Protection Priorities and Ranking Criteria for Alternatives B–D

To identify and rank sites in the project areas, we worked in consultation with internal FWS divisions (Migratory Birds, Fisheries, Ecological Services) and the cooperating agency team and chose to develop protection priorities based on a prior extensive group effort to determine and quantify the ORVs of the MNRR (NPS 2012). The ORVs were developed in fall 2011 by a group of more than 60 subject matter experts, interested stakeholders, and other river partners to help guide the management of the MNRR. The ORVs that were identified are listed below:

- Cultural
- Ecological
- Fish and Wildlife
- Geological
- Recreational
- Scenic

We used a two-pronged approach to landscape prioritization. The first component was to investigate a suite of focal fish and wildlife species, their habitats, and overall river function (Ecological and Fish and Wildlife ORVs). The second component was to investigate recreational access, scenic qualities, and the potential for sites to contain culturally significant sites (Cultural, Geological, Recreational, and Scenic ORVs).

Focal Species Prioritization

We selected a suite of fish and wildlife species that we felt were representative of a functional river ecosystem. Each of these focal species represents a group of species that are vulnerable to the same threat processes (Caro and O'Doherty 1999). The selected species are the bald eagle, pallid sturgeon, least tern, and piping plover.

All four species are Federal trust species or have State or regional conservation status, making them worthy of protection on their own; however, conserving habitat for these species would also protect habitat for other species with similar habitat requirements. In this way, these species serve as indicators of overall river functionality and health. In addition, species like the bald eagle are significant to many American Indian tribes.

Point data (such as capture locations or nest sites) for the four species were available from various research or monitoring studies conducted within the proposed conservation areas (figures 4, 5, and 6); however, no conceptual models or species-specific models have been developed for the action area in its entirety. Accordingly, we chose to identify the habitats those species were using and extrapolate to the entire action area. Using the finest scale available land cover dataset that covered the entire action area (LANDFIRE 2006), we identified the vegetation community (or land cover) types that correlated to the extensive point data for these species. We then ranked the land cover data relative to the species locations, with land cover classes in red and yellow representing 79.6 percent of bald eagle nest locations, 97.4 percent of pallid sturgeon capture locations, and 97.6 percent of least tern and piping plover nest sites (figure 7). We then classified the remaining land cover types according to their biological significance for the focal species, with grasslands and forestlands ranked as medium priority and row-crop agricultural lands and developed areas (roads and cities) ranked as the lowest priority.

In addition, we mapped characteristics that support or inhibit overall river function as shown in figure 8. These characteristics were:

- the historical floodplain of the Missouri River and its tributaries;
- confluences of tributaries with the Missouri River;
- large islands;
- areas with artificially stabilized banks that do not protect river management infrastructure (tailraces), major highways, cities, or private residences.

Historical floodplains were mapped because that characteristic is a key attribute necessary to support the processes associated with hydrology, sediment transport, and the transformation of organic and inorganic materials in river and riparian systems—for example, up and down channels, between chan-

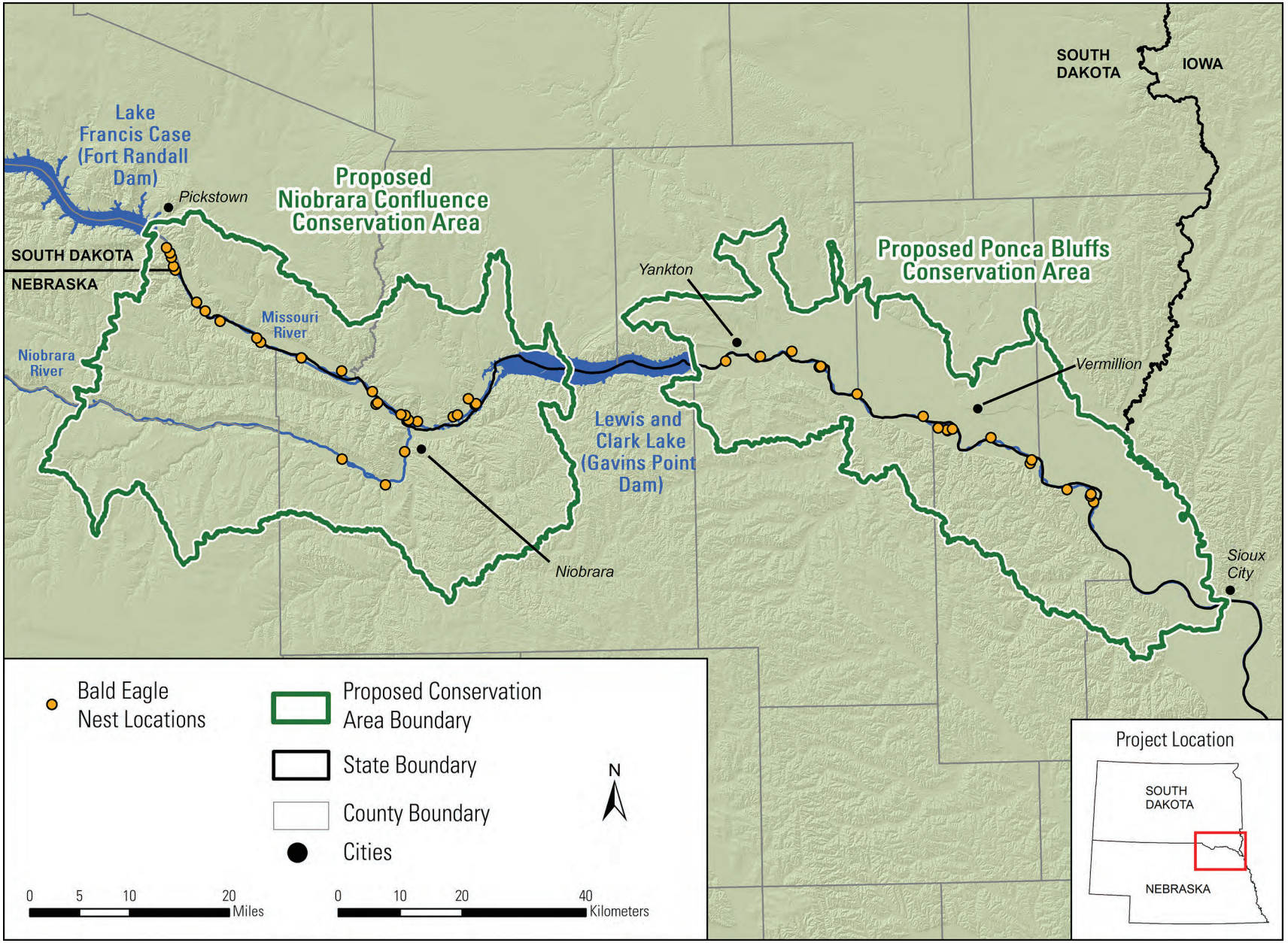

Figure 4. Bald eagle nest locations in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

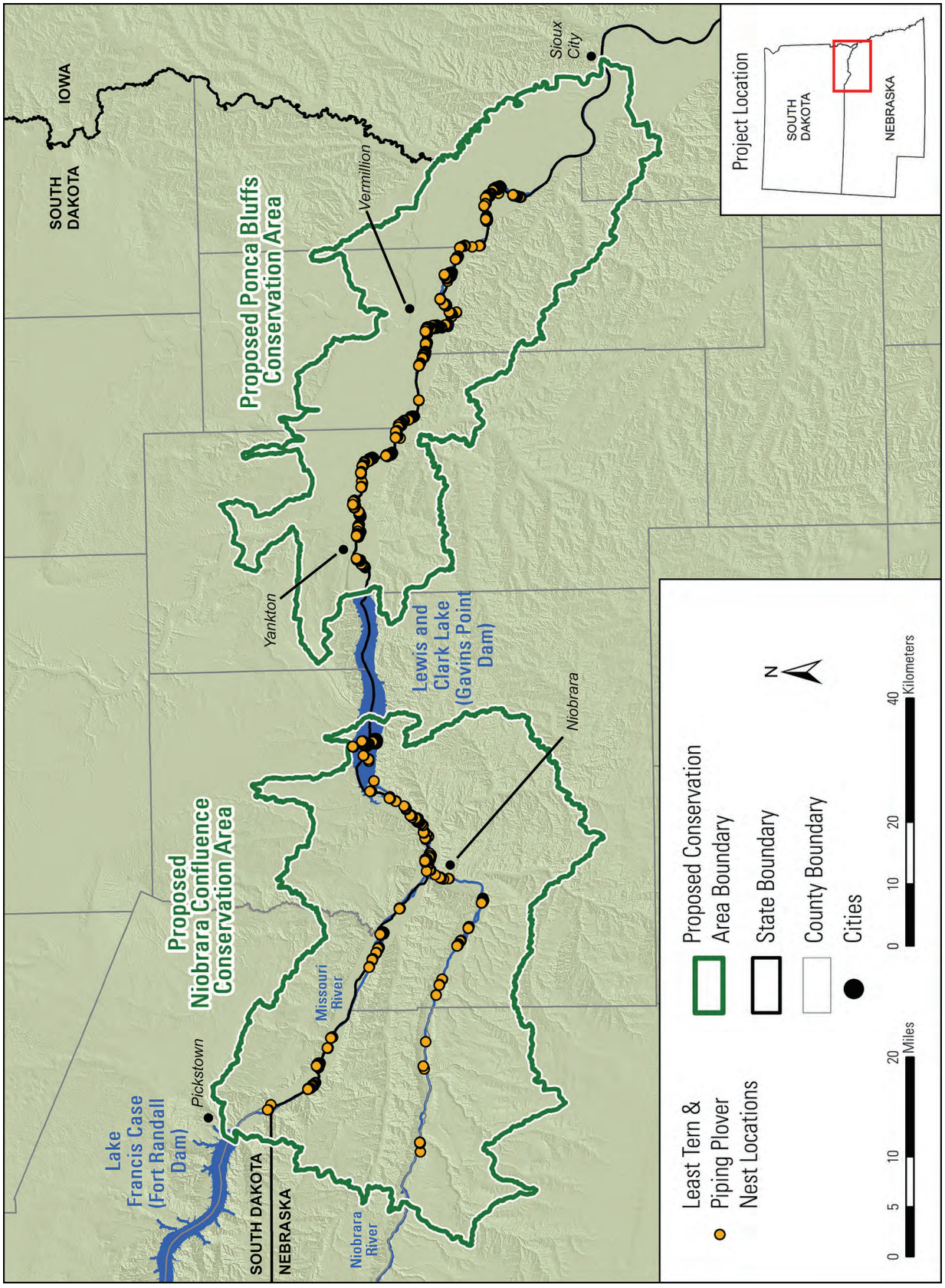

Figure 5. Least tern and piping plover nest locations in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

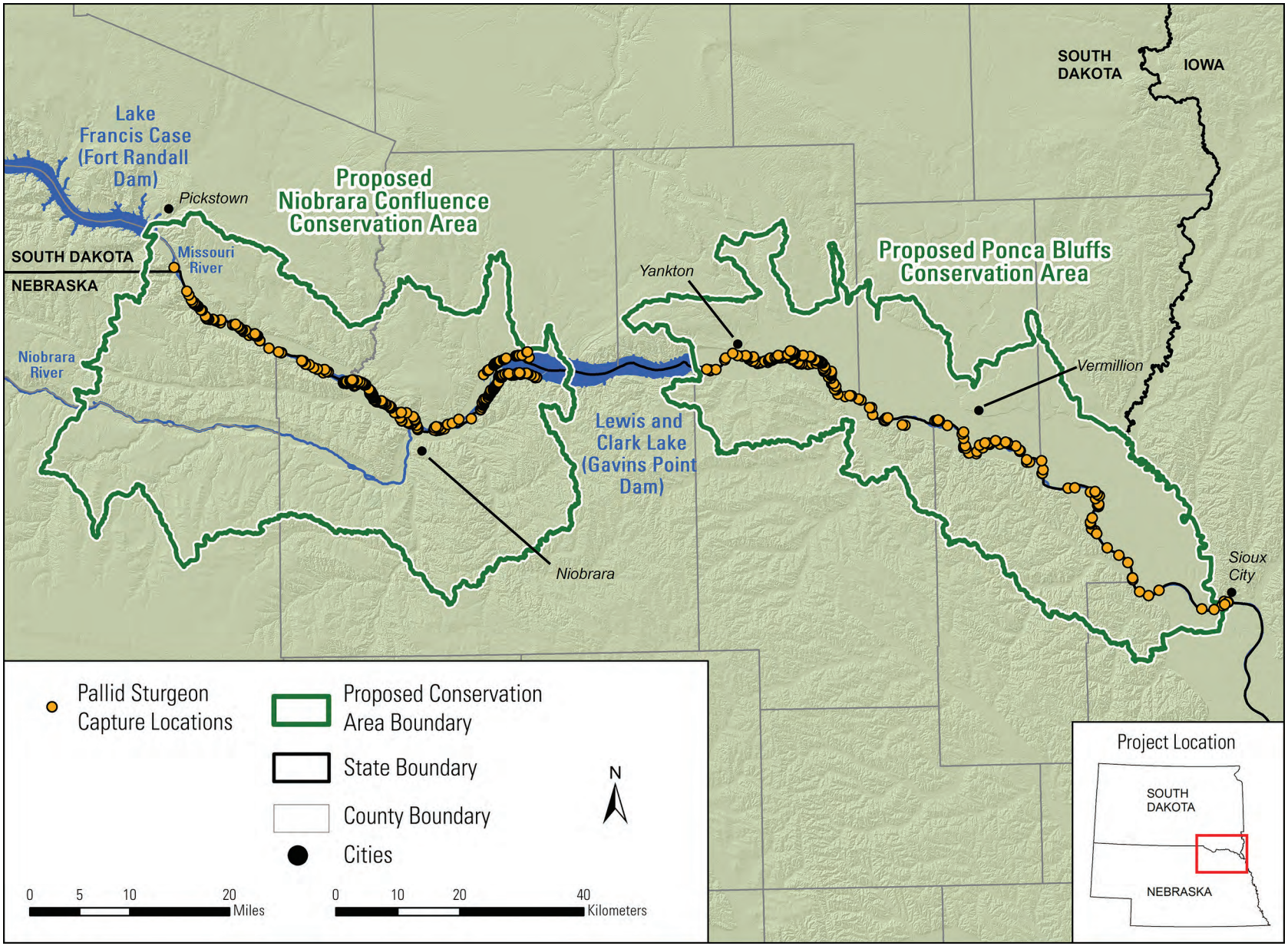

Figure 6. Pallid sturgeon capture locations in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

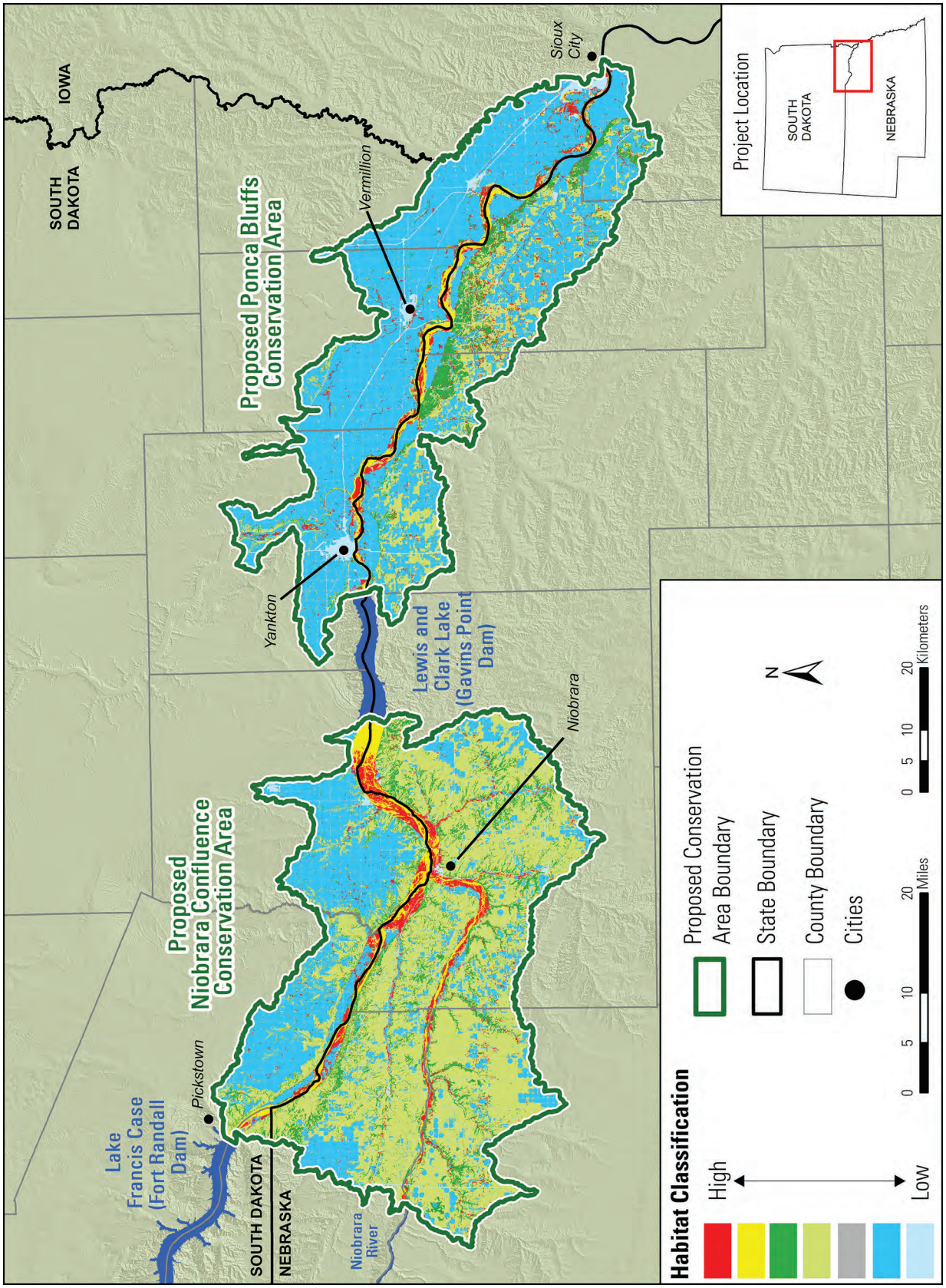

Figure 7. Focal species habitat prioritization in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

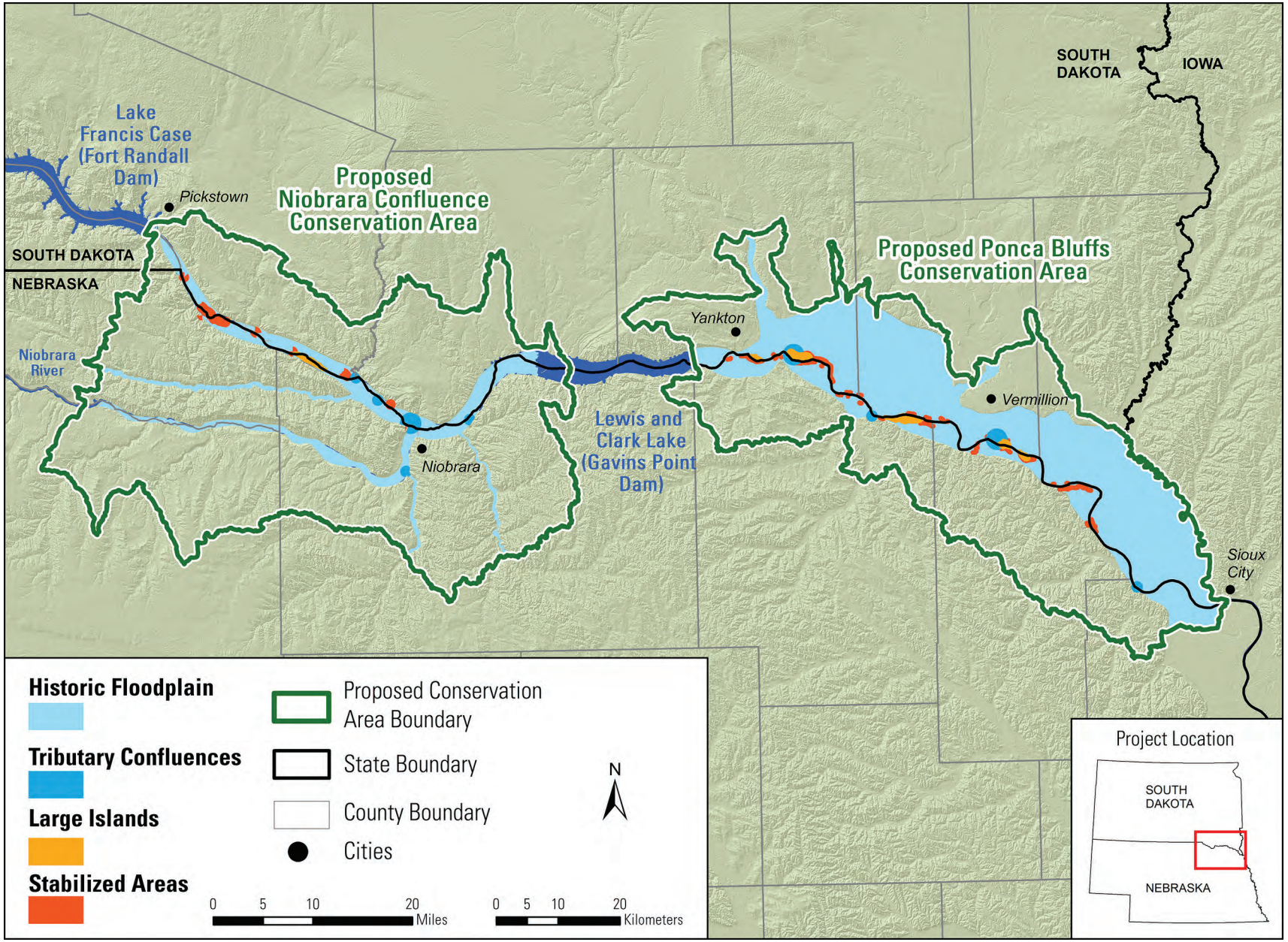

Figure 8. River features in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

nels, and between riparian areas and floodplains (The Nature Conservancy 2008).

Confluences were mapped because they contribute organic and inorganic materials and physical habitat features that may be locally important in the watershed (The Nature Conservancy 2008). Moreover, the Niobrara River confluence is a unique site where a sediment-rich river (the Niobrara) meets a river that is generally considered to be sediment-hungry (the Missouri). The confluence, because of these characteristics, provides optimal habitat conditions for species like the pallid sturgeon.

Large islands were mapped because many of them provide dynamic habitat conditions ranging from barren sandbars to old-growth cottonwood galleries and mature lowland forests of ash and elm. These sites are also known for supporting nesting colonies of turtles, an important indicator of overall river function (NPS 2012).

After the floodwaters receded in fall 2011, MNRR and the Missouri River Institute at the University of South Dakota collaborated on a bankline inventory for MNRR. The purpose of this study was to create a database that contains bank descriptions and their locations, including any processes that were occurring at the time of data collection (such as erosion and tree loss), detailed information on stabilization if it was present, and any areas in need of cleanup. We used these data to identify where portions of the Missouri River are being inhibited from natural flow patterns and where potential restoration could occur. Areas with stabilized shorelines were not included if they protect river management infrastructure (tailraces), major highways, cities, or private residences.

Cultural, Geological, Scenic, and Recreation Prioritization

NPS cultural resource experts developed a cultural resource sensitivity model that identified areas that are potentially sensitive for cultural resources (figure 9). The model identifies high- and medium-sensitivity zones in the two conservation areas on the basis of environmental characteristics of known archeological sites within the administrative boundary. Three attributes were used to create the model: archeological site locations, distance to water, and slope.

Chalkstone bluffs, a prominent geologic and scenic feature in the NCCA and on the south side of the Missouri River in the PBCA were mapped in a Geographical Information System (GIS) database using digital elevation models (figure 9). These areas, besides providing scenic value, also make a crucial contribution to river functionality in the form of sediment. Rivers continually use dynamic forces to move sediment throughout the floodplain. Much of this sediment is initially derived from river bluffs.

Current recreational access sites (such as boat ramps) were identified in a GIS layer (figure 10). We established a 500-meter buffer, which allowed us to prioritize a small but reasonable management area around existing access to maintain access to those sites. We then examined where on the Missouri River more access may be needed based on comments from the public and requests from agencies, tribes, or other stakeholders; we also considered areas where more access may be necessary to increase human safety. We incorporated the conservation of existing public access sites through the use of a boundary length modifier (described in the next section); this approach allowed us to identify a network of conserved areas.

Overall Landscape Prioritization

The species-specific maps (figures 4, 5, and 6) are useful for determining where in the landscape the key habitats for the focal species occur. However, they do not help decisionmakers with determining which areas would provide the most effective conservation returns overall.

Besides the presence or absence of habitat for individual species, it is important to consider issues such as connectivity, cost, and unequal conservation need for each species. Accordingly, the software package Marxan (Ball, Possingham, and Watts 2009), with its simulated annealing algorithm, was used to identify "optimal" solutions for conservation prioritization in the NCCA and PBCA. Marxan permits the user to specify individual conservation targets for conservation features (in this case, area of focal species habitat) and species-specific penalties for models that do not meet conservation targets. This feature allows the user to individually weight features—for example, the program can assign penalties for not including enough habitat for species of higher conservation concern, or can reduce the amount of land necessary for generalist widespread species. By designating a boundary length modifier, the user can generate a more compact reserve system. The landscape can also be classified by cost; this attribute can be as simple as land area, or it can be made more complex and meaningful by accounting for variables such as land costs or metrics of the human footprint.

Because of the flexibility allowed by Marxan, the values for the selected parameters need to be optimized by successive iterations of the program. For this analysis, hexagonal planning units were selected, as these have been shown to result in less fragmented, more efficient reserve networks (Nhancale and Smith 2011). Hexagons encompassed 20 acres (approximately 8.1 hectares), providing resolu-

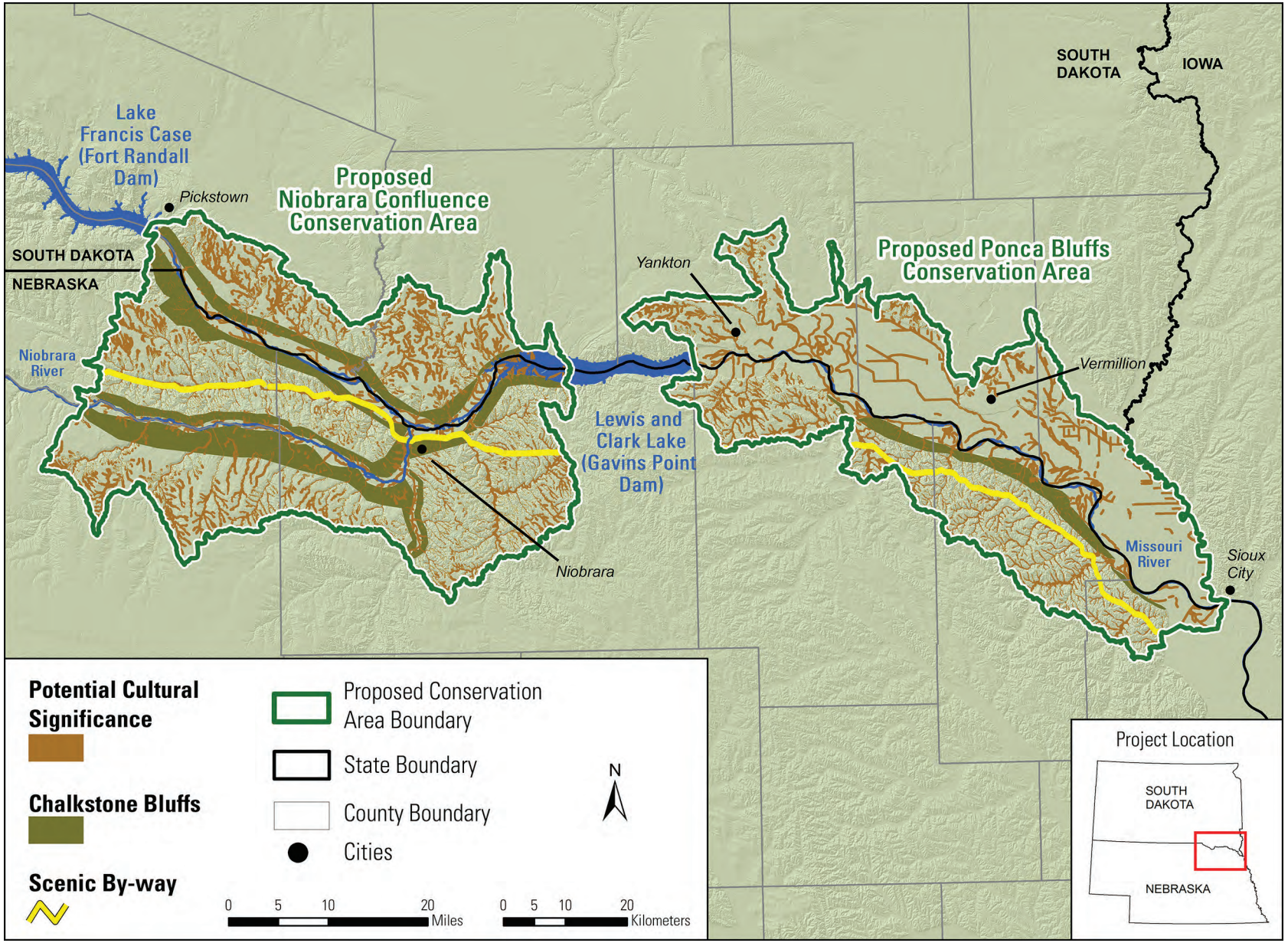

Figure 9. Chalkstone bluffs and historical trails in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

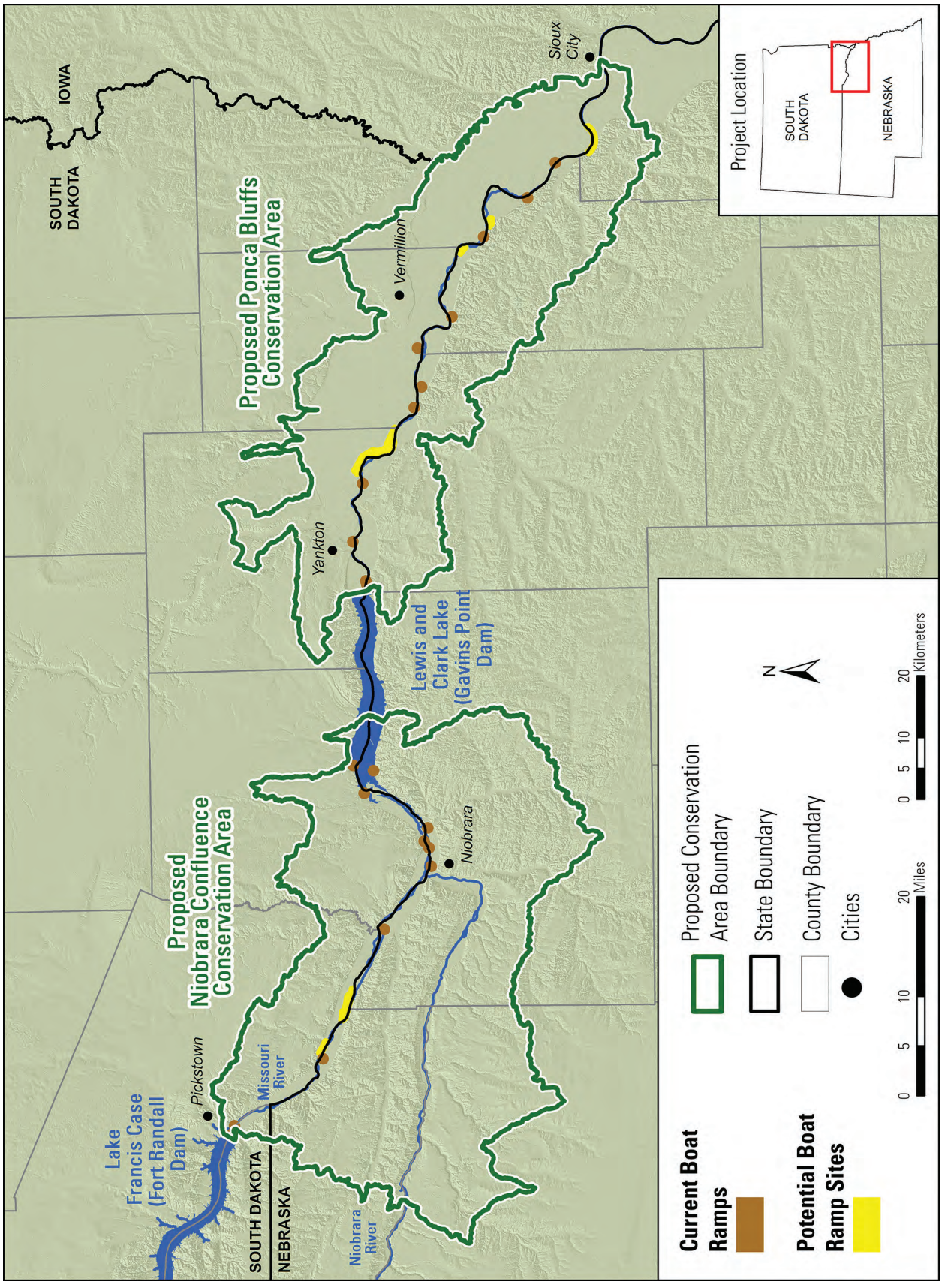

Figure 10. River access points in the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

tion that is sufficient for making land protection decisions while covering the project areas in few enough planning units to be computationally manageable. Hexagons already in a permanent protected status (that is, existing conservation easements or land already owned by the FWS or the NPS in fee title) were locked into the model because they typically met the objectives of the NCCA and PBCA. However, lands owned by federally recognized tribes were excluded from the model because discussions and formal consultation with the tribes suggested that other methods would be more viable than land acquisition to achieve conservation goals. Marxan was run for 100 runs at 100 million iterations. The species-specific data were included as features in the Marxan model. A boundary length modifier of 0.001 was used to create a slightly more compact reserve network. Increasing that value to 0.01 oversimplified the reserve network and did not meet the intent of the NCCA and PBCA.

Targets for protection were set at 40, 50, and 60 percent of the land supporting focal species habitats or essential river features (Ecological and Fish and Wildlife ORVs) for alternatives B–D, respectively. Targets for Cultural, Geological, Scenic, and Recreation ORVs were set at 20, 25, and 30 percent of the entire landscape for alternatives B–D, respectively. We developed individual models for each proposed conservation area and alternative (figures 11–13).

Evaluation of Easement Potential

As described earlier, acquisition of conservation easements is not a new tool for achieving conservation objectives in the NCCA or PBCA; the Nebraska NRCS holds a number of easements, and nongovernmental organizations hold several easements in the action area. These organizations have missions that are not identical to ours but that share many objectives.

The landscape modeling described above has generated maps of species-specific conservation priorities for each of the focal species, as well as a consensus map that shows where conservation returns for Federal funds would be maximized for the suite of species examined. Biologists and realty specialists would work cooperatively to use these tools to identify parcels where conservation efforts would result in the greatest benefit to trust species.

When a willing seller approaches us, or if we wish to proactively seek out sellers, the following criteria would guide our decisionmaking:

- *Overall conservation value*—is the property located, in whole or in part, in an area that was selected in 60 percent or more of the spatial conservation priority runs in Marxan?

- *Trust species value*—does the parcel contain priority habitat that was identified in any of the species-specific maps developed as part of this exercise?

- *Previously unidentified conservation value*—if neither of the preceding thresholds is reached, is there another compelling reason (such as promoting critical habitat connectivity, identification of new species of conservation concern, simplified management of an existing refuge unit, or donation of intact or easily restored habitat) that justifies the property's protection?

Nothing in these guidelines is intended to limit the appropriate exercising of discretion and professional judgment by realty specialists and refuge staff. Potential acquisitions would be subject to scrutiny to determine (1) that acquisition would comply with realty policy, and (2) that the habitat for which the property was identified as a priority is, in fact, present on the parcel. As mentioned above, there may also be more reasons why acquisition of interest in a parcel is justified, even if the parcel did not rank highly in models for selected priority trust species at the time that this plan was approved.

3.2 Elements Common to All Alternatives

Key management elements will be included in the final EIS and LPP. Regardless of the alternative selected, we would comply with all laws, regulations, and policies pertaining to management activities that could affect conservation area resources such as soil, water, air quality, threatened and endangered species, and cultural resources. Such activities include subsurface mineral reservations and the management of utility lines, easements, contaminants, and invasive species. Specific elements common to all alternatives are as follows:

- The Lake Andes Wetland Management District, a unit of the Lake Andes National Wildlife Refuge Complex, will continue to manage waterfowl production areas and easements associated with wetlands and grasslands in the Prairie Pothole Region.

- The NPS will continue to manage the 39-mile and 59-mile districts of the MNRR as a national recreational river as designated by Congress through the Wild and Scenic Rivers Act.

- The FWS's Partners for Fish and Wildlife program will continue to work with willing landowners on site-specific conservation projects such as water improvements, wetland restoration, grazing plans, and other projects. (Please refer to www.fws.gov/partners for further information on this effort.)

- We will continue to work with Missouri River basin initiatives such as the MRRP and other efforts of the Missouri River Recovery Implementation Committee.

- We will continue to work toward the goals outlined in the recovery plans for piping plover, least tern, and pallid sturgeon.

Specific elements common to all action alternatives (B–D) are as follows:

- We propose to use conservation easements on 80 percent of the lands conserved to reduce impacts on local tax bases, while still achieving the objectives and strategies identified in section 3.8.

- Achieving conservation actions would be contingent on willing landowners and project funding. Accordingly, there can be no estimated completion date, but for the purposes of this analysis we have assumed the conservation areas can be fully realized over a period of 50 years.

- If the LPP is approved, the FWS would develop an interim conceptual management plan for fee-title lands until a CCP can be completed. The interim plan would help guide potential management of acquired parcels in the short term and would include items such as interim compatibility determinations.

3.3 Descriptions of Alternatives

Summaries of alternatives A–D are presented below. For each action alternative (B–D), the summary indicates what percentage of the total landscape would be conserved and how conservation efforts would be allocated. Maps showing conservation area boundaries and priorities for each action alternative are also included. Section 3.9 presents a summary of conservation efforts for all alternatives.

Summary of Alternative A—No Action

Under the no-action alternative, the areas outside existing protected areas would largely remain privately owned and subject to changes in land use or habitat type. However, some additional protection is likely because of ongoing conservation easement initiatives by public entities such as the NRCS and the USACE and nongovernmental organizations such as Northern Prairie Land Trust and The Nature Conservancy.

The NPS would continue to manage the 39-mile and 59-mile districts of the MNRR as a national recreational river and would continue acquisition of lands under the authority outlined in section 6 of the Wild and Scenic Rivers Act. However, this authority authorizes fee-title acquisition of no more than 100 acres per mile, on average, on both sides of the river.

Under this alternative, much of the privately owned riparian corridor and uplands that are vulnerable to conversion to nonnative conditions or other destruction may be lost. The burden of conserving lands without compensation would lie more heavily on private landowners and other conservation entities, and a large extent of marginal lands would not be restored.

Summary of Alternative B—Minimal Conservation Action

We would work with willing landowners and communities to strategically conserve up to approximately 5 percent of the total project area (red and orange areas in figure 11) through conservation easements on 4 percent of the landscape and fee-title acquisition of 1 percent. The acquisition goals would

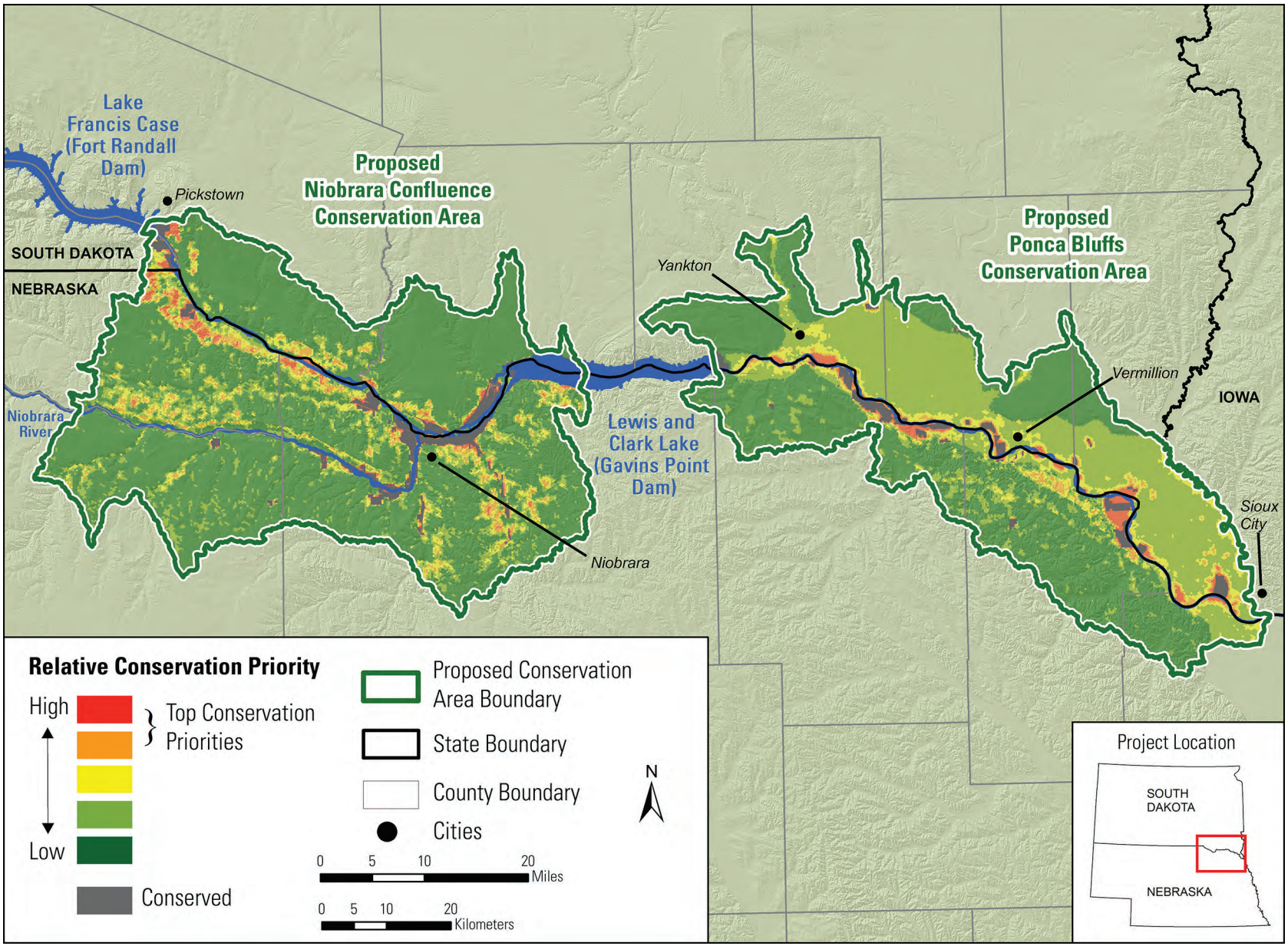

Figure 11. "Alternative B—Minimal Conservation Action" for the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

be 40,000 acres for the NCCA and 30,000 acres for the PBCA. Under alternative B we would protect:

- 40 percent of floodplain riparian habitats and important ecological attributes;
- 20 percent of upland grasslands and forests;
- 20 percent of historic trails and cultural sites;
- 20 percent of recreational access sites.

Draft conservation easement concepts are as follows:

- Unless prior approval in writing is granted by the FWS or the NPS, landowners will maintain permanent vegetative cover consisting of grasses, forbs, low-growing shrubs, and trees on easement lands and abide by the following restrictions:
  - Haying, mowing, and seed harvesting for any reason will not occur before July 15 in any calendar year.
  - Grassland, wildlife habitat, or other natural features will not be altered by digging, plowing, disking, or otherwise destroying the vegetative cover, and no agricultural crop production can occur on the habitat areas delineated.
  - Draining, filling, and leveling of wetlands will be prohibited.
  - Altering and stabilizing the riverbank and shoreline will be prohibited.
  - Livestock confinement facilities such as feedlots will be prohibited.
- Grazing will be permitted on the easement land at any time throughout the year without approval in writing.
- Grantors will pay taxes and assessments, if any, that may be levied against the easement land.
- Noxious weed control will remain a responsibility of the landowner.
- If the landowner would like to allow public access, the easement will be held by the NPS under an additional access agreement; if the landowner wishes to exclude public access, the easement could be held by either agency.
- This easement and the covenants and agreements contained herein will run with the land and will be binding on all persons and entities who come into ownership or possession of the lands subject to this easement.

Lands purchased in fee title would be restored (if needed) to native conditions and subsequently managed to meet the goals and strategies discussed in section 3.4 below and in detail in the LPP.

Summary of Alternative C—Moderate Conservation Action (Preferred Alternative)

We would work with willing landowners and communities to strategically conserve up to approximately 10 percent of the total project area (red and orange areas in figure 12), using conservation easements on 8 percent of the project area and fee-title acquisition of 2 percent. The acquisition goals would be 80,000 acres for the NCCA and 60,000 acres for the PBCA. Under alternative C we would protect:

- 50 percent of floodplain riparian habitats and important ecological attributes;
- 25 percent of upland grasslands and forests;
- 25 percent of historic trails and cultural sites;
- 25 percent of recreational access sites.

Easement terms would be the same as those under alternative B. Additionally, lands purchased in fee title would be restored (if needed) to native conditions and subsequently managed to meet the objectives and strategies discussed in section 3.4 below and in detail in the LPP.

Summary of Alternative D—High Conservation Action

We would work with willing landowners and communities to strategically conserve up to approximately 15 percent of the total project area (red and orange areas in figure 13), using conservation ease-

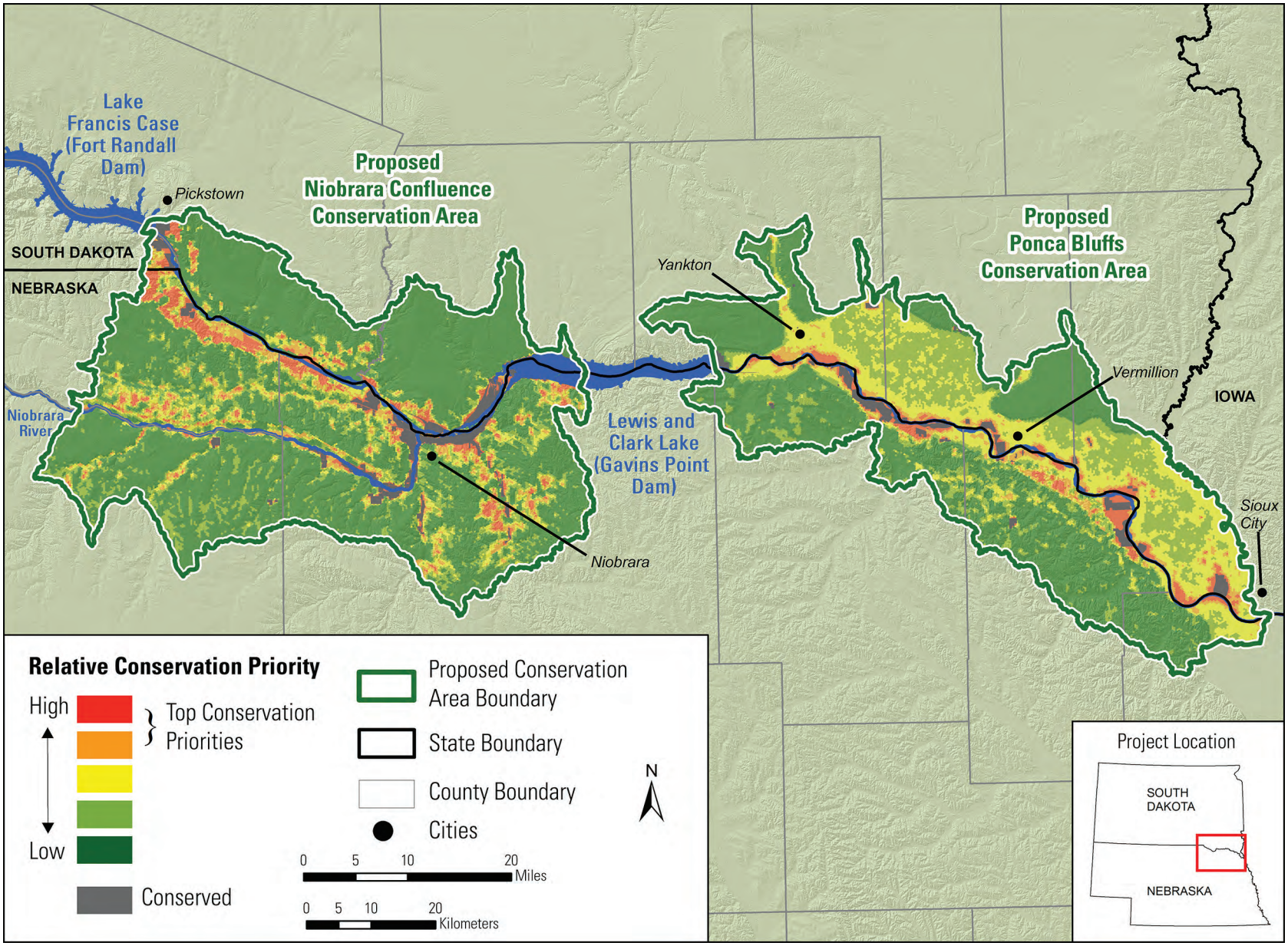

Figure 12. "Alternative C—Moderate Conservation Action" for the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

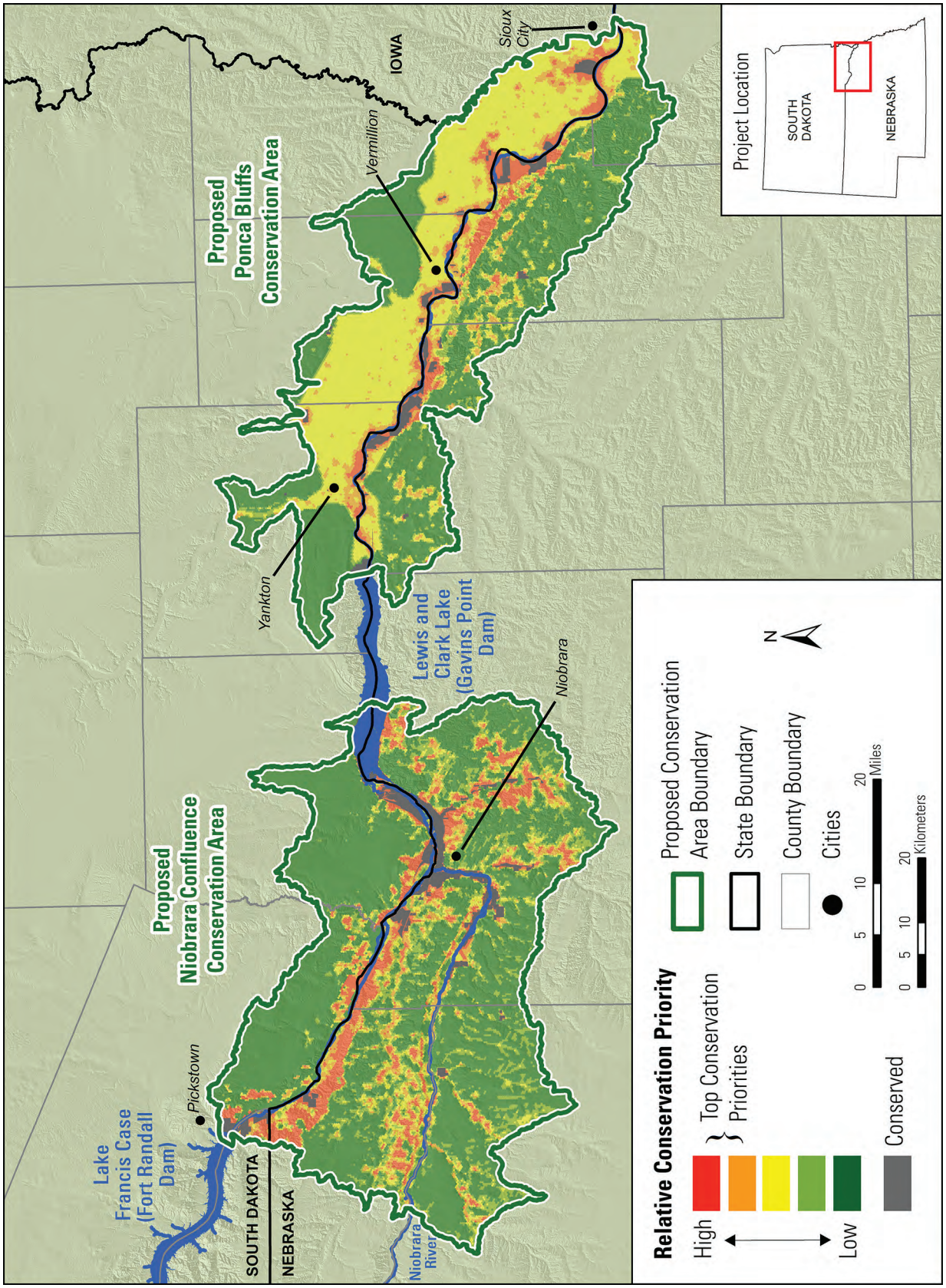

Figure 13. "Alternative D—High Conservation Action" for the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

ments on 12 percent of the project area and fee-title acquisition of 3 percent. The acquisition goals would be 120,000 acres for the NCCA and the 90,000 acres for the PBCA. Under alternative D we would protect:

- 60 percent of floodplain riparian habitats and important ecological attributes;
- 30 percent of upland grasslands and forests;
- 30 percent of historic trails and cultural sites;
- 30 percent of recreational access sites.

Easement terms would be the same as those under alternatives B and C. Additionally, lands purchased in fee title would be restored (if needed) to native conditions and subsequently managed to meet the objectives and strategies discussed in section 3.4 below and in detail in the LPP.

3.4 Goals and Strategies

Each action alternative is designed to address the goals listed in chapter 2. This section summarizes the actions by which the following goals would be achieved:

- local economies and tourism
- partnerships and collaboration
- ecological and river functionality
- cultural resources
- recreational opportunities
- wildlife, fisheries, and their habitats

These goal categories and the strategies to attain these goals are discussed below. Because the action alternatives only differ by level and focus of conservation effort, the strategies for each of these alternatives are identical.

Local Economies and Tourism Goal

Help sustain local economies through preserving working farm and ranch landscapes and conserving lands, both of which will attract tourists from across the Nation.

Discussion

Conservation easements are valuable conservation tools because they allow for the preservation of habitat while maintaining working farm and ranch landscapes like farmlands and rangelands. Consequently, this approach would be cost effective and socially and politically acceptable. Furthermore, conservation easements allow lands to remain privately owned and on local tax rolls while still providing lifelong conservation value to the public. Landowners would be compensated for conserving their properties in perpetuity in a native condition—promoting the growth of native grasses, shrubs, and trees; eliminating or reducing invasive species; and protecting culturally significant sites. In return, these landowners would have money available to use how they see fit, and this money would eventually enter the local economy.

The action alternatives call for an 80-percent to 20-percent ratio of conservation easement to fee-title acquisition.

Strategies

- Provide for a healthy, natural river system that attracts local and other tourists to the area by conserving lands and increasing access to those sites.
- Emphasize conservation through the acquisition of easements to help support and maintain vital local economies.

Partnerships and Collaboration Goal

Develop and foster partnerships with local landowners, communities, tribes, and others by offering financial incentives, sharing knowledge, or collaborating on projects with ecological benefits.

Discussion

Working with landowners, communities, schools, counties, tribes, and other agencies enables us to share knowledge and understand one another's goals and objectives. Groups such as Missouri River Futures (www.missouririverfutures.com) provide a forum for sharing information. Although we would continue to participate in activities in the proposed conservation areas under alternative A, alternatives B–D provide an opportunity for us to play a greater

role in conserving and promoting the Missouri River as a precious resource.

Strategies

- Foster and maintain active participation in community environmental projects, educational outreach, school functions, and landowner workshops.
- Develop an increased presence of the FWS's Partners for Fish and Wildlife Program.
- Work with Indian tribes to develop joint collaborative conservation efforts and long-term management plans—possibly through the use of a memorandum of understanding.
- Continue to work with State and Federal partners on conservation activities.

Ecological and River Functionality Goal

Increase river and ecological functionality by improving water and air quality, maintaining healthy native plant communities such as cottonwood galleries, increasing floodplain connectivity, promoting active channel processes, and reducing flood risk.

Discussion

River systems are among the most biologically diverse and ecologically important systems in the world. This is due in part to their highly dynamic nature, which creates a mosaic of shifting habitat types that vary in age, species composition, and structure (The Nature Conservancy 2008). Rivers are constantly shaping and reshaping the landscape by eroding, transporting, and depositing sediment, debris, and other materials.

Strategies

- Work with partners and landowners to manage lands for native plant communities such as cottonwood galleries and to promote regeneration and establishment.
- Restore and conserve in perpetuity sites that allow river channel movement for natural erosion and deposition (for example, sandbars and point bars) that are crucial to native wildlife and fish species.

Cultural Resources Goal

In consultation with our partners, locate, document, and evaluate cultural resources and encourage preservation and interpretation when appropriate.

Discussion

The lands making up the proposed conservation areas possess a rich history of Native American traditions and practices as well as a rich history of post-European exploration, settlement, and development. These were places where wild bison crossed the river to areas of greater food supplies or to escape Indian hunting groups. Lewis and Clark first discovered black-tailed prairie dogs here and had their crew

NPS

NPS

We would encourage preservation and interpretation of cultural resources whenever appropriate. Pictured are the remains of a fur trapper's cabin (left) and the North Alabama steamship (right).

carry water from the river to pour down prairie dog holes so they could catch, examine, and describe them in their journals. Preserving and maintaining such sites for future generations is crucial to maintain our legacies.

Strategies

- Work with partners to continue to identify areas of cultural or historic significance.
- Work with American Indian tribes to develop joint collaborative conservation efforts and long-term management plans—possibly through the use of a memorandum of understanding.
- Use land protection measures to preserve culturally significant sites in perpetuity.

Recreational Opportunities Goal

Increase recreational opportunities for residents and visitors.

Discussion

Recreational activities are typically what connect individuals to the outdoors and the plants and animals that live there. However, Americans today have become increasingly disconnected from the outdoors. In April 2010, President Obama launched the America's Great Outdoors Initiative and directed agencies like the FWS and the NPS to develop a plan to reconnect individuals to the outdoors (FWS 2012a). The proposed action aims to provide reliable and consistent access to the Missouri River and its tributaries.

Nick Kaczor / FWS

Recreational opportunities would be increased for residents and visitors.

Strategies

- Partner with local communities, outdoor recreational groups, State and Federal partners to identify additional recreational sites (for example, boat ramps, campgrounds, and hunting areas).
- Encourage landowners who acquire conservation easements to exercise the option of allowing public access (through the NPS), which may increase the easement's value, and compensate them accordingly.
- Foster relationships between landowners and State wildlife agencies to provide more liberal access policy like the existing annual public access programs (typically walk-in areas).

Wildlife, Fisheries, and Their Habitats Goal

Support the recovery and protection of threatened and endangered species and reduce the likelihood of future listings under the ESA, while continuing to provide migration habitats for millions of migrating birds and habitats for resident fish and wildlife populations.

Discussion

There are now eight threatened and endangered wildlife species known to utilize the proposed project area; three (least tern, piping plover, and pallid sturgeon) use the NCCA and PBCA to meet their lifecycle requirements. The recovery plans for all three

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Habitats for both migratory and resident wildlife would be preserved.

species have identified the NCCA and PBCA as either crucial habitat or recovery priority areas (FWS 1988, 1990, 1993). Furthermore, the recovery plans for these three species call for actions to restore habitats and functions of the Missouri River ecosystem while minimizing impacts on other uses of the river; the plans also highlight the use of conservation easements or fee-title lands to conserve those essential habitats.

Of the five remaining species, some migrate through the area; we require more information on the others to determine their utilization of the area. One threatened plant species—western prairie fringed orchid—is also known to occur in the project area. Descriptions of these species can be found in section 4.2.10.

Strategies

- Use land protection measures to conserve in perpetuity important sites that provide, or contribute to, the life-cycle requirements for threatened or endangered species and clearly help achieve one or more recovery objectives.
- If applicable, restore sites to natural or favorable conditions for threatened and endangered species.
- Use land protection measures—and restoration techniques if applicable—to conserve riparian areas, wetlands, grasslands, and forestlands in perpetuity to aid in water retention, water quality, carbon sequestration, and improved habitat conditions for migratory and resident fish and wildlife species.

3.5 Foreseeable Activities

Missouri National Recreational River Actions

The NPS would continue to manage the 39-mile and 59-mile districts as a recreational river under the Wild and Scenic Rivers Act and implement the final general management plans for each area. The NPS would continue to acquire lands of no more than an average of 100 acres per river mile on both sides of the river and would coordinate with the USACE on the 59-mile district, because the USACE also has responsibility under the Wild and Scenic Rivers Act. The USACE also has joint responsibility with NPS under the Wild and Scenic Rivers Act for the 59-mile district of the MNRR.

Lake Andes National Wildlife Refuge Complex Actions

The FWS recently developed a CCP for the Lake Andes National Wildlife Refuge Complex in southeast South Dakota. This CCP, which will guide management of the refuge complex's three units, primarily focuses on wetland and grassland protection in the Prairie Pothole Region north of the NCCA and PBCA. In addition, the refuge complex will be implementing the recently approved Dakota Grassland Conservation Area and the current Small Wetlands Acquisition Program, which are large landscape plans in North Dakota and South Dakota designed to work with willing landowners to conserve wetlands and grasslands through the use of conservation easements.

U.S. Army Corps of Engineers Actions

The USACE is expected to continue to manage the Missouri River for the eight authorized purposes of flood control, water supply, navigation, water quality, irrigation, recreation, hydropower, and fish and wildlife, as established by the Flood Control Act of 1944. These actions will be consistent with prior USACE management actions along the river, and the proposed conservation areas would not affect or change any of these authorized purposes.

3.6 Alternatives Considered but Eliminated from Further Consideration

Voluntary Landowner Zoning

Landowners would voluntarily petition their county commissioners to create a zoning district to direct the types of development that can occur in an area. For example, landowners would petition the county government to zone an area as agricultural, precluding certain types of nonagricultural development such as residential subdivision. Citizen initiatives like this one are rarely realized, and we did not consider this alternative further.

County Zoning

In a traditional approach used by counties and municipalities, the local government would use zoning to designate the type of development that could occur in an area. While laws in Nebraska and South Dakota grant cities and counties the authority to regulate land use, engaging in planning and zoning activities is optional. Many counties in these States have opted to have no planning or zoning requirements. However, where zoning is used, it is subject to frequent changes and would not ensure the long-term prevention of residential or commercial development in the proposed conservation areas.

Short-Term Contracts

One alternative considered was developing a program similar to the Conservation Reserve Program that would pay landowners for protecting their wetlands from being altered or destroyed for a period of 10 years. The contract would be available for renewal every 10 years. However, this approach would not ensure long-term protection of riparian and upland habitats. Like Conservation Reserve Program lands, wetlands would become susceptible to drainage when crop prices make it profitable to convert such wetlands to cropland. Furthermore, the Partners for Fish and Wildlife Program is active in the area and can be used to help with technical and financial assistance to private landowners if acquisition is not an option for them.

3.7 Monitoring and Evaluation

Lands included under conservation easements would be monitored and evaluated on an annual basis by the agency holding the easement. Conservation easements would allow regular access by the agency to inspect for compliance with easement terms and agreements. Specific monitoring and evaluation criteria are outlined in chapter 4 of the LPP. In the future, if a landowner submits a reasonable request to modify an easement, we would provide reasonable accommodation in a manner that best conserves the values of the easement while addressing the legitimate needs of the landowner.

3.8 Funding and Staff

We propose to use the following funds for land acquisition and future management.

Land and Water Conservation Fund

The United States Land and Water Conservation Fund is a Federal program that was established by Act of Congress in 1964 to provide funds to Federal, State, and local governments for the acquisition of and easements on land and water for the benefit of all Americans. The main emphases of the fund are recreation and the protection of national natural treasures in the form of parks and protected forest and wildlife areas. The fund's primary source of income is fees paid to the Bureau of Ocean Energy Management, Regulation, and Enforcement by companies drilling offshore for oil and gas. Other minor income sources are the sale of surplus Federal real estate and taxes on motorboat fuel. This fund does not originate from Federal income taxes. Both FWS and the NPS can access monies from this fund.

Migratory Bird Hunting and Conservation Stamp (Duck Stamp)

On March 16, 1934, Congress passed and President Roosevelt signed the Migratory Bird Hunting Stamp Act. Popularly known as the Duck Stamp Act, the bill's purpose was to generate revenue for one use: acquiring wetlands for what is now known as the National Wildlife Refuge System. Funds are generated by migratory bird hunters and conservationists purchasing annual stamps. These funds are then used for the preservation and conservation of wetlands. Like the Land and Water Conservation Fund, this fund does not originate from Federal income taxes. Only the FWS can access Duck Stamp funds.

Other Funding Sources

Other sources of money could include—but would not be limited to—the North American Wetlands Conservation Act; nongovernmental partners such as The Nature Conservancy, Northern Prairie Land Trust, and Ducks Unlimited; and donations by landowners.

Staff

The level and number of staff required to manage the NCCA and PBCA would ultimately depend on landowner involvement and participation in the program along with monies available for conservation. If the goals of the preferred alternative (alternative C) are reached, it is estimated that the staff listed in table 2 would be required to manage the areas. In addition, it is anticipated that the FWS's private lands program (Partners for Fish and Wildlife Program) based out of Grand Island, Nebraska and Huron, South Dakota would be adequate to address the proposed action.

3.9 Comparison of Alternatives

Alternatives B–D provide us with a range of conservation actions for analyzing conservation-related effects on the focal species identified in the LPP and for gauging landowner interest in the proposed action. Alternative A would result in an "as-is" management approach, and nothing would change. By contrast, alternatives B–D would result in an increasing level of conservation effort by us in partnership with willing landowners. The terms and conditions of easements would be the same under all action alternatives. Tables 3 and 4 summarize the acquisition goals for each conservation area.

Table 2. Staff required under alternative C for the proposed Niobrara Confluence and Ponca Bluffs Conservation Areas, Nebraska and South Dakota.

Staff group	*Position*	*Grade*
Management	Interagency project leader	GS–13
	Wildlife refuge manager	GS–12
	Biological sciences technician	GS–07
Acquisition	Realty specialist	GS–12
Biology	Wildlife biologist	GS–11
Visitor services	Outdoor recreation planner	GS–11
Administration	Administrative officer	GS–07
Maintenance	Engineering equipment operator	WG–10
	Maintenance worker	WG–08
Fire management	Prescribed fire specialist	GS–09
Law enforcement	Law enforcement officer	GS–09
	Park ranger	GS–05

Abbreviations: GS = General Schedule, WG = Wage Grade.

Table 3. Acquisition goals for the proposed Niobrara Confluence Conservation Area, Nebraska and South Dakota.

Alternative	*Easement acreage goal*	*Percentage of project area—easements*	*Fee title acreage goal*	*Percentage of project area—fee title*	*Total acreage goal*	*Total percentage of project area*
A	0	0%	0	0%	0	0%
B	32,000	4%	8,000	1%	40,000	5%
C	64,000	8%	16,000	2%	80,000	10%
D	96,000	12%	24,000	3%	120,000	15%

Table 4. Acquisition goals for the proposed Ponca Bluffs Conservation Area, Nebraska and South Dakota.

Alternative	*Easement acreage goal*	*Percentage of project area—easements*	*Fee title acreage goal*	*Percentage of project area—fee title*	*Total acreage goal*	*Total percentage of project area*
A	0	0%	0	0%	0	0%
B	24,000	4%	6,000	1%	30,000	5%
C	48,000	8%	12,000	2%	60,000	10%
D	72,000	12%	18,000	3%	90,000	14%