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E-PARCC

COLLABORATIVE GOVERNANCE INITIATIVE

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An Exercise in Environmental Collaborative Planning

SUMMARY

The U.S. Army Corps of Engineers (Corps) is at the start of a large ecosystem restoration project on the Missouri River that will restore some of the rivers ecological outputs. The restoration program has been authorized and funded by Congress and is the result of an Endangered Species Act (ESA) Section 7 consultation between the Corps and the U.S. Fish and Wildlife Service (Service), the agency responsible for implementing the ESA. The ESA consultation was necessary as the Corps had built a series of dams on the Missouri River that had brought considerable economic benefit to the region and Nation but at considerable impact to the rivers natural processes.

To implement the program the Corps purchased, from a willing seller, a piece of property in the flood plain immediately adjacent to the river. The property is located in Cedar County, Nebraska, a county that its primary economic base is agriculture. The purchased property is farmed by a tenant farmer for irrigated small grains. Recognizing the restoration program is extremely controversial with much of the local community, the Corps wants to develop the property in collaboration with local interests and achieve a consensus on the management while meeting the requirements of the ESA consultation with the Service.

For this simulation students break into groups and work collaboratively to develop a site restoration development plan for the property. Each student is assigned a role to play as a specific stakeholder with specific interests they are to “protect” through the process.

This simulation was an honorable mention winner in our 2010-11 “Collaborative Public Management, Collaborative Governance, and Collaborative Problem Solving” teaching case and simulation competition. It was double-blind peer reviewed by a committee of academics and practitioners. It was written by Mike George of the University of Nebraska- Omaha. This case is intended for classroom discussion and is not intended to suggest either effective or ineffective handling of the situation depicted. It is brought to you by E-PARCC, part of the Maxwell School of Syracuse University’s Collaborative Governance Initiative, a subset of the Program for the Advancement of Research on Conflict and Collaboration (PARCC). This material may be copied as many times as needed as long as the authors are given full credit for their work.

The simulation provides students with the experience of working in a contentious, collaborative environment—similar to “real world” collaborative efforts—to develop a site development plan. Students must reach agreement on and apply technical standards while reaching a policy consensus. After completing the simulation, students will appreciate the difficulty of getting to a decision in a collaborative environment and discover what techniques work to achieve a sustainable decision.

Part A: Case Scenario and Process Design Instructions

Part B: Roles and Role Play Instructions

Part C: Appendices

Part D: Teaching Notes

Keywords: Collaboration, ecosystem restoration, Endangered Species Act, environmental planning

Part A: Case Scenario and Process Design Instructions

The Missouri River Ecosystem Restoration Challenge

The Missouri River is the longest river in the United States. With its headwaters in Three Forks, Montana, the Missouri River flows approximately 2,321 miles before it empties into the Mississippi River in St. Louis, Missouri. It drains one-sixth of the United States and flows through the states of Montana, North Dakota, South Dakota, Nebraska, Iowa, Missouri, and Kansas. From the time of its original mapping by the Lewis and Clark expedition in the early 1800s to the present, the Missouri River's form and function has been fundamentally changed. Recently, it has become recognized this change has come at the expense of the river ecosystem's vitality and has steered policy makers and public opinion towards an innovative goal of rehabilitation. The Missouri River will never be the wild, untamed river it once was but some of the river's ecological integrity and function can be recovered to ensure the sustainability of its unique resources. Ecosystem recovery on a landscape scale that involves the diversity of interests on the Missouri River including hydropower, recreation, agriculture, and environmental groups requires careful planning and broadly inclusive collaboration (USACE, 2006).

At the end of the 20th century, the infrastructure on the Missouri River (*e.g.*, dams, levees, upkeep of the navigational channel etc.) provided for both flood control and navigation, but also contributed to significant losses in fish and wildlife populations as well as loss of recreational opportunities. Three million acres of river habitat had been altered, 51 of 67 native species have been rated as uncommon or decreasing, the dominant cottonwood forests along the river have ceased reproduction, and aquatic insect diversity, a key food source, in the river has declined by 70%. The cumulative result of these factors has contributed to the decline of three (3) species which are now designated as threatened or endangered. This designation triggered the federal government into Section 7 Consultation under the Endangered Species Act. The U.S. Fish and Wildlife Service (USFWS) determined in 2000 that continued USACE operations on the Missouri River jeopardized the continued existence of the least tern (*Sternula antillarum*), piping plover (*Charadrius melodus*), and pallid sturgeon (*Scaphirhynchus albus*) as well as impacted the bald eagle (*Haliaeetus leucocephalus*). The least tern and pallid sturgeon are federally endangered species while the piping plover is a threatened species. The bald eagle, though listed as threatened at the time of consultation was delisted in 2007 (USFWS, 2003).

Overview

Students will break into teams and work collaboratively as a group to develop a site restoration plan for an acquired piece of property along the Missouri River. Each student will be assigned a role to play as a stakeholder with specific interests they are to "protect" through the process. The goal is to maximize the stakeholder's interests while achieving the stated goal of ecosystem restoration at the site. It will be the team's job to decide what is meant by ecosystem restoration and what the resource objectives are for the site and what the strategy is to achieve those objectives. Students will be given descriptions of the stakeholder they are to represent in the scenario and success criteria (needs) for their stakeholder. Stakeholders can share the information with the group on what their "needs" are as they see appropriate. Some of the role players have resources at their disposal including funds and employees. The goal is for the

student to maximize their stakeholder's interest while achieving the stated goal of ecosystem restoration at the site. It is the team's job to collectively decide what is meant by ecosystem restoration, what the resource objectives are, and what the team's strategy is to achieve the objectives.

Property Information

A 2,200-acre farm was recently purchased by the U.S. Army Corps of Engineers and is on the Nebraska shore of the Missouri River at river mile marker 760. The site is known locally as the Wynot Farm or Mulberry Bend tract. Most of the tract is farmed for small grains. A complete physical description and land uses is provided to the group in the environmental baseline survey that was completed prior to the site being purchased. The site was purchased for the purpose of ecosystem restoration and protecting a nesting island for the federally endangered interior least tern and threatened piping plover from shoreline development. The boundary is not surveyed or fenced.

The site is on the western edge of the tall grass prairie eco-zone. It is within the Missouri River flood plain but there has been no flooding on the site since Gavins Point Dam was built in the 1950's and much of the land is accreted (created) since the dam was closed. Some of the shoreline along the river has been rip-rapped to prevent bank erosion and meandering of the river channel. The www.moriverrecovery.org site is a good resource for understanding what some of the contemporary impacts have been on the overall health of the Missouri River system.

Group Exercise

You will be assigned a team and role play a stakeholder on that team that helps prepare a site management plan, prepare a written report and give a team presentation to the class designed to simulate a public meeting. As part of your role playing you will be expected to assume the interests of your assigned stakeholder and pursue that stakeholder's interests aggressively. Student grades for the project are based on three criteria: 1) overall quality of the team's site development restoration plan and report; 2) achievement of individual stakeholder success criteria; and 3) peer evaluation. You should initially keep the information confidential in your stakeholder's description and release it as you see it may serve you strategically.

Stakeholder Roles

- 1) US Army Corps of Engineers Site Project Manager
- 2) Cedar County Commissioner
- 3) U.S. Fish & Wildlife Service Biologist
- 4) State Game & Parks Commission Representative
- 5) Adjacent Landowner to the Site
- 6) Audubon Society

Resources Provided to the Team

Treatment Cost Estimator (Appendix A)

Environmental Condition of Property Report with map (Appendix B)

Grading

Individual grades for the project are based on 3 criteria:

- 1) Overall quality of the project (33%);
- 2) Achievement of success criteria for assigned role (33%).
- 3) Peer evaluation (33%).

Each student will score each team member, including him or herself, based on the effort the team member put into the project and then provide this to the instructor. These scores will be kept confidential and averaged for one grade. The scoring rubric is:

- 60 & below = F. No effort.
- 61-70 = D. Minimal effort. Missed most meetings, rarely provided useful ideas. Attitude of not caring or being combative. Did none or very minimal amount of writing.
- 71-80 = C. Made most team meetings. Not an active participant in finding solutions but not a hindrance either. Contributed minimally to the writing effort.
- 81-90 = B. Made all or most team meetings. Willing to take on tasks but may need to be asked. Looks for team solutions. Does fair share of the writing.
- 91 & above = A. Made all team meetings. Always willing to contribute and volunteer for tasks. Showed leadership in keeping the group moving towards achieving its objective. Does fair share, or more, of the writing.

The assignment has three parts, all developed as part of a collaborative team effort.

1) The site management plan should be in a map format showing visually on the map the approximate location of each of the treatments and the year it will be applied.

2) The written report will have three sections:

i) A copy of the map described above.

ii) A description of management practices that should be applied to the site for the next five years with a schedule for implementation by year. For example: year one plant x acres of native grass; year two fence x miles of boundary; etc. Treatments should be justified as to what objectives they achieve. Costs for a variety of treatments are provided to the group. If the team decides to apply a treatment not found on the Treatment Cost Estimator you will need to develop a cost and cite the source. The objectives are to be developed by the team and the reason(s) given for why they are an appropriate objective. The write-up should be 2-3 pages including a map.

iii) Describe the process the team used to get to a plan and a description of what a good process would be in the real world to maximize public participation. Describe what collaborative process the team used to achieve a solution. Did the team go for a consensus or majority rules? How were the conflicts between the stakeholders' interests overcome? Were there other stakeholder groups that should have been represented? How would you propose being more inclusive so other stakeholders could participate in the process? Write-up should be 1-2 pages.

3) Present the team's plan to the class and include appropriate visual aids and hand-outs.

Part B: Roles and Role Play Instructions

Stakeholder Role 1:

1. U.S. Army Corps of Engineers Site Project Manager

Your job is to use a collaborative process to develop a site management plan for the Wynot site that will protect the site from future development and meet the requirements of the U.S. Fish and Wildlife Service for the interior least tern and piping plover. Other potential uses for the site include connecting or creating off-channel backwaters by dredging or mechanical digging that are valuable as nursery areas for river fish; restoring native vegetation; creating wetlands; creating braided channels used by waterfowl and fish (including the endangered pallid sturgeon); providing recreation opportunities; and protecting view sheds (a priority of the National Park Service).

Some tools in your “tool box” (you can let your team know about these at your own discretion.)

- 1) Your budget is \$2 million a year for any number of years. Keep in mind, too extensive or expensive of development results in lost opportunity costs for other sites in the program. For example, if you spend \$2 million on the Wynot site that is \$2 million not available for additional land purchase.
- 2) The shoreline is what you are primarily concerned about to prevent development. You can sell land that you don't need for the project. Those sale proceeds go to the general fund of the U.S. Treasury and are not available for the project.
- 3) According to an agency legal opinion, you can lease the land for agricultural purposes on an interim basis not to exceed 5 years. After 5 years, agricultural leasing cannot exceed 15% of the total acreage. If you lease the land it goes at cash rent for fair market value (currently \$125 an acre). The lease proceeds go 75% to the county, 15% to the general fund and 10% to the Corps for administering the program. The lease can be negotiated for payment after harvest.
- 4) You are responsible for the Operation and Maintenance (O&M) of the site (weed control, fence mending, maintaining plantings, etc.) and this is usually done by contract with local farmers. You can also use what is known as a “rental abatement” that is a tool where the agriculture rent is reduced if the renter does some or all the O&M. For example, if the renter built a 2-mile fence, that cost (\$7,500) would be deducted from the cash rent due to the government.
- 5) You have rangers available for patrolling the site.
- 6) There is a 1,000 acres site known as Alabama Bend 10 miles down river for sale on the South Dakota side of the river, which also protects a tern and plover nesting area with similar features as the Wynot site. The sale cost is \$5 million. You have budgeted \$3.5 million next year for land purchases not counting what you could save from development of the Wynot site. Any money you save at Wynot can go towards purchasing Alabama Bend. It will not be available after next year.

- 7) If the U.S. Fish and Wildlife Service representative is not satisfied with the features of the project for terns and plovers they may stop the project at their discretion until their needs are met.

Success Criteria for you will be:

- 1) A site plan that everyone on the team agrees with;
- 2) The shoreline protected from development for the tern and plover nesting;
- 3) Your plan defines and maximizes environmental benefits;
- 4) The site will have minimum O&M costs.
- 5) You have enough funds to buy Alabama Bend.

Stakeholder Role 2:

2. Cedar County Commissioner

You are a Cedar County Commissioner who owns a farm implement company. Your primary concern is the loss of tax revenue as the site transfers to the federal government, which does not pay property tax. The tax loss is \$4 an acre annually. The federal government does have a program known as PILT (payment in lieu of taxes) administered by the BLM and typically pays less than a \$1 an acre to the county for land in federal ownership. Your other concern is more personal: as farmland is taken out of production there is less demand for farm machinery. One of your constituents has called you several times, he currently farms the site and is worried he will lose a substantial amount of income if he can't continue to farm it and would like you to help him. He is also concerned if the site is open to the public there will be more traffic on his road and he will have trespassers. You talked to the Corps and were able to get him on the site development team. Your preference is the federal government does not buy this site at all, but since it has, you are willing to sit in the team and work on a solution that minimizes impact to the county. As a county commissioner you do have influence on road maintenance schedules and sheriff patrols.

Success Criteria for you will be:

1. You minimize or (ideally) find a way to offset the property tax loss;
2. You minimize new roads to the site (they cost money to maintain);
3. You find a way to help your constituent with his concerns;
4. You keep the government from buying any more land in your county.

Stakeholder Role 3:

3. U.S. Fish and Wildlife Biologist

You are a shorebird expert with the U.S. Fish and Wildlife Service. Your primary concern is that habitat is constructed and protected for the interior least tern (terns) and piping plover (plovers). Site protection includes no public access to the nesting islands between April 15 and August 15 every year. Also, it would be ideal if the trees near the islands were cut down as they serve as perches for raptors and owls that prey on the shorebirds and their nests. As this project is part of the compliance requirements for the ESA consultation with the Corps of Engineers, you have the authority to stop other activities from occurring until the needs of the terns and plovers are met.

- 1) There is a 1,000 acres site known as Alabama Bend 10 miles down river for sale on the South Dakota side of the river, which also protects a tern and plover nesting area with similar features as the Wynot site. You know any money the Corps saves at Wynot can go towards purchasing Alabama Bend. It will not be available after next year. You do not know what it costs but you assume the Corps does.

Success Criteria for you will be:

1. At least one island is built for terns and plovers;
2. Public access is restricted to the islands and immediate shore during nesting season;
3. Trees are removed on the shoreline near the island;
4. The Corps agrees with your assessment and finds a way to buy Alabama Bend.

Stakeholder Role 4:

4. State Game & Parks Commission Representative

You are the District Wildlife Manager. Your primary concern is the wildlife resources in your district are protected and maximized. You are definitely concerned about the endangered species on the site, but you also want to maximize the recreation opportunities for hunting and fishing. From your standpoint, once the endangered species are protected you would like to see the site managed for deer, turkey and pheasant. This means food plots and a mosaic of different habitats including tall grasses, wetlands and not more than 20% trees. You are adamant that the land stay in public ownership and be available for the public to use, particularly in the fall. Ideally there should be at least one good, public road into the site and parking lot.

Success Criteria for you will be:

1. All the land stays in public ownership;
2. The site has at least 100 acres of food plots (corn and milo) with each food plot no larger than 15 acres;
3. The site has at least a 25 acre wetland pond or backwater connection to the river;
4. The site is open for public hunting and fishing
5. Boundary is marked to identify it as an open public area.

Stakeholder Role 5:

5. Adjacent Landowner to the Site

You are a farmer and have farmed the 2,200 acres for the last 10 years. Currently you sharecrop the property and split expenses and profits 50/50. Your typical annual income after expenses is \$35 an acre when corn is \$4 a bushel. Because it represents about half of your annual income you had hoped to purchase the site yourself but could not raise the \$10 million purchase price. Your concern is you will no longer be able to rent the land and cause you a considerable loss of income. Another concern is if the land is open to the public you will have people trespassing on your property, which is immediately adjacent to the site. Also, you are concerned about weeds and deer coming onto your property from the government land. The deer are especially a concern because you feel they will deplete your cornfield if there is no cropping on the new site. You also know of 70 acres of field bindweed you have been working to control on the property for the last three years and you do not want the government to stop spraying these weeds. You have called your county commissioner with your concerns and he was able to get you on the site development team. You were reluctant at first, you don't know much about the federal government and are a little distrustful of it, but agreed because so much is at stake.

Success Criteria for you will be:

1. You protect your income, at least for several years until you can find more land to rent or buy;
2. The boundary between your properties is clearly marked and preferably fenced to minimize trespassing;
3. Your road doesn't suffer from all the increased traffic;
4. Deer depredation is prevented and weeds controlled.

Stakeholder Role 6:

6. Audubon Society Member

You are a volunteer with the Audubon Society. You are a retired biology teacher and have always been an active bird watcher. You are excited about this site because of the potential it has for helping the endangered birds. It also has tremendous benefit for migratory neo-tropical birds, especially if some of the cottonwood trees can be restored.

Success Criteria for you will be:

1. The tern and plover islands are protected from shoreline development;
2. At least some of the historical corridor forest of cottonwood trees are restored;
3. The site is open to the public at least part of the time for bird watching.

Part C: Appendices

APPENDIX A: Treatments Cost Estimator

Native Grass Planting--\$600 acre

Tree Planting--\$5,000 acre

Wetland Construction—1-5 acres \$75,000; each additional acre \$10,000 an acre per site

3-strand barbwire fencing—labor \$2,500 mile; materials \$3,000 mile

Shoreline riprap--\$1,000,000 per mile

Chute construction--\$500,000 per 2,000 feet dredging
--\$350,000 per 2,000 feet upland disposal on site

Island construction--\$1,200,000 per 40-acre island complex
--No cost if part of chute construction disposal (dredging) 20 acres for every
2,000 feet of chute construction

Road construction--\$550,000 mile gravel (all-weather)
--\$150,000 mile dirt

Parking Lot--\$15,000 each (1/2 acre)

Food plot planting--\$100 an acre (\$70 labor; \$30 equipment)
Food plot seed mix--\$50 an acre of corn/milo/sunflower mix

Weed Control--\$40 an acre labor and \$40 an acre for chemicals. Required the first three years on native grass planting and first 5 years on tree plantings.

Boundary signage--\$50 per sign and post

Ranger patrols--\$50 an hour

**ENVIRONMENTAL CONDITION OF PROPERTY
WYNOT RIVER FARMS PROPERTY
EMERGENT SANDBAR HABITAT
MISSOURI NATIONAL RECREATIONAL RIVER
CEDAR COUNTY, WYNOT, NEBRASKA**

1. PURPOSE

The U.S. Army Corps of Engineers (USACE) conducted an environmental assessment for a real estate transaction on the Wynot River Farms (Wynot) property. The purpose of the assessment was to support an Environmental Condition of Property (ECP) area type classification; to determine if hazardous materials or petroleum products were stored, released, or disposed of on site in order to assess health and safety risks and any environmental liabilities.

2. BACKGROUND

Representatives from Omaha District, USACE, conducted a site reconnaissance accompanied by the land owner who provided escort around the property where accessible by vehicle, and by foot through other parts of the property. In general, visual observations were made along the entire property boundary, except for the perimeter to the south bounded by bluffs. The vehicle traversed the land starting from the south-southeast traveling north on a vehicle trail through farmland to the river. We then traveled west along the riverbank to the northwest corner of the property. We then traveled back towards the east along the riverbank to the eastern property boundary and back to the entrance.

The property is currently primarily used as farmland, leased land for camping, and hunting by the owners and tenants. Prior to the operation of Gavins Point Dam in 1956, the property was primarily floodplain and consisted of trees. Once the dam was operational and the water receded, the property was cleared of the trees and became farmland. The current owner purchased the property in 1988. Currently, approximately 85% of the land is farmed (soybeans and field corn) and the remaining 15% is open grassland, bluffs, trees, or riverbank. To conduct this assessment, an aerial photograph from Google Maps with the property outlined was obtained (Figure 1), regulatory permitting agency records were reviewed, and also a visual site inspection and interviews were conducted.

No evidence was discovered that hazardous substances defined by 42 USC § 9601(14) or petroleum products have been released or disposed on the property. Prior to 1988, four fertilizer and one anhydrous nitrogen aboveground tanks were present on the property. These tanks were removed when the property was purchased in 1988. The anhydrous tank was located where there is currently field corn. Presently herbicides and fertilizers are used for crop management, but are not stored on the property. Petroleum products, such as oil, greases and diesel fuel used for farm equipment are stored on the property. The oil and greases are contained in approximately 5-gallon pails and are stored in a small trailer. Diesel fuel is stored in an aboveground tank, approximately 250 gallons, located next to the trailer containing oil and greases and is used to fuel farm equipment. There was no stained soil observed near the trailer and diesel fuel tank. All

of the storage containers, including the tank, appeared to be intact. Diesel fuel was used to run eleven irrigation wells. The empty diesel fuel tank appeared to be structurally sound and remains on the property. In 2003, electricity was installed on the site; now only one well is run by diesel fuel contained in a tank next to the well. This irrigation well was not easily accessible.

3. SITE AND VICINITY GENERAL CHARACTERISTICS

The property is located approximately two miles north-northwest of Wynot, NE, adjacent to and north of St. Helena, NE and adjacent to and south of the Missouri River. The property is located north of highway 12 and southwest of 454th Avenue. Adjacent property is used for cropland or is grassland and undeveloped.

The Wynot property is located in Cedar County, Nebraska, within the 59-Mile District of the Missouri National Recreational River (MNRR). The MNRR is a National Wild and Scenic River in Nebraska and South Dakota. The MNRR preserves the natural environment and offers water recreation, camping, fishing, and wildlife observation to visitors. Cedar County is mostly agricultural land with several small towns, the largest being Hartington, and is relatively urban compared with adjacent counties in southern South Dakota and northern Nebraska. The county contains some commercial and governmental enterprises, the major industries include recreation and agriculture. The climate in the area is moderate in the spring and autumn. Summers can be hot and humid with occasional thunderstorms. Winters can be very cold, with rain, ice/sleet, and snow.

3.1 Descriptions of Structures, Roads, Other Improvements on the Site

No improved roads exist on the property, although some vehicle trails exist for access from the southeast corner of the property, for travel along the sections of farmland and to campgrounds located along the river. Four buildings are located along the riverbank. Three are cabin homes and one is a trailer house. There is a power pole and water well on the trailer house property with one of the homes located directly east also serviced by these features. Some abandoned farm machinery was observed scattered in a few areas along the tract of land adjoining the river.

Additional property features of interest include:

- Boat dock on riverbank central to the north property line. This area had discarded boating/recreational waste.
- A dike on northwest corner.
- Two artesian wells, one on the eastern portion of the property and one on the southwest.
- Mounded areas in the wooded areas along the riverbank that may be buried trees from when the trees were cleared from the property during its development as farmland.

3.2 Current Uses of the Adjoining Property

Adjacent property is the Missouri River to the north, bluffs and agricultural land to the south-southwest, agricultural land and trees to the west and the Missouri River and agricultural land to the east. There are two small farms, one adjacent to the south property boundary and one adjacent to the eastern property boundary. The entire property and adjacent land is within the Lewis and Clark Trail National Park and adjacent to the MNRR.

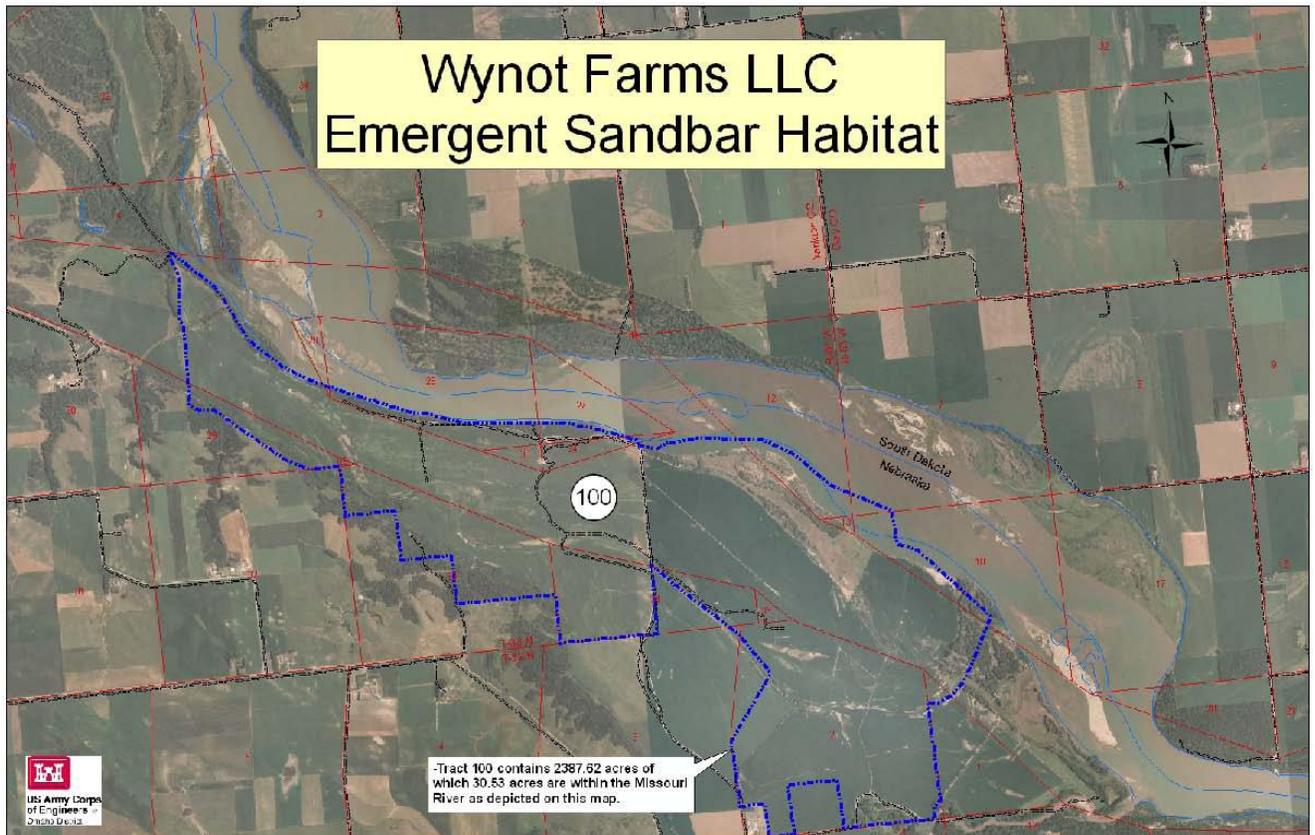
4. ENVIRONMENTAL CONDITION OVERVIEW – EXISTING ENVIRONMENTAL INFORMATION (ECP REPORT)

4.1 Standard Environmental Record Sources

The Nebraska Department of Environmental Quality (NE DEQ) databases were searched for listings of environmental records. The NE DEQ online UST database lists leaking underground storage tanks (LUSTs) and surface spills for Cedar County. The Federal Superfund Program, CERCLIS database (see below), contains nine counties in Nebraska with sites currently on the Final National Priorities List (NPL). None of these are in Cedar or in adjacent counties of Yankton and Clay, South Dakota, or Dixon, Wayne, Pierce and Knox, Nebraska.

5. CERTIFICATION

No evidence was discovered during the assessment that hazardous substances defined by 42 USC § 9601(14) or petroleum products have been released or disposed on the Wynot property. The Wynot property is an ECP Area Type 1 in accordance with the classification system American Society for Testing and Materials (ASTM) D5746-98, Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities. It is a geographically contiguous area or parcel of real property where the results of investigations reveal that no hazardous substances or petroleum products or their derivatives were released, or disposed of on site property.



Part D: Teaching Notes

Notes to the Instructors: The team will need a couple of resources provided by you and made available to all team members. The resources are included in this scenario. Also, students will assume a number of roles that describe the stakeholder's position, their interests and what they would consider as success (success criteria) at the end of the process. Some of these "success criteria" are in conflict with other members of the team and are designed to create a tension on the team. Accordingly, the students should initially keep their success criteria confidential but may choose to share parts or all of it as a negotiating strategy. The stakeholder interests and success criteria vary and the instructor may want to assign roles based on each student's experiences and backgrounds. The Corps Project Manager's role is especially complex and would be an appropriate role for a grad student. The Environmental Condition of Property report is a complete site description with map; additional maps can also be accessed on the internet through Google Earth or similar application. The Treatment Cost Estimator provides potential restoration strategies as well as their cost.

Introduction

One of the contemporary challenges in public administration is governing in an information laden world. Individuals in modern society are bombarded with information, but the communication is a monologue. The problems have been pre-identified and the solutions already put in place. Reality is no longer described in the language understood by all and bureaucrats use word games to obfuscate their real meaning (Miller & Fox, 2007, pp. 60-61). People cannot have a dialogue with their television or the Internet and yet they are a source of immense amounts of information—without context or discourse. Postmodernists describe this life as hyperreality, a blurring of the real and unreal (Fredrickson & Smith, 2003, p. 139) and that signs and words have become increasingly estranged from democratic discourse (Miller & Fox, 2007, p. 126). The public, using all the tools of modernity including the internet, ease of transportation, and information overload, insist on being participants in their governance.

One solution to the public's insistence on participating in their governance is collaboration. This creation of a collaborative environment on the part of the public administrator can be a challenge, especially if the administrator has little exposure to the use or function of collaboration outside the literature. One solution is to provide collaboration training to students (future public managers) in public administration programs. To be effective this training must be realistic and applicable. By establishing student teams to work collaboratively on a real public problem, in this case an ecosystem restoration project, with real consequence of action (their grade), students can get "hands-on" experience to the challenges and rewards of public collaboration.

Historical Overview

Daniel Kemmis in his book, *This sovereign land: A new vision for governing the West*, describes a timeline of management philosophies that dictated the federalist philosophy of public land management over the last century (2001, pp. 123-127). Kemmis describes how in the early 1900's management of the natural resources were dictated by the Progressive movement that had succeeded in convincing policy makers that technical elite should be responsible for the majority

of natural resources management decisions, consistent with the positivist movement of the period. This was followed midcentury by a pluralistic approach by the land management agencies—a belief that they could be everything to everyone. They could use the land to provide timber, oil, livestock, recreation and wildlife for everyone and keep the special interests at bay. By the 1960's this model for management was an obvious failure and, according to Kemmis, helped foster the contemporary environmental movement that led to much of the current environmental legislation including the National Environmental Protection Act (NEPA).

Kemmis notes, for all of NEPA's benefits in protecting the environment, it also leads to a significant amount of litigation and the use of the courts and lobbying to change the law to further each interests agenda. By the late 1980's and 1990's a growing number of people with an "interest in the outcomes" were frustrated with the litigation model of management and began experimenting on their own with a new way of finding solutions to environmental issues—the use of collaboration. The large federal land management agencies saw this new collaboration as a way out of their crisis of legitimacy created by the pluralistic model for management of the public lands and natural resources and embraced it as a solution to environmental conflict (Kemmis 2001, p. 127).

This "environmental collaboration model" creates a challenge to the public administrator. Consistent with Kemmis, Timney (1998) notes that public administrators have traditionally been viewed as experts and the field has been subject to the dominant value of efficiency. Many administrators have viewed public participation as public interference in administrative affairs. Timney (1998) posits if public administrators want to become partners with citizens, they will need to abandon the belief that the administrator is the sole expert in policy implementation. Also, the importance of efficiency as a dominant value must be decreased, especially when it interferes with building consensus. The role of administrator must change from expert to facilitator.

McSwite (2002, p.92) makes the case that the roles of public administrators in a postmodern society are as facilitators of collaboration and serve as mediators of conflict and tension concerning public policies. Waldo made the same case in 1952 with his essay "...and that to achieve democracy, citizen groups of all kinds must be brought into the administrative process and given the opportunity to state their interests and to help make and execute decisions affecting their lives." So, as per McSwite, Waldo and others, the job of the public administrator in a postmodern society is not to exclusively collect empirical facts and quantitative data, but instead to work in the metaphysical world of language and social relationships and serve as a mediator of the public discourse.

This simulation was developed consistent with the concept the public administrator must be a facilitator. The exercise is based on an actual site being developed for environmental restoration along the Missouri River. The land is owned by the United States federal government and managed by the U.S. Army Corps of Engineers. The location and site descriptions are accurate. The cost estimates and other dollar estimates are strictly hypothetical, as are members of the collaboration team and their roles.

Class Lecture and Literature

The class is designed for advanced undergraduates and graduate students and offered to students in both the School of Public Affairs and Environmental Sciences. The mix of policy students (public administration majors) and technical students (biology and environmental science majors) contributes significantly to the exercise as both skill sets are needed to develop a successful restoration plan. The student-team simulation exercise is conducted over the last 3 weeks of a 14 week semester. The class meets once weekly for three hours. The teams are established in week one of the exercise (week 12 of the class) and allowed to form and begin preliminary work on the project. The second week is dedicated to team work with instructors available to answer questions. The third week is for group presentations. The students were expected to do some of the team work outside of the class.

The first eleven weeks of class are dedicated to lectures and learning modules on large ecosystem restoration projects across the country including the Everglades, Platte River, Chesapeake Bay, the Upper Mississippi as well as the Missouri River. Lectures are also dedicated to applicable environmental and natural resources laws concerning ecosystem restoration, the planning process and collaborative governance. The class texts are *Large-scale ecosystem restoration: five case studies from the United States* (2008) edited by Mary Doyle and Cynthia A. Drew and *Environmental Politics and Policy* (2008) by Walter A. Rosenbaum. The intent is to give the students a broad understanding of ecosystem restoration, the importance of collaboration for sustainability and to provide a foundation for completing the group exercise. Table 1 is a proposed literature and lecture sequence leading up to the team simulation. It is for an 11 week series with three weeks of the 14 week semester reserved for student topic papers and class discussion.

Lecture/Activity	Reading
Making the Case for Ecological Consciousness	EPP Ch. 1
Policy Making Process	EPP Ch. 2
Legal Foundations of Environmental & Natural Resources Policy	EPP Ch. 3, 6, 9
Platte River Basin Restoration	LSER Part I
Chesapeake Bay Restoration (PBS Documentary)	LSER Part II
Everglades Restoration	LSER Part IV
Upper Mississippi Restoration	LSER Part V
Standards for Ecosystem Restoration	(Palmer, Bernhardt & others, 2005, pp.208-217)
Team Work on Projects with instructor available for consultation	
Team Work on Projects with instructor available for consultation	
Team Presentations	

Table 1: Lecture/literature sequence for simulation development

The goal of the exercise is to force the students into a situation where collaboration is important for success (one third of their grade), but it is also important to protect their own interest (one third of their grade) and provide a quality product (one third of their grade). It is intended to simulate the real world collaborative environment where participants are often motivated to reach a consensus not out of altruism, but to protect their own interest.

It is important to emphasize to the students that the simulation does not have “one right answer.” This will be a challenge for some of the students who will be concerned with how they will be graded. This is why the grading rubric is presented as part of the exercise and it is emphasized that collaboration is the exercise goal, not the best technical solution—something typical in the professional world where solutions are often described as the most implementable.

A suggestion from some of the class participants was to develop the teams and provide the assignment earlier in the semester. This was so students could familiarize with team members; see a more direct correlation of lectures and theories to application; and have more time for developing a solution and achieving a consensus. Students felt this extra time would have been valuable as their groups often got quite contentious as the deadline approached and they had not reached a consensus. From instructor observations of the groups, additional time may not have helped as it was the impending deadline that forced consensus—not unlike the real world where deadlines often dictate the schedule.

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