



Alternatives Development Report

Pea Island NWR - Region 4



Spring 2014

Background

Purpose

The purpose of this Alternatives Development Report (ADR) is to outline, in broad scope, the options, tools and alternatives available to the US Fish and Wildlife Service (Service) that can be used to secure a long term and mutually beneficial solution to the Pea Island question for both the Service and the state of North Carolina (State).

Context

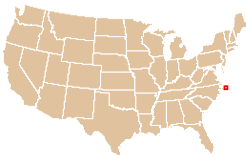
Part of the Alligator River National Wildlife Refuge Complex, Pea Island National Wildlife Refuge (PINWR) is a barrier island refuge of approximately 5,800 acres of land and 25,000 acres of proclamation boundary waters. PINWR was established on April 8th, 1938 to provide nesting, resting, and wintering habitat for migratory birds, including migratory waterfowl, shorebirds, wading birds, raptors, and neotropical migrants (purpose).

While PINWR is generally very successful in fulfilling its stated Refuge purpose, there are a number of pressures outside of the control of Service staff that make it difficult if not impossible to manage the unit in a way that is consistent with Service mission and refuge purpose.

Land Status



PRODUCED IN THE DIVISION OF REALTY
ARLINGTON, VIRGINIA
LAND STATUS CURRENT TO: 11/5/12
MAP DATE: 1/31/2013
BASEMAP: ESRI / DOE RENEWABLE ENERGY ATLAS
WEB MERCATOR PROJECTION
NAD 83



- FWS Approved Acquisition Boundary**
- USFWS real estate interest:**
 - Owned in Fee**
 - Easement or Lease**
 - Agreement**
 - Secondary Jurisdiction of US Property**



Background

NC Highway 12 and Utilities

This highway bisects the refuge north to south and is the only surface transportation facility to the village of Rodanthe and the popular destination of the Cape Hatteras National Seashore (managed by the National Park Service). The village and surrounding seashore are important regional economic drivers and when access and utilities are cut off due to flooding, storms and erosion, the state must mobilize quickly to restore access and services. This involves activities (movement of heavy equipment, construction, redistribution of sand, etc.) that are disruptive to the quality of the protected habitat and alter the natural processes of the dynamic landscape. Despite this fact, it is expected that the refuge staff issue permits to state DOT to allow these activities that take place outside of the existing ROW.

Beach Nourishment

Because of the economic importance of a sandy coastline to Dare County, beach nourishment activities frequently take place after severe weather events. Beach nourishment is an intensive process that involves heavy equipment and disturbances to the remaining portions of beach. It can disrupt the invertebrate colonies that the migratory and nesting birds depend on for food sources and can disrupt the nesting success of sea turtles that utilize the beach.

Long Bridge Option:

A solution was proposed and developed in 2003 that would have provided a long term resolution to the ongoing Pea Island question. The so called 'long bridge' option, the project would have involved the rerouting of NCH-12 via a causeway parallel but west of Pea Island, connecting to the barrier chain at the village of Rodanthe. The remaining roadway on Pea Island would have been decommissioned and removed, and the natural processes of the island ecosystem would have been restored.

Despite the fact that this project had support from all members of the conservation community and it would have permanently solved the access problem for the State, the project was canceled by the Federal Highway Administration for unknown reasons.

Section 4(f) of Title 23:

Section 4(f) under CFR Title 23 (Chapter I, Subchapter H, Part 774) states that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land.
- The action includes all possible planning to minimize harm to the property resulting from use

It has long been the contention of complex staff that Pea Island constitutes a Section 4(f) property and that neither condition for exemption has been met.

The Bonner Bridge and Oregon Inlet

The Bonner Bridge is a facility that spans the Oregon Inlet and connects Pea Island to Bodie Island to the north. The navigable inlet is managed by the Army Corps of Engineers (ACE). In efforts to provide maximum stability for the bridge infrastructure, the State DOT 'hardened' the edges of the passage with breakwaters and a 'terminal groin' (a structure made of riprap and concrete meant to hold the edge of the island in place). In addition, ACE must constantly dredge the inlet to prevent buildup of sand and keep the channel navigable.

These activities and features are disruptive to the natural processes of the inlet and the natural accumulation/movement of sandmass. The dredge material and hardened edges of the inlet create conditions on the beach which continually degrade the already disappearing habitat.

Constantly providing permits for these activities and facilities is contrary to resource protection goals, hurts morale and requires an inordinate amount of already limited staff hours. With all these pressures, and in the face of climate variability and sea level rise, the Service should begin to consider options for Pea Island that would open the door for strategic repositioning of the refuge system instead of the status quo strategy of 'adaptive mitigation' whereby the Service reactively mitigates impacts as, or after, they occur.

In July of 2013, the state legislature established a task force to study the state's options for control of the Oregon Inlet and NCH-12. While the task force has not engaged in talks directly with refuge staff, a letter was reportedly sent to the Department (DOI) from the task force proposing acquisition of parts of PINWR (approximately 150 to 250 acres on the northern and southern ends of the island) to be able to conduct maintenance and construction on the infrastructure without requiring permitting from the Service. This is scenario #4, see next section.

While this would theoretically free up refuge staff from the workload associated with the permitting processes, this is a far less than ideal outcome for the Service because the continued problem of habitat and resource degradation. Indeed, this issue would likely worsen given the all but certain increase in intensity of construction, maintenance and beach nourishment activities. In addition, outright sale of federal lands through a limited divestiture or a State level condemnation process is extremely rare, would set a dangerous precedent and damage the integrity of the Service as a government agency. From the complex staff perspective, this is a worst case scenario.

Despite differing missions and objectives between the State and the Service, there is an opportunity in this problem to develop and execute a plan that serves mutual interests and provides a long term solution for both sides.

Available Options

In an attempt to be proactive and anticipate inquiry from Secretarial, Departmental and Service leadership, the staff at Alligator River have developed a 'White Paper' which outlines in broad terms a number of scenarios for the future management of Pea Island including:

1. Denial of all permit requests
2. NC governor declares NCH-12 under a standing state of emergency therefore, waiving application of state and federal laws pertaining to permitting
3. Transfer of refuge to NPS
4. Transfer of parts of the refuge to the State
5. Disposition of the refuge for conservation lands elsewhere in the coastal plains (exchange or disposition/purchase - explored in this document)
6. Status quo management (adaptive mitigation)
7. Compensatory mitigation (explored in this document)

From the perspective of the complex staff, scenario #5 is the preferred alternative. It could strategically augment the conservation estate in North Carolina while at the same time preempting the continual degradation of the resource due to the ongoing construction and maintenance activities and the changes in the natural, ecological and hydrological systems of Pea Island due to sea level rise.

This approach is consistent with the concept of landscape-level conservation and the adaptive management of dynamic systems in an ever changing global ecology. This approach would also provide the State with the opportunity to maintain its transportation assets, continue its beach nourishment practices and continue to support local economic interests.

Scenario 5 - Exchange

Precedent

Scenario #5 is not without precedent in the federal lands arena, both the Forest Service and the Bureau of Land Management have robust land exchange programs that help land managers accomplish strategic goals and program mission.

- Forest Service: see FSH 5409.13 - LAND ACQUISITION HANDBOOK, Chapter 30 - LAND EXCHANGE

- Bureau of Land Management: see H-2200-1 Land Exchange Handbook

While land disposal and exchanges are less common with the smaller FLMA's, the US Fish and Wildlife Service Division of Realty processes about 1 to 2 per year when certain conditions are met for both the divestiture and the new acquisition.

FWS Policy on Land Exchanges

The laws, rules and guidelines for such an exchange can be found in the following Sections of the US Fish and Wildlife Service Manual (Appendices 1-4):

- 342-FW-5 Non-Purchase Acquisition
- 341-FW-1 Land Acquisition Planning
- 613-FW-1 Floodplain Management
- 613-FW-2 Wetland Protection

Source: <http://www.fws.gov/policy/manuals/>

Key Provisions of 342 FW 5:

■ 342 FW 5 (7.A) Definition

Exchange is a valuable method to acquire land or interests in land for Service programs. A landowner may be willing to exchange land or interests for land or interests of the United States when he/she would otherwise be unwilling to sell. Also, an exchange may have definite tax advantages to the landowner. In general, an exchange can be allowed if 1) The exchange is of benefit to the American people and 2) If the value of the lands or interests to be exchanged is approximately equal (or equalized through payment of cash)

Notes: This is a potentially difficult point because the land at Pea Island is so commercially valuable, that identifying willing landowners with enough property of equivalent value to execute an exchange could prove challenging.

■ 342 FW 5 (7.B) Approval

The Director's approval is required for any exchange involving over 40 acres.

Notes: Any exchange at Pea Island would trigger this requirement.

■ 342 FW 5 (7.C) Divestiture Requirements

Before divesting any lands of the United States, it is essential that the requirements of the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.); the Archeological and Historic Preservation Act of 1974 (16 U.S.C. 469 et seq.); the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (94 Stat. 2767 et seq.); the Resource Conservation and Recovery Act (98 Stat. 3221 et seq.) and Executive Orders 11988 (Floodplains Management) and 11990 (Protection of Wetlands) be complied with. Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

Service policy is included in 613 FW 1 and 2 (Natural Resources Protection).

As to lands or interests in lands being conveyed out of United States ownership by exchange, the Regional Director must make a determination whether or not the lands are within a floodplain or wetlands within the scope of EO 11988 and EO 1199 (same as 613 FW 1,2). The conveyance of land identified as being restricted by either of these orders must contain appropriate restrictive language. Any restrictive language to be used in the deed must also be included in the exchange agreement. The exchange agreement in such cases cannot be accepted until the procedures for public notices have been completed.

■ 342 FW 5.7.D (3) Exchange Approval Thresholds

For land exchanges where the estimated value of the Federal lands to be exchanged is greater than \$2,000,000, we must give the House and Senate Committees on Appropriations 30 days to examine the proposed exchange before it is consummated.

Notes: For any divestiture/exchange at Pea Island to occur, these requirements must be met and all parties must be aware of the time and processes required to execute the exchange. In addition, the exchange must happen in accordance with the rules governing land acquisition policies in 341 FW 1.

Key Provisions of 341 FW 1:

■ 341 FW 1(1.2) Scope

Planning for acquisition of land, water, or other interests is initiated with the identification of a need to meet resource objectives that require a real property base. Acquisition involves obtaining full control (fee title) or partial control (easements, leases, or agreements). For purposes of this part, planning for land acquisition usually terminates when the decision document package is completed.

■ 341 FW 1(1.3) Land Acquisition Policy

(1) Basic Service policy is to acquire land only when other means, such as zoning or regulation, of achieving program goals and objectives are not appropriate, available, or effective. When lands are to be acquired, the minimum interest necessary to reach management objectives is to be acquired or retained. If fee title is required, full consideration will be given to extended use reservations, exchanges, or other alternatives that will lessen impact on the owner and the community.

(2) To carry out this policy, where there is evidence of a need for additional resource protection at any proposed or existing refuge, fish hatchery, research station, or similar facility, a Land Protection Plan shall be developed that conforms to Departmental and Service policies and applicable laws. The plan shall be simple and concise. It shall be prepared with appropriate public participation and shall include consideration of the sociocultural impacts.

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Scenario 5: Exchange

Method

Before any exchange process can take place, a land acquisition planning process would need to be initiated in accordance with 341 FW 1 at the regional realty office.

The complex staff have indicated the possibility of some strategic interests that could be identified for acquisition in the greater Albermarle Peninsula region between the Pamlico-Albermarle Sound and the piedmont plateau region of the State, specifically in the Chowan and/or Pamlico River basins.

Once the general areas of interest are identified, the augmentation boundary(s) of the nearest refuge would have to be drawn and approved as administration of the new lands would be difficult from the facilities at Alligator River.

After augmentation boundaries are approved, the complex should undergo a 'landscape zoning' exercise for Pea Island to identify the appropriate uses for each area of the island, with specific coordinates and boundaries.

In general, these zones would include:

- Land to be divested (exchanged with the state, DOT or ACE)
- Land to be retained by Pea Island NWR (divestiture of the entire refuge is not an option as leadership has indicated a concern with the setting of a bad precedent)

Land to be retained would include the following zones:

- Transportation
- Recreation
- Conservation

Ideally, this would be a collaborative process between the greater conservation community, the state Department of Transportation, the surrounding communities, Dare County and the State government.

Good areas for retention include the water impoundments, any recreational trails or boardwalks and any stable facilities and/or buildings (like the visitor's center).

Bipartite Exchange Scenario

Once all the land to be divested is identified, surveyed and appraised (entire refuge was most recently appraised at \$35.23M), the areas can be exchanged for lands of equal value from the owning entity. If the exchange is not of equal value, the balance must be equalized by a payment of cash at the time of closing. Payment of cash is only to equalize relatively approximate land values, cash is not intended to be used as payment for FWS lands.

Pros: This option is completely within the established laws and rules governing Service land exchanges, the FWS HQ Realty Office processes between 1-2 exchanges per year. It would allow for strategic repositioning of the conservation estate in the coastal plains of North Carolina. It would allow complex staff to focus on mission critical activities, rather than continually issuing permits that are in direct conflict with Service mission and refuge purpose. It is an option that is mutually beneficial to the State and Service. It would allow for continued management of the parts of the refuge that are critical habitat for wildlife. The option is in line with the philosophy of long term resilience planning in the face of a dynamic global ecosystem (as opposed to adaptive mitigation)

Cons: This scenario would involve intense cooperation with the State and/or DOT. The state may not currently possess lands that are suitable to the mission of the FWS and would thus have to acquire and assemble the lands on their own. This would likely be a lengthy process.

Tripartite Exchange Scenario

Leaving the State to identify, acquire and convey lands that are both suitable to the FWS mission and are of commiserate value to the areas for divestment may be impractical.

A tripartite exchange scenario is one where three parties exchange land and cash at a closing. Since the State cannot outright 'buy' FWS lands with cash, they could instead use a third party entity (individual or organization) that does possess the lands that are suitable for FWS acquisition as intermediary. At closing, the State gives cash to the third party, the third party conveys its land to the FWS and the FWS conveys the land identified for divestiture to the State.

Pros: This is likely an easier and more expedient method for divesting of parts of Pea Island. It would take less time, and would allow the State to 'buy' FWS lands without FWS breaking any protocols.

Cons: Needs buy-in and early collaboration with the State. There may be no precedent for this kind of exchange scenario.

Scenario 7: Compensatory Mitigation

FWS Policy

Failing a successful land exchange arrangement, a second best option would be to require the State or DOT to furnish biodiversity mitigations every time a construction or maintenance project impacts the natural resources on the island. The mitigations would then be used to achieve, at worst, a ‘no net loss’ scenario for the ecosystem and at best could be used to produce a ‘net positive’.

The laws, rules and guidelines for compensatory mitigations can be found in the following Section of the US Fish and Wildlife Service Manual (Appendix 5) and in the Federal Register (Appendix 6 and 7):

- 501 FW 2 Mitigation Policy
- FR 99 (23627) Mitigation Bank
- FR 95 (28907) Establishment and Use of Mitigation Banks

Source: <http://www.fws.gov/policy/manuals/>, <https://www.federalregister.gov/>

Key Provisions:

- 501 FW 2 (2.7) Resource Categories and Mitigation Goals

Mitigation Policy identifies four Resource Categories, defines designation criteria, and establishes a mitigation goal for each.

A. Resource Category 1. The designation criteria for habitat in Resource Category 1 is “habitat to be impacted is of high value for evaluation species and is unique and irreplaceable on a national basis or in the ecoregion section.” The mitigation goal for habitat in Resource Category 1 is “no loss of existing habitat value.”

B. Resource Category 2. The designation criteria for habitat in Resource Category 2 is “habitat to be impacted is of high quality for evaluation species and is relatively scarce or becoming scarce on a national basis or in the ecoregion section.” The mitigation goal for habitat in Resource Category 2 is “no net loss of in-kind habitat value.”

C. Resource Category 3. The designation criteria for Resource Category 3 is “habitat to be impacted is of high to medium value for evaluation species.” The mitigation goal for habitat in Resource Category 3 is “no net loss of habitat value while minimizing loss of in-kind habitat value.”

D. Resource Category 4. The designation criteria for Resource Category 4 is “habitat to be impacted is of medium to low value for evaluation species.” The mitigation goal for habitat in Resource Category 4 is “minimize loss of habitat value.”

Notes: The rationale for the category determinations for each impact would have to be supported with technical evidence.

- 501 FW 2 (2.10) Impact Analysis.

Prior to formulation of mitigation recommendations, the impacts of the proposed project or action need to be analyzed and evaluated. The Mitigation Policy states that “Habitat Evaluation Procedures will be used as a basic tool for evaluating project impacts and as a basis for formulating subsequent recommendations.” When the Habitat Evaluation Procedures do not apply, other evaluation systems may be used such as Instream Flow Incremental Methodology. Where specific impact evaluation methods or mitigation technologies are not available, Service personnel shall continue to apply their best professional judgement to develop mitigation recommendations.

- 501 FW 2 (2.11) Mitigation Means and Measures.

The Mitigation Policy outlines five types of actions that can be incorporated into mitigation recommendations. These five types of actions are to be considered in the following order: Avoid the impact; minimize the impact; restore/reduce or eliminate the impact over time; and finally, compensate for the impact. It is important that Service personnel remember projects should be designed first to avoid adverse impacts. Compensation is to be considered only if habitat value losses are likely to remain after the first four means have been considered.

Notes: Once other measures have been exhausted (avoid, minimize, restore/rehab) the offset is the amount that the project sponsor would ‘bank’ into a mitigation bank (or land bank) once quantitative values are established for the impact.

- FR 99 (23627) Mitigation Bank.

A mitigation bank is a site where wetland and/or other aquatic resources are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

It typically involves the consolidation of small, fragmented wetland mitigation projects into one large contiguous site. Units of restored, created, enhanced or preserved wetlands are expressed as “credits” which may subsequently be withdrawn to offset “debits” incurred at a project development site.

- 95 FR (28907) Federal Guidance for the Establishment, Use and Operation of Mitigation Banks

This document is too long to summarize and for the purposes of this report, it is only needed for reference.

- 501 FW 2 (2.14) Location of Mitigation Lands

First priority will be given to the recommendation of a mitigation site within the planning area. Second priority will be given to the recommendation of a mitigation site in proximity to the planning area within the same ecoregion section. Third priority will be given to a mitigation site within the same ecoregion section.

- 99 FR (23627) Part 5. Compensatory Mitigation for Direct Effects on National Wildlife Refuge System Lands

In circumstances where activities occurring within a National Wildlife Refuge require compensatory mitigation, the mitigation must occur on the National Wildlife Refuge being directly affected by the activity. The activity must first have been determined to be compatible. Under no circumstances can an activity which has been determined to be incompatible be allowed in exchange for compensatory mitigation.

Every effort must be made to avoid and minimize the effects before compensatory mitigation is applied. Further, mitigation activities must support the mission of the National Wildlife Refuge System; must be compatible with the purposes of the refuge and the Refuge System mission; must be authorized by and be subject to, the terms and conditions of a Special Use Permit issued by the Refuge manager; and must be coordinated with the appropriate Ecological Services Office supervisor.

Method

When state DOT or FHWA approaches the refuge for a permit (for beach nourishment, road reconstruction, bridge building, etc.), the activity will be found compatible if offset mitigations are furnished.

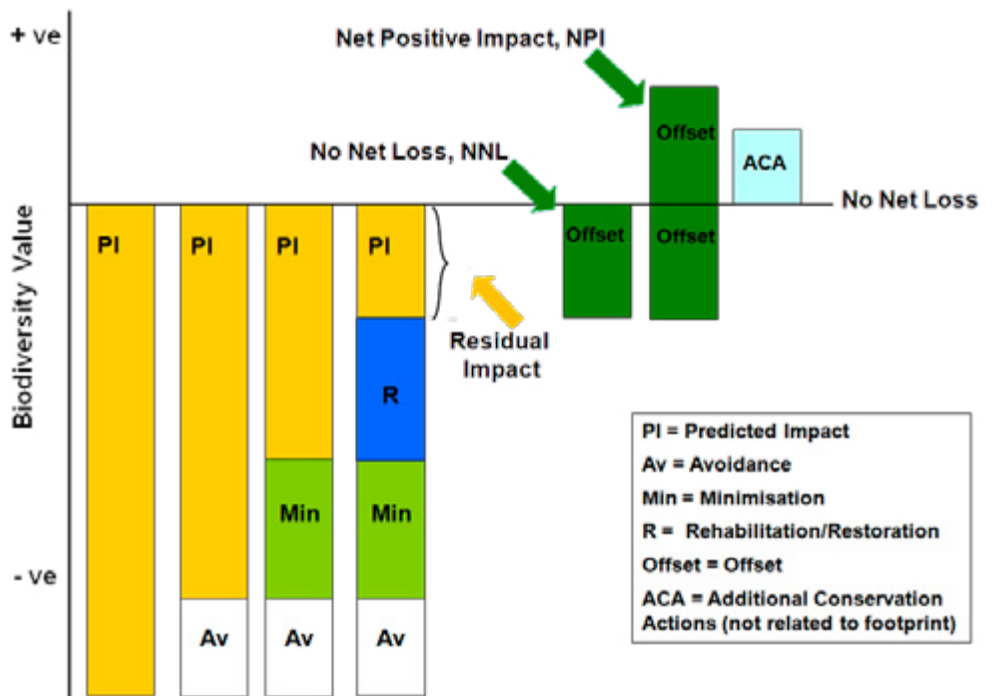
Each activity's impacts would be quantified on a scientific basis and the mitigation means and measures formula would be used. Once all other means are exhausted, the residual impact portion of the net predicted impact (with associated dollar value) would be used to acquire or 'bank' lands identified as appropriate through the process established in Section B.2 Site Selection found in 95 FR 28907.

At a time deemed appropriate by the managing committee of the bank, the credits (or land) can be transferred into Alligator River NWR.

Pros: Allows for strategic repositioning of the conservation estate in the coastal plains of North Carolina. This process is common practice and there is a well established legal framework for this mechanism.

Cons: This creates an extremely time consuming process for both the State and the Service. In an environment where disaster areas and states of emergency are frequent, this is not a process that can keep pace with the needs of the State when fast reaction is necessary.

Mitigation Actions



U.S. Fish & Wildlife Service

<http://www.fws.gov>

