

What is a Coastal Barrier?

- Dynamic landform located at the interface of land and sea
- Generally composed of sand; mangrove islands also act as barriers
- Subject to wind, wave, and tidal energies
- Subject to the impact of coastal storms and sea-level rise



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Why Are Coastal Barriers Important?

They Provide Important Services that are the Foundations of a Healthy Environment and a Strong Economy

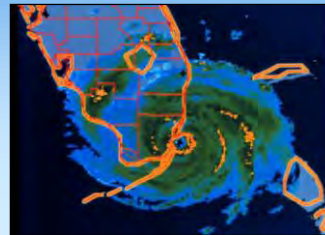
- Offer habitats that support a variety of fish and wildlife
- Protect mainland communities from severe storms and hurricanes
- Serve as popular vacation destinations and support local economies



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Building on Coastal Barriers Can Be Risky

- Coastal barriers are the first landforms hurricanes and tropical storms strike
- They are often made of shifting sand, which is not suitable for long term building stability
- Severe storms can dramatically reshape coastal barriers, tear new inlets, destroy buildings, and threaten people's lives



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Coastal Barrier Resources Act (CBRA)



- Congress created the Coastal Barrier Resources System (CBRS) in 1982
- CBRA removes Federal subsidies for new development in coastal areas
- CBRS areas are depicted on maps that can only be modified by an act of Congress

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CBRA's Goals

1. Keep people out of harm's way
2. Save taxpayers' money
3. Protect valuable habitat for fish and wildlife

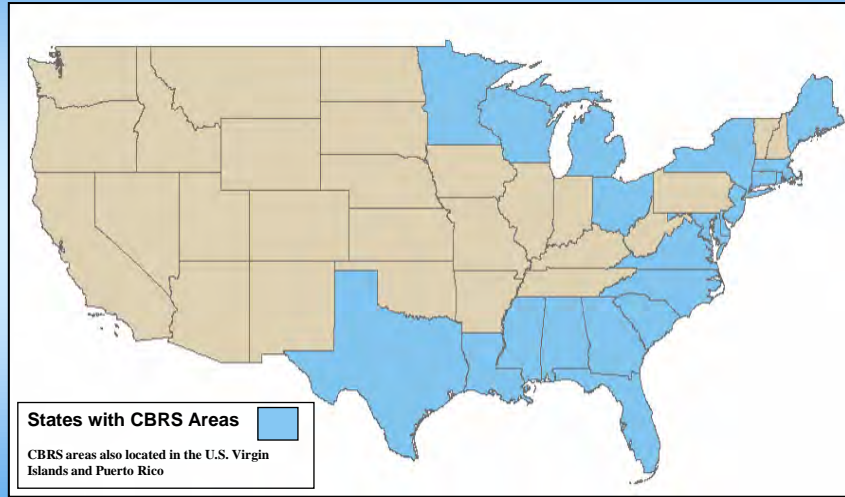


People can develop, but taxpayers won't subsidize

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Distribution of CBRS Areas

857 CBRS areas (approx. 3.1 million acres) located in 23 states and territories



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System Units

- 585 System units
- ~1.3 million acres
- Mostly private lands
- Boundaries are generally intended to follow features on the ground
- Federal spending prohibitions
 - e.g., flood insurance, road construction, dredging, beach nourishment



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Otherwise Protected Areas

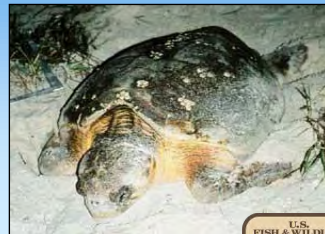
- 272 OPA units
- ~1.8 million acres
- Boundaries are intended to follow conservation and recreation areas
- Only Federal spending prohibition is flood insurance



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Fish and Wildlife Service Role

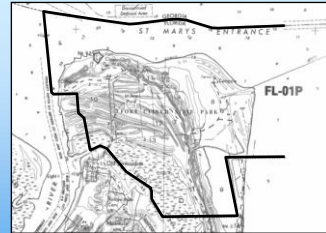
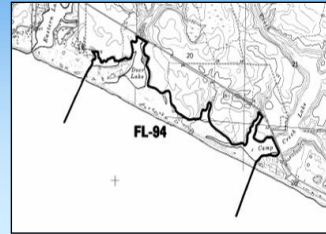
- Property determinations
Is my property in or out?
- Federal project consistency consultations
Can Federal funds be spent on that road?
- Keeper of the official maps and background records
Why were the lines put there?
- Five-year review to address geomorphic changes
Has the shape of the coastal barrier changed due to erosion or accretion?



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CBRA is a Map-Based Law

- CBRS boundaries are depicted on maps enacted by Congress through legislation
- CBRS boundaries are intended to follow certain natural or man-made features
- Only Congress can approve CBRS boundary revisions to add or remove land



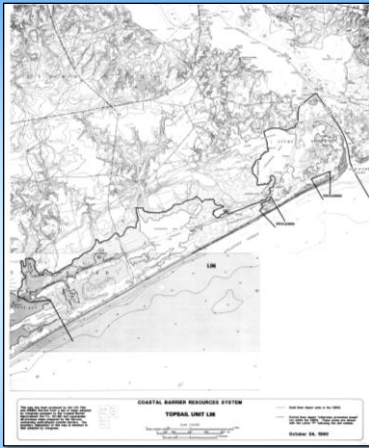
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Challenges Associated with Existing Maps

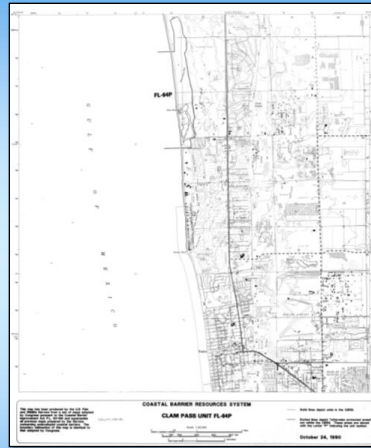
- Age and accuracy of base maps
- Antiquated cartographic methods
- Boundary location doesn't always precisely match boundary intent
- Maps are difficult to use and frequently challenged

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Challenges Associated with Existing Maps



Toposail Unit L06
(System Unit)



Clam Pass Unit FL-64
(OPA Unit)

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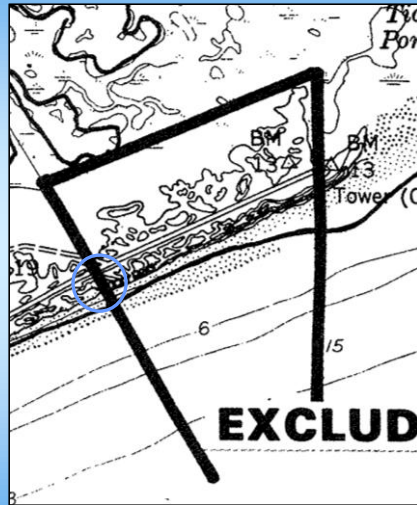
Remapping System Units

- Obtain aerial imagery
- Obtain geomorphic and development data
 - e.g., wetlands, property parcel and date of construction data
- Digitize boundary and establish horizontal control
- Assess boundary intent
- Adjust existing boundaries to create proposed boundaries
- Calculate proposed acreage and shoreline changes
- Create a draft map for Congressional consideration



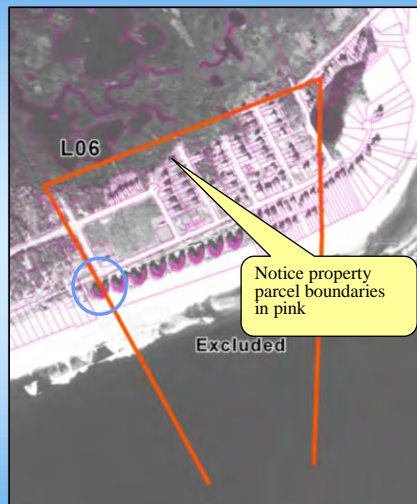
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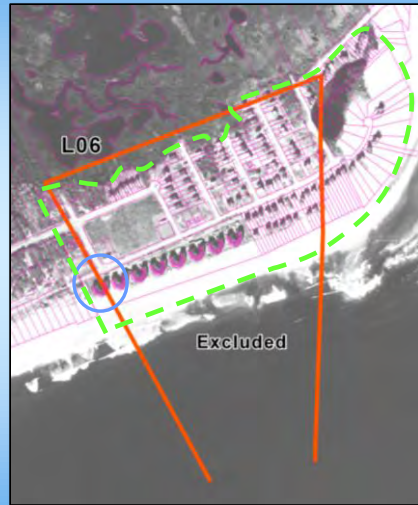
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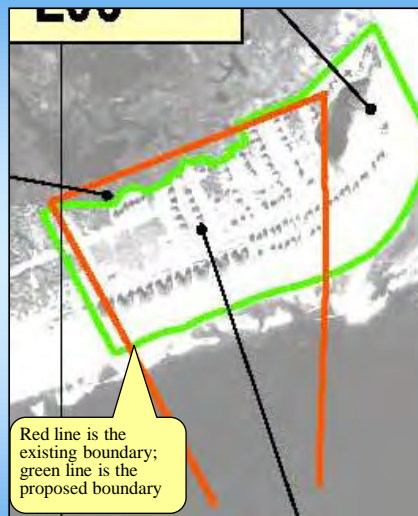
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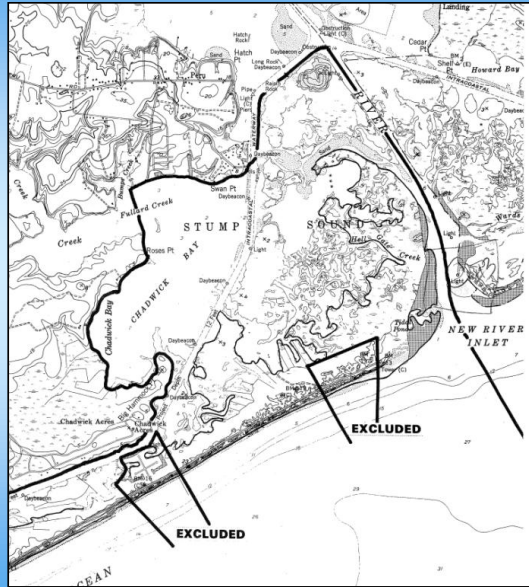
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Remapping System Units

Current Map



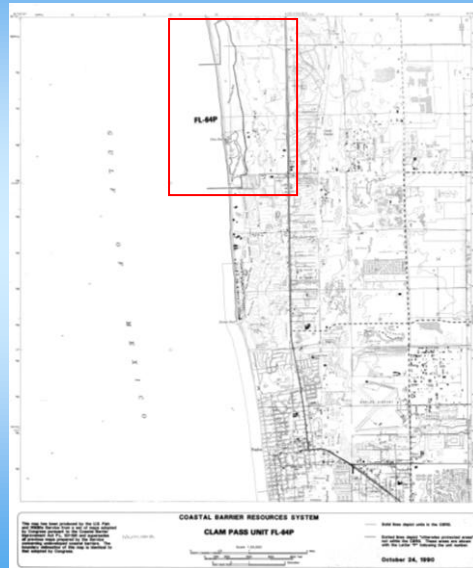
Remapping System Units

Draft Digital Pilot Map



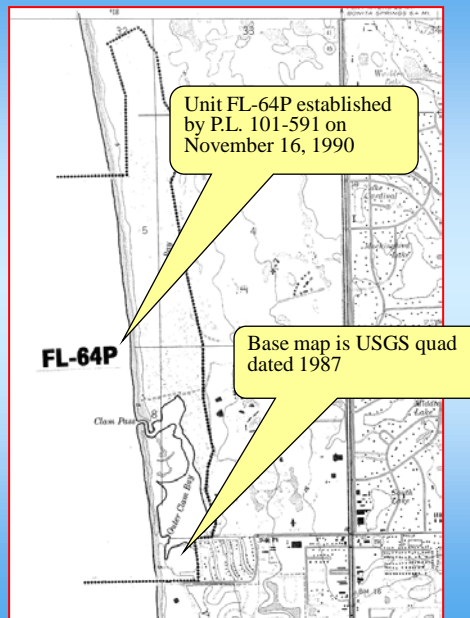
Remapping OPAs

- Obtain aerial imagery
- Digitize boundary and establish horizontal control
- Assess boundary intent
- Compile and validate conservation and recreation area boundaries
- Adjust existing boundaries to create proposed boundaries
- Calculate proposed acreage and shoreline changes
- Create a draft map for Congressional consideration

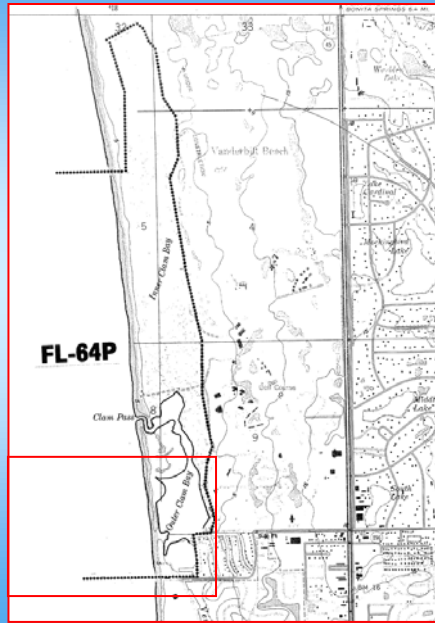


Remapping OPAs

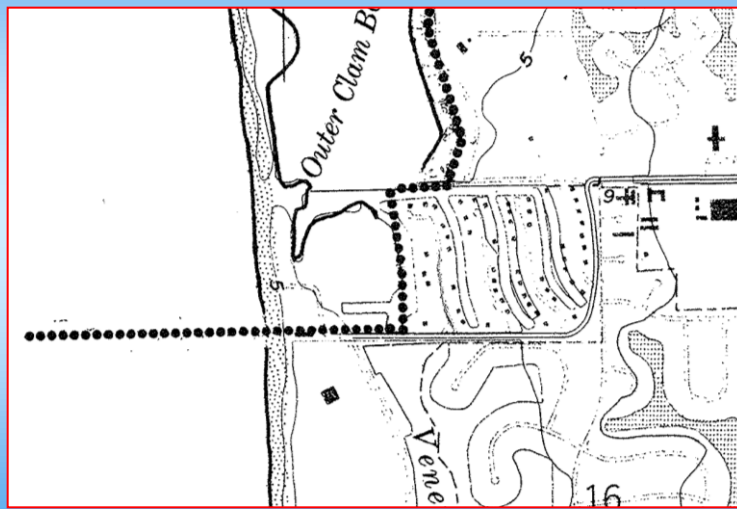
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Remapping OPAs



Remapping OPAs



Remapping OPAs

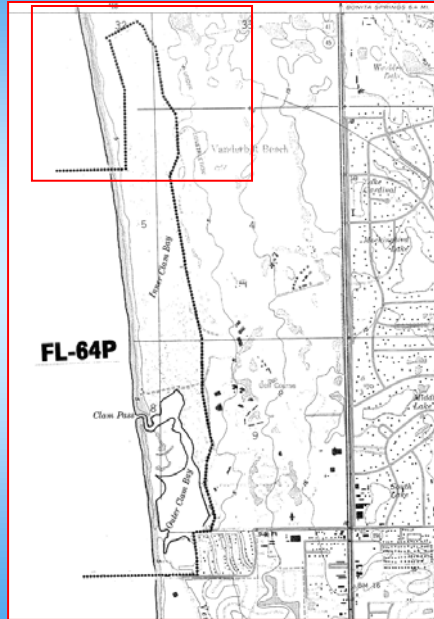
1987 base map did not show development already on the ground when OPA was designated in 1990



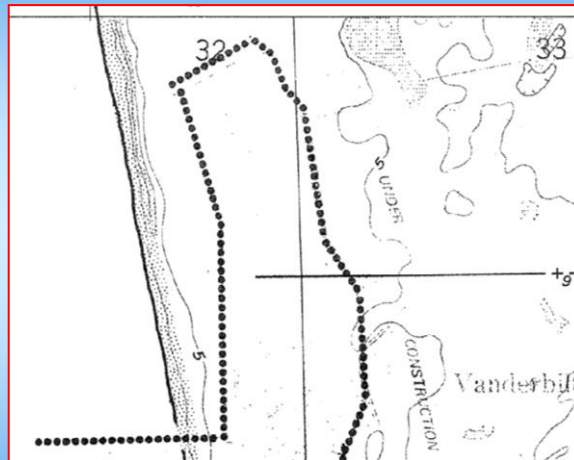
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Remapping OPAs



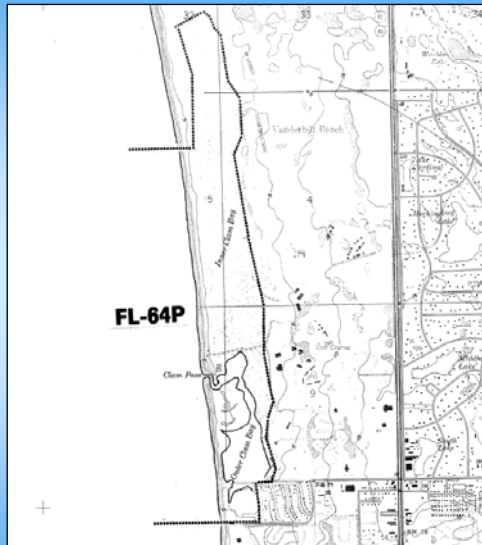
Remapping OPAs



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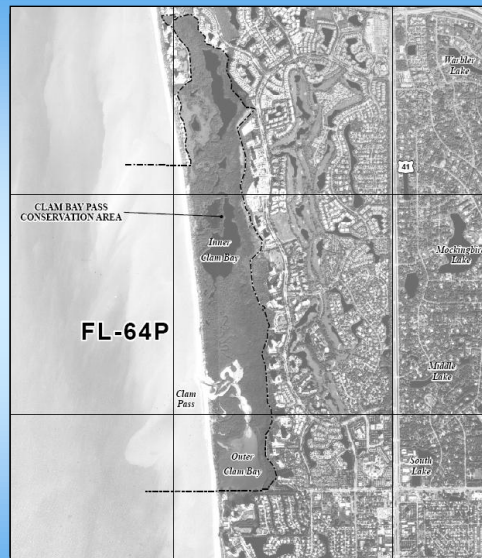


Remapping OPAs



Before

Remapping OPAs



After

Benefits of Map Modernization

- Corrects errors that affect private property owners
- Adds areas appropriate for inclusion
- Improves government efficiency and customer service
- Reduces the need for future case-by-case changes
- Preserves the long-term integrity of the CBRS

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Pilot Project Authority

- Congress recognized the challenges associated with existing paper maps
- Coastal Barrier Resources Reauthorization Act of 2000 directed FWS to map 50-75 CBRS areas using digital technology and submit a report to Congress



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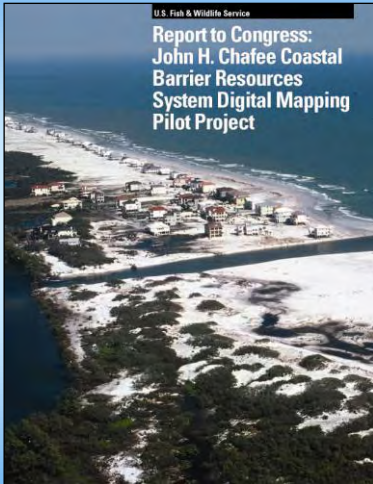
Scope of the Pilot Project

- 70 pilot project units
- 284,434 acres remapped
- Approximately 10% of the entire CBRS
- Pilot units located in Delaware, North Carolina, South Carolina, Florida, and Louisiana



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Pilot Project Report Contents



- Overview of the CBRS
- Need for map modernization
- Digital data standards, needs and availability
- Digital mapping methodology
- Pilot Project Results
 - including maps, summaries, and background records for 70 units
- Costs, Next Steps, and Conclusions

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Types of Proposed Pilot Project Changes

- Alignment with geomorphic features (e.g., shorelines), development features (e.g., edge of a road, property parcel boundaries), and cultural features (e.g., park boundaries)
- Adjustment to reflect geomorphic change (erosion and accretion)
- Adjustment to map channel boundaries consistently
- Addition of associated aquatic habitat
- Addition of conservation or recreation area to existing OPAs
- Addition of new OPAs
- Addition of undeveloped upland not currently within the CBRS
- Removal of private land that was inadvertently included within an OPA
- Reclassification from System unit to OPA and vice versa

In cases where FWS found no compelling evidence to propose a revised boundary, the existing boundary remains unchanged

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Proposed Additions

- Pilot project areas proposed for addition meet the CBRA criteria for inclusion
- 24,991 acres proposed for inclusion
 - 21,832 acres to System units (618 upland and 21,214 associated aquatic habitat acres)
 - 3,159 acres to OPAs (1,007 upland and 2,152 associated aquatic habitat acres)



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Proposed Deletions

- Pilot project areas proposed for removal did not meet the CBRA criteria for inclusion when they were originally added
- 1,151 acres proposed for removal
 - 946 acres from System units (254 upland and 692 associated aquatic habitat acres)
 - 205 acres from OPAs (109 upland and 95 associated aquatic habitat acres)
- Areas proposed for removal contain approximately 300 structures



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Proposed Reclassifications

- 764 pilot project acres proposed for reclassification from System unit to OPA
 - 478 upland and 286 associated aquatic habitat acres
 - Areas were held for conservation or recreation and met the criteria for OPA status at the time of inclusion

- 12,518 pilot project acres proposed for reclassification from OPA to System unit
 - 330 upland and 12,188 associated aquatic habitat acres
 - Areas were not held for conservation or recreation and met the criteria for System unit status at the time of inclusion

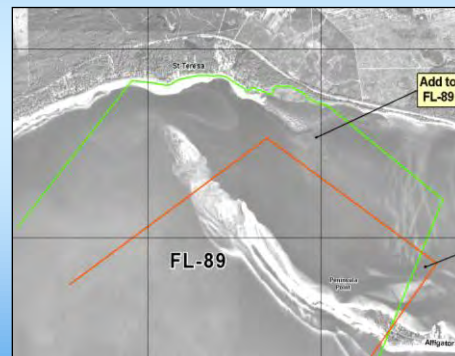


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Proposed Additions of Associated Aquatic Habitat

- CBRA defines a coastal barrier to include the adjacent wetlands, marshes, estuaries, inlets, and near-shore waters as "associated aquatic habitat"

- The pilot project proposes inclusion of additional landward aquatic habitat associated with the coastal barrier



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Proposed Channel Boundary Changes

- The CBRA definition of a coastal barrier includes the associated aquatic habitat
- Pilot project maps propose remapping channels consistently
 - For System units, the proposed boundaries include the entire channel
 - For OPAs, the proposed boundaries are placed at the center of the channel
- CBRA contains an exception for the maintenance or construction of improvements of existing Federal navigation channels and related structures



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Proposed Adjustments to Channel Shorelines

- Pilot project maps propose remapping channel shorelines consistently
 - For developed shorelines, boundary is generally placed 50 feet from shoreline
 - For undeveloped shorelines, boundary generally coincides with the shoreline



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Adjustments to Features



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Updating Base Map Aerial Imagery



Updating Base Map Aerial Imagery



Development Assessment

- FWS will consider level of development on the ground at the time the area was originally included within the CBRS (or April 7, 2009, for proposed pilot project additions)
- Interested parties may submit documentation to prove a full complement of infrastructure existed at the time of an area's inclusion within the CBRS

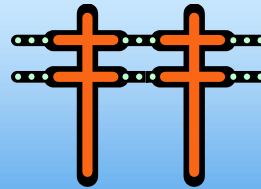


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Infrastructure Criteria

A full complement of infrastructure includes:

- (1) a road, with a reinforced road bed, to each lot or building site in the area;
- (2) a wastewater disposal system sufficient to serve each lot or building site in the area;
- (3) electric service for each lot or building site in the area; and
- (4) a fresh water supply for each lot or building site in the area



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Public Comment Period

- Report and draft maps available for 120-day public comment period
April 7 – August 5, 2009
- FWS is not seeking public comments on non-pilot project units at this time
- Parties who seek revisions to proposed pilot project maps should provide documentation to support their claim
 - *Does the proposed boundary coincide with the feature(s) on the ground it was intended to follow?*
 - *Did the area qualify as an undeveloped coastal barrier when it was originally included within the CBRs?*



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Next Steps

Pilot Project Finalization:

- FWS will review public comments and make appropriate adjustments to the maps, update underlying base maps, and submit final recommended maps and report to Congress
- Congress will ultimately determine any final changes to pilot project unit boundaries by enacting new maps into law

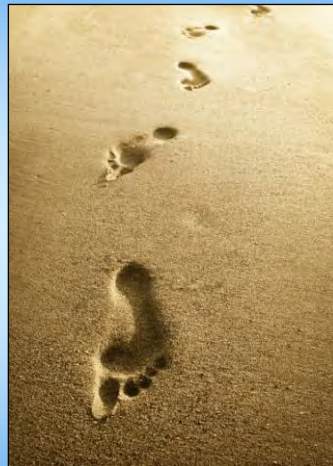


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Next Steps

Comprehensive Map Modernization:

- Coastal Barrier Resources Reauthorization Act of 2005 directed FWS to modernize remainder of the CBRS maps and identify proposed additions to the CBRS
- Estimated cost to remap entire CBRS is up to \$17 million
- Modernizing the remaining 90% of the CBRS is subject to availability of resources



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Conclusions

- CBRS maps are outdated, difficult to use, and frequently challenged
- The pilot project report and maps lay the framework for comprehensive map modernization
- Digitally remapping the entire CBRS would address mapping errors, improve government efficiency, and further the goals of CBRA



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FWS must receive comments on the pilot project report and draft maps by **August 5, 2009**

Mail or hand-deliver comments to:

Coastal Barriers Coordinator
 Division of Habitat and Resource Conservation
 U.S. Fish and Wildlife Service
 4401 N. Fairfax Drive, Room 860A
 Arlington, VA 22203

or send comments by e-mail to: CBRAcomments@fws.gov

For additional information, visit
http://www.fws.gov/habitatconservation/coastal_barrier.html