

Report to the Honorable Wayne T. Gilchrest, House of Representatives

March 2007

COASTAL BARRIER RESOURCES SYSTEM

Status of Development That Has Occurred and Financial Assistance Provided by Federal Agencies





Highlights of GAO-07-356, a report to the Honorable Wayne T. Gilchrest, House of Representatives

Why GAO Did This Study

In 1982, Congress enacted the Coastal Barrier Resources Act. The Coastal Barrier Resources Act, as amended (CBRA), designates 585 units of undeveloped coastal lands and aquatic habitat as the John H. **Chafee Coastal Barrier Resources** System (CBRS). CBRA prohibits most federal expenditures and assistance within the system that could encourage development, but it allows federal agencies to provide some types of assistance and issue certain regulatory permits. In 1992, GAO reported that development was occurring in the CBRS despite restrictions on federal assistance. GAO updated its 1992 report and reviewed the extent to which (1) development has occurred in CBRS units since their inclusion in the system and (2) federal financial assistance and permits have been provided to entities in CBRS units.

GAO electronically mapped address data for structures within 91 randomly selected CBRS units and collected information on federal financial assistance and permits for eight federal agencies.

What GAO Recommends

GAO recommends, among other things, that the four agencies that provided prohibited loan guarantees or insurance policies to CBRS units first verify and then cancel those that are in violation of CBRA. Three agencies agreed with our recommendation; VA did not, stating that it would inflict unfair harm to the affected veterans.

www.gao.gov/cgi-bin/getrpt?GAO-07-356.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu Mittal at (202) 512-3841 or mittala@gao.gov.

COASTAL BARRIER RESOURCES SYSTEM

Status of Development That Has Occurred and Financial Assistance Provided by Federal Agencies

What GAO Found

An estimated 84 percent of CBRS units remain undeveloped, while 16 percent have experienced some level of development. About 13 percent of the developed units experienced minimal levels of development-typically consisting of less than 20 additional structures per unit since becoming part of the CBRS, and about 3 percent experienced significant developmentconsisting of 100 or more structures per unit-since becoming part of the CBRS. According to federal and local officials, CBRA has played little role in the extent of development within the CBRS units that we reviewed because they believe that other factors have been more important in inhibiting development. These include (1) the lack of suitably developable land in the unit; (2) the lack of accessibility to the unit; (3) state laws discouraging development within coastal areas; and (4) ownership of land within the unit by groups, such as the National Audubon Society, who are seeking to preserve its natural state. In units that GAO reviewed where development had occurred, federal and local officials also identified a number of factors that have contributed to development despite the unit's inclusion in the CBRS. These include (1) a combination of commercial interest and public desire to build in the unit, (2) local government support for development, and (3) the availability of affordable private flood insurance.

Multiple federal agencies have provided some financial assistance to property owners in CBRS units that is expressly prohibited by CBRA; some assistance allowed under CBRA; and hundreds of permits for federally regulated development activities within the unit. Specifically, four agencies-the Department of Housing and Urban Development, the Department of Veterans Affairs, the Federal Emergency Management Agency, and the Small Business Administration—provided financial assistance, such as flood insurance and loan guarantees, totaling about \$21 million that is prohibited by CBRA to property owners in CBRS units. Although most of these agencies had processes in place to prevent such assistance from being provided, they cited problems with inaccurate maps as being a key factor leading to these errors. With regard to financial assistance allowed by CBRA, GAO found that three federal agencies have provided such assistance but did not track how much assistance they provided, so the total extent of this assistance is unknown. With regard to permits issued in CBRS units for federally regulated activities, GAO identified hundreds of permits issued by the Army Corps of Engineers and state agencies authorized to issue permits on behalf of the Environmental Protection Agency. These permits covered various activities such as the construction of piers, the discharge of dredged or fill material into federally regulated waters, and permits associated with water discharges from construction sites or wastewater treatment systems.

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United States Government Accountability Office Washington, DC 20548

March 19, 2007

The Honorable Wayne T. Gilchrest House of Representatives

Dear Mr. Gilchrest:

The U.S. coasts are among the most rapidly growing and developed areas in the nation. From 1980 to 2003, the population in U.S coastal areas is estimated to have increased by 33 million people and is projected to increase by another 7 million people by 2008. Coastal barriers, such as islands and broad sandy barrier beaches, serve as the mainland's first line of defense against the impacts of hurricanes and coastal storms. These areas are also biologically rich and provide protection for a variety of fish and wildlife species, including migratory birds, shellfish, and sea turtles. While the geological composition of coastal barriers makes them highly unstable areas on which to build, their desirable waterfront locations make them attractive for development. As development and population increase, the risk to human life, property, and valuable habitat increases, and the natural buffers that minimize storm damage are degraded. For example, when Hurricane Isabel made landfall along North Carolina's Outer Banks in 2003, it caused widespread wind and storm surge damage to several piers, several thousand homes and businesses, and damaged or washed away sections of a highway.

Recognizing that development in coastal barrier areas can be impacted by the actions and programs of the federal government, Congress enacted the Coastal Barrier Resources Act in 1982. The stated purpose of the Coastal Barrier Resources Act as amended (CBRA) is to minimize (1) the loss of human life; (2) wasteful expenditures of federal revenue; and (3) damage to fish, wildlife, and other natural resources associated with coastal barriers along the Atlantic and Gulf Coasts and the shores of the Great Lakes by restricting future federal expenditures and financial assistance, which have the effect of encouraging development of coastal barriers. Through CBRA, Congress designated 585 units of undeveloped coastal land and associated aquatic habitats comprising nearly 1.3 million acres as the John H. Chafee Coastal Barrier Resources System (CBRS).¹ Congress,

¹For the purposes of CBRA, a coastal barrier was considered undeveloped if the density of development was less than one structure per 5 acres of land above mean high tide.

through the Coastal Barrier Improvement Act of 1990, also designated an additional 1.8 million acres already held for conservation or recreation, such as national wildlife refuges, national parks and seashores, and state and county parks, as otherwise protected areas (OPA).

CBRA does not prohibit development in CBRS units by owners willing to develop their properties without the benefit of federal financial assistance, such as federal flood insurance, loans, grants, subsidies or other forms of direct or indirect federal assistance.² Instead, with certain exceptions, CBRA prohibits federal expenditures or financial assistance within CBRS units that might encourage development. The prohibition includes-but is not limited to-the issuance of flood insurance policies, home loans, loan guarantees, and new or expanded infrastructure construction within CBRS units. However, the act does exempt certain federal expenditures or financial assistance from the general prohibition, such as emergency operations that are essential to saving lives, maintaining and replacing existing publicly owned infrastructure, energy development, and activities related to national security. In addition, CBRA allows agencies to issue permits to entities within the CBRS for certain federally regulated activities, such as the construction of bridges and docks or the discharge of dredged or fill materials into waters that fall under federal jurisdiction.

Under CBRA, no single federal agency is assigned overall responsibility for administering activities in the CBRS; instead, all federal agencies must abide by the provisions of the act and are required to certify annually that they are in compliance with CBRA.³ CBRA does assign the Secretary of the Interior responsibility for, among other things, the tasks of consulting with other federal agencies that propose spending funds within the CBRS, maintaining maps for each CBRS unit, and recommending modifications to CBRS unit boundaries, as needed. These maps are used by property owners; federal, state, and local agencies; and other parties, such as insurance agents, to determine whether a property or planned project is

²Financial assistance as defined by the act does not include general revenue sharing grants; deposit or account insurance for customers of financial institutions; the purchase of mortgages or loans by federal associations or corporations such as the Federal National Mortgage Association; assistance for environmental studies, planning, and other assessments that are required incident to the issuance of permits or other authorizations under federal law; and assistance for programs entirely unrelated to development, such as the federal old-age survivors or disability insurance program.

³Such reports and certifications shall be submitted annually to the Secretary of the Interior. 16 U.S.C. § 3506(b).

within a CBRS unit and therefore whether it is ineligible for federal financial assistance. Within the Department of the Interior (DOI) these responsibilities belong to the U.S. Fish and Wildlife Service (FWS). The existing maps that depict CBRS unit boundaries are outdated technologically and present challenges to users. In May 2006, the Congress directed the Secretary of the Interior to initiate a map modernization project for all of the units in the CBRS that is to be completed by 2013.⁴ This effort is designed to create digital maps of all CBRS units that are more accurate and less time consuming for agencies and others to use than the maps currently available.

In 1992, we reported that development was occurring in some CBRS units despite restrictions on federal assistance.⁵ CBRA has been amended several times and the CBRS has expanded to include significantly more units. In this context, you asked us to update our 1992 report and review the extent to which (1) development has occurred in the CBRS and (2) federal agencies have provided financial assistance and issued permits to entities in CBRS units.

To determine the extent of development that has occurred within CBRS units, we selected a stratified random sample of 91 units located throughout the system. The sample included units designated as part of the system in 1982 and 1990. We did not include otherwise protected areas in our analysis. For each unit, we obtained and electronically mapped address or parcel data for structures within the unit boundaries.⁶ Throughout this report, the percentage of units that have experienced development is a statistical estimate based on our analysis of the development in the 91 randomly selected units, which can be projected to the entire system. The random sample was stratified by region to select an equal number of units in northern and southern regions. In addition, we conducted site visits and/or interviewed officials for a subset of 59 units in 13 states to determine the extent of and reasons for development. To determine the extent of federal expenditures and financial assistance made to individuals and entities within CBRS units, we identified and

 $^{^4}$ Coastal Barrier Resources Reauthorization Act of 2005, Pub. L. No. 109-226, $\$ 4(a), 120 Stat 381.

⁵GAO, Coastal Barriers: Development Occurring Despite Prohibitions Against Federal Assistance, GAO/RCED-92-115 (Washington, D.C.: July 17, 1992). Our 1992 report only covered units designated by the original 1982 act.

⁶We electronically mapped the location of the addresses using MapInfo Software.

collected information on financial assistance provided in selected CBRS units from those federal agencies that, based on our previous report and our discussions with FWS, were the most likely to have provided assistance. These agencies include the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA), Federal Highway Administration (FHWA), Small Business Administration (SBA), U.S. Army Corps of Engineers (the Corps), U.S. Department of Agriculture, Department of Housing and Urban Development (HUD), and the Department of Veterans Affairs (VA). We also interviewed officials with these agencies about the agencies' procedures for preventing prohibited expenditures from being provided to individuals and entities in CBRS units. To determine the extent to which federal agencies issued permits for projects within selected CBRS units, we interviewed officials and analyzed data provided by the Corps, the Environmental Protection Agency (EPA), and state agencies authorized to administer EPA programs. The information we gathered on federal financial assistance and permits cannot be generalized to the entire universe of CBRS units. We determined that the agency data were sufficiently reliable for the purposes of our review. A more detailed description of our scope and methodology is presented in appendix I. We performed our work between February 2006 and February 2007 in accordance with generally accepted government auditing standards.

Results in Brief

Most units within the CBRS remain undeveloped; however, about 3 percent of units have experienced significant levels of development. Specifically, an estimated 84 percent of all CBRS units have remained undeveloped (no new structures were built) since they were included in the system, while about 13 percent have experienced minimal levels of development—consisting of less than 20 additional structures per unit since becoming part of the CBRS. An estimated 3 percent of units experienced significant development-consisting of 100 or more structures per unit—since becoming part of the CBRS. According to federal and local officials, CBRA has played little role in the extent of development within the CBRS units that we reviewed. For those units that have remained undeveloped, officials identified the following factors as being primarily responsible for inhibiting development (1) the lack of suitably developable land in the unit; (2) the lack of accessibility to the unit; (3) state laws discouraging development within coastal areas; and (4) ownership of land within the unit by groups, such as the National Audubon Society, who are seeking to preserve the natural state of the unit. For those units that we reviewed where development has occurred, local officials said that CBRA did little to discourage development and identified the following factors as being primarily responsible for contributing to development: (1) a combination of commercial interest and public desire to build in the unit, (2) local government support for development to improve the economic base of the area, and (3) the availability of affordable private flood insurance. Overall, we found that CBRS units in the southern region of the United States are experiencing greater development than units in the north. This is largely because the amount of developable land is greater in the south.

Federal agencies have provided some financial assistance that is prohibited by CBRA, some assistance that is allowed under CBRA, and issued hundreds of permits for federally regulated construction projects to property owners and other entities in CBRS units. More specifically,

- Four agencies—FEMA, HUD, SBA, and VA—provided financial assistance to property owners in CBRS units that is prohibited by CBRA. For example, we determined that 73 FEMA flood insurance policies with total policy values of \$20 million and 5 HUD insured loans totaling \$384,000 were made to entities in CBRS units and were active in 2006. While FEMA, SBA, and VA have procedures in place intended to prevent prohibited financial assistance from being provided to property owners in CBRS units, HUD does not have such procedures. FEMA officials cited the lack of updated CBRS maps and limitations with mapping technology as the primary reasons why errors were made and assistance was provided to entities within the CBRS. FWS has begun a congressionally directed effort to modernize and correct CBRS unit maps. However, according to FWS officials, completing that effort is contingent upon receiving specific funding for the effort. In the meantime, FWS is working with FEMA to update the digital flood maps used by FEMA-an effort that should improve FEMA's, insurance agents' and other's ability to determine if a property is eligible for federal flood insurance. VA and SBA officials acknowledged that they had provided assistance prohibited by CBRA and told us that they will monitor compliance with their procedures more carefully in the future. HUD officials told us that they have no procedures under their single-family mortgage insurance programs related to CBRA because it would be unnecessary in practical terms. For example, agency officials believed it was unlikely that these programs would fund projects in the CBRS because of the high-priced homes generally found in these areas. In response to our findings, HUD officials said that they would be developing CBRA policy guidance and associated training to ensure future compliance.
- Three federal agencies have provided some financial assistance that is allowed under CBRA, but the total extent of this assistance is unknown.

For example, in the past 10 years, FEMA has provided at least \$5.6 million in disaster assistance to the unit in North Topsail, North Carolina, for debris removal and repairs. Similarly, FHWA has provided \$1.1 million for road repair to the unit in Cape San Blas, Florida. However, because these federal agencies do not track the amount of allowable financial assistance they provide to CBRS units, they could not provide us with the complete and reliable data needed to estimate the total extent of such assistance.

• The Corps and states authorized by the EPA have issued hundreds of permits allowed by CBRA to entities within the CBRS. Since 1983, in 20 CBRS units the Corps issued at least 194 permits to allow, among other things, the construction of piers, mosquito control ditches, erosion control areas, and the raising of fish and shellfish. Similarly, since 1983, in 9 CBRS units EPA-authorized state agencies issued 41 permits, primarily for storm water runoff from construction activities and the discharge of water from treatment systems.

We are recommending that FEMA, HUD, SBA, and VA obtain official determinations from FWS on whether the properties we identified as receiving federal assistance in violation of CBRA are in fact located within a CBRS unit and cancel all inappropriate loan guarantees and insurance policies. We are also recommending that these agencies examine their policies and procedures to ensure that they are adequate to prevent federal assistance from being provided to entities in CBRS units. In addition, so that federal agencies and other parties can more accurately determine whether a property is within CBRA and whether it is eligible for assistance, we recommend that FWS place a high priority on completing its efforts to develop digital maps that more accurately depict unit boundaries. In commenting on our report, DHS, DOI, and HUD generally agreed with our recommendations. SBA had no comment on the draft report. VA agreed with our findings and one of our recommendations but did not concur with the recommendation to cancel all inappropriate loan guarantees, stating that it would inflict disproportionate harm on lenders and veterans. While we understand VA's concerns about the adverse effect that this could have on the potentially affected parties, we believe that VA should rescind these loan guarantees because they were made in violation of CBRA.

Background

Coastal barriers are unique land forms that function as buffers, protecting the mainland against the destructive forces of hurricanes and other coastal storms. Coastal barriers also provide habitat for migratory birds and other wildlife; and they provide essential nesting and feeding areas for commercially and recreationally important species of fish and other aquatic organisms such as sea turtles. In the United States, coastal barriers are predominantly distributed along the Atlantic and Gulf coasts but can also be found in areas surrounding the Great Lakes, the Virgin Islands, and Puerto Rico. From the Gulf of Maine to Padre Island, Texas, coastal barriers form an almost unbroken chain along the coastline. Coastal barriers are generally unsuitable for development because the movement of unstable sediments undermines man-made structures. Despite this threat, coastal areas that include coastal barriers are among the most rapidly growing and developed areas in the nation, accounting for 53 percent of the total population in the United States according to a 2004 report by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service.

In 1982, Congress enacted the Coastal Barrier Resources Act to minimize (1) the loss of human life; (2) wasteful expenditures of federal revenue; and (3) damage to fish, wildlife, and other natural resources associated with coastal barriers along the Atlantic and Gulf coasts by restricting future federal expenditures and financial assistance, which have the effect of encouraging development of coastal barriers. The act designated 186 units, comprising about 453,000 acres along 666 miles of shoreline from Maine to Texas, which would later be known as the John H. Chafee Coastal Barrier Resources System (CBRS).

Subsequently, the CBRS was further expanded to include additional units along coastal states from Maine to Texas, plus units in the Great Lakes, the Virgin Islands, and Puerto Rico. Currently, the CBRS includes 585 units, which consist of undeveloped coastal barrier lands and aquatic habitat that comprises nearly 1.3 million acres of land and associated aquatic habitat. The CBRS was also expanded to include 272 OPAs that comprise an additional 1.8 million acres of land and associated aquatic habitat. Most of the land in these OPAs is publicly held for conservation or recreational purposes, such as national wildlife refuges, national parks and seashores, and state and county parks; but some OPAs may also include some private property that may or may not be held for conservation.

Under CBRA, no single federal agency has overall responsibility for administering activities within the CBRS; instead, all federal agencies must abide by the provisions of the act. CBRA does assign the Secretary of the Interior responsibility for, among other things, maintaining maps of each CBRS unit and recommending modifications to CBRS unit boundaries, as needed.⁷ Within the Department of Interior, these responsibilities belong to the FWS. Both agencies and property owners can request decisions from FWS regarding whether specific properties are within CBRS boundaries. Finally, agencies must consult with FWS to determine whether a proposed project is within the CBRS, and if so, whether the project is consistent with CBRA.

The Coastal Barrier Resources Reauthorization Act of 2000 directed the Secretary of the Interior to complete a Digital Mapping Pilot Project for at least 50 but not more than 75 units in the CBRS and submit a report to the Congress that describes the results of the pilot project and the feasibility, data needs, and costs of completing digital maps for the entire CBRS.⁸ Currently, FWS is conducting a pilot project to create updated digital CBRS maps that would provide federal agencies and others with an enhanced tool for determining accurate boundary locations. Later, the Coastal Barrier Resources Reauthorization Act of 2005 directed the Secretary of the Interior to create digital maps by 2013 for all CBRS units not included in the pilot project. However, according to agency officials, the ability to conduct this project and the actual completion date will depend upon the specific funding that the agency receives for this project.

CBRA does not prohibit development in CBRS units by owners who are willing to develop their properties without the benefit of federal financial assistance. Instead, with certain exceptions, CBRA prohibits federal expenditures or financial assistance within CBRS units that might encourage development. The prohibitions include, but are not limited to the following:

• the construction or purchase of any structure, facility, or related infrastructure;

⁸FWS anticipates the draft maps and report will be submitted to the Congress in 2007.

⁷Aside from minor exceptions, only Congress, through new legislation, can modify the boundaries of the CBRS. To determine whether the revisions constitute appropriate technical corrections, FWS conducts objective reviews to examine whether or not the area was undeveloped when it was included in the CBRS and whether or not the boundaries on the map correctly follow the natural or man-made features they were intended to follow on the ground. When technical mapping errors are found, FWS has supported legislation to modify boundaries accordingly. Since the CBRS was designated in 1982, Congress has enacted technical correction legislation to revise the boundaries of 42 CBRS units.

- the construction or purchase of any road, airport, boat landing facility, or other facility on, or bridge or causeway to, any CBRS unit;
- any project to prevent the erosion of, or to otherwise stabilize, any inlet, shoreline, or inshore area for the purpose of encouraging development; and
- the issuance of flood insurance coverage under the National Flood Insurance Act of 1968 for any new construction or substantially improved property.

CBRA allows certain federal assistance within the CBRS for limited activities after consultation with FWS. However, the act does not require the agencies to obtain FWS' approval before acting. Such assistance includes, but is not limited to the following:

- the exploration, extraction, or transportation of energy resources that can be carried out only on, in, or adjacent to a coastal water area;
- the maintenance or construction of improvements of existing Federal navigation channels and related structures;
- the maintenance, replacement, reconstruction, or repair, but not the expansion, of publicly owned or operated roads, structures, or facilities that are essential links in a larger network or system;
- military activities essential to national security; and
- assistance for emergency operations essential to saving of lives and protecting property.

CBRA has no provisions prohibiting the administration of federal regulatory activities, such as issuing certain permits, within the CBRS. Three federal agencies—the Corps, EPA, and the U.S. Coast Guard—issue permits that regulate, among other things, the discharge of dredged or fill material into federally regulated waters, including wetlands; the discharge of wastes into navigable waters; and the construction of bridges over navigable waters. Because much of the CBRS is comprised of wetlands and aquatic habitat, activities undertaken in these areas can require a permit from one or more of these agencies. Federal legislation other than CBRA provides the authority for issuing these permits. Among these are the Clean Water Act, the Rivers and Harbors Appropriation Act of 1899, and the Bridge Act of 1906, as amended.

CBRS Remains Largely Undeveloped	Despite the concentration of significant levels of development in a few units, most of the CBRS remains undeveloped. Specifically, we found an estimated 84 percent of all CBRS units remain undeveloped—with no new structures built since the unit was included in the CBRS. We found that factors such as the lack of suitably developable land in the unit and state laws discouraging development were responsible for inhibiting development. We also determined that an estimated 13 percent of CBRS units experienced minimal levels of development—consisting of less than 20 additional structures per unit since becoming part of the CBRS—while 3 percent of CBRS units experienced significant development—100 or more additional structures per unit. According to local officials, commercial interest and public desire to build in some units and local government support for development were some of the key factors contributing to the development in the CBRS units we reviewed. Appendix II lists the units in our review and the status of development in those units.
The Majority of CBRS Units Have Not Experienced Development	On the basis of our analysis of a random sample of CBRS units, we estimate that 84 percent of the units experienced no new development since their inclusion in the CBRS. ⁹ For the units in our sample, the undeveloped units were generally smaller in total acreage and had less developable acreage than the developed units. Although CBRA does not appear to have been a primary factor in discouraging development in the units we reviewed, officials indicated that in those areas where CBRA prohibitions are complemented by local and state government objectives for development, it is unlikely that there
	 and state government objectives for development, it is unikely that there will be significant increases in development. Local officials cited several factors as being primarily responsible for inhibiting development. <i>The Lack of Suitably Developable Land</i>. This was a primary factor for the lack of development in a number of CBRS units that we reviewed.¹⁰ For example, the Boat Meadow unit in Massachusetts is comprised almost entirely of salt marshes with small sand bars scattered throughout shallow
	⁹ The random probability sample included 91 geographically dispersed CBRS units. All percentage estimates from the sample have margins of error of plus or minus 10 percentage points, unless otherwise noted.

¹⁰Developable land is the number of fastland acres in each unit. Fastland is situated above the mean high-tide line and is generally not wetlands. FWS determined the fastland acres for each unit within the CBRS.

water, making the land unsuitable for development. Similarly, in the Wrightsville Beach unit in North Carolina, the sand continuously shifts, making the land too unstable for development. Figure 1 is an example of the type of terrain generally found in the Boat Meadow CBRS unit in Massachusetts.

- Figure 1: Boat Meadow CBRS Unit in Massachusetts

Source: GAO.

Lack of Accessibility to the Unit. A number of federal and local officials noted that some CBRS units are not easily accessible or are located in remote locations that are not desirable to developers. For example, a number of units, such as the Bay Joe Wise Complex in Louisiana, are only accessible by boat. Other units, such as the Boca Chica unit in Texas, are in such remote locations that an official said developers are not willing to build there. In addition, several remote and inaccessible locations do not currently have the infrastructure needed to develop the unit. For example, an official said the lack of existing infrastructure and the high cost of constructing development-quality water and sewage infrastructure have discouraged development on the North Padre Island unit in Texas. State Laws Discouraging Development. State laws were cited by a number of officials as reasons why development had not occurred in some CBRS units. Some states have adopted specific restrictions to prevent development in coastal or wetland areas, which are often found in CBRS units. For example, a number of units in Massachusetts—such as Black Beach and Squaw Island—have not experienced development due in part to wetland and coastal protection laws enacted by the state.¹¹ In addition, both Maine and Massachusetts do not allow state funds or grants to be used for projects to encourage development in barrier beaches.¹² In Rhode Island, any coastal development project must receive a permit from the Rhode Island Coastal Resources Management Council, and an official explained that it was highly unlikely that permits would be issued for new development in coastal regions of the state.

Preservation Efforts by Conservation Groups. A number of CBRS units include land owned by entities seeking to preserve the area in its natural state. In some cases, CBRS units have lands that are owned by federal, state, or local governments, such as local parks or national forests. For example, the Whitefish Point unit in Michigan is part of the Hiawatha National Forest. In other cases, land in CBRS units is owned by conservation groups seeking to prevent development. For example, a significant portion of the Southgate Ponds unit in the U.S. Virgin Islands is owned by the St. Croix Environmental Association; the Fox Islands unit in Virginia is owned by the Chesapeake Bay Foundation; and the Pine Island Bay unit in North Carolina is mostly owned by the National Audubon Society. Although these owners have sought to prevent development within the unit, as the land becomes more valuable, owners may experience pressure to sell it for development purposes. Private home owners have also taken actions to prevent continued development in one CBRS unit we reviewed. Some portions of the Prudence Island Complex unit in Rhode Island are located in private home owners' backyards. Home

¹¹According to Massachusetts state officials, the Wetlands Protection Act regulations established a "no net loss of wetlands" policy for all coastal areas and barrier beaches. Under the Massachusetts Coastal Wetlands Restriction Act, the Massachusetts Commissioner of Environmental Protection can regulate and prohibit dredging, filling, or otherwise altering coastal wetlands.

¹²In 1980, Massachusetts Governor Edward J. King issued Executive Order No. 181 preventing the use of state funds and grants for construction projects to encourage growth and development in hazard prone barrier beaches. See also Me. Rev. Stat. Ann. tit. 38, §§ 1901-1905.

owners have voluntarily placed their land into a conservation easement to formally protect it from future development.

A Small Percentage of Although the majority of CBRS units remain undeveloped, 16 percent have experienced some level of development. While the range of development Units Have Experienced varies between one additional structure for some units to over 400 new Some Level of structures for another unit, the amount of development in most of the Development, but units has been small. Thirteen percent of the units have added less than 20 Significant Development structures. Where there has been significant development, it has been Has Been Concentrated in concentrated in a relatively small number of units. We estimate that only 3 a Few Units percent of CBRS units have experienced the addition of 100 or more new structures since their inclusion in the CBRS. The majority of the CBRS units within our sample that have experienced development are located in the southern United States. Two units experiencing the most extensive development were the Topsail, North Carolina unit and the Cape San Blas, Florida unit. Several other units in the south, such as the Four Mile Village unit in Florida and Bird Key Complex in South Carolina, have plans for continued development. None of the units in our sample located in the northern United States had experienced such extensive development. One factor contributing to increased development in the south is the greater amount of developable acres; 80 percent of the developable land in the CBRS is located in southern units-those located south of New Jersey. Local officials cited several factors as being primarily responsible for the development that has occurred.¹³ Commercial Interest and Public Desire to Build in the Unit. Officials told us that development had occurred in several areas because the public's desire to develop in the unit was stronger than the disincentive of CBRA. For example, the Currituck Banks unit in North Carolina has experienced an increase of at least 400 new residential homes since its inclusion in the CBRS. Although this unit only has beach access for fourwheel drive vehicles, approximately 75 percent of the land south of the unit is currently built to capacity, and the increasing demand for

¹³To determine the reasons development occurred, we interviewed local officials in a number of developed units in our sample as well as officials for the Cape San Blas unit in Florida and the Topsail unit in North Carolina.

residential structures is sending developers into the adjoining CBRS unit. Local officials stated that the lack of federal assistance did not appear to have any affect on the rate of development in the area. Similarly, the Cape San Blas unit in Florida has continued to experience increased development with at least 900 new structures—primarily single family vacation homes—being built since the unit's inclusion in the CBRS. Officials in Cape San Blas believe that as other coastal locations around Florida became too expensive to find affordably priced ocean front homes, the area of Cape San Blas became a highly desirable location. Accounting for the significant development that has occurred in the Topsail unit in North Carolina, officials stated that the basic reason was simply supply and demand: people want to live on the coast of North Carolina, and the area that includes the CBRS unit had developable land available.

Local Government Support for Development. Local officials explained that local governments with a pro-development attitude aided in increasing development in CBRS units. For example, local officials in Topsail, North Carolina told us that most of the 1,600 structures located in the Topsail CBRS unit were constructed after the unit's inclusion in the CBRS.¹⁴ These officials indicated that the county government had begun development plans for land within the unit prior to its inclusion in CBRS. These officials noted that the county had targeted the area for development to promote tourism and increase the local tax base, and that certain infrastructure was built to support this increased development. As the result of these prodevelopment policies, a large portion of the unit has been developed with residential homes—many of which serve as vacation rentals during the summer months. Similarly, in the Cape San Blas unit in Florida the local government had development plans for the area prior to the adoption of CBRA. Local officials there said that the area was already subdivided into lots for development and that some existing infrastructure, such as roads, water systems, and telephone systems, was already built when the unit was added to the CBRS.

Availability of Affordable Private Flood Insurance. Officials familiar with several CBRS units told us that initially restrictions on the availability of federal flood insurance had little impact on the development that occurred in some CBRS units. Lenders did not require flood insurance in order for

¹⁴The date structures were built in the Topsail unit was not readily available when we conducted this analysis, so we could not determine the exact number of structures built since the unit's inclusion in the CBRS.

home owners to obtain mortgage loans at the time most of the development occurred. According to these officials, home owners within CBRS units that chose to get flood insurance could readily get private flood insurance at rates comparable with federal flood insurance. However, in the past few years FEMA has updated its flood-zone maps and has designated some CBRS areas as special flood hazard areas. This change in designation has made areas that once did not require owners to obtain flood insurance in order to receive financing into areas where owners are now required to have flood insurance prior to obtaining mortgage loans. At the same time, officials said that in several CBRS units the cost of private insurance has skyrocketed and is no longer comparable to national flood insurance program rates. According to a local banker in Cape San Blas, a \$250,000 home outside the CBRS unit can obtain flood insurance through the National Flood Insurance Program for \$470 per year, but private flood insurance for homes located in the CBRS unit that are not eligible for national flood insurance could cost between \$5,070 and \$12,500 a year, depending on the insurance company.

The new requirements mandating flood insurance for mortgages in some units and the increased costs of private flood insurance may begin to impact development in the CBRS in the future, according to local officials. For example, officials in Currituck County noted that the flood zone determination change had significantly reduced the number of building permits issued for new development in the CBRS unit since 2005 and suggested that the unit will now experience less future development. Likewise, the Cape San Blas unit in Florida has also been affected by the flood zone determination change. A local official stated that since FEMA adopted a special flood hazard area for the CBRS unit in 2002, property values in the unit have decreased by 30 percent. Because the cost of private flood insurance has risen dramatically in the last couple of years, a number of residents and officials representing areas within the CBRS, including Cape San Blas and Topsail, have unsuccessfully attempted to remove the areas from the CBRS, primarily so that residents would be eligible to obtain flood insurance through the National Flood Insurance Program.

Our review of CBRS units did not include OPAs because FWS officials informed us that these areas were classified separately from system units and that the land was already protected from development by other mechanisms—such as its designation as a state or federal park. OPAs are not under the same limitations as CBRS units; the only restriction placed on federal spending within these areas is the prohibition on federal flood insurance. However, we found instances where land within OPAs was sold

	to private developers and development had increased in the area. For example, in the St. Andrews Complex unit in Florida, the Bahia de Tallaboa unit in Puerto Rico, and the Mustang Island unit in Texas, development has continued despite the units' designation as an OPA.
The Extent to Which Federal Agencies Have Provided Financial Assistance and Permits to Entities in CBRS Units Varies	We found that federal agencies have provided some financial assistance prohibited by CBRA, some assistance allowed by CBRA, and hundreds of permits for federally regulated construction projects to entities within the CBRS units included in our review. Four agencies provided financial assistance expressly prohibited by CBRA to property owners in CBRS units. Three federal agencies also provided financial assistance to entities in CBRS units that is allowed under CBRA, but they do not track the amount of assistance they provided. As a result, we were unable to determine the total extent of such assistance. Finally, the Corps and EPA- authorized state agencies have issued hundreds of permits for a variety of federally regulated construction projects within CBRS units.
Four Federal Agencies Have Provided Some Financial Assistance That Is Prohibited by CBRA	Four federal agencies—FEMA, HUD, SBA, and VA—provided some financial assistance that is expressly prohibited by CBRA to property owners in CBRS units. Our review of approximately 4,500 addresses uncovered 73 active FEMA flood insurance policies, 37 inappropriate FEMA disaster assistance payments, 5 HUD home loan guarantees, 3 SBA disaster loans, and 11 VA home loan guarantees that should not have been made to property owners in CBRS units. Although three of the four agencies have procedures to prevent and detect assistance to property owners in CBRS units, agency officials cited several reasons why this erroneous assistance was provided in violation of CBRA, including the lack of updated CBRS maps, which makes determining the precise locations of properties and CBRS unit boundaries difficult.
FEMA National Flood Insurance Program	FEMA provides federally backed flood insurance for home owners, renters, and business owners in participating communities that are not in the CBRS. Structures that are built or substantially improved following their inclusion within the CBRS are not eligible for federal flood insurance. However, our review of policies active as of May 2006 identified 73 National Flood Insurance Program (NFIP) policies for properties in CBRS units. The flood insurance policies ranged from \$26,500 to \$350,000 and totaled approximately \$20 million. Although these policies violated the CBRA, FEMA officials said it is unlikely that the agency would actually pay a claim on these policies, because before paying a claim, FEMA adjusters would first conduct a physical inspection of the property and determine

whether it was in a CBRS unit. If a property was found to be within the CBRS, FEMA would deny the claim and refund the policy owner's insurance premium.

To prevent flood insurance policies from being issued for properties in CBRS units, FEMA's Flood Insurance Manual requires that private insurance companies participating in the NFIP determine if a property is eligible for flood insurance. Prior to issuing a policy, the agent is required to review FEMA's flood insurance maps to determine if the property is located within the CBRS and collect information to determine if the structure was built prior to the unit's inclusion in the CBRS. However, according to FEMA, insurance agents have made mistakes and issued policies in violation of CBRA for two reasons:

- It may be difficult to locate a property and determine whether it is in a CBRS unit, especially when a property is near or adjacent to a CBRS boundary. For example, at one location we visited, we identified homes adjacent to each other where one property was in the CBRS and the other was not. In other CBRS units, some homes had backyards that fell within the CBRS. Furthermore, new streets may not be depicted on existing maps. According to FEMA officials, the insurance agent must often make a judgment call when determining whether a property is within the CBRS.
- The agent may not be familiar with CBRA prohibitions and may not follow procedures. According to FEMA officials and officials from a private insurance agency with whom we spoke, some home owners obtain flood insurance from insurance agents located inland, away from coastal areas, who might not have been aware of the CBRA restrictions.

According to FEMA officials, the agency takes a number of steps to identify properties that may have inappropriately received federal flood insurance. Since 1998, FEMA has sought to assist private companies with identifying flood insurance policies that potentially were ineligible for flood insurance coverage because the property was within the CBRS. To accomplish this task, FEMA uses computer mapping technology to plot addresses and determine whether they are potentially in a CBRS unit.¹⁵ However, the computer software FEMA relies on cannot always correctly

¹⁵According to FEMA officials, FEMA does this plotting for all properties in a community where a CBRS unit is located. Every month FEMA plots addresses of new policies or policies that have changed. All addresses in a community with a CBRS unit are reviewed at least once a year.

locate all addresses on the map. For example, this can occur if a street or address range is not included in the software, which can happen when a street or a range of addresses is new. Twenty of the 73 flood insurance policies that we determined were issued for a property that was in a CBRS unit could not be located on a map by FEMA's computer software. In addition, computer mapping technology has inherent inaccuracies and may plot properties in the wrong location. For example, using our mapping software, we determined another 20 of the 73 flood insurance policies were for a property in the CBRS but were not identified as being in a CBRS unit by FEMA's mapping software.¹⁶ FEMA officials said they recognize that their software may not always identify new addresses and streets in CBRS units, and so the agency obtains quarterly updates of new streets and addresses and rechecks insured properties against the updated information to identify any that might be located in CBRS units.

When FEMA's computer plotting reveals that a property for which a federal flood insurance policy has been issued may be in a CBRS unit, FEMA reports the error to the insurance company. Once an insurance company receives notification in the form of an error message that they may have written an ineligible policy, the company may take one of four actions:

- 1. The company can agree that the property is located in a CBRS unit and cancel the policy back to the inception date of coverage.
- 2. The company may agree that the property is located in a CBRS unit but prove that the building was constructed prior to the CBRS designation. In these cases, the policy is deemed valid and may remain in effect.
- 3. The company can disagree that the property is located in a CBRS unit and assume responsibility for the risk. In these cases, the policy would remain active, FEMA would continue to collect the premiums, but the insurance company would be responsible for paying any claims filed. Insurance companies have assumed liability for the risks associated with 29 of the 73 flood insurance policies that we identified had been issued for properties located in CBRS units.

¹⁶FEMA uses MapInfo software with MapMarker to plot locations. This software is updated more frequently than the software that we use. In these 20 instances, our software located properties within the CBRS boundary, but FEMA's software did not. However, we physically verified that 14 of these 20 properties appeared to be within CBRS boundaries during a site visit to the unit. We did not visit the locations where the remaining 6 properties were located.

4. The company can request that FWS make an official determination regarding whether the property is in the CBRS. If FWS determines that the property is in a CBRS unit, the policy is then cancelled back to the inception date of coverage. However, FEMA officials expressed concern about the length of time FWS takes to make a property determination. Typically, it takes FWS a year to respond to inquiries for a property determination. As of January 17, 2007, FEMA was waiting for determinations on 544 addresses from FWS.

According to FWS officials, the process for making property determinations is labor intensive because they are using CBRS maps that were created more than 15 years ago and are not available in digital format. FWS officials told us that modernized digital maps of the CBRS would improve the accuracy and efficiency of the property determination process, allowing its customers and partners, in many cases, to determine within minutes whether a property is located within the CBRS. In 2000, the Congress directed the Secretary of the Interior to create draft digital maps for at least 50 and not more than 75 units, or nearly 10 percent of the CBRS.¹⁷ FWS has created draft digital maps of 60 CBRS units that it must submit to the Congress for its consideration.¹⁸ In May 2006, the Congress also instructed the Secretary of the Interior to create maps for the rest of the CBRS by May 2013.¹⁹ According to FWS, digital maps would replace the paper maps currently being used that are (1) outdated technologically and (2) sometimes inaccurate and may not align precisely with the natural or man-made features that the Congress intended the boundaries to follow. FWS officials believe that modernizing the CBRS maps will address the inaccuracies of the existing maps.

To implement the map modernization project, FWS officials said that they investigated several options for procuring data to produce the required draft digital maps, including federal, state, local, and private sources. In many cases, FWS was able to obtain data internally or from other federal

¹⁷The Coastal Barrier Resources Reauthorization Act of 2000, Pub. L. No. 106-514, §6, 114 Stat. 2394, 2396, required FWS to prepare draft digital maps for a portion of the CBRS.

¹⁸The Coastal Barrier Resources Act of 2005 directs the Secretary of the Interior to finalize the pilot project maps by conducting a public review of the draft maps, making adjustments as necessary, and presenting final recommended maps to the Congress its consideration. At that point, the Congress could adopt the pilot project maps as the official CBRS maps through legislation.

¹⁹The Coastal Barrier Resources Reauthorization Act of 2005, Pub. L. No. 109-226 § 4, 120 Stat. 381, 382 (2006).

agencies at little or no cost, including wetlands data and national wildlife refuge boundaries from within FWS, aerial imagery from the U.S. Geological Survey, hydric soils data from the Department of Agriculture's Natural Resources Conservation Service, and digital boundaries for many federally protected areas from NOAA.

FEMA is also conducting a map modernization effort that includes preparing digital flood insurance maps. In 2006, FWS entered into an interagency agreement with FEMA whereby FWS will place current CBRS boundaries onto FEMA's digital flood maps. FEMA provided FWS with \$40,000 for an initial set of maps for some units. While the FEMA maps are not the "official" CBRS maps adopted by the Congress, FWS officials said that these digital maps will allow property owners, insurance agents, and others to have a much more accurate and precise tool for determining whether a property or project site is located near a CBRS area and would require an official determination from FWS.

FEMA's Individuals and Households Program (IHP)²⁰ provides housing assistance and other assistance, such as medical or funeral assistance, for needs arising from a declared emergency or major disaster. For owners or renters residing in CBRS units, FEMA regulations allow providing temporary housing assistance (rent) but generally do not allow providing funds for housing repairs or construction assistance. However, we found that since August 26, 1998, FEMA provided 37 disaster assistance payments to individuals in CBRS units included in our review totaling \$25,393. Most of the payments were for purposes labeled by FEMA as "Other Eligible Property Items." According to FEMA officials, "Other Eligible Property Items were for post-disaster purchases for emergency needs such as chainsaws, generators, heating fuel, dehumidifiers, air purifiers, and wet/dry vacuums.²¹ These payments were made under six different disaster declarations, all to individuals living in

FEMA Individuals and Households Program

²⁰Our study also includes data from disasters that predate IHP, from its predecessor program called "Disaster Housing/Individual and Family Grant Program."

²¹CBRA exempts from its general prohibition assistance for emergency actions essential to saving lives and the protection of property and the public health, as performed under particular sections of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended. 16 U.S.C. \$ 3505(a)(6)(E). In its regulations, FEMA describes these actions to include, among other things, removing debris and repairing primary residences to make them habitable. However, for the expenditures described above as "Other Eligible Property Items," such as chainsaws and generators, FEMA officials said those payments were prohibited.

CBRS units in North Carolina and Florida. The units included Coconut Point, Cape San Blas, Blue Hole, Ponce Inlet, and Ormond-by-the-Sea in Florida, and Currituck Banks and Topsail in North Carolina. In addition to payments for "Other Eligible Property Items," one payment of \$645.95 was made for home repairs. FEMA procedures require officials making payment determinations in potential CBRS areas to document that the property is not in a CBRS unit prior to approving assistance for those types of assistance not allowed in such areas. However, according to a FEMA official, in these cases the procedures were not followed when these payments were approved.²²

Through its Mortgage Insurance Homes program, HUD insures lenders against losses on mortgage loans used to finance the purchase of proposed, under construction, or existing housing, as well as to refinance indebtedness on existing housing as long as these properties are not located in the CBRS. In our review of insured home loans active as of June 2006, we identified five HUD-insured loans for properties located in CBRS units. Three of the loans were for properties in the Prudence Island Complex unit in Rhode Island; one in the Topsail unit in North Carolina; and one in the Cape San Blas unit in Florida. These insured loans were approved by HUD between 1985 and 2000, with loan amounts ranging from approximately \$50,000 to \$137,000, for a total of about \$384,000.

> Despite the fact that all of HUD's programs are subject to CBRA restrictions, HUD officials said that they have no procedure under their single family (one- to four-family property) mortgage insurance programs related to CBRA. HUD officials further indicated that while they could implement better controls for restrictions on providing single family mortgage insurance in the CBRS, it would be unnecessary in practical terms. HUD officials provided three primary reasons why it was unlikely that a HUD-insured loan would be provided for a property in a coastal area. First, HUD regulations require that flood insurance be obtained under the NFIP before HUD will insure single family mortgages for properties in FEMA-identified special flood hazard areas. HUD officials stated that because properties located in the CBRS would likely be in special flood hazard areas and the NFIP flood insurance is prohibited in

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Department of Housing and **Urban** Development

²²We issued a report on the challenges that the IHP program experienced during Hurricanes Katrina and Rita and recommended that FEMA address the potential for fraud and abuse identified in the program. GAO, Hurricanes Katrina and Rita: Unprecedented Challenges Exposed the Individuals and Households Program to Fraud and Abuse; Actions Needed to Reduce Such Problems in Future, GAO-06-1013 (Washington, D.C.: Sept. 27, 2006).

	the CBRS, HUD would not be able to insure single family mortgages for these properties. However, HUD's explanation does not account for the fact that portions of CBRS units may not be in a special flood hazard area and that FEMA prohibitions are not universal as the NFIP flood insurance may be available to homes built before the area's inclusion in the CBRS. Second, most HUD insurance for single family mortgages is for first-time home owners who typically are not buying homes in the higher priced ranges found in the CBRS. Third, property values in the CBRS are such that mortgage amounts would likely exceed the program limits for typical HUD-insured single family mortgages, as the mortgage limit for a one family property ranges from approximately \$170,000 to \$310,000, depending on the location. In response to our findings, HUD officials said that the department would be developing CBRA policy guidance and associated training to ensure future compliance.
Small Business Administration	Following the issuance of a disaster declaration, SBA provides disaster loans to eligible home owners for repair or replacement of their primary residences. However, residences located in CBRS units are ineligible for this disaster loan assistance. During our review of the period January 1, 1990, through May 30, 2006, we found that SBA had made three disaster loans for home repairs for properties in CBRS units. ²³ The three loans ranged from \$5,000 to \$10,000 and totaled \$24,200. These loans have been paid in full and were made to individuals in the Florida CBRS units of Blue Hole and Cape San Blas, and the Creek Beach unit in New York. To prevent disaster loans from being provided to properties within the CBRS, SBA procedures call for agency staff to consult FEMA's flood maps to determine whether a property is within a CBRS unit before approving disaster loans. SBA officials acknowledge that two of these loans should not have been approved, but did not agree that the third loan was for a property within CBRS. These officials stated that it is sometimes difficult for agency staff to determine if a property is within the CBRS with the existing FEMA flood maps. SBA officials said that as a result of our review the agency will increase the number of quality assurance reviews conducted in any disaster area that includes a CBRS unit.
Department of Veterans Affairs	VA issues home loan guarantees to help eligible recipients obtain homes or refinance home loans except in CBRS units. However, our review of home loan guarantees active as of September 2006 found that VA had provided

 $^{^{23}\}text{SBA}$ approved seven loans in CBRS units, however, individuals did not initiate four of these loans and they were cancelled.

	11 loan guarantees for homes in a CBRS unit. Nine of these 11 loan guarantees were issued to home owners in the Topsail unit in North Carolina, while the other two were provided to home owners in the Ormond-by-the-Sea unit in Florida. The amount of the 11 loan guarantees ranged from a low of about \$14,340 to a high of about \$45,900 for a total value of \$352,188.
	VA officials told us that the agency's Lenders Handbook includes provisions that inform readers that properties in CBRS units are ineligible as security for a VA-guaranteed loan. VA appraisers are instructed during training sessions to reject assignments appraising such properties. Also, to verify that loan guarantees are provided lawfully, agency officials said that they or their designees (1) examine appraisal paperwork for all loan applications looking for anomalies; (2) inspect 10 percent of all loan applicant properties to verify, among other things, that they are not in CBRS units; (3) review paperwork for 10 percent of all closed loans; and (4) visit lender offices and sample VA loans for compliance. In reviewing the provisions included in VA's handbook, we determined that it inaccurately instructs appraisers to obtain the maps for determining the location of a property from the U.S. Geological Survey rather than from FWS.
	VA officials acknowledge that agency staff should have identified the 11 properties we discovered as located within the CBRS during their initial review of the appraisal paperwork. VA officials explained that as a result of our findings, they have (1) corrected the Lenders Handbook provisions to instruct staff to use maps maintained by FWS and (2) instructed officials at VA regional loan centers to modify their training to both lenders and appraisers to emphasize the procedures designed to prevent issuing loans to persons who reside in CBRS units.
Federal Agencies Have Provided Assistance That Is Allowable under CBRA, but the Extent of Such Assistance Is Unknown	We found that three federal agencies had provided financial assistance allowable under CBRA to entities within the CBRS. We were unable to determine the total extent of such assistance, because these federal agencies do not track the amount of allowable financial assistance they provide to entities in CBRS units, and they could not provide us with the data necessary to estimate the total assistance provided.
Federal Emergency Management Agency	After a disaster, FEMA may provide disaster funding in CBRS units for emergency assistance such as debris removal and emergency protection measures. FEMA may also provide disaster funding following an emergency for activities like repairing roads or utilities, repairing existing

water channels, or disposing of sand. Because FEMA could not provide reliable data on whether this disaster assistance was within a CBRS unit for each project, we could not determine the full extent of the allowable disaster assistance provided by FEMA. However, with FEMA's data, we were able to identify that some of the projects were within CBRS units. For example, since 1998, FEMA provided at least \$5.6 million in disaster assistance to the Topsail unit in North Carolina to fund projects to remove debris, replace signs, and repair beach access crosswalks and public beach facilities after Hurricanes Ophelia, Floyd, Irene, and Isabel. Similarly, in both the Cape San Blas, Florida and Topsail, North Carolina CBRS units, FEMA provided funds to construct an emergency berm in order to protect existing development after storms destroyed protective dunes and caused beach erosion. Table 1 provides examples of some of the disaster assistance FEMA has provided to CBRS units since 1998.

Storm and year	Unit	Project description	Total obligated
Floyd and Irene, 1999	Topsail Beach, North Carolina	Replace traffic control signage	\$13,979
Floyd and Irene, 1999	Topsail Beach, North Carolina	Debris removal	1,304,417
Charley and Bonnie, 2004	Ormond-by-the Sea, Florida	Restore an electrical substation	11,361
Ivan, 2004	Cape San Blas, Florida	Construct an emergency berm	1,423,766
Frances, 2004	Ponce Inlet, Florida	Restore Turtle Rehabilitation Laboratory at the Marine Science Center	23,666
Dennis, 2005	Dog Island, Florida	Repair damaged road surfaces	37,372
Dennis, 2005	Dog Island, Florida	Debris removal	470,833
Ophelia, 2005	Topsail Beach, North Carolina	Construct emergency berms	\$1,167,146

Table 1: Examples of FEMA Disaster Assistance Since 1998

Source: GAO analysis of FEMA data.

As mentioned earlier, FEMA is also allowed to provide limited disaster assistance to individuals through the IHP after the President declares an emergency or major disaster in an area, including CBRS units. We found that since August 26, 1998, FEMA provided \$8,237 to 16 individuals in CBRS units for emergency rental assistance. These payments were made to individuals in CBRS units in Florida and North Carolina.

Federal Highway Administration	An exception to the limitations within CBRA allows FHWA to administer federal funding for projects on publicly owned or operated roads that are essential links in a larger transportation network and do not expand the existing transportation system. Because, as stated in agency guidance, FHWA determined that all roads within the federal highway system, including those in CBRS units, are usually "essential links" in a larger transportation network, most projects within CBRS units are permissible under CBRA after a consultation process with FWS. Although FHWA does not maintain data on which projects were located within CBRS units, we were able to identify—based on information provided by state officials— some examples of allowable projects in CBRS units that received federal funds from FHWA. For example, according to data from the Florida Department of Transportation, federal funding totaling approximately \$1.1 million was provided to repair a road in the Cape San Blas unit after each of three hurricanes—Opal, Earl, and Ivan.
Corps of Engineers	An exception to the limitations within CBRA allows the Corps to provide assistance in CBRS units after consultation with FWS as part of its mission to maintain and improve existing navigation channels. We found that since 1983, the Corps performed at least 24 such projects in CBRS units, and most were to dredge channels. Many of these projects occurred along the Atlantic Intracoastal Waterway or in channels connecting this waterway to the Atlantic Ocean. Of the 24 projects, two-thirds occurred in CBRS units in South Carolina while the others were located in North Carolina, Florida, and Massachusetts. However, it is difficult to calculate the value of the Corps' assistance to CBRS units because nearly all of the Corps' projects involve activities both inside and outside CBRS units, and the Corps does not breakout project costs based on CBRS boundaries.
EPA-Authorized State	EPA-authorized state agencies and the Corps have issued permits to property owners and entities within CBRS units for a number of different

Agencies and the Corps Have Issued Permits for Federally Regulated Construction Projects in CBRS Units EPA-authorized state agencies and the Corps have issued permits to property owners and entities within CBRS units for a number of different projects.²⁴ Since 1983, EPA-authorized state agencies issued at least 41 permits to property owners and entities in nine different CBRS units. All of the permits were associated with the National Pollutant Discharge Elimination System (NPDES), primarily to allow storm water discharges from construction sites or for discharges from water or wastewater treatment systems. Florida, as an EPA-authorized permitting state, issued

²⁴In most cases, permits to regulate point sources that discharge pollutants into waters of the United States are issued by EPA-authorized states rather than by EPA itself.

38 of the 41 permits. Of the remaining three permits, two were issued by New York and one by the U.S. Virgin Islands, both of which are authorized by EPA to issue NPDES permits.

The Corps was unable to provide a complete list of all the permits it had issued since CBRA was enacted. However, we have determined that since 1983, the Corps issued at least 194 permits in 20 different CBRS units for purposes such as erosion control, constructing piers and mosquito control ditches, filling wetlands, and raising fish and shellfish. Of these 194 permits:

- Eighty-three were authorized under Section 10 of the Rivers and Harbors Appropriation Act of 1899. The act gives the Corps authority to issue permits to construct piers or marinas in navigable waters.
- Eighty-seven were authorized under Section 404 of the Clean Water Act. Section 404 provides the Corps with the authority to issue or deny permits for discharges of dredged or fill material into waters under federal jurisdiction, including wetlands.
- Twenty-four involved activities covered by both Section 10 of the Rivers and Harbors Appropriation Act and Section 404 of the Clean Water Act. Almost two-thirds of these permits were issued to property owners and entities in CBRS units in Florida; the remaining permits were issued to entities in units in the Carolinas and New England.

Conclusions

Although CBRA has limited the amount of federal financial assistance provided to some CBRS units, it does not appear to have been a major factor in discouraging development in those CBRS units that have developable land, local government and public support for development, and access to affordable private flood insurance. Despite CBRA's prohibitions on federal assistance to units in the CBRS, four federal agencies—FEMA, HUD, SBA, and VA—have provided such assistance. While the amount of assistance provided in violation of CBRA is not large, it does raise concerns about the ability of federal agencies to fully comply with the requirements of the act. Unless federal agencies follow the procedures they have established to prevent the provision of prohibited assistance and have access to up-to-date and reliable maps to ensure that accurate determinations are made for properties located in CBRS units, it is likely that some violations of CBRA may continue to occur.

Recommendations for Executive Action	In light of the federal financial assistance that was provided in violation of CBRA, we are recommending that the Secretaries of DHS, HUD, and VA, and the Administrator of SBA direct their agencies to (1) obtain official determinations from the FWS on whether the properties we identified as receiving federal assistance in violation of CBRA are in fact located within a CBRS unit and if they are, cancel all inappropriate loan guarantees and insurance policies that have been made to the owners of these properties and (2) examine their policies and procedures to ensure that they are adequate to prevent federal assistance that is prohibited by CBRA from being provided to entities in CBRS units.
Agency Comments and Our Evaluation	We provided a draft of this report to the Department of Defense, DHS, DOI, HUD, SBA, and VA. We received comments via e-mail from the Department of Defense, DHS, and SBA, and we received written comments from the DOI, HUD, and VA. The Department of Defense and the SBA stated that they had no comments on the draft report, and DHS provided only technical comments and stated that it concurred with the report's recommendations. In its written comments, DOI stated that it supports efforts to improve CBRS property determinations and ensure compliance with CBRA. DOI also indicated that it will consider our recommendation concerning prioritization of the completion of digital maps as it develops future budget requests. In its written comments, HUD stated that the loan guarantees in question have already been terminated. HUD also noted that it is now developing policy guidance and associated training to ensure that no future violations of CBRA occur. In its written comments, VA stated that it agreed with our findings and one of our recommendations but did not agree with our recommendation to cancel the inappropriate loan guarantees that it had made in violation of CBRA. VA stated that it did not believe that the small number of loan guarantees that we found indicated a pattern of abuse of CBRA and that canceling these guarantees would inflict a disproportionate harm on lenders and veterans who were not
	responsible for the erroneous property determinations that the loan guarantees were based on. While we understand VA's concerns for the adverse impacts that could affect the parties involved, we believe that because these loan guarantees violate CBRA they should be rescinded.

We have also incorporated the technical comments provided by DHS and DOI, as appropriate, throughout this report. HUD's written comments are presented in appendix V, DOI's written comments are presented in appendix VI, and VA's written comments are presented in appendix VII.

We are sending copies of this report to interested congressional committees as well as the Administrator, Small Business Administration; the Commander, U.S. Army Corps of Engineers; and the Secretaries of the Army, Defense, Homeland Security; Housing and Urban Development, Interior, and Veterans Affairs. We also will make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you have any questions about this report, please contact me at (202) 512-3841 or mittala@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix V.

Sincerely yours,

Ann K. Mettal

Anu K. Mittal Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

	We were asked to address issues related to the Coastal Barrier Resources Act, as amended, (CBRA) by reviewing development that has occurred and federal funding that has been provided within the John H. Chafee Coastal Barrier Resources System (CBRS). Specifically, we were asked to determine (1) the extent of development within the CBRS and (2) the extent of federal assistance provided to CBRS units.
Determining the Extent of Development in CBRS Units	To determine the extent of development in the system, we determined the number of structures within each unit. We accomplished the task by electronically mapping addresses with MapInfo and layering electronic boundaries of CBRS units from the Federal Emergency Management Agency's (FEMA) Q3 Digital Flood Insurance Rate Map data product with the mapped addresses. FEMA's Q3 data provides the external boundaries for CBRS units, though it is not an exact replica of the boundaries. Our results are representative of the extent of development within the CBRS. We focused our review on a stratified random sample of 91 units drawn from the 584 total units in the system, excluding otherwise protected areas. ¹ The sample was drawn so that the results from the sample would have a precision margin of about plus or minus 10 percentage points at the 95 percent confidence interval. We were able to collect and analyze data for 84 of the 91 CBRS units, representing a weighted response rate of 92 percent. ² Of the 84 units, 42 units are located in the north and 42 units are located in the south. Northern units include those located in Connecticut, Maine, Massachusetts, Michigan, New Jersey, New York, and Rhode Island. Southern units are those located in Alabama, Florida, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Virginia, Texas, Puerto Rico, and the Virgin Islands. As a result of the high response rate, we reweighted the sample to represent the entire population of units.
	¹ According to the Fish and Wildlife Service (FWS), there are 585 units in the system. However, FWS considers the Waites Island Complex to be two units because portions of the units are in North Carolina and South Carolina. We counted this as one unit for our analysis. We excluded OPAs from our review based on discussions with FWS officials. According to the officials, they did not believe that OPAs were subject to the same level of development as full system units since they were often protected from development by other mechanisms.

 $^{^{2}}$ We were unable to obtain data for seven units within the sample because the local governments were unable to provide address data or year built for the structures in these areas.

Because we followed a probability procedure based on random selections, our sample is only one of a large number of samples that we might have drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval. This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn. As a result, we are 95 percent confident that each of the confidence intervals in this report will include the true values in the study population. All percentage estimates from the sample have margins of error of plus or minus 10 percentages points or less.

To identify the number of structures within the CBRS units in our sample, we obtained address or parcel data from local government offices including tax assessor's offices and on-line databases, geographic information system departments, and information technology departments. The exact dates for the parcel and address datasets vary by location—however, we requested the most recent available data. We also collected year-built data, value, and type of structure when available. After determining whether the structure was within the CBRS unit, we reviewed the year-built data to determine how many structures were built since the unit's inclusion in the CBRS. We did not independently assess the reliability of each address dataset provided by the local governments. However, for a number of address datasets we assessed the reliability of the data through interviews with knowledgeable local officials and verification of the addresses in the dataset by visual inspection during site visits.

The electronic mapping was performed using roads and highways data provided by MapInfo's 2002 StreetSmart program. As a result, our analysis would not be able to map structures located on a street not included in the 2003 roads and highways dataset. Once the addresses were mapped, they were layered in MapInfo with FEMA's Q3 data. On the basis of conversations with FEMA and FWS officials, we believe these data are sufficiently reliable for the purposes of this study. Since the FEMA Q3 data CBRS boundaries may not be precise, the results of our analysis could incorrectly reflect whether a structure is within a CBRS unit. As with any electronic mapping technology, accuracy issues are inherent and may impact reliability of the results.

We conducted site visits to 18 CBRS units in Florida, Massachusetts, North Carolina, Rhode Island, and South Carolina. During the site visits, we observed the CBRS units and interviewed local, state, and federal officials, home owners, realtors, insurance agents, and environmental officials to

	discuss the extent of development and factors encouraging or discouraging development in the units.
	In addition to the site visits, we conducted telephone interviews with local, state, or federal officials in Louisiana, Massachusetts, Maryland, Michigan, Rhode Island, Texas, Virginia, and Puerto Rico. Using the data collected during the site visits and the telephone interviews, we were able to determine reasons why development has or has not occurred in those units.
Determining the Extent of Federal Assistance Provided to CBRS Units	To determine the extent of federal assistance provided to CBRS units, we identified eight agencies with programs that may have provided assistance to these areas. Appendix IV includes a complete list of these programs. We reviewed and analyzed federal legislation and regulations that are applicable to federal assistance to CBRS units, including the CBRA. For each of the programs that provide assistance that is prohibited in a CBRS unit, we interviewed officials regarding their agency procedures for preventing assistance to CBRS units. In instances where we identified violations, we collected additional information about the assistance provided and interviewed agency officials regarding the agency's plans to prevent prohibited assistance from being provided in the future. We compiled a list of 4,472 addresses in 37 CBRS units that had at least one address. (See app. II for a list of CBRS units in our review.) As the section above details, we obtained address data from local county government sources and electronically mapped addresses within the boundaries of CBRS units. Next, we obtained data from each agency on program assistance provided and determine whether this assistance was provided within one of the CBRS units or to an address in a CBRS unit. We asked agency officials to provide latitude and longitude data for every project that occurred or permit that was issued in any of the counties that contained at least one of the 37 CBRS units. Then we electronically mapped the coordinates to determine if the activity occurred within the boundaries of a CBRS unit. Corps officials, however, were unable to provide latitude and longitude data for a large percentage of the permits issued.
	For each agency program, we assessed the accuracy and reliability of the data system by obtaining from the agency written responses regarding (1) the agency's methods of data collection and quality control reviews, (2) practices and controls over accuracy of data entry, and (3) any limitations of the data. We determined that the agencies' data were sufficiently reliable for the purposes of our review unless noted below. The details of our analysis for each agency program are provided below.
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FEMA National Flood Insurance Program	To identify flood insurance policies in CBRS units, we obtained data from FEMA's National Flood Insurance Program for all policies as of May 8, 2006. As mentioned above, we compiled a list of 4,472 addresses in 37 CBRS units. Because structures built prior to a CBRS unit's inclusion in the system may still obtain flood insurance, we had to determine whether each structure was built prior to the unit's inclusion in the CBRS. Of the 4,472 addresses, we were able to determine that 648 structures were built prior to the unit's inclusion in the CBRS, and we deleted these addresses from our analysis. We reviewed the addresses of all the structures built after the unit's inclusion in the CBRS and addresses where we could not determine the year built in our flood insurance analysis. Thus, we reviewed 3,824 addresses in 21 units to determine if the structure had federal flood insurance. Structures that were built prior to the CBRS unit's inclusion in the system cannot obtain federal flood insurance if the property has been substantially improved. We did not collect data on whether properties had been improved. If we identified a flood insurance policy among the addresses where we were unable to determine the year built, we reviewed the year-built data in FEMA's data arevealed that the structure was built prior to the unit's inclusion in CBRA, we eliminated the match from our review.
FEMA IHP Program	We provided FEMA our list of addresses located in 37 CBRS units. FEMA compared our list of addresses with addresses for which Individuals and Households Program (IHP) payments had been provided from its National Emergency Management Information System. FEMA reviewed payments from the system from August 26, 1998, to August 2, 2006.
SBA	The Small Business Administration (SBA) provided loan data for business and disaster loans in all states with CBRS units from its Loan Accounting System. SBA provided us records for loans approved January 1, 1990, through May 30, 2006. While we did not find any matches for business loans, SBA officials told us that the address in the database could be a mailing address and not the physical address of the business. For SBA disaster loans, the SBA officials said that the address in the database is the location where the assistance was provided.

HUD Housing Programs	We obtained data for 13 of the Department of Housing and Urban Development's (HUD) single family and multifamily housing programs. (See app. IV for a list of the programs reviewed.) HUD provided data from its Real Estate Management System and Single Family Housing Enterprise Data Warehouse database for loans as of June 2006.
VA Home Loan Guaranty Program	The Department of Veterans Affairs (VA) provided loan guarantee data from its Home Loan Guaranty database. VA provided us records for active loan guarantees as of October 2006.
USDA Business and Industry, Community Facilities, and Housing Programs	We obtained data for 22 of the U.S. Department of Agriculture's (USDA) business and industry, community facilities and single family and multifamily housing programs. USDA provided this information from its Automated Multi-Family Housing Accounting System, Guaranteed Loan System, MortgageServ Loan Servicing System databases, and Multi-Family Information System. The information was as of July 2006.
USDA Utility Programs	For USDA's utility programs, we used a different methodology because the projects are not associated with one structure as with a flood insurance policy or a housing loan. For USDA's electric programs, USDA officials reviewed the construction work plans and the environmental reports for recent loans to electric service providers who provide service to selected counties in Florida, North Carolina, and Virginia that include one or more of the CBRS units included in our review. USDA officials determined that it does not appear that they have financed projects serving a CBRS unit.
	For USDA's water and waste programs, we requested the environmental assessment forms statements for the projects in the counties that included a CBRS unit we identified as having 100 or more structures. We then reviewed these records to determine if they indicated that USDA officials had considered whether the projects would impact a CBRS unit when reviewing them.
FEMA Public Assistance Grant Program	FEMA provided data from its National Emergency Management Information System on disaster assistance provided to counties and territories in our review, including data for the U.S. Virgin Islands and Puerto Rico. The data were from November 1998 through July 2006. We reviewed assistance designated by FEMA as being within a CBRS unit. However, we determined that this designation was not sufficiently reliable to identify all projects within the CBRS. We could not determine the full extent of assistance provided to CBRS units because the CBRS designation in the data was not always reliable. In addition, some assistance was provided countywide, and we could not determine if this

	assistance was provided to the unit. As a result, we provide examples of disaster assistance in our report. Where data were available, we electronically mapped the location of the assistance to verify it was within a CBRS unit.
Federal Highway Administration	We obtained data for projects receiving federal aid that received federal funds between January 1996 and July 2006 in counties with a CBRS unit that we identified as having 10 or more structures. Federal Highway Administration (FHWA) officials extracted the data for these projects from the Financial Management Information System—a database that tracks projects that receive federal funding. To determine whether assistance was provided that is prohibited by law, we identified new construction projects or projects that added capacity to existing roadways. To determine whether these projects were within a CBRS unit, we relied upon interviews and location analysis provided by FHWA officials and Department of Transportation officials from New Jersey, North Carolina, Puerto Rico, Rhode Island, South Carolina, and the Virgin Islands. For projects in New Jersey, state officials provided aerial photographs with the location of federally funded projects. For North Carolina, we met with FHWA officials to review maps displaying the location of federally funded projects. For Puerto Rico, FHWA and Puerto Rico Department of Transportation officials electronically mapped the location of projects. For Florida, we relied upon analysis conducted by an official at the Florida FHWA division office. For Rhode Island, South Carolina, and the U.S. Virgin Islands, Department of Transportation officials or public works department officials provided a paper map marked with the location of the projects.
	Because of the volume of projects that are allowable, we did not determine the number of allowable projects in every CBRS unit. However, we did review the allowable projects in Gulf County, Florida, and Onslow County, North Carolina.

Appendix II: CBRS Units We Reviewed

This appendix provides information on the CBRS units that we reviewed. Table 2 shows the units included within our random sample and the approximate number of new structures in each unit.

Table 2: CBRS Units Included in Random Sample and Approximate Number of New Structures

Unit number	CBRS unit	State	No new structures	1-5 New structures	6-10 New structures	11-15 New structures	100 or More new structures
Q01A	Pelican Island	AL	X	0114014100			
AL-03	Skunk Bayou	AL	X				
E03	Jordan Cove	CT	X				
CT-13	Kelsey Island	CT	X				
CT-01	Mason Island ^a	СТ					
E09	Norwalk Islands	СТ	Х				
FL-34	Biscayne Bay	FL	X				
FL-46	Boot Key	FL	×				
P20	Cayo Costa	FL	×				
P31A	Four Mile Village	FL	~				Х
P05A	Matanzas River	FL				Х	Α
P18	Sanibel Island Complex	FL		Х		~	
FL-99	Tom King	FL	X	Χ			
P10	Vero Beach	FL	~	Х			
S01A	Bay Joe Wise Complex		X	Х			
S05	Timbalier Islands	LA	×				
C19	Black Beach	MA	X				
C11A	Boat Meadow	MA	~	Х			
C15	Centerville	MA	Х	Х			
C00	Clark Pond	MA	~		Х		
C16	Dead Neck	MA		Х	~		
C31	Elizabeth Islands	MA	Х	~			
C10	Freemans Pond	MA	X X				
MA-30	Herring Brook	MA	X X				
C32	Mishaum Point	MA	X X				
MA-24	Naushon Island Complex	MA	X X				
MA-24 MA-16	Nobscusset	MA	X X				
MA-16 MA-33		MA	X X				
	Phinneys Harbor						
C03A	Rexhame	MA	X				
C28	South Beach	MA	X				
C14	Squaw Island	MA	Х				

Unit number	CBRS unit	State	No new structures	1-5 New structures	6-10 New structures	11-15 New structures	100 or More new structures
C24	Tuckernuck Island	MA	Х				
C01C	West Head Beach	MA	Х				
MD-53	Blake Creek	MD	Х				
MD-39	Drum Point	MD	Х				
MD-15	Long Point	MD	Х				
MD-56	St. Catherine Island	MD	Х				
MD-35	Wilson Pond	MD	Х				
A03	Jasper	ME	Х				
A09	Seapoint	ME	Х				
A03B	Starboard	ME	Х				
MI-59	Laughing Whitefish River ^a	MI					
MI-66	Lightfoot Bay ^a	MI					
MI-02	Toledo Beach	MI	Х				
MI-43	Whitefish Point	MI	Х				
MS-04	Heron Bay Point	MS	х				
R02	Marsh Point	MS	Х				
L01	Currituck Banks	NC					Х
L03	Hatteras Island	NC	Х				
L08	Wrightsville Beach	NC	Х				
NJ-04B	Metedeconk Neck	NJ				Х	
NY-12	Centerpoint Harbor	NY	Х				
NY-41	Clam Island	NY	Х				
NY-39	Cow Neck	NY	Х				
NY-59	Fire Island	NY	Х				
NY-57	Georgica/Wainscott Ponds	NY	х				
NY-30	Hog Neck Bay	NY	Х				
NY-64	The Isthmus	NY	Х				
NY-11	Lloyd Harbor	NY	Х				
NY-10	Lloyd Point	NY	Х				
NY-42	Mill Creek ^a	NY					
F10	Napeague ^ª	NY					
F05	Old Field Beach	NY	Х				
NY-16	Stony Brook Harbor	NY	Х				
NY-76	Walker	NY	Х				
PR-53	Bajio de Marea	PR	Х				
PR-68	Boca Prieta ^ª	PR					

Unit number	CBRS unit	State	No new structures	1-5 New structures	6-10 New structures	11-15 New structures	100 or More new structures
PR-79	Penon Brusi ^ª	PR					
PR-59	Punta Ballena	PR	Х				
PR-40	Punta Tuna	PR	Х				
RI-12	East Matunick Beach	RI	Х				
RI-07	Hazards Beach	RI	Х				
RI-02A	McCurry Point	RI	Х				
D02B	Prudence Island Complex	RI			Х		
M07	Bird Key Complex	SC		Х			
M08	Captain Sams Inlet	SC			Х		
M06	Morris Island Complex	SC	Х				
T12	Boca Chica	ТΧ	Х				
T11	South Padre Island	ТΧ	Х				
TX-04	Swan Lake	ТΧ	Х				
VI-08	Cangarden Bay	VI	Х				
VI-09	Krause Lagoon	VI	Х				
VI-17	Pond Bay	VI	Х				
VI-06	Robin Bay	VI	Х				
VI-04	Southgate Pond	VI	Х				
VI-11	Westend Saltpond	VI		Х			
VA-42	Chesapeake Beach	VA	Х				
VA-25	Fox Islands	VA	Х				
VA-45	Harveys Creek	VA	Х				
VA-46	Ingram Cove	VA	Х				
VA-16	Scarborough Neck	VA	Х				

Source: GAO analysis of CBRS units.

Note: There was no development in any unit between 16 and 100 structures.

^aThe number of new structures is unknown for these units.

Tables 3 and 4 show the CBRS units we included in our analysis to determine the extent of federal expenditures and permits made to entities in the CBRS. Table 3 displays the CBRS units included within our sample that had structures—regardless of whether the structures were built prior to or after the units inclusion in the CBRS. Table 4 lists the additional CBRS units that were suggested for inclusion in our review by FWS because the agency had information suggesting that development was occurring in these areas.

Unit number	CBRS unit	State
CT-13	Kelsey Island	СТ
CT-01	Mason Island	СТ
E09	Norwalk Islands	СТ
FL-46	Boot Key Island	FL
P31A	Four Mile Village	FL
P05A	Matanzas River	FL
P18	Sanibel Island Complex	FL
P10	Vero Beach	FL
C19	Black Beach	MA
C11A	Boat Meadow	MA
C00	Clark Pond	MA
C16	Dead Neck	MA
C31	Elizabeth Islands	MA
C14	Squaw Island	MA
L01	Currituck Banks	NC
L08	Wrightsville Beach	NC
NJ-04B	Metedeconk Neck	NJ
NY-59	Fire Island	NY
NY-30	Hog Neck Bay	NY
NY-42	Mill Creek	NY
F10	Napeague	NY
NY-16	Stony Brook Harbor	NY
RI-12	East Matunick Beach	RI
D02B	Prudence Island Complex	RI
M07	Bird Key Complex	SC
M08	Captain Sams Inlet	SC
VA-45	Harveys Creek	VA

Table 3: CBRS Units Included in GAO's Random Sample That Were Analyzed to Determine the Extent of Federal Expenditures and Permits

Source: GAO analysis of CBRS units.

Table 4: Additional CBRS Units Suggested for Review by FWS That Were Analyzed	
to Determine the Extent of Federal Expenditures and Permits	

Unit Number	CBRS unit	State
P10A	Blue Hole	FL
P30	Cape San Blas	FL
P09A	Coconut Point	FL
FL-94	Deer Lake Complex	FL
P28	Dog Island	FL
FL-92	Indian Peninsula	FL
P07	Ormond-by-the-Sea	FL
P08	Ponce Inlet	FL
FL-98	Santa Rosa Island	FL
L06	Topsail	NC

Source: GAO analysis of CBRS units.

Appendix III: Snapshots of Selected CBRS Units

Massachusetts	Within the state of Massachusetts, there are 62 CBRS units. The units consist of 64,076 total acres of land, with 88 percent of the land considered wetlands by FWS. ¹ We visited six CBRS units—Black Beach, Boat Meadow, Centerville, Herring Brook, Sandy Neck, and Squaw Island. These units were primarily salt marsh or wetland areas with narrow coastal beach areas. Only the Boat Meadow unit had experienced any new development since inclusion in the CBRS_Figure 2 displays the CBRS
	development since inclusion in the CBRS. Figure 2 displays the CBRS units we visited during our site visit.

¹For purposes of this appendix, wetlands include associated aquatic habitat such as nearshore waters and inlets.



Figure 2: CBRS Units We Visited in Massachusetts

Source: GAO.

The Herring Brook and Sandy Neck units both include land used as a public beach destination. The Sandy Neck unit is a coastal barrier beach, with both public and private beach areas, approximately 6 miles long varying in width from 200 yards to one-half mile. The unit is classified by the local government as a conservation and recreation area. Several homes

are located on the unit, but one local official noted they are all registered by the state as historic places.

The Centerville unit and the Squaw Island unit each have a barrier beach, but the beach is privately owned. The Centerville unit serves as a private beach and protective buffer for the homes bordering the unit. A local official noted the residents annually pay for a beach nourishment project in order to keep the protective buffer for their homes. The Squaw Island unit is a barrier beach and wetlands surrounding an area of developed land that was excluded from CBRS. The excluded area consists of homes valued between \$1.7 and \$6.9 million. Figure 3 displays a portion of Squaw Island.



Figure 3: House and Beach on the Squaw Island, CBRS Unit in Massachusetts

Source: GAO.

Both the Black Beach and Boat Meadow units consist primarily of salt marshes and wetlands. The southern portion of the Black Beach unit has one street of homes that were built prior to CBRA. One local official described the homes as "traditional Cape Cod" style houses. The Boat Meadow unit has several neighborhoods bordering the unit with one

	neighborhood partially included in the unit. It is within this area that new development—three single-family homes—has occurred since the unit's inclusion in the CBRS.
Rhode Island	Within the state of Rhode Island, there are 21 CBRS units. The CBRS units consist of 10,320 total acres, with 83 percent considered wetlands by the FWS. During our site visit to Rhode Island, we focused our review on the Prudence Island Complex unit. The Prudence Island Complex unit consists of numerous separate pieces of land all included in one CBRS unit. The unit is located in residential neighborhoods in several counties around the Narragansett Bay. Although approximately 50 homes are located within the CBRS unit, only 8 of the homes have been built since inclusion within CBRS. Figure 4 shows the CBRS units that we visited in Rhode Island.



Figure 4: CBRS Units We Visited in Rhode Island

Several areas included in the Prudence Island Complex are backyards of private homes. Home owners voluntarily included the CBRS land in their backyards in conservation easements, limiting the right of future owners of the property to develop the land. Figure 5 is one of the homes with a backyard that falls in the CBRS unit boundaries.



Figure 5: Home with a Backyard in the Prudence Island, Rhode Island CBRS Unit

Another area included in the unit is owned by the Rhode Island Country Club and serves as a golf practice area. Figure 6 is the country club land that is included in the CBRS.



Figure 6: Portion of the Prudence Island Complex CBRS Unit

Source: GAO.

The unit also includes a small beach and a wetland inlet located in a residential neighborhood. The inlet leads to the Rhode Island Country Club. A local official stated that the County Club has asked the U.S. Army Corps of Engineers to re-dredge the inlet to improve the playability of the golf course—which gets heavily saturated during rains. Dredging within the CBRS unit would allow water to run off the course faster. Figure 7 shows the area within the CBRS unit that would be dredged.



Figure 7: Inlet Where Proposed Dredging Project Would Occur in the Prudence Island CBRS Unit

Source: GAO.

South Carolina

Within the state of South Carolina, there are 16 CBRS units. FWS officials determined that the units consist of 97,856 total acres, with 90 percent of land considered wetlands. We visited two units in South Carolina—Bird Key Complex and Captain Sams Inlet (see fig. 8). Each of the units has experienced the addition of 10 or fewer residential homes since its inclusion in the CBRS. The developed portions of both of these units are located on coastal islands—the Captain Sams Inlet homes are located on Seabrook Island, and the Bird Key Complex homes are located on Kiawah Island.

Figure 8: CBRS Units We Visited in South Carolina



Development in the Captain Sams Inlet CBRS unit is located in the Seabrook Island Resort—a 2,200-acre, privately gated, beachfront community on Seabrook Island. According to local officials, the title to the land where these homes are located was in dispute for years, which delayed its development, unlike the rest of the island. Local officials also stated that they believe that if the title to the land had not been in dispute, the area would have developed at the time of the CBRS unit designations and most likely would not have been included in the CBRS. Because of the CBRS inclusion, the property owners in the unit are no longer eligible for certain types of federal assistance, in particular federal flood insurance, which they noted is much less expensive than privately available insurance. Officials with whom we met on neighboring Kiawah Island stated that a developer has plans to build up to 50 units on a 20-acre portion of the Captain Sams Inlet CBRS unit that is located on Kiawah Island.

Development in the Bird Key Complex CBRS unit is located on the northeast portion of Kiawah Island, which is also a privately gated, beachfront community with approximately 3,000 homes. The southern portion of the CBRS unit includes a few homes that we identified as being located in the unit, an 18-hole golf course, and an area of land called "Cougar Island." Kiawah officials told us that a private developer has plans to build 360 homes on 24 acres of Cougar Island at a future date.

Florida

Within the state of Florida, there are 67 CBRS units. The units range extensively in size and composition and encompass 285,937 total acres along both the Atlantic and Gulf Coasts. Overall, 87 percent of the land within the units is considered wetlands by FWS. We visited three units—Four Mile Village, Cape San Blas, and Deer Lake Complex (see fig. 9). All three units we visited had experienced some level of development. However, the development ranged from 11 new structures in Deer Lake Complex to at least 900 new structures in Cape San Blas since the units inclusion in the CBRS.





The Four Mile Village unit in Florida has experienced an increase of at least 100 new residential structures since its inclusion in CBRS. This unit is expected to continue to experience development, as a 167-home private development project called Cypress Dunes is completed. The Cypress Dunes project consists of a 44-acre gated community and will include a clubhouse, pool, exercise center, dining facility, and tennis courts, all entirely within the CBRS unit. The 1,637-acre Topsail Hill Preserve State Park makes up more than onehalf of the Four Mile Village CBRS unit. The preserve was purchased in 1992 with funds from the Conservation Acquisition of Recreation Lands program, also known as Forever Florida. Topsail was purchased for its unique natural ecosystems, including freshwater coastal dune lakes, wet prairies, scrub, pine flatwoods, marshes, cypress domes, seepage slopes and 3.2 miles of sparkling white sand beaches. The park also includes areas to bike, walk, swim, fish, and access to the beach, plus a full-facility campground features a swimming pool, tennis courts, and shuffleboard courts.

The Cape San Blas CBRS unit is located on a peninsula in the Florida panhandle. It has experienced significant development since its inclusion within the CBRS with the addition of at least 900 new homes. Primarily, the homes are single-family residences used as vacation homes and rentals.

In November 2002, FEMA designated parts of Cape San Blas as a special flood hazard area. Mortgage lenders require home owners in these zones to obtain flood insurance. Because federal flood insurance is not available in CBRS, home owners with mortgages must obtain private flood insurance. At the same time, officials told us that the cost of private insurance has skyrocketed and is no longer comparable to national flood insurance program rates. According to local officials, tourism in the Cape San Blas area is important to the economy of the county. They told us that property values in the unit have decreased since FEMA adopted a special flood hazard area for the CBRS unit. Residents and local officials have unsuccessfully attempted to remove Cape San Blas from the CBRS so that residents would be eligible to obtain flood insurance through the National Flood Insurance Program. In the 109th Congress, legislation was introduced in the House of Representatives that would exempt Cape San Blas, along with another unit, from CBRA's prohibitions and the limitations on flood insurance.² However, the bill never came to a vote.

We identified some development in the Deer Lake Complex unit since its inclusion within the CBRS. A total of 11 new single-family homes have been constructed within the unit.

²H.R. 3280, 109th Cong. (2005)

North Carolina

Within the state of North Carolina, there are 10 CBRS units consisting of 52, 215 total acres—approximately 6,809 of those are considered developable acres by FWS. We visited four CBRS units—Topsail, Lea Island, Currituck Banks, and Wrightsville Beach (see fig. 10). Both Topsail and Currituck have experienced significant levels of development since inclusion within the CBRS. In contrast, Lea Island and Wrightsville Beach are impractical locations for development as they are significantly affected by erosion and shifting sands.

Figure 10: CBRS Units We Visited in North Carolina



The Topsail unit in North Topsail is a barrier island with low elevation without the protection of substantial dunes. It has a total of approximately 1,600 structures and local officials stated that most of the structures were built after CBRA was enacted. The unit consists of single and multifamily homes, a few hotels/motels, a convenience store, and the North Topsail Beach Town Hall.

In recent years, the unit has been hit several times by hurricanes. For example, in 1996, Hurricanes Bertha and Fran caused significant damage. The storms leveled dunes, cut new channels across the island, dumped tons of sand, and destroyed more than 300 buildings. The federal government provided funds that assisted in repairing the streets, repairing water and sewer lines, replacing signs, and removing substantial debris. Since that time, the area has been rebuilt, but other storms have continued to cause damage. We identified at least \$5.6 million in disaster assistance that was provided to entities in the unit since November 1998.

Portions of the Topsail CBRS unit have experienced substantial levels of erosion. As the soil erodes, the ocean becomes dangerously close to the homes. Figure 11 pictures one of several homes in the Topsail area where the ocean waves make contact with the home's foundation.



Figure 11: House in North Topsail CBRS Unit on the Edge of the Ocean

Several areas outside of the CBRS unit have approved plans for a federally funded Corps beach renourishment project. However, because areas within the CBRS unit are ineligible for federal funding for a beach renourishment project, local officials are pursuing other opportunities to fund the portion of the project that falls within the CBRS boundaries. For example, the Town of North Topsail Beach recently proposed a \$34 million bond package to pay for the beach renourishment project, but the voters rejected the proposal in November 2006.

According to local officials, during the time when much of the development occurred in the Topsail unit, affordable private flood

insurance was generally available. However, in recent years the cost of private flood insurance has increased tremendously. Currently, these officials said that many residents are frustrated with CBRA's prohibitions on the availability of federal flood insurance and federal funding for beach renourishment projects. According to these officials, residents in the Topsail CBRS unit are upset that they must pay significantly higher insurance premiums than their neighbors who own properties just outside of the unit who can obtain federal flood insurance.

The Currituck Banks CBRS unit is located on the outer banks of North Carolina, with the northern boundary at the Virginia state line. The unit has also experienced significant new development, with at least 400 new residential homes built since inclusion in CBRS. Local officials stated that rapid development has occurred in the area since the late 1980s and that as of June 2006, there were 550 single-family dwellings within the unit. However, officials noted this only represents 18 percent of the total capacity of homes that can be built in the unit. County planning staff noted that the area currently has 3,088 actual or planned building lots available. Although the Currituck Banks unit does not have any paved roads and is only accessible by four-wheel drive vehicle or boat, it still continues to be developed, partly because people on the Outer Banks are seeking the solitude that living in the CBRS unit can provide. Moreover, the unit has an extensive canal system that allows residents direct boat access to their homes and the mainland.

The Lea Island CBRS unit is a tiny barrier island, accessible only by boat, and located south of the Figure Eight Island. The island is privately owned, but local officials stated that conservation groups are slowly trying to buy more of the island. The island is approximately 60 acres long with most of the land less than 10 feet above sea level. The island is in a constant state of flux due to erosion and shifting sand. According to a local coastal official, 15 homes previously existed on Lea Island, but all of them—except for one small cabin—had been destroyed by natural disasters.

At the time CBRA was enacted, FWS determined that the Wrightsville Beach unit had 83 developable acres of land. However, sand continuously shifts within the unit. At one point, the majority of sand in the unit had shifted to such an extent that the entire unit was under water. According to local officials, to keep the unit above water, local entities must continually dredge an inlet adjacent to the unit to replenish the unit with sand.

Appendix IV: Programs and Types of Federal Assistance Analyzed

U.S. Army Corps of Engineers	Permits - Section 404 and Section 10 Civil Works programs			
U.S. Department of Agriculture	Business and Industry Programs Business and Industry Direct Loans Business and Industry Guaranteed Loans Intermediary Relending Program Rural Business Enterprise Grants Rural Business Opportunity Grants Rural Economic Development Loans Rural Economic Development Grants Renewable Energy and Energy Efficiency Program Community Facilities Direct Loans Community Facilities Guaranteed Loans Community Facilities Grants Electric Programs Hardship Loans Municipal Loans FFB Guaranteed Loans Single Family Housing Programs Rural Housing Guaranteed Loan Rural Housing Direct Loan Housing Repair and Rehabilitation Loan Housing Repair and Rehabilitation Grant Rural Housing Site Loans Mutual Self-Help Housing Grants Homes for Sale <t< td=""></t<>			

	Rental Assistance Program
	Water and Waste Programs
	Water and Waste Disposal Loans
	Water and Waste Disposal Grants
	Emergency Community Water Assistance Grants
	Revolving Fund Program
	Household Water Well System Program
Department of Homeland	Federal Emergency Management Agency
Security	g
Security	National Flood Insurance Program
	Individuals and Households Program
	Public Assistance Program (Disaster)
U.S. Coast Guard	Permits for bridges over navigable waters of the United States
Department of Housing and Urban Development	Single Family Housing Programs
	Mortgage Insurance - Section 203(b)
	Rehabilitation Mortgage Insurance - Section 203(k)
	Mortgage Insurance for Condominium Units - Section 234(c)
	Home Equity Conversion Mortgage - Section 255
	Multifamily Housing Programs
	Supportive Housing for the Elderly - Section 202
	Mortgage Insurance for Cooperative Housing - Section 213
	New Construction/Substantial Rehabilitation of Apartments with
	Nonprofit Sponsors - Section 221(d)(3)
	New Construction/Substantial Rehabilitation of Apartments with For-
	profit Sponsors - Section 221(d)(4)
	Refinancing of Apartment Primary Loans - Section 223(a)(7)
	Healthcare Facilities - Section 232
	Refinancing of Healthcare Facilities - Section 232
	Supplemental Loan Insurance - Section 241(a)
	Supportive Housing for Persons with Disabilities - Section 811

Environmental Protection Agency	National Pollution Discharge Elimination System (NPDES) permits
Federal Highway Administration	Federal Aid Highway Program
Small Business Administration	7 (a) and 504 Loan programs Disaster Loan program
Department of Veterans Affairs	Veterans Benefits Administration Home Loan Guaranty Program

Appendix V: Comments from the Department of Housing and Urban Development

ASSISTANT SECRETARY FOR HOUSING-
ASSISTANT SECRETARY FOR HOUSING- FEDERAL HOUSING COMMISSIONER FEB – 9 2007
Anu K. Mittal, Director Natural Resources and Environment United States Government Accountability Office
441 G Street, NW Washington, DC 20548
Dear Ms. Mittal:
The Department of Housing and Urban Development (HUD) appreciates the opportunity to respond to the Government Accountability Office (GAO) draft report. <u>Coastal Barrier Resources</u> <u>System: Status of Development That Has Occurred and Financial Assistance Provided by Federal Agencies</u> (GAO-07-356). GAO states it has sampled 91 of the 585 Coastal Barrier Resource System (CBRS) units that have been designated under the Coastal Barrier Resources Act, as amended (CBRA). GAO has determined that HUD has provided Single Family Mortgage Insurance (SFMI) for five properties located among three of these units: Cape San Blas, Florida; Topsail, North Carolina; and Prudence Island, Rhode Island.
Based on its determinations, GAO has recommended that, as SFMI is prohibited within CBRS units, HUD obtain official determinations from the Fish and Wildlife Service (FWS) as to whether the five properties are truly in CBRS units, and, where so determined, cancel all inappropriate loan guarantees. GAO has recommended further that HUD examine its policies and procedures to ensure that they are adequate to prevent SFMI within CBRS units.
In regard to the first set of recommendations relating to the five properties in question, HUD has determined that between the years 1986 and 2003 all of the mortgage loans have been satisfactorily paid-off, with the mortgage insurance thus terminated. Therefore, further analysis and determinations, as well as cancellations, are not needed.
In regard to the second set, HUD is now developing policy guidance and an associated training module for its SFMI programs to ensure that there will be no future violations of CBRA. HUD expects this to be completed within the year and with training to occur as soon afterwards as possible.

-2-Thank you for providing this most useful draft report to HUD. Sincerely, Brian D. Montgomery Assistant Secretary for Housing-Federal Housing Commissioner

Appendix VI: Comments from the Department of the Interior



2 reflected in the numerous efforts by property owners to remove land from the CBRS through legislation so that the properties can be developed with Federal financial assistance. Since the CBRS was designated in 1982, Congress has enacted technical correction legislation to revise the boundaries of 42 CBRS units. Currently, the Service has a backlog of requests from property owners and other interested parties who seek to remove private land from 26 units. The enclosure provides technical comments from the Service. We hope these comments will assist you in preparing the final report. Sincerely, Danoth Verlag Assistant Secretary for kish and Wildlife and Parks

Appendix VII: Comments from the Department of Veterans Affairs

THE DEPUTY SECRETARY OF VETERANS AFFAIRS WASHINGTON February 23, 2007 Ms. Anu K. Mittal Director, Natural Resources and Environment U. S. Government Accountability Office 441G Street, NW Washington, DC 20548 Dear Ms. Mittal: The Department of Veterans Affairs (VA) has reviewed your draft report, COASTAL BARRIER RESOURCES SYSTEM: Status of Development That Has Occurred and Financial Assistance Provided by Federal Agencies (GAO-07-356) and agrees with your findings as they pertain to VA. However, VA does not concur with your recommendation to cancel the 11 possibly inappropriate loan guaranties identified in the draft report. This small number of incidents does not indicate a pattern of abuse of the Coastal Barriers Resources Act and cancelling the subject guarantees would inflict a disproportionate harm on lenders and veterans who were not responsible for the potential errors. The enclosure details VA's comments to your specific recommendations. VA appreciates the opportunity to comment on your draft report. Sincerely yours Gordon H. Mansfield Enclosure



Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact	Anu K. Mittal (202) 512-3841 or mittala@gao.gov
Staff Acknowledgments	In addition to the contact named above, Sherry McDonald, Assistant Director; Natalie Herzog; Stuart Ryba; Jay Spaan; Amy Ward-Meier; and Leigh M. White made key contributions to this report. Also contributing to this report were Kevin Bray, John Delicath, Nancy Hess, Gloria Saunders and Jay Smale.

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