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THE JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE AND OCEANS

OF THE

COMMITTEE ON RESOURCES
U.S. HOUSEOF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

Thursday, November 20, 2003

Serial No. 108-78

Printed for the use of the Committee on Resources

Available via the World Wide Web: http://www.access.gpo.gov/congress/house
or
Committee address: http://resourcescommittee.house.gov

U.S. GOVERNMENT PRINTING OFFICE

90-579 PS WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
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OVERSIGHT HEARING ON THE JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

Thursday, November 20, 2003
U.S. House of Representatives
Subcommittee on Fisheries Conservation, Wildlife and Oceans
Committee on Resources
Washington, D.C.

The Subcommittee met, pursuant to notice, at 10:02 a.m., in Room 1324, Longworth House Office Building, Hon. Wayne T. Gilchrest [Chairman of the Subcommittee] presiding.

Present: Representatives Gilchrest and Pallone.

Mr. GILCHREST. The Subcommittee will come to order. I want to welcome all of our witnesses this morning. You arrived on a beautiful, sunny fall day, not too much wind, a gentle breeze, and no rain. The only thing left unsolved is the traffic. We will look at that on another day.

We will conduct an oversight hearing on the John H. Chafee and Tom Evans Coastal Barrier Resources System.

STATEMENT OF THE HON. WAYNE T. GILCHREST, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. GILCHREST. In 1982, Congress enacted legislation to protect underdeveloped coastal barrier islands and to stop the endless process of rebuilding property that has been damaged or destroyed by storms. CBRA is unique and important in that it saves lives, saves taxpayers millions of dollars, and helps to conserve some of the most fragile land in our coastal ecosystem.

I strongly support the Coastal Barrier Resources System and have grown increasingly troubled by the number of legislative proposals to remove land from various CBRA units and adjust system boundaries.

Since becoming a member of this Subcommittee, since 1995, there has been a number of hearings on what were called technical changes to the Coastal Barrier Resources System. We have heard members argue that their constituents were adversely affected by incorrectly drawn boundary lines, failure to meet the number of structures per acre rule, the development of infrastructure prior to 1982, and bad advice from the U.S. Fish and Wildlife Service. There are even some property owners who simply do not want to

be incorporated within the system, despite the fact that they built their homes with the full knowledge that the Federal flood insurance was unavailable.

While some of these proposals have been enacted, it seems there is always another technical change in the pipeline and it is fair to say that the system is being undermined an acre at a time.

There is no language in the Coastal Barrier Resources Act that stops a single property owner from building a home on a coastal barrier that he owns. However, the message of CBRA is that people can develop but taxpayers won't pay. To protect taxpayers, human lives, and fragile habitat, such an owner may not fairly expect the public, through Federal flood insurance and other government subsidies, to invest in such risky business within the CBRA system.

It is my hope that today we can learn how many acres have been removed from the system, how many have been added, and what is the impact on the ongoing digital mapping effort and what is the cumulative impact of legislative efforts to modify the system since 1982. I look forward to hearing from the U.S. Fish and Wildlife Service, the Federal Emergency Management Agency, and Professor David Salvesen, an expert on the Coastal Barrier Resources System.

We look forward to your testimony so that we can find some way—not everybody would agree with me on this, but some way to effectively deal with the annual bills that we get here in Congress to say that I was inadvertently put into the system, a mapping error has caused me some financial distress and so I would like it to be corrected, and members of Congress will either pass that as a freestanding bill or it will be submitted to a conference report where it gets into some omnibus bill, goes to Federal court, Federal court overrules it, says they didn't have a right to get their Federal funding source because they were in this CBRA system, and then the next year it gets put into some omnibus bill and gets passed out and it goes on and on like that.

We are not here to blame anybody at the table in front of us. The responsibility lies with us here as members of Congress to uphold the Act that was passed so many years ago. But what we would like to do is to learn from you basically the history of the system, your impressions of its success, how much development has gone on in the area of CBRA, perhaps because of local and State policy, how much development is there actually on areas that are designated as CBRA, do we keep an accounting of that, what is the cost of the annual problem with storms, and where are we with the mapping? Will we have a day when someone cannot say they made a mistake? Will there be a day when there is a CBRA system that is digitized, done, complete, and there will be no more question about it? We look forward to your testimony.

[The prepared statement of Mr. Gilchrest follows:]

Statement of The Honorable Wayne T. Gilchrest, Chairman, Subcommittee on Fisheries Conservation, Wildlife and Oceans

Good morning. Today, the Subcommittee will conduct an oversight hearing on the John H. Chafee Coastal Barrier Resources System (CBRA).

In 1982, Congress enacted legislation to protect undeveloped coastal barrier islands and to stop the endless process of rebuilding property that has been damaged or destroyed by storms. CBRA is unique and important in that it, saves lives, saves

taxpayers millions of dollars, and helps to conserve some of the most fragile lands in our coastal ecosystem.

I strongly support the Coastal Barrier Resources System and have grown increasingly troubled by the number of legislative proposals to remove land from various CBRA units and adjust system boundaries.

Since becoming a member of this Subcommittee nine years ago, there have been a number of hearings on what were called technical changes to the Coastal Barrier Resources System. We have heard Members argue that their constituents were adversely affected by incorrectly drawn boundary lines, failure to meet the number of structures per acre rule, the development of infrastructure prior to 1982, and bad advice from the U.S. Fish and Wildlife Service. There are even some property owners who simply do not want to be incorporated within the system, despite the fact that they built their homes with the full knowledge that federal flood insurance was unavailable.

While some of these proposals have been enacted, it seems there is always another technical change in the pipeline and it is fair to say that the system is being undermined an acre at a time.

There is no language in the Coastal Barrier Resources Act that stops a single property owner from building a home on a coastal barrier that he owns. However, the message of CBRA is that people can develop, but taxpayers won't pay. To protect taxpayers, human lives, and fragile habitat, such an owner may not fairly expect the public, through federal flood insurance and other government subsidies, to invest in such risky business within the CBRA system.

It is my hope that today we can learn: how many acres have been removed from the system; how many have been added; what is the impact of the ongoing digital mapping effort; and what is the cumulative impact of legislative efforts to modify the system since 1982. I look forward to hearing from the U.S. Fish and Wildlife Service, the Federal Emergency Management Agency and Professor David Salveson, an expert on the Coastal Barrier Resources System.

I am now pleased to recognize the Ranking Democratic Member of the Subcommittee, Congressman Frank Pallone.

Mr. GILCHREST. At this point, I would like to yield to the gentleman from New Jersey, Mr. Pallone.

STATEMENT OF THE HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Mr. Chairman. From time to time in Congress, we find it necessary to criticize the policies of the executive branch and, of course, it tends to occur more frequently when the other political party controls the Administration, and not surprisingly, the former Reagan Administration drew out a steady stream of criticism, particularly for their efforts to undermine policies designed to protect our common natural resource heritage.

What is surprising, however, is that I believe that there was one aspect of environmental policy where the Reagan Administration actually got it right, and that instance was when the President signed the Coastal Barrier Resources Act into law on October 1, 1982.

The fundamental weave of conservative fiscal policy and progressive land use planning has been demonstrated to be a cost-effective and market-oriented strategy to protect both the Federal taxpayer from shouldering ill-advised subsidies for risky coastal development and the legitimate rights of property owners to own and develop their land as they see fit. Not incidentally, this prudent and sensible combination has also resulted in the preservation of extremely valuable open space and coastal fish and wildlife habitats necessary to provide opportunities for public recreation, travel, and

tourism and to maintain environmental quality along our nation's increasingly crowded coastlines.

The August 2002 report released by the Fish and Wildlife Service perhaps best summed up the unique qualities of the Act when it stated, and I quote, "The Act is the essence of free market natural resource conservation. It in no way regulates how people can develop their land, but transfers the full cost from Federal taxpayers to the individuals who choose to build. By limiting Federal subsidies and letting the market work, the Act seeks to conserve coastal habitat, keep people out of harm's way, and reduce wasteful Federal spending."

I agree with all this, I think we all do, but the question, as the Chairman has said, is where do we go from here? It has not escaped my notice that we regularly take up legislation introduced to address technical corrections to the boundaries of coastal barrier units or otherwise protected areas. Clearly, in my view, this circumstance is much more a reflection on the vast improvements made in recent years in geographic information systems and digital mapping techniques than it is with any inherent flaws in the Act's policies.

But the question lingers, how should Congress best approach the need to modernize the system's maps, maps that are the physical embodiment of the Act's policies, but to do so without damaging or undermining the very policies that the maps represent?

Also, despite the Act's effectiveness in preventing some coastal development, it is plainly apparent to the most casual observer that significant development continues to occur along our shores. We need to know why, and perhaps more directly, we need to know how other State and local development subsidies may interact to thwart the Act's market-based disincentives for development.

Mr. Chairman, I hope that our witnesses can provide us with insights into these questions—I know you basically asked the same questions—as we look to reauthorize this important law and I think this hearing is important in that respect today. Thanks.

Mr. GILCHREST. Thank you, Mr. Pallone.

Our witnesses this morning are Dr. Benjamin Tuggle, Chief, Division of Federal Program Activities, U.S. Fish and Wildlife Service, who is accompanied by Ms. Katie Niemi; Mr. Anthony S. Lowe, Director, Mitigation Division and Federal Insurance Administrator, Federal Emergency Management Agency; and Mr. David Salvesen, Center for Urban and Regional Studies, University of North Carolina at Chapel Hill.

I want to thank each of you for coming this morning, for taking the time out to help us with this issue, and I want to thank especially Mr. Anthony Lowe for his fine work and your professional crew that came into Maryland during the Isabel storm. They did a stunning job and it is well appreciated.

We will begin this morning with Dr. Benjamin Tuggle. Welcome, sir.

STATEMENT OF BENJAMIN N. TUGGLE, CHIEF, DIVISION OF FEDERAL PROGRAM ACTIVITIES, FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR

Dr. TUGGLE. Thank you, Mr. Chairman. Mr. Chairman, Mr. Pallone, I thank you for this opportunity to testify on behalf of the Department of the Interior at this oversight hearing of the John H. Chafee Coastal Barrier Resources System. I am Dr. Benjamin Tuggle. I am the Division Chief for Federal Program Activities with the U.S. Fish and Wildlife Service.

Before I proceed, Mr. Chairman, I would like to request that my written testimony be made part of the record.

Mr. GILCHREST. Without objection, so ordered.

Dr. TUGGLE. Thank you. Mr. Chairman, I would like to begin my testimony by saying that the Service shares your concerns about the potential risk to the system from numerous boundary revisions. Our goal is to map the system accurately so that the delineations of the boundaries have lasting integrity.

In September, the Service testified before this Subcommittee in support of three bills that would make system changes. Today, I will explain how we are working to maintain the integrity of the system and also discuss with you our mapping modernization process that the Service is currently pursuing.

My written testimony discusses the legislative changes that have been made to the system over time and the processes and approaches the Service has developed to carry out our responsibilities under the Coastal Barrier Resources Act, or as we fondly refer to it, CBRA.

Full system units comprised of private lands were first delineated in 1982 with the passage of CBRA. Full system units generally follow geographic features on the ground, such as rivers or roads that were easily discernible. System maps created at that time used the technology and base maps with inherent inaccuracies. In some cases, the system unit boundaries are drawn on base maps that do not precisely follow the intended geographical features. When this occurs, the result can be the inclusion of private property that were not originally intended to be part of the system.

Most requests and proposed changes to the full system units, however, assert that the development criteria used to designate undeveloped coastal barriers were not appropriately applied when the unit was originally adopted. Accordingly, the Service examines proposed changes to the full system units. We look at the level of development that existed when the unit was created.

The Service receives numerous requests to remove land from full system units. However, after objective review, we generally find that the development criteria were appropriately applied and the boundary changes are not warranted. In these cases, the Administration does not support a change.

In 1990, Congress passed the Coastal Barrier Improvement Act, which expanded the system to create a new category under CBRA called "otherwise protected areas," or OPAs. OPAs are intended to follow protected area boundaries, such as State parks or National Wildlife Refuges. Again, much like the original maps that we used for full system units, OPAs were originally mapped with limited resources and rudimentary mapping tools.

Unlike changes to the system units, the Service often agrees that changes to OPAs are appropriate because OPA boundaries commonly do not coincide with the actual protected area boundaries. In those cases, OPAs sometimes include adjacent private lands due to the imprecise mapping techniques that were used. When these cases come to our attention, we work closely with interested land owners, local and State officials, and protected area managers to closely and comprehensively map the protected area boundaries with precise mapping tools.

The benefits of converting the existing maps to a digital format go way beyond just correcting the depiction of the boundaries. As you know, Mr. Chairman, CBRA is a map-driven law that is poised for modernization, that can expand electronic government, improve customer service, and also complement existing efforts to conserve our nation's coastal resources.

Congress recognized this when it passed the Coastal Barrier Resources Reauthorization Act of 2000. This Act directed the Service to conduct a digital mapping pilot project, and we are pleased to report to you that we are making significant progress in completing that directive.

In our efforts to modernize the maps, the Service must work hand in hand with Congress in an open and consistent fashion. Currently, we are handling these cases on a case-by-case basis that are basically driven by Congressional offices and constituents. We address these individual cases in an unbiased, transparent way by objectively applying standard review criteria and explaining our findings to the Subcommittee and the interested parties.

In the future, after presenting the results of our mapping pilot project, we hope to move from the current reactive case-by-case process to a holistic, proactive approach. In that holistic approach, using the latest digital technology, we want to work closely with the Subcommittee to correct existing inaccuracies when they are found. Once the modernization effort is completed, we think that we will be in a stronger position to further the goals of CBRA.

In closing, Mr. Chairman, the Administration supports CBRA and we want to continue to work with Congress to achieve CBRA's original intent. Our work to correct technical errors is only part of a broader goal to modernize all CBRA maps and to provide our customers and partners with the best information. We believe that we will help to achieve all three of CBRA's original goals, which were to save taxpayer money, protect people and their property, and to conserve valuable fish and wildlife habitat.

Mr. Chairman, that concludes my prepared comments. Thank you again for this opportunity to testify today and I look forward to answering your questions.

Mr. GILCHREST. Thank you, Dr. Tuggle.

[The prepared statement of Dr. Tuggle follows:]

Statement of Dr. Benjamin Tuggle, Chief, Division of Federal Program Activities, Fish and Wildlife Service, U.S. Department of the Interior

Mr. Chairman and members of the Subcommittee, I thank you for the opportunity to present the Administration's testimony for this oversight hearing on the John H. Chafee Coastal Barrier Resources System (System). I am Dr. Benjamin Tuggle, Chief of the Division of Federal Program Activities in the U.S. Fish and Wildlife Service (Service).

In your request for testimony from the Administration, you requested that we provide a justification of how changes to System maps are beneficial to the integrity of the System as a whole. My testimony will attempt to do this by describing the Service's role in implementing the Coastal Barrier Resources Act (CBRA), the processes and approaches we have developed to carry out our responsibilities, legislative changes that have been made to the System since its creation, and the future direction we envision for the System.

Mr. Chairman, the Administration strongly supports the intent of CBRA and its free-market approach to conservation. Congress has determined there is a high probability of repetitive storm damage to the Nation's coastal barrier islands and associated areas. It designated undeveloped coastal barrier areas as the Coastal Barrier Resources System and prohibited federal spending for flood insurance, roads, wastewater treatment systems and other types of infrastructure within the System. This minimizes the potential loss of human life and reduces wasteful federal expenditures, but in no way regulates how people can develop their land. Instead, it eliminates federal subsidies and insurance for development within these damage-prone areas, while imposing no restrictions on development done at private expense. Today, areas designated by CBRA and its amendments comprise approximately 3.1 million acres of undeveloped coastal barriers along the Atlantic Ocean, the Gulf of Mexico, the Great Lakes, Puerto Rico, and the Virgin Islands. Individuals who choose to build and invest in these hazard-prone areas will incur the full cost of that risk, instead of passing that cost on to the American taxpayers. It is estimated that by 2010, CBRA will have saved American taxpayers approximately $1.3 billion.

CBRA has already greatly benefited the Nation, but we believe that it can do even more. CBRA's conservation accomplishments would be furthered if the federal government were to seek and develop partnerships with local and state governments and nongovernmental organizations to encourage conservation initiatives that complement the System. But in order to take these forward steps, we must first modernize the maps that delineate CBRA areas, enabling them to be more effectively coupled with other conservation initiatives. This map modernization process must ensure that the boundaries on CBRA maps are accurate. By proactively addressing the mapping inaccuracies, we will maintain the System's integrity, and will also be able to focus more of our limited resources on promoting partnerships.

Map Modernization

CBRA is a map-driven law that is beginning to be modernized by expanding electronic government, improving customer service, and building upon existing tools used by our partners to conserve the Nation's coasts. Congress recognized this when it last reauthorized CBRA. The Coastal Barrier Resources Reauthorization Act of 2000 directed us to conduct a Digital Mapping Pilot Project that would produce draft digital maps of 75 areas and estimate the cost and feasibility of completing digital maps for all CBRA areas. We are pleased to report that we are making progress on completing the pilot project.

In our efforts to modernize the maps, we must work hand-in-hand with Congress in an open, objective, and consistent process. Currently, this is occurring on a case-by-case basis that is driven by requests from Congressional offices and constituents. We address these individual cases in an unbiased and transparent way by objectively applying standard review criteria and explaining our findings to the interested parties and to the Subcommittee.

In the future, after presenting the results of the pilot project, we hope to move from the current reactive case-by-case process, to a holistic proactive process. Once the modernization and perfecting effort is completed, we will be in a stronger position to further the goals of CBRA.

There are many potential benefits to converting the existing maps to digital format. Ultimately, consistent with the President's E-Government Initiative, CBRA maps could be posted on the Internet for greater public access and incorporated into local government planning databases. The Service will also work with federal agencies involved in mapping, such as the U.S. Geological Survey and others, to work toward reducing redundancies. This would help ensure that people know about CBRA's restrictions on federal spending before they choose to invest in a property affected by the law. Modernizing the maps would give landowners, insurance providers, federal agencies, and state and local planners a more precise and accessible tool for determining boundary locations, making investment decisions, issuing flood insurance policies, and managing coastal areas. Having an accurate baseline of digital maps will allow the Service to be more proactive in the future in recommending additional areas to Congress for inclusion in the System.

Digital maps could also be incorporated into programs administered by our partner agencies, such as the Federal Emergency Management Agency's National Flood Insurance Program. Instead of consulting with the Service, these agencies would be able to conduct an accurate preliminary analysis regarding whether CBRA restrictions apply.

By making CBRA maps easily available in digital format, we could work with our partners to encourage increased bundling of conservation tools to meet CBRA's conservation goals. The Service has observed that CBRA is most effective when our partners complement their conservation approaches with the law's fiscal disincentive. For example, the State of Texas prohibits State-backed windstorm insurance within the System, adding another layer of fiscal disincentive to build in these locations. In North Carolina, the National Audubon Society has targeted its land acquisition investments in a CBRA area, providing long-term protection to the fish and wildlife habitat.

Modernizing existing maps will take time, but electronic governance is clearly the future for the Act. Our goal is to map the full System units and "otherwise protected areas" accurately and precisely to provide the System and OPAs with lasting integrity. Mr. Chairman, we share your concern of the potential risk to the System from numerous boundary revisions, which could over time make it a victim of "death by a thousand cuts." Our efforts to perfect the boundaries of CBRA areas through an open and objective process are being undertaken to prevent this from occurring.

Legislative Changes to the John H. Chafee Coastal Barrier Resources System

Mr. Chairman, you asked us to assess the legislative changes that have been made to the System since it was created in 1982. Before doing so, it is important to distinguish between the two different classes of CBRA areas, and to describe how we approach proposed changes to these different types of areas. The different classes of CBRA areas are: (1) the private lands component, or "full System units," and (2) "otherwise protected areas," or OPAs. More detailed information about full System units and OPAs, and the processes by which the Service reviews proposed changes to them, can be found in Attachment 1.

Most proposed changes to full System units assert that the development criteria used when the units were created were incorrectly applied. The development criteria were applied to areas at the time they were considered for inclusion in the System, and relate to the density of development and the level of infrastructure (see Attachment 1 for more information). When the Service examines proposed changes to full System units, we look at the level of development that existed when the unit was created. The Service receives numerous requests to remove land from full units of the System, however, after objective review, we generally find that the development criteria were appropriately applied in the past and boundary changes are not warranted. We would like to note that there have been cases in the past where Congress has enacted changes to full System units that were not supported by the Service.

Unlike changes to full System units, the Service often agrees that changes to OPAs are appropriate because almost every one of the OPAs is mapped inaccurately. Full System units generally follow geographic features on the ground that are easily discernable. We believe, however, that Congress intended OPAs to follow protected area boundaries. We regularly uncover cases where OPA boundaries do not coincide with the actual protected area boundaries we believe they are meant to follow. When these cases come to our attention, we work closely with interested land owners, local and state officials, and protected area managers to correctly map the protected area boundaries with the high quality mapping tools now available.

Comprehensive Mapping Approach

If after applying our review process for full System units and OPAs, the Service finds a technical mapping error that warrants a change in one part of a CBRA map, we review all adjacent areas to ensure the entire map is accurate. This comprehensive approach to map revisions treats all landowners who may be affected equitably, and it also ensures that Congress and the Administration will not have to revisit the map in the future. This approach allows us to improve the integrity of the entire System by looking at boundary revisions in a holistic fashion instead of pursuing incremental fixes for individual areas on a single map.

This comprehensive approach was developed by the Service, in close coordination with the Subcommittee staff, beginning in 1999 with NC-03P, Cape Hatteras National Seashore. Since 1999, there have been seven legislative changes to System units and OPAs. Each of these changes was thoroughly scrutinized by the Service, Congressional members and staff, appropriate state and local officials, and property owners. In all of these cases but one (DE-03P, Cape Henlopen State Park), the com-

prehensive mapping approach was applied. The comprehensive mapping approach was in each case a lengthy process, sometimes taking over a year to complete. Congress has not adopted any changes that the Service did not support since we have instituted this high-precision and inclusive approach.

Although the comprehensive mapping approach is preferred, we have deviated from it in limited circumstances when it proves impossible or when the equities of a particular situation make a targeted map revision appropriate. We have learned over the years that each new CBRA case can present unforeseen circumstances, and we must be flexible to appropriately address each case.

Assessment of Legislative Changes

Between the enactment of CBRA in 1982 and the enactment of CBIA in 1990, there were no changes made to full System units through legislation. The CBIA created OPAs and new full System units, and made changes to numerous existing full System units. The CBIA replaced all the 1982 maps with updated 1990 maps. Our information indicates that since the enactment of the CBIA in 1990, there have been 41 separate changes made to CBRA areas through legislation. Of the 41 legislative changes, 19 were made to OPAs and 22 were made to full System units. Most of the 41 changes made since 1990 removed land from CBRA areas. These legislative changes are listed in Attachment 2.

It is significant to note that since the comprehensive mapping approach was developed in 1999, the frequency of enacted legislative changes has slowed. Between 1999 and 2003, legislative changes were made to seven CBRA areas. By comparison, between 1991 and 1998, legislative changes were made to 34 CBRA areas. It is also significant to note that the comprehensive approach can yield significant increases to OPAs; since 1999, some of the changes added protected lands in addition to removing private lands.

Mr. Chairman, you asked us to account for total acres removed from and added to CBRA areas by these legislative changes. Unfortunately, we don't have that information, and it was not possible for us to conduct the research to compile this information in time for today's hearing. As I just mentioned, the majority of the legislative changes were made before 1999, and were done using the old mapping technology. In order to account for the total acreage change, we would need to compare the original maps with the amended maps. This process is lengthy and resource intensive, especially for the large number of changes that were made prior to 1999. Consequently, we can provide to you, for the record, acreage changes made since we began implementing our comprehensive mapping approach in 1999.

We recognize the importance of tracking acreage changes to CBRA areas. As we carry out our comprehensive mapping approach to all new changes, we use the digital technology to accurately calculate acreage changes, and ensure that such changes are accurately tracked and recorded.

Technical Correction Bills Pending Congressional Action

Mr. Chairman, you also asked us how many additional changes are pending Congressional action. There are technical correction bills for six CBRA areas currently pending Congressional action. The Service testified before this Subcommittee in September in support of H.R. 154, H.R. 2501, and H.R. 3056. The other CBRA areas are addressed by H.R. 3333 and S. 1643; these bills have not yet been reviewed by the Subcommittee, nor has the Administration stated a position on these two bills.

Conclusion

In closing, Mr. Chairman, we will continue to work with Congress to achieve CBRA's intentions and ensure the System's boundaries are accurately delineated. Our work to correct technical errors is one part of our broader goal to modernize all CBRA maps and provide our partners and customers with better information. We believe this will help achieve all three of CBRA's intentions: saving taxpayers' money, keeping people out of the deadly path of storm surge, and protecting valuable habitat for fish and wildlife.

The Administration strongly supports the intent of CBRA and its free-market approach to coastal protection. Despite the challenges presented by the fact that the controlling CBRA maps were drawn using the imprecise mapping tools of the past, the Administration believes that the intent of CBRA has largely been achieved. We look forward to working with you to enact digitized maps for all CBRA areas that will help us further the goals of the Act.

Mr. Chairman, this concludes my prepared statement. Thank you again for the opportunity to testify at today's hearing. I would be pleased to respond to any questions.

ATTACHMENT 1

JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

LEGISLATIVE CHANGES

Full System Units

The private lands component of the System was first delineated in 1982 with the passage of the original CBRA. These original units encompassed approximately 590,000 acres of privately owned, undeveloped coastal barriers along the Atlantic and Gulf coasts. The undeveloped status of System lands was an important underpinning of the law. The Act sought to discourage new construction in these hazard-prone and environmentally sensitive areas that were not yet developed. However, the Act did not seek to apply its disincentives to existing communities where significant investments had already been made.

The Department of the Interior published guidance in the Federal Register that established two criteria to define undeveloped coastal barriers. These criteria, applied to areas at the time they were considered for inclusion in the System, are as follows. (1) The density of development on an undeveloped coastal barrier is less than one structure per five acres of land above mean high tide. (2) An undeveloped coastal barrier does not contain a full complement of infrastructure. A full complement of infrastructure consists of a road, fresh water supply, wastewater disposal system, and electric service to each lot or building site in the area. The purpose of the infrastructure criterion was to exclude subdivisions where a significant amount of private capital had been spent prior to Congressional designation. Congress codified these criteria in the 2000 reauthorization of CBRA.

The boundaries of full System units are drawn on U.S. Geological Survey topographic quadrangle maps, most of which are decades old. In nearly all cases, we have an understanding of the intent of the lines that define full System units. These lines generally follow particular features depicted on the underlying maps, such as wetlands demarcations, roads, streams, and other landscape features. However, as the courts, our attorneys, and Congress have repeatedly told us, the line as drawn on the map is the law, and we must make determinations based on where the line actually falls on the ground, not where the Service believes Congress intended it to fall. Because of the inaccuracies inherent in the depiction of features on the base maps and in the drawing of CBRA lines, most of the 585 full System units contain minor inaccuracies. In most cases, these minor inaccuracies don't affect structures or properties, and therefore are not the focus of proposed legislative changes.

Most proposed changes to full System units assert that the development criteria were incorrectly applied when the units were created. Accordingly, when the Service examines proposed changes to full System units, we look at the level of development that existed when the unit was created. When presented with credible information that indicates that the development criteria were not appropriately applied, we review the administrative record, review any additional information provided by the interested parties, prepare draft revised maps of the area if appropriate, and then present Congress with the factual findings and draft revised maps. If Congress chooses to adopt the revised maps, it then enacts new maps for the area through legislation. If the Service finds that the development criteria were appropriately applied when a unit was designated, we do not support changes to the unit.

The Service receives numerous requests to remove land from the System, however, after objective reviews, we generally find that the development criteria were appropriately applied in the past and boundary changes are not warranted. Consequently, we have supported very few changes to full System units. Since 1999, we have only supported one change based on the development criteria to remove land from a full System unit (the unit is T07, the subject of H.R. 154). We would like to note that there have been cases in the past where Congress has enacted changes to full System units that were not supported by the Service.

Otherwise Protected Areas

OPAs were first delineated in 1990 with the passage of the Coastal Barrier Improvement Act (CBIA). Congress created OPAs to limit federal subsidies in coastal barriers that are protected (that is, areas already held for conservation purposes, such as state parks and National Wildlife Refuges). Unlike full System units, with their wide array of restrictions on federal spending, only federal flood insurance is prohibited in OPAs. This restriction sought also to discourage development within private in holdings. In total, about 1.8 million acres are within OPAs.

Unlike changes to full System units, the Service often agrees that changes to OPAs are appropriate because almost every one of the 271 OPAs is mapped inac-

curately. Full System units generally follow geographic features on the ground that are easily discernable. We believe, however, that Congress intended OPAs to follow protected area boundaries. These are more difficult to ascertain because they are based on property boundaries, not geographic features. When OPAs were first designated more than a decade ago, they were mapped with limited resources and rudimentary mapping tools. As a result, OPAs could not be, and were not, mapped with the highest degree of accuracy.

We regularly uncover cases where OPA boundaries do not coincide with the actual protected area boundaries we believe they were meant to follow. OPAs sometimes include adjacent private lands that are not in holdings. Because of the OPA designation, the owners of these lands cannot obtain federal flood insurance for their homes. We believe that Congress did not intend to include such adjacent private lands within the OPAs. When these cases come to our attention, we work closely with interested landowners, local and state officials, and protected area managers to correctly map the protected area boundaries with the high-quality mapping tools now available. All of the changes that have been made to the CBRA areas since 1999 were supported by the Service, and nearly all of these changes were to OPAs.

ATTACHMENT 2

JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

LEGISLATIVE CHANGES

- Since the enactment of the Coastal Barrier Resources Act (CBRA) in 1982, several changes have been made to CBRA areas through legislation.
- Between 1982 and 1990, no changes were made.
- The Coastal Barrier Improvement Act (CBIA) of 1990 created otherwise protected areas (OPAs) and new full System units. All 1982 maps were replaced with updated 1990 maps.
- After passage of the CBIA in 1990, stand-alone changes (i.e., changes that were not a part of a comprehensive reauthorization like the CBIA) to CBRA areas started to be made through legislation.
- A total of 41 separate changes have been made through legislation since the passage of the CBIA.
- No changes were made in 1991.
- Between 1992 and 1998, changes made to 34 CBRA areas as follows:

1992	NC-01P	NC-05P	VA-60P	VA-60	
1994	NY-75	VA-62P	FL-05P	P11A	FL-15
	FL-36P	P17	P17A	P18P	P19P
	FL-72P	P31P	FL-95P	AL-01P	MI-21
1996	NY-59P	SC-01			
1998	P05	P05A	P10	P11	P11A
	P18	P25	P32	P32P	FL-35
	SC-03	M09	FL-35P		

- In 1999, the comprehensive mapping approach was developed
- Between 1999 and 2003, changes were made to seven CBRA areas as follows below. Of these seven, five resulted in removal of developable private land. One of these changes (DE-03P) did not follow the comprehensive approach.

1999	DE-03P	NC-03P	L03
2000	P19	P19P	NC-01
2003	VA60P		

Response to questions submitted for the record by Dr. Benjamin N. Tuggle, Chief, Division of Federal Program Activities, U.S. Fish and Wildlife Service

Questions from The Honorable Frank Pallone

1) What were the results of the economic assessment of the System that was mandated by the Congress in P.L. 106-514?

Public Law 106-514 directed the Department of the Interior to assess the impact of the Coastal Barrier Resources Act (CBRA) on federal spending resulting from the avoidance of federal expenditures for disaster relief, development assistance (for roads, wastewater systems, and potable water supply), and the National Flood Insurance Program (NFIP).

The study estimated that from 1983 through 2010, CBRA's restrictions on expenditures for disaster relief and development assistance will have resulted in a combined federal savings of about $1.278 billion. Development assistance comprises about 93 percent of this total savings. The study also noted that the NFIP, which is the most important deterrent to development of the System, probably yields no federal taxpayer savings. NFIP is required to be self-sufficient, with income from policy premiums exceeding expenses.

A copy of the study is available at the following web address: www.fws.gov/cep/TaxpayerSavingsfromCBRA.pdf.

2) There are cases where developers have been incorrectly advised by the U.S. Fish and Wildlife Service that their property was not within the System and based on those assurances they built houses or subdivisions.

- **Since the property was always within the System, what responsibility, if any, does the Federal Government have in these situations?**

One of the Service's responsibilities under CBRA is to determine where the lines drawn on congressionally-enacted maps actually exist on the ground. We have consistently applied the best available technology to fulfill this responsibility. However, as the technology available to us improves, we find that the enacted lines contain inherent inaccuracies. That is, the lines don't always mirror what we believe the intent of Congress was in drawing the lines. On occasion, this can result in situations where properties that don't appear to be included in a CBRA area are revealed by higher precision technology to actually be a part of the CBRA area.

The Service has recently learned of cases where our field personnel issued incorrect property determinations in the past. The determinations were made in good faith, using the best tools available at the time. Based on determinations from the Service, the NFIP notified landowners that their respective properties are not affected by CBRA and therefore are eligible for federal flood insurance. Subsequently, upon using higher precision mapping tools that were not available in the past, the Service discovered some instances of incorrect past determinations. The NFIP does not honor incorrect determinations and, therefore, must cancel such insurance policies upon learning of the mistake.

In such situations where the Service has provided incorrect information to citizens, we believe the federal government should provide a remedy to those citizens for the financial impact of that incorrect information. We want to honor our past determinations so that property owners who received incorrect determinations could retain their federal flood insurance. The remedy will need to be determined based on the facts for each situation, but could include making recommendations to Congress for private relief legislation or comprehensive map revisions in cases where the Service believes affected properties were not originally intended to be part of a CBRA area.

3) Should the Congress consider enacting legislation that would allow the Department of the Interior to make small technical changes to the Coastal Barrier Resources System maps when minor mistakes are discovered?

The Service believes that all decisions to make changes to CBRA lines should remain with Congress. Furthermore, we believe that the completion of the Digital Mapping Pilot Project will help provide a solution to the issue of the need to make technical changes. The Report to Congress that will accompany the pilot project will address the different types of changes and the extent of changes that will be necessary to accurately portray CBRA boundaries on modern digital maps. We will provide recommendations for how to revise and perfect all CBRA maps, making the need for technical changes in the future very rare. We believe that we should continue our close working relationship with Congress as decisions on boundary changes are proposed.

4) In your written testimony you state that "conservation accomplishments would be furthered if the federal government were to seek and develop partnerships with local and state governments and

nongovernmental organizations to encourage conservation initiatives that complement the System."

- **Could you please expand on this thought? What types of programs are you referencing?**

The Service has observed that CBRA works best when its fiscal disincentives are complemented by other conservation approaches, implemented by our partners, in the same areas. We know that when the economic incentive for development is extremely high, development will occur in CBRA areas despite the Act's restrictions on federal spending. Some state and local governments and non-governmental organizations have employed their own approaches to maintain the natural state of coastal barriers before the economic incentive for development surpasses CBRA's fiscal disincentive. We believe that by digitizing CBRA areas we will provide local communities with important information they can use to make land use planning decisions. This will enable us to conduct outreach to encourage our partners to develop conservation approaches that complement CBRA.

Conservation of lands designated under CBRA could be better achieved if conservation programs such as zoning regulations, targeted land acquisition, long-term and voluntary conservation easements, and tax policy that rewards conservation reinforce CBRA's goals. This is already occurring in some areas. Texas, for example, prohibits State-backed windstorm insurance for property in the Coastal Barrier Resources System, adding another layer of fiscal disincentive for development to CBRA's free-market approach. On Dauphin Island in Alabama, State and local policies have also reinforced CBRA's goals. The State's coastal construction control line coincides with the System boundary, and Dauphin Island has zoned the entire area for conservation and parkland. Many of these state and local activities are undertaken under the auspices of State Coastal Management Plans under the Coastal Zone Management Act, which is administered by the National Oceanic and Atmospheric Administration (NOAA) in the Commerce Department. In recent years, Congress has also appropriated Coastal and Estuarine Land Conservation Program grant funds to NOAA to facilitate state and local acquisition of particularly sensitive coastal lands.

CBRA's restrictions on federal spending may provide incentive to landowners to sell property that is a part of the System, or to agree to conservation easements on their properties. Therefore, state and local conservation programs may benefit by targeting their land acquisition efforts in the System. For example, the National Audubon Society is buying System lands in North Carolina and will hold them in trust for fish and wildlife resources in perpetuity.

Examples of the pairing of local, state, and non-governmental conservation initiatives with CBRA are few. However, digitizing CBRA areas will enable the Service to conduct efficient, effective, and expansive outreach and provide digital information to local communities. A primary focus of a future outreach effort will be to encourage more pairing of other conservation initiatives with CBRA.

- **Should such arrangements or partnerships be formally authorized under the Act or does the Service believe that it has adequate authority right now?**

It would be most practicable to explore complementary conservation efforts when all CBRA areas are digitized and made available to our partners via the Internet and other methods. The Service believes that it currently has the authority to conduct outreach and develop and strengthen partnerships to complement CBRA.

5) As the maps for the System become increasingly digitized, do you foresee the need to modify the corrections process when questions are raised regarding boundaries?

As the maps for the System become digitized, the Service does not foresee a need to modify the corrections process when questions are raised regarding boundaries. When interested parties seek changes to System or OPA boundaries, the Service applies standardized mapping procedures and objective review criteria to determine whether a change is appropriate. When the Service finds a technical mapping error in one part of a coastal barrier map, we review all other nearby boundaries to ensure they are mapped accurately. We work with interested parties as appropriate to produce draft maps that we provide to Congress for consideration. This comprehensive approach to boundary changes treats all landowners equitably and prevents Congress and the Administration from having to revisit the same areas in the future. The processes and approaches we currently use to assess changes to CBRA areas would also be applied to the review of proposed changes to CBRA areas that are depicted on digital maps.

- **How can we be confident that any transition to a new corrections process and digitized maps will not result in areas being excluded from the System?**

The Service's goal regarding digitizing CBRA areas is to work with Congress to maintain the long-term integrity of the System and OPAs by ensuring that the boundaries on CBRA maps are accurate. Any transition from the current CBRA maps to maps prepared with digital technology must be approved by the Congress. The Service supports continuing our ongoing efforts by recommending the legislative adoption of digital maps that make changes to CBRA lines to ensure those lines are accurate (i.e., they follow the features and/or boundaries that they were intended to follow). The Service would make recommendations based on research of the administrative record for each CBRA area.

Changes made to CBRA lines by digital maps adopted by Congress in the future will likely result in some areas being removed from, and some areas being added to, System units and OPAs. However, because the digitization process will make the boundaries accurate, it will help ensure the integrity of the System over time. In making recommendations to Congress, the Service will continue to apply a high level of objective scrutiny to all proposed changes to CBRA areas, including during any large-scale process of adopting digitized CBRA maps. The Service will continue to oppose changes in cases where our objective review indicates that the area was appropriately mapped and designated as a System unit or OPA.

The Digital Mapping Pilot Project will be a first step in any large-scale transition to digital maps. The pilot project will digitize and perfect the boundaries of 50 System units and 25 OPAs (in the form of draft digital maps). The pilot project will help to identify potential problems that could occur in making a transition to digital maps, and will propose solutions to those problems. It is difficult to speculate at this juncture whether the maps produced for the pilot project will result in a net acreage loss or gain to the System and OPAs if they are enacted by Congress. We anticipate that there may not be any significant net change. There may even be a net gain to OPAs if we uncover coastal barriers held for conservation purposes that are not currently designated as OPAs and these areas are designated as OPAs in the future.

The System (i.e., non-OPA) maps prepared for Congress as part of the pilot project will recommend boundary modifications due to natural changes (erosion and accretion) as well as "intent changes." Recommended intent changes will be based on research of the administrative record. An example of an intent change is a change to a boundary that was intended to follow the edge of a road but actually inadvertently bisects private properties on the other side of the road that were not intended to be part of the System.

The OPA maps prepared for Congress as part of the pilot project will recommend boundary modifications in cases where the OPA boundaries do not coincide with the protected area (e.g., state or national park) boundaries. We anticipate some of these recommended changes would remove private lands that are not part of protected areas, while other changes would add protected lands that are not currently part of OPAs.

We are confident that the results of the pilot study and accompanying report will demonstrate to Congress that all CBRA areas can be digitized in a process that will maintain the integrity of the System and OPAs, and will only remove areas from CBRA designation that were not intended to be so designated. Additionally, only Congress can make changes to the existing CBRA maps and can enact a transition to digital maps. As such, Congress itself has the ability to ensure that map changes that are inconsistent with CBRA are not made.

- **Would a systematic review of the OPA boundaries be an appropriate place to start once the pilot digital maps are completed?**

If the 75 CBRA areas in the Digital Mapping Pilot Project are enacted, there will be a variety of possibilities for prioritizing the consideration of the next set of digital maps. For example, one possibility, dependent on the availability of resources, is to make changes to all CBRA maps (both System units and OPAs) on a state-by-state basis. Another is to do a systematic review of OPAs. We anticipate that our Digital Mapping Pilot Project and Report to Congress will contain the Administration's recommended approach. Until the project is completed, we cannot provide a recommendation.

With regards to a systematic review of OPAs, we note that many CBRA maps contain both OPAs and System units. If we were directed to review OPA boundaries first, we would request the ability to maintain our comprehensive mapping approach. This approach attempts to remap all CBRA areas on a map at the same time so that the entire map is corrected. This would mean that we would want to review any System units that are depicted on any OPA maps that we are directed to review.

Mr. GILCHREST. Mr. Lowe?

STATEMENT OF ANTHONY S. LOWE, FEDERAL INSURANCE ADMINISTRATOR, AND DIRECTOR, MITIGATION DIVISION, FEDERAL EMERGENCY MANAGEMENT AGENCY, DEPARTMENT OF HOMELAND SECURITY

Mr. LOWE. Mr. Chairman, thank you so much for your kind words. I will pass those on to the disaster staff as well as the Region III folks who really did the best they could to try to get it right for the State of Maryland.

Mr. Chairman, Ranking Member Pallone, members of the Subcommittee, my name is Anthony Lowe, Federal Insurance Administrator and Director of the Mitigation Division of the Federal Emergency Management Agency, FEMA, of the Department of Homeland Security. On behalf of the National Flood Insurance Program, the NFIP, we welcome and appreciate the invitation to appear today before the Fisheries Conservation, Wildlife, and Oceans Subcommittee.

One of the main goals of FEMA in the Department of Homeland Security is to reduce the loss of life and property from natural and man-made disasters. The National Flood Insurance Program was established to reduce the nation's risk to the devastation of flood losses. The NFIP has a three-pronged approach to achieving its purpose, working with communities: First, identifying flood-prone areas; second, encouraging communities to adopt sound flood plain management; and last, our promise to offer NFIP flood insurance in eligible communities to homeowners and businesses. There are nearly 20,000 NFIP communities across the country.

FEMA strongly supports the U.S. Fish and Wildlife Service in its work to delineate the Coastal Barrier Resources System. As you know, these systems prohibit Federal insurance and investments that would lead to development in these sensitive protected areas. Currently, FEMA reflects the system boundaries in our flood insurance rate maps. In addition, the National Flood Insurance Act prohibits the NFIP from providing flood insurance for buildings constructed or substantially improved after placement into the system.

While the Coastal Barrier Resources Act does not prevent private flood insurance in these areas, there is not a well-defined market for private flood insurance generally, nor in particular as it pertains to the Coastal Barrier Resources System areas. Private flood insurance availability in these areas is inconsistent and largely depends on local transactions and practices. In our experience, private carrier premium rates are typically higher than NFIP premium rates.

Briefly, I would like to directly answer the questions raised by this Subcommittee. One, what would be the additional cost for providing NFIP coverage for properties that are removed from the system through legislative changes? Mr. Chairman and members of the Committee, in general, the NFIP uses full actuarial rates for such structures. Therefore, there are no additional costs to the program. From a risk perspective, buildings formerly in the system are rated similar to other high-risk buildings currently in the NFIP. Typically, flood insurance premiums for compliant structures in high-risk areas can range anywhere from $500 to $5,000 annually.

The second question, what would happen to homeowners whose policies are canceled because they were found to be within the system? In short, their NFIP policy would be canceled. In practice, two situations can result in cancellation of an NFIP policy. One, if an existing insured structure is substantially improved or damaged, the NFIP policy would not be renewed. Two, if an insured building is later shown to be in the system and not eligible for a Federal insurance policy or coverage, the policy would be canceled and the premium refunded. In these instances, the homeowner would have to seek coverage from the private sector.

Your last question, what is the cost difference between the Federal and private flood insurance coverage? We have little data to actually validate specific private insurance rates in the Coastal Barrier Resources System. However, our experience suggests that private insurance premiums are substantially higher. In fact, our research indicates that private insurance can be twice the cost of an NFIP policy.

In conclusion, the mission of the NFIP is to reduce loss of life and protect property by accurately identifying flood risks, encouraging sound flood plain management, and insuring properties in eligible communities. We appreciate the opportunity to support the Service and look forward to its digital mapping data to better identify these system areas.

Again, I thank the Subcommittee for this opportunity to testify and look forward to answering any questions you may have. Thank you.

Mr. GILCHREST. Thank you, Mr. Lowe.

[The prepared statement of Mr. Lowe follows:]

Statement of Anthony S. Lowe, Federal Insurance Administrator, and Director, Mitigation Division, Federal Emergency Management Agency, Department of Homeland Security

Chairman Gilchrest, Ranking Member Pallone, and Members of the Subcommittee, I am Anthony S. Lowe, Federal Insurance Administrator, and Director of the Mitigation Division of the Federal Emergency Management Agency of the Department of Homeland Security. On behalf of the National Flood Insurance Program (NFIP), we welcome and appreciate the invitation to appear today before the Fisheries Conservation, Wildlife and Oceans Subcommittee of the Committee on Resources.

Background

One of the main goals of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) is to reduce loss of life and property from the effects of natural and man-made hazards. The National Flood Insurance Program (NFIP) was established to reduce the Nation's risk to the devastation of flood loss. The NFIP has a three-pronged approach for achieving this goal. First, the flood hazards are identified, and FEMA provides NFIP maps that identify flood-prone areas and provide a basis for an actuarial rate for properties located in them. Second, the program requires that communities adopt and enforce sound flood plain management ordinances based on these maps and proactively manage development in the identified hazard areas. Third, flood insurance is available to residents of those communities to protect against potential economic loss from flooding.

FEMA supports the U.S. Fish and Wildlife Service (FWS) in administering and updating the Coastal Barrier Resources Systems (CBRS), which reduces and restricts Federal Government actions and investments that would result in development in these protected areas by reflecting CBRS boundaries on our NFIP maps. The purpose of the CBRS is to protect undeveloped, environmentally sensitive places. The National Flood Insurance Act prohibits the NFIP from providing flood insurance for buildings constructed or substantially improved after placement in the CBRS.

When Congress passes a law that revises CBRS boundaries, FEMA coordinates with the FWS to revise the flood insurance rate maps. FWS provides revised maps and the new boundaries are transferred onto the flood maps where flood insurance prohibition dates are noted. FEMA then presents these draft maps to the FWS for review and concurrence. The maps are then published and used by the lending and insurance industries. We have worked closely with FWS and our joint efforts have resulted in reducing the time it takes to finalize revised maps. We also coordinate with the FWS to disseminate information via letters and our website to state and local governments, lending institutions, and the insurance industry to keep stakeholders apprise of changes.

While FEMA mitigation measures serve to protect buildings, FEMA appreciates its role in cooperating with FWS to prevent damage to fragile coastlines. We understand that damage to fragile ecosystems can be long-lasting or irreparable and support FWS in their mission.

Flood Insurance Availability

Eligibility for Federal flood insurance in CBRS depends upon whether the community in which the building is located is impacted by the 1982 or the 1990 Act. While the rules regarding coverage are detailed, generally, a CBRS building will be covered by the NFIP under either Act under the following circumstances:

- There was a legally valid building permit for construction of the building issued prior to a statutory cut off date (October 1, 1983, for the 1982 Act, November 16, 1990, for the 1990 Act);
- Construction began or was complete prior to the statutory cutoff date; and
- The building was not substantially damaged or improved after the statutory cutoff date.

Flood Insurance Costs

NFIP policy rates are set according to the property's zone, which takes into account various flood risk factors. Rates are generally commensurate with the risk. Flood insurance premiums for compliant structures in flood-prone areas typically range from $500 to $5,000 annually.

The CBRS Act of 1982 does not prevent private development, financing or private flood insurance in the CBRS. Private flood insurance availability in CBRS areas is inconsistent, and largely dependent on local business practices. Companies may provide flood insurance in the CBRS, but are unlikely to market such an insurance product. Private carrier premium rates are typically higher than NFIP premium rates.

Subcommittee Questions

I would like to address the questions raised by this Subcommittee. First, what would be the additional costs for providing NFIP coverage for properties that were removed from the CBRS through legislative changes? Second, what would happen to homeowners whose policies were cancelled because they were found to be within the system? And, third, what is the cost difference between federal and private flood insurance?

In response to the first question, in general, the NFIP uses actuarial rates for such structures, and, in these cases, there will be no additional costs to the program. This is due to the fact that buildings in the CBRS would generally—from a risk perspective—be similar to other high-risk buildings currently in the NFIP. There may, however, be costs from an environmental perspective that the Fish and Wildlife Service can address.

There are two possible situations that can result in the NFIP coverage being cancelled. If an existing insured structure is substantially improved or damaged, the NFIP policy will not be renewed. Or, if an insured building is shown to be in the CBRS and not eligible for the Federal flood insurance, the NFIP policy will be cancelled and premium refunded when the error is discovered. The homeowner would have to seek coverage from the private sector.

In such a case, there will be cost implications for the homeowner seeking private insurance, because (as noted earlier) private insurance will be more expensive. In fact, our sources indicate, flood insurance purchased from the private sector might cost twice as much as NFIP flood insurance coverage.

Conclusion

The mission of NFIP is to reduce flood damages, loss of life, and economic disruption by accurately identifying flood risks, encouraging sound floodplain management techniques, and providing a mechanism through which people can insure their homes against flooding. We appreciate the opportunity to support the U.S. Fish and Wildlife Service in updating and implementing the CBRS and hope that the

information provided will be useful to the Subcommittee in its deliberations. Once again, I thank the Subcommittee for the opportunity to testify before you today, and will be glad to answer any questions you may have.

Mr. GILCHREST. Mr. David Salvesen? Thank you, sir, for coming.

STATEMENT OF DAVID A. SALVESEN, CENTER FOR URBAN AND REGIONAL STUDIES, UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, CHAPEL HILL, NORTH CAROLINA

Mr. SALVESEN. Thank you, Mr. Chairman and members of the Committee. I am delighted to be here to talk about CBRA. And for the record, when I came last night, it was absolutely pouring. It wasn't a bright sunny day, but I am delighted it has cleared up today.

My name is David Salvesen. I work for the Center for Urban and Regional Studies at UNC-Chapel Hill. The Center, briefly, it is an organization that conducts research on a wide variety of topics related to housing, land use, transportation, and the environment.

A few years ago, I spent quite a bit of time researching the Coastal Barrier Resources Act. I asked a few simple questions. One was what has been the impact of CBRA on development in CBRA units, and two, why have some units developed despite the withdrawal of Federal subsidies? What I would like to do is just go very quickly through what I did and how I did it and then jump to some findings and recommendations. Hopefully, I will get there before the timer beeps me.

I conducted five case studies. I went to five CBRA sites, two in Alabama, one in Florida, one in South Carolina, and one in North Carolina, and I picked these not at random. I picked them because these were the sites that were under tremendous development pressure. They had either already undergone some development or there was a lot of pressure to develop in these units.

I talked to people at each of the sites. I spent two, three, four, or 5 days. I talked to Realtors, developers, appraisers, elected officials, anybody who would talk to me and seemed knowledgeable about CBRA, and what I found was that, first of all, the vast majority of CBRA units remain undeveloped, although it is hard to tell sometimes because there has been no complete, comprehensive inventory of all the units. But based on my analysis, the vast majority of the sites remain undeveloped.

Some CBRA units, however, have developed so much that they are virtually indistinguishable from the non-CBRA areas, places like North Bethany Beach, North Topsail Beach—I should say Bethany Beach in Delaware, North Topsail Beach in North Carolina, and Cape San Blas in Florida.

Many of the CBRA units probably would not have developed anyway. They are low-lying. They are isolated. They consist primarily of wetlands. They are inaccessible. And as one person in South Carolina told me, at least regarding the CBRA units in South Carolina, most of the lands put in CBRA were the crummy lands anyway.

There are many different factors that influence development in CBRA. That is one person in South Carolina's opinion.

Mr. GILCHREST. Not crummy lands to the ducks, I guess, or the turtles.

Mr. SALVESEN. No, crummy lands for development. They are not the kind of places you would pick for development and that is why they were undeveloped in 1982.

But there are many different factors that influence development of CBRA. The withdrawal of subsidies is one of those. The strength of the real estate market. Again, the topography or geology. Some of the units off the coast of Mississippi would probably never develop. They are just too low-lying and too isolated. The beaches are not very attractive. They are mostly a mud mixture.

One of the key findings, however, is that a strong real estate market trumps CBRA. Where the market is strong enough, developers will find it cost effective to build their own infrastructure, to put in their own water and sewer system, to build their own roads, and even help their buyers find private flood insurance in the private market.

Private flood insurance is expensive. I would agree with Mr. Lowe's comments. But when you can rent your property for $3,000 to $4,000 a week during prime season, you just fold that into the costs of the rent and you make it back quite easily in a year. And I would add that most of the properties that are built along the coast today, in my opinion, are built for the rental income they generate. These are not properties where people are going to live in year around.

Most developers and Realtors, unfortunately and surprisingly, are unfamiliar with CBRA. When I talked to them about the Coastal Barrier Resources Act, many of them didn't have a clue what I was talking about. These are even people who develop in coastal areas. Many insurers, I talked to a gentleman from FEMA, many insurers unwittingly issued NFIP policies to people who live in CBRA areas. We found this out after Hurricane Fran hit North Carolina, that a lot of policies were issued in error and FEMA refunded their money.

CBRA lands seem to develop last. In many places I went to, the non-CBRA areas are developed first because there are fewer restrictions there. You can get the infrastructure. Your people can get National flood insurance policies. But when everything else is gone, then the CBRA areas are going to go next. As one Realtor told me on the Fort Morgan Peninsula in Alabama, he said CBRA lands are the only game in town and that is where all the development is going to happen now.

And finally, I think one indication of the strength of CBRA are the number of efforts to remove property from the CBRA boundaries. If CBRA wasn't providing a disincentive for people to develop in the CBRA units, then I don't think we would see so many efforts to have people's property withdrawn from the system.

In conclusion, I think that by itself, CBRA will not prevent development from occurring. Where the market is strong and where State and local governments adopt policies to undermine the Act, then development will occur. In some cases, for example, local governments may build private water and sewer systems to facilitate development.

But the converse is also true. Where State and local policies support the spirit and intent of CBRA, then development will not occur. I didn't find many examples of this, but Dauphin Island, Alabama, is one where the State drew its coastal setback line on the same boundary as the CBRA line and the local government, the Town of Dauphin Island, zoned the entire area for conservation and open space, and so that area has not developed.

Very quickly, because I am out of time, I think a couple of quick recommendations. One is to improve outreach. Again, many people have never heard of CBRA. They don't know about it. They buy property. They later find out that they can't get flood insurance. They sue the Realtors or whatever. I think there needs to be greater outreach for buyers, for developers, for insurers, and for State and local coastal zone managers. I was shocked at the lack of awareness.

And in order for any market system to work, you have to have, if I remember my Economics 101 correctly, you have to have perfect information and there isn't enough information out there, and perhaps that is something the Fish and Wildlife Service could do.

I think the match should be made much more readily available. As a researcher, it was difficult to me. Whenever I wanted to do an inventory of my own systems, I had to go either to Washington, or Arlington, or the local Fish and Wildlife Service in North Carolina to have a look at their aerial photos and maps. They should be digitized. They should be made available to local governments. They should be on tax assessor files and in local plans.

Third, I think, if possible, the Federal Government should try to reach partnerships with State and local agencies to identify the CBRA areas, to identify and prioritize those areas that should be protected either through acquisition programs or whatever.

I think CBRA should be incorporated in State Coastal Zone Management plans. There should be a requirement for consistency among Federal agencies in their decisions that affect CBRA, so if you have one agency building a road or expanding a highway that is going to affect development that doesn't seem to be all that consistent with CBRA, perhaps Fish and Wildlife Service should have more than just an oversight role in that.

And finally, I will give a plug for State and local governments who would like to acquire some of these CBRA lands. Maybe there is some way for the Federal Government to simply buy these areas. When I go to North Topsail Beach, every time I go there, I see that the lands at the very northernmost part of the island are not in CBRA, but most of the area leading up to that are. So whenever the road gets washed out or the water and sewer system gets damaged, they have got to repair that. It becomes an issue because they say—the local government wants to expand it so they can allow more development to occur and the Fish and Wildlife Service has held the line and said, no, I am sorry, we can't expand it but we can repair it. If you go back 20 years, you should have just bought out those few, relatively few acres up at the top of the island and that would have made things a lot simpler for everybody.

But in any case, I am sorry to rush through this. I am out of time and I thank you for inviting me to give testimony today.

Mr. GILCHREST. Thank you very much, Mr. Salvesen.

[The prepared statement of Mr. Salvesen follows:]

Statement of David Salvesen, Center for Urban and Regional Studies, University of North Carolina at Chapel Hill

BACKGROUND

Coastal barriers are long, narrow bars of sand found just offshore, wherever low coastal plains and other conditions of geology and weather favor their creation. Commonly referred to as barrier islands, coastal barriers also include bay barriers and barrier spits that attach directly to the mainland. From the Gulf of Maine to Padre Island, Texas, coastal barriers form an almost unbroken chain, like beads on a necklace, along the Atlantic and Gulf coasts. The chain includes over 400 barriers and totals approximately 2,700 miles of shoreline. Lying parallel to the shore, coastal barriers function as buffers, protecting the mainland against the destructive forces of storm-driven waves, hence the name barrier. The barriers themselves survive the occasional onslaughts by rolling with nature's punches. Rather than stand fast against the irrepressible sea, the barriers migrate inland, at varying rates, in response to wind, waves, and rising sea levels that roll the sand off their outer edges back and into their interiors.

The wind-swept, isolated beauty of coastal barriers has always attracted people. Millions of Americans have enjoyed weekend getaways and summer vacations on our barrier beaches. Over the last 20 years or so, many of these isolated outposts of sand have undergone a boom in second-home and resort development. Yet, the low elevation, narrowness, and shifting sands of coastal barriers make them extremely risky places for beachfront development.[1] It is not uncommon for houses on coastal barriers to be washed away, rebuilt, and then destroyed again by a subsequent storm. Coastal barriers do not stand still, which is contrary to the way we think of land as behaving (Hansen, 1993).

For decades, the federal government has encouraged private development on coastal barriers through financial assistance for the construction of highways and bridges, water supply and wastewater treatment facilities, and beach stabilization projects (Godschalk, 1984:1; Brower, Godschalk and Beatley, 1986:258; Jones, 1991:1027).[2] Federal disaster assistance and flood insurance also have facilitated coastal development by transferring much of the risks and costs of development from the private sector to the public sector (U.S. DOI, 1982; Beatley, Brower and Schwab, 1994).[3] Federal subsidies have perpetuated a cycle of subsidized development, destruction and subsidized redevelopment. After a major coastal storm or hurricane sweeps across a coastal barrier, damaging or destroying development subsidized by government, federal disaster relief helps rebuild the damaged properties. For example, after hurricane Frederic destroyed the bridge to Dauphin Island, Alabama, in 1979, the Federal Highway Authority provided funds to reconstruct the bridge at a cost of $32 million, a subsidy of about $26,000 (in 1982 dollars) for each of the island's 1,220 permanent residents (Kuehn, 1984:595).

In 1977, President Carter called for an end to federally subsidized projects on barrier islands. That same year, the Barrier Islands Work Group, comprised of the U.S. Department of Interior, the Department of Commerce and the Council on Environmental Quality, began a series of studies that focused on identifying and assessing

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[1] It has long been known that building on sand in hazard-prone areas is risky business: "And everyone that heareth these sayings of mine, and doeth them not, shall be likened unto a foolish man, which built his house upon the sand. And the rain descended, and the floods came, and the winds blew, and beat upon that house, and it fell, and great was the fall of it." Matthew 7:26-27.

[2] A classic example is Cape Hatteras on North Carolina's Outer Banks. At the time the Cape Hatteras National Seashore was authorized in 1937, there were eight small fishing villages scattered along the three barrier islands that make up the federal seashore. These villages are outside the boundaries of the federal seashore. Development was concentrated primarily in protected areas behind natural dune systems. In 1962, construction of the Herbert Bonner Bridge provided direct access to the mainland and stimulated construction on the formerly isolated islands. Second home development occurred in primary sand dunes, rapidly eroding areas sites of former inlets and ecologically sensitive areas. By the 1970s, several wells in the Village of Avon became contaminated by inadequately treated wastewater from septic tanks. In the 1970s, the Cape Hatteras Water Association obtained a loan from the Farmers Home Administration to build a water line from Buxton to Avon. The new water line spurred additional development. Eventually, however, the limited capacity of the electric transmission line across Bonner Bridge curtailed development, at least until the Rural Electricfication Administration subsidized the construction of a newer, larger line across the bridge (U.S. Department of Interior, Final Environmental Impact Statement, Undeveloped Coastal Barriers, 1983, pg. A-96).

[3] Burby, et al., (1999) stated that federal subsidies, (e.g., federal disaster relief and income tax write-offs), have encouraged people to build in hazard-prone locations.

alternative approaches for protecting coastal barriers and reducing recurring federal costs associated with their development. In January 1980, the Work Group released a Draft Environmental Statement, which examined federal programs that, through grants, loans, permits or acquisition, contributed to the development or conservation of coastal barriers. The Environmental Statement noted that many federal programs worked at cross-purposes, and it called for a consistent federal policy on coastal barriers.[4]

In 1981, Congress took the first step toward reducing federal subsidies that facilitate development of coastal barriers when it enacted the Omnibus Budget Reconciliation Act (PL 97-35) or OBRA, which amended the National Flood Insurance Act of 1968 and prohibited the sale of federal flood insurance for new construction on undeveloped barrier islands after October 1, 1983.[5] In April 1981, Senator John Chafee (R-R.I.) introduced a bill (S.B. 1018) that expanded the scope of the prohibition of federal expenditures and financial assistance on designated coastal barriers, while Representative Thomas Evans (R-Del.) introduced a nearly identical bill (H.B. 3252) in the House (Kuehn, 1984:599). Chafee, an early advocate of nonregulatory approaches to conserving the coastal environment, called federal subsidies of coastal development a "travesty," particularly when domestic assistance programs were being cut.

> *In the context of this country's fiscal austerity, it seems to me subsidizing development by the federal government is really a travesty. We are reducing school lunch programs. We are reducing support for Medicaid and a host of other programs. Certainly it makes no sense to spend federal dollars to enrich a group of developers whose goals are hardly compatible with the public's interest or the national interest.*[6]

The Chafee-Evans bill, the Coastal Barrier Resources Act or CBRA, brought together strange bedfellows—fiscal conservatives, environmentalists and those opposing additional federal regulations, and garnered support among Democrats and Republicans alike.[7] The bill was signed by President Reagan on October 18, 1982.[8] The history of CBRA is summarized briefly in Figure 1.3.

Figure 1.1: Chronology of the Coastal Barrier Resources Act

1976	President Carter calls for an end to federally subsidized projects on barrier islands.[12]
1977	The U.S. Department of Interior (DOI) begins a study to assess options for modifying federal programs affecting coastal barriers.
1980	Results of the DOI study released in a draft Environmental Impact Statement.
1981	Omnibus Budget Reconciliation Act (PL 97-35) amends the National Flood Insurance Act of 1968, withdrawing federal flood insurance from designated coastal barriers.
1981	Sen. Chafee (R-R.I.) and Rep. Evans (R-Del.) introduce legislation to create CBRA
1982	President Reagan signs Coastal Barrier Resources Act on October 18, 1982.
1983	Final Environmental Statement issued in May.
1983	North Carolina developers, led by Marlow Bostic, file lawsuit against the federal government, alleging that their property was erroneously included in the system.

[4] U.S. Department of the Interior. "Final Environmental Statement: Undeveloped Coastal Barriers." May 1983. In 1982, an amendment by Senator Chafee, CBRA's chief sponsor, repealed this provision (Section 341(d)(2)), of the Omnibus Budget Reconciliation Act and inserted it into CBRA (in S1018).

[5] Congressional Record, July 1, 1982, p. 15660.

[6] Coastal Barrier Resources Act: Hearings Before the Environmental Pollution Subcomm. of the Senate Comm. on Environment and Public Works, 97th Cong., 1st and 2nd Sess. (1981-82), Statement by Senator Chaffee.

[7] Twenty-eight Democrats and 30 Republicans cosponsored the Senate CBRA bill, S.1018, while 68 Democrats and 61 Republicans cosponsored the House CBRA bill, H.R. 3252 (Jones, 1991:1058).

[8] In May 1982, the U.S. Department of Interior, in cooperation with the Federal Emergency Management Agency, released a draft environmental statement for use in implementing OBRA's directive requiring the Secretary of the Interior to designate undeveloped coastal barriers for the purpose of prohibiting new federal flood insurance. CBRA became law prior to the completion of the final environmental statement. The designation of undeveloped coastal barriers was established legislatively by the Act.

[12] Congressional Record. March 2, 1982, pg. 2885

1984 Federal judge rules against Bostic and upholds CBRA. The decision was affirmed on appeal.[13]
1990 Coastal Barrier Improvement Act amends CBRA and expands CBRS.
1996 Rep. Tillie Fowler (R-Fla.) attaches rider to Omnibus Parks bill to remove areas from CBRS. President Clinton signs the bill.
1997 The Coast Alliance, a nonprofit environmental group in Washington, D.C., files lawsuit asserting that DOI made changes to the wrong maps.
1998 United States District Court for the District of Columbia rules in favor of the Coast Alliance and strikes down the Fowler amendment.
1998 Tillie Fowler attaches rider to Omnibus Appropriations bill, which passes and is signed by the President. Seventy-five acres removed from CBRS units in Florida.
2000 CBRA reauthorized (Coastal Barrier Resources Reauthorization Act of 1999).

* * *

CBRA's purpose is to minimize loss of life, wasteful expenditures of federal revenues, and damage to fish and wildlife and other natural resources. Prohibitions on federal expenditures in designated areas went into effect immediately, while those for federal flood insurance did not become effective until one year later (October 1, 1983). CBRA prohibits federal financial assistance[9] for roads, bridges, flood insurance, utilities, erosion control, and post-storm disaster relief for new development on designated "undeveloped" areas of coastal barriers.[10] Areas designated as undeveloped were those with less than one walled and roofed building per five acres of fastland,[11] areas lacking urban infrastructure, vehicle access, water supply, wastewater disposal, and electric service to each lot and areas that were not part of a development of 100 or more lots. In addition, designated units had to have at least one-quarter mile of oceanfront.

CBRA carves out certain exceptions under which the expenditure of federal money is permitted. Section 6 of the Act grants exceptions for energy projects, military activities, Coast Guard facilities, maintenance of channel improvements, and the "maintenance, replacement, reconstruction, or repair, but not the expansion, of publicly-owned or publicly-operated roads, structures, or facilities that are essential links in a larger network or system."[14] Structures or facilities include public utilities. A related exemption permits federal expenditures or financial assistance for the maintenance, replacement, reconstruction, or repair, but not the expansion, of publicly-owned or publicly-operated roads, structures, or facilities that are not essential links, but only if such expenditures or assistance are "consistent with the purpose" of CBRA.[15] Thus, a developer can build a road within the system, dedicate it to public use, and make the road eligible for federal assistance for maintenance or replacement after a storm (Kuehn, 1984:623).

The Federal Highway Administration has determined that all roads and highways in the federal-aid highway system are, by definition, "essential links" because they are links to a larger network of roads. As a result, all of the roads and highways in the federal-aid highway system satisfy the threshold criteria for the 6(a)(3) exception (Babb, 1996). A road that qualifies for the 6(a)(3) exception need not show that its construction is consistent with CBRA (Department of Interior, 1983:45667).

Congress initially designated 186 CBRA units, comprising some 453,000 acres along 666 miles of shoreline of the Atlantic and Gulf coasts. The units range from small, isolated shoals of sand scarcely above sea level to chains of islands stretching hundreds of miles, some of which individually exceed a mile in width (GAO, 1992:11). These designated units comprise the Coastal Barrier Resources System

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[13] M.F. Bostic et al. vs. United States of America, U.S. District Court, Eastern District of N.C., No 83-139-CIV-4)

[9] Financial assistance is defined as "any form of loan, grant, guaranty, insurance payment, rebate, subsidy, or any other form of direct or indirect federal assistance," CBRA § 3(3), 16 U.S.C. § 3502(3) (1982).

[10] Coastal barrier is defined as "a depositional geologic feature that (i) consists of unconsolidated sedimentary materials, (ii) is subject to wave, tidal, and wind energies, and (iii) protects landward aquatic habitats from direct wave attack." The definition encompasses all associated aquatic habitats, including wetlands, marshes, estuaries, inlets, and near shore waters, CBRA § 3(1), 16 U.S.C. § 3502(3) (1982).

[11] Fastland—above mean high tide. Generally refers to land that is not wetlands or open water.

[14] CBRA (16 U.S.C. 3505 § 6(a)(3)) (1982).

[15] CBRA (16 U.S.C. 3505 § (6)(a)(6)(F)) (1982). The Act also provides exemptions for nonstructural shoreline stabilization measures, scientific research, and for emergency actions essential to save lives, protect property and public safety.

(CBRS). In 1990, Congress expanded the system to 854 units by adding new units along coastal states from Maine to Texas and by including coastal barriers along the Great Lakes, Puerto Rico, the Florida Keys and the Virgin Islands. Two hundred and seventy of the new units added in 1990 were already protected from development because they are part of a National Wildlife Refuge, National Seashore, state park or are owned by nonprofit land conservation groups such as The Nature Conservancy. These already-protected units, which encompass some 1,786,242 acres, are known as "Otherwise Protected Areas" or OPAs.[16] Table 1 provides a brief summary of certain characteristics (size and composition) of CBRS units, excluding the Otherwise Protected Areas. The vast majority of land (87.4%) in the non-OPA CBRS units is comprised of wetlands.

Table 1: Summary Statistics: Coastal Barrier Resources System (excluding Otherwise Protected Areas)

State	Number CBRS Units	Total Area (Acres)	Fastland (Acres)	Wetlands (Acres)	Shoreline Miles
AL	3	13,690	5,699	7,991	17.76
CT	25	7,469	943	6,526	16.70
DE	4	6,497	589	5,907	14.40
FL	66	284,667	41,106	243,561	238.13
GA	6	68,202	5,069	63,134	20.54
LA	17	300,136	8,626	291,510	152.59
ME	26	4,798	1,191	3,607	28.30
MD	36	6,255	1,015	5,240	27.10
MA	61	64,039	7,509	56,530	129.70
MI	45	13,409	4,924	8,485	59.20
MN	1	901	217	684	3.10
MS	6	5,990	422	5,568	13.76
NJ	9	9,105	1,182	7,923	7.70
NY	80	76,015	10,488	65,527	93.30
NC	10	48,718	8,009	40,709	47.20
OH	10	5,195	2,021	3,175	10.00
PR	41	40,519	5,366	35,154	54.80
RI	21	10,322	1,739	8,583	29.50
SC	16	97,872	10,216	87,656	74.70
TX	17	231,162	47,834	183,328	172.30
VI	24	2,175	636	1,539	9.70
VA	53	27,361	1,389	25,972	70.70
WI	7	1,953	614	1,339	9.00
Total	584	1,326,449	166,803	1,159,646	1,300

[16] Personal communication with Paul Souza, December 28, 2001. U.S. Fish and Wildlife Service, Arlington, Va.

Despite some setbacks, CBRA still enjoys broad bipartisan support in Congress, as evidenced by its reauthorization in 2000. The reauthorization codified the criteria used to determine if a coastal barrier is developed (one structure per five acres of fastland or a full compliment of infrastructure). It also renamed CBRS after its chief sponsor and advocate, Senator Chafee, who died in October 1999. Now, CBRS is officially called the John H. Chafee Coastal Barrier Resources System.

CBRA departs from more traditional approaches to conserving natural resources, such as regulating or acquiring land. If successful, the same technique—withdrawing growth-inducing subsidies—could also be used to protect wetlands, floodplains, endangered species habitat, and other natural resources.[17] In adopting CBRA, however, federal policymakers may have overlooked the key role of state and local governments, as well as the role of policy coalitions, in shaping development on coastal barriers.[18] By itself, the Act will not prevent development. In fact, it appears that development in CBRS units will occur if (1) development pressure is strong enough to overcome the disincentives posed by CBRA, and (2) state and local governments facilitate development in CBRS units. For example, a local government may substitute its own subsidies for those withdrawn by the federal government. Nothing in the Act prevents this from occurring. However, state and local governments also may enact policies to discourage or prevent development in CBRS units.

CBRA is a simple, straightforward federal law that seeks to discourage development in designated coastal areas by removing development subsidies, thus making development in CBRS units more expensive. The basic premise of the Act is that conservation can be achieved without increasing federal regulatory involvement simply by withdrawing federal financial support for development in high-risk coastal areas. Several studies have shown that the provision of infrastructure spurs development (Tabors, Shapiro and Rogers, 1976; Urban Systems Research and Engineering, Inc., 1976). Burby, et al, (1988:6) found that locating capital facilities such as streets and water and sewer lines in and near flood hazard areas tends to encourage urban encroachment into the floodplain. A study of barrier island development near four National Seashores (Cape Hatteras, North Carolina; Cumberland Island, Georgia; Padre Island, Texas; and the Gulf Islands in Alabama, Florida and Mississippi) found that uniformly, little development occurred on the barrier islands until road, bridge, or causeway access was provided from the mainland (Sheaffer & Roland,Inc., 1981). The corollary was true as well: where no such access existed, little development occurred.[19]

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[17] In 1983, former Interior Secretary James Watt submitted a draft bill to Congress that applied the expenditure limitation approach to wetlands. Entitled the "Protect Our Wetlands and Duck Resources Act of 1983," the legislation would have established a resource system comprising undeveloped wetlands of five acres or more that provide significant wildlife, fisheries, or water purification benefits, (Kuehn, 1984:633). The proposed legislation, introduced in the Senate by Chaffee, was never enacted.

[18] In 1982, there was considerable controversy and debate over whether CBRA's subsidy limitation approach alone would achieve the Act's resource protection goals (Jones, 1991:1017). Section 10 of CBRA directed the Secretary of Interior to prepare, within three years of the Act's enactment, a report to Congress that contains recommendations on conserving the natural resources of the CBRS. In response, the Department of Interior released draft reports in 1985 and 1987, with final recommendations to Congress in 1988. The 1985 report recommended several alternative means of conserving natural resources in CBRS units, such as changing the tax code (for example to eliminate casualty loss deductions), acquiring land, or requiring consistency with CBRA in federal permitting activities (USDOI, 1985). Most of these recommendations never made it into the final report.

[19] Sheaffer and Roland (1981) found that the private sector or state and local governments bore the initial costs of providing roads, bridges, or causeways to coastal barriers, while the federal government typically subsidized later expansion, improvement, repair, rehabilitation or replacement (Sheaffer and Roland, 1981:24).

Table 2: Developed CBRS Units

Unit Name (and number)	State	Total No. Structures	Total Acres Fastland	No. Structures per 5 Acres Fastland[20]
Ft. Morgan Peninsula(Q01)	AL	153	4,018	0.20
North Bethany Beach (H1)	DE	201	141	7.13
Cape San Blas (P30)	FL	500	2,272	1.1
Moreno Point (P32)	FL	39	2,688	0.07
Hatteras Island (L03)	NC	15	1,288	0.06
North Topsail Beach (L06)	NC	348	1,045	1.66
Dafuskie Island (M13)	SC	132	1,320	0.5
Litchfield Beach (M02)	SC	15+	28	2.7

Source of estimates on number of structures in CBRS unit:

Ft. Morgan Peninsula: direct counts by the author using 2001 aerial photographs

North Bethany Beach: Daniel, Heather. 2000. The Coastal Barrier Resources Act: Impact on Development in the Coastal Zone, Masters Thesis. University of Delaware.

Cape San Blas: Rough estimate provided by David Richardson, planner for Gulf County, Pers. communication, 2/15/02. U.S. GAO (1992) estimated that there were 332 residences in 1992.

Moreno Point: U.S. General Accounting Office, 1992. GAO estimated that there were 39 structures in 1992. Considerable development has taken place since then, and I suspect that Moreno Point would no longer qualify for inclusion in CBRS. More recent estimates of development were unavailable.

Hatteras Island (as of 2002: there are about 100 lots in the CBRS unit, 15 have houses on them).

North Topsail Beach. Direct counts by the author using 1996 (post-Fran) aerial photos plus personal communication with John Starzinski, building inspector for North Topsail Beach, 2/25/02. The number for North Topsail Beach is somewhat misleading. First, many of the structures are high-rise condominiums with up to 230 units (there are an estimated 820 dwelling units in the CBRS unit of North Topsail Beach). Second, over 260 homes at North Topsail Beach were destroyed by Hurricane Fran, most of which were in the CBRS unit. About half that many (130) have been rebuilt since 1998.

Daufuskie Island: Teri Norris, Planner, Beaufort County, S.C. Pers. communication, February 20, 2002.

Litchfield Beach: direct count by the author during on-site visit and follow-up call in 2000.

Without easy access, a reliable source of potable water, and some form of wastewater treatment, extensive development on coastal barriers is unlikely.[20]

The vast majority of CBRS units remain undeveloped.[21] Yet, the lack of development may be due to factors other than the withdrawal of federal subsidies. For example, most CBRS units are remote and relatively inaccessible by automobile. Others consist primarily of wetlands and would be difficult to develop or are in public ownership and are off-limits to development. In several CBRS units, however, substantial development has occurred. For example, a 1990 study by the National Wildlife Federation found that, of the 157 CBRS units examined, nearly 600 structures

[20] A survey of coastal developers by Godschalk (1984) indicated that the lack of water and sewer would constrain development on barrier islands.

[21] Souza, Paul. Personal communication. December 28, 2001. U.S. Fish and Wildlife Service, Arlington, Va.

had been built since the Act was adopted. Only 10 units showed an increase of ten or more structures. Five states (Alabama, Delaware, Florida, North Carolina and South Carolina) accounted for 91 percent of the new construction (Jones and Stolzenberg, 1990).

In 1992, the U.S. General Accounting Office (GAO) reviewed 34 geographically dispersed CBRS units and determined that eight had undergone significant new development since CBRA was enacted. In all, GAO determined that about 1,200 new structures were built in CBRS units since 1982, with most of the construction occurring on barrier islands in Alabama, Delaware, Florida, North Carolina and South Carolina (GAO, 1992). Several CBRS units have experienced so much development that they would no longer meet the criteria for inclusion in the system, i.e., greater than one structure per 5 acres of fastland. Table 2 lists the CBRS units that have undergone the most development.

The amount of development in the CBRS units shown ranges from 15 to over 500 structures. Four of the CBRS units have undergone so much development that they no longer meet the minimum criteria for being included in the system: less than one structure per five acres of fastland. North Bethany Beach, which is surrounded by development, has over 7 structures per five acres of fastland. And the CBRS unit at North Topsail Beach includes an estimated 820 dwelling units in some 348 structures.

RESEARCH METHODS

From 1998-2002, I conducted an analysis of the Coastal Barrier Resources System as part of my dissertation at the University of North Carolina at Chapel Hill. I conducted case studies of five Coastal Barrier Resources System (CBRS) sites in four states: Alabama, Florida, North Carolina and South Carolina. In addition, I conducted a survey of state coastal managers (in states with CBRS units) and key informants within each state selected for analysis. My research sought to explain why development has occurred in some CBRS units, despite the withdrawal of federal subsidies to these units. I sought to answer the following questions:

1. To what extent does CBRA limit development in CBRS units?
2. How do the policies and actions (e.g., providing funds for infrastructure in a CBRS unit) of state and local governments affect the development of CBRS units?
3. To what extent do other key stakeholders, (e.g., developers and conservation groups) account for the difference in the level of development among certain CBRS units?

Previous reports on development in CBRS units (e.g., Godschalk, 1984; GAO, 1992; Jones and Stoltzenburg, 1990; USDOI, 1983) indicated that CBRS units in five states—Alabama, Florida, North Carolina, South Carolina and Delaware—had undergone the most development or were under strong development pressure. In its Final Environmental Statement (1983), the U.S. Department of Interior predicted that CBRA would have the greatest impact in North Carolina, South Carolina, Florida and Texas "where large acreages of undeveloped fast land are available for development and intense development pressure now threatens large sections of the coast" (USDOI, 1983:IV-12). The Department of Interior also predicted that CBRA would also have a significant effect in Alabama and Mississippi.[22]

In deciding which CBRS units to select for case study, I focused on the states containing CBRS units that had experienced development or were under strong development pressure, i.e., Alabama, Delaware, Florida, South Carolina and North Carolina. In addition, I also sought units that would provide variation by state (i.e., CBRS units from different states) and by the amount of development that had occurred.

Based on published reports, discussions with key informants (primarily federal and state resources agencies and nonprofit coastal conservation groups), and analysis of aerial photographs, I identified those CBRS units that had experienced the most development. These units are shown in 3. As shown in the table, only 4 CBRS units have experienced substantial development, that is, have more than one structure per five acres of fastland, although I was not able to verify the amount of development in all units within the Coastal Barrier Resources System. The Ft. Morgan peninsula is included in the table because it has undergone considerable development in the last five years and because it is under intense development pressure. Also, the 0.20 figure for the number of structures per five acres of fastland in the

[22] "Although the undeveloped coastal barrier acreage is small, significant effects are also likely in Mississippi and Alabama, where there is considerable development pressure on several areas," U.S. Department of the Interior. 1983. Final Environmental Statement, Undeveloped Coastal Barriers, pg. IV-12.

Ft. Morgan CBRS unit is somewhat misleading. First, a large chunk of the CBRS unit is within the Bon Secour Wildlife Refuge and thus is off-limits to development. Second, much of the recent development is in the form of large, multi-story condominiums, thus calculating the number of dwelling units per five acres of fastland may provide a more accurate indication of the amount of development that has occurred.

Once I narrowed my focus to these five states, the selection of units to study was fairly easy, since there were few developed CBRS units to choose from, except for those units in Florida. For example, there is only one developed CBRS unit in Delaware (North Bethany Beach), one in North Carolina (North Topsail Beach), one in Alabama (Ft. Morgan peninsula) and one in South Carolina (Litchfield Beach). The other two CBRS units selected—Dauphin Island, Alabama, and Hutchinson Island, Florida—were selected because they were identified by key informants as CBRS units subject to strong development pressure. In addition, while other CBRS units in Florida—Cape San Blas and Moreno Point—were considered, due to the amount of development that has occurred in these units, I selected the Hutchinson Island unit because I wanted to build on the pilot study by Godschalk (1984), which included a case study of this unit (as well as North Topsail Beach).

Table 3: The Most Developed CBRS Units

Unit Name (and number)	State	Total No. Structures	Total Acres Fastland	No. Structures per 5 Acres Fastland
Ft. Morgan Peninsula (Q01)	AL	153	4,018	0.20
North Bethany Beach (H1)	DE	201	141	7.13
Cape San Blas (P30)	FL	500	2,272	1.1
North Topsail Beach (L06)	NC	348	1,045	1.66
Litchfield Beach (M02)	SC	15+	28	2.7

Budget constraints prevented me from including CBRS units from Delaware and from including additional CBRS units from within the four states selected. Table 3 summarizes the characteristics of the most-developed CBRS units identified while Table 4 summarizes the characteristics of the five specific CBRS units selected for analysis.

One of the findings of my research is that little is known about the exact amount and type of development that has occurred in CBRS units. The U.S. Fish and Wildlife Service does not keep an accurate account of development activity (e.g., number of dwelling units or structures) in CBRS units. For example, in 1992, the U.S. General Accounting Office estimated that there are 332 residences at Cape San Blas, a CBRS unit in Florida (U.S. GAO, 1992:27). However, I could not obtain a more recent estimate from the Service—the planner for Gulf County, Florida (where Cape San Blas is located) estimated that as of February 2002, there were upwards of 500 structures in the unit.

The units selected for case study meet the range of characteristics desired for my analysis. That is, variation in size, location (different states), development pressure and in the amount of development that has occurred. In addition, each has sufficient vacant land for development. As shown in Table 4, the five CBRS units selected range in size from 103 acres at Litchfield Beach to over 15,000 acres at Hutchinson Island, and in the level of development from low (none) at Dauphin Island to high (over 800 dwelling units) at North Topsail Beach. Three of the CBRS units selected are on barrier islands, two on peninsulas. Wetlands make up at least 49 percent of each of the CBRS units selected, with Hutchinson Island topping the list with 93 percent of the unit comprised of wetlands. And except for Hutchinson Island, each of the units has been struck by a major hurricane since 1982, when CBRA was enacted. All of the CBRS units are readily accessible by car and are within a few hours drive from a major metropolitan area.

Table 4: Characteristics of CBRS Units Selected for Analysis

CBRS Unit	Development Amount (low, med., high)	Hurricane History	Total Size (acres)	Fastland (acres)	Fastland (%)	Pop. Growth (%)
Dauphin Island	Low (none)	1998	3,852	773	20	9.5
Ft. Morgan Peninsula	Medium	1998	7,875	4,018	51	78.7
Hutchinson Island	Low	1979	15,842	2,737	17	66.0
Litchfield Beach	High	1989	103	28	27	26.4
North Topsail Beach	High	1996 1998 1999	5,687	1,045	18	33.0

Source: Souza, Paul, 2000. Ibid.

Notes on Table 4:
Development Amount: based on number of structures per 5 cares of fastland.
Hurricane History: Years in which major (category II or higher) hurricanes struck, since 1960.
Fastland: Land that is not wetlands or open water, i.e., buildable land.
Population Growth: Population growth rate (1980 – 2000) of the county in which the CBRS unit is located.

At each site, I conducted at least 15 in-depth interviews with key stakeholders—planners, developers, Realtors, lenders, insurers, regulators, elected officials, and representatives of conservation groups—to examine the different factors that influence development in the selected CBRS units. I used the snowball technique[23] to identify the key stakeholders at each site, starting with an interview with the town or county planner and working from there. The interviews were open-ended, although many of the same questions were asked of all interviewees. I asked each interviewee questions to probe their knowledge of CBRA, how the Act affects development in the CBRS unit, the main factors and groups (coalitions) influencing development, and the outcome of that influence.

FINDINGS

General

CBRA is a novel federal approach to protecting coastal barriers. Federal attempts to protect coastal resources have generally been limited to fairly traditional approaches: property acquisition, encouragement of state and local land use planning through financial incentives, or direct "command and control" regulation.[24] In contrast, CBRA does not rely on regulations, state incentives, or on acquisition, which would be expensive, given the price of coastal properties. Instead, the Act simply removes federal incentives that encourage development of coastal barriers. The philosophy behind the Act is that the risk associated with new development in areas that have been identified as high-risk, damage-prone areas in which to build, should not be borne by the American taxpayer. The basic premise of the Act is that conservation can be achieved without increasing federal regulatory involvement simply by withdrawing federal financial support for development in high-risk areas.

> *For decades, the federal government worked against itself, spending millions to acquire and protect some undeveloped coastal barriers and billions to subsidize development on other barriers. The Coastal Barrier Resources Act was intended to stop all that, to establish the principle that those who wish to*

[23] Under the snowball sampling technique, researchers solicit help from respondents or interviewees in identifying other key people to interview.

[24] U.S. Department of the Interior, Coastal Barrier Studies Group. 1988. Report to Congress: Coastal Barrier Resources System with Recommendations as Required by Section 10 of the Public Law 97-348, The Coastal Barrier Resources Act of 1982, Vol.1, 166.

develop undeveloped costal barriers shall do so at their own risk and expense and not at the risk and expense of the federal taxpayer. [25]

Congress may have been naive in assuming that the withdrawal of federal subsidies, by itself, would prevent development of designated coastal barriers. As Table 2 shows, substantial development has occurred in several CBRS units. To date, however, there has been little research examining why these CBRS units have developed.

The case studies and surveys of state coastal managers suggest that there are a number of different factors that influence land use in Coastal Barrier Resources System units, including market forces, state and local policies and actions, geology, accessibility and advocacy coalitions, although it is difficult to tease apart the different factors. At Dauphin Island, Alabama, no development has occurred in the CBRS unit in large part due to state policy (the setback line), CBRA and the actions of a conservation group. In particular, the conservation group was able to thwart the developer's plans to develop 200 lots on the western end of the island. However, geology was also a factor. The west end of the island is narrow, low-lying, and extremely vulnerable to coastal storms, as Hurricane Georges aptly illustrated. In comparison, Alabama's Ft. Morgan peninsula, which is heavily developed, is wider, higher in elevation, and its beaches are far more attractive. Also, although both places attract crowds in summer, the Ft. Morgan peninsula traditionally has been a bigger draw for tourists while Dauphin Island is a relatively quiet, year-round beach community.

State coastal managers varied in their knowledge of the Coastal Barrier Resources Act. In states where little or no development had occurred in CBRS units, coastal managers tended to have very limited knowledge of the Act, which is not surprising given that CBRA is not a high-profile federal program. It was designed to be self-implementing: there are no regulations to enforce, no permits to issue, and, in most cases, few controversies to address. Only about half of the state coastal managers interviewed were knowledgeable about the Act, which makes it difficult to draw conclusions (based on the survey results) about the impact of CBRA, among other factors, on land use in CBRS units. The findings from the survey of state coastal managers were consistent with the case studies in a number of areas. In particular, the case studies and surveys both showed that developer interests were dominant at North Topsail Beach, Litchfield Beach and the Ft. Morgan peninsula, while conservation groups were dominant at Dauphin Island. In addition, the case studies and surveys indicated that CBRA is only one of several factors that influence land use in designated coastal barriers.

Key informants also were asked about their knowledge of CBRA and about the relative influence of conservation and development interests in their state. As with state coastal managers, the key informants varied considerably in their knowledge of CBRA. Most said they were somewhat familiar with the Act, a handful claimed they were very familiar, and a few admitted that they never heard of the Act.

Finally, state and local policies and actions seemed to influence development in the CBRS units examined, as illustrated by Alabama's Coastal Construction Control Line, which overlays the CBRS boundary and has helped prevent development in the CBRS unit of Dauphin Island. Similarly, the policies and actions of local elected officials have facilitated development at North Topsail Beach and the Ft. Morgan peninsula, and certainly paved the way for development to occur on Hutchinson Island.

Impact of CBRA

The impact of the Coastal Barrier Resources Act varies from place to place. In some places, such as North Topsail Beach, the Ft. Morgan peninsula and Litchfield Beach, the CBRS units have undergone so much development that they are virtually indistinguishable from adjacent areas that are not part of CBRS. In other places, such as Dauphin Island and Hutchinson Island, the difference between CBRS and non-CBRS areas is very stark. In general, CBRA has made development more difficult and expensive. The withdrawal of federal subsidies for water, sewer and insurance in particular have posed obstacles to development, although, as the case studies of North Topsail Beach, Litchfield Beach and the Ft. Morgan peninsula demonstrated, these obstacles are not insurmountable. Strong land markets, a full complement of infrastructure, the availability of private flood insurance and a cooperative, if not strongly pro-development, town council or county commission enabled development to occur. These three units are some of the most extensively developed

[25] Coastal Barrier Resources System: Hearing before the Subcomms. On Fisheries and Wildlife Conservation and the Environment and on Oceanography of the House Comm. On Merchant Marine and Fisheries, 101st Cong., 1st Sess. 2 (1989), statement of Rep. Gerry Studds.

of the entire CBRS system. Even at Dauphin Island, where a proposal to develop in the CBRS unit was defeated, Mobile County had offered to provide the infrastructure for a proposed project that received approval (a variance) from the state. In at least one place—Hutchinson Island—the added difficulty of developing land in CBRS is reflected in land prices: according to Realtors and property appraisers interviewed, vacant land located in the CBRS unit is worth less than land outside of CBRS, all else being equal.

In some of the CBRS units studied, the Act may have kept land (in CBRS) from being developed, at least until developable land outside the unit became scarce. At the Ft. Morgan peninsula, development in the CBRS unit really began only after the non-CBRS areas were already developed. At Hutchinson Island, CBRA appears to have kept some vacant land off the market long enough for state and local governments to acquire it. In addition, the Act appears to have shaped the type of development that occurs as well—an outcome that was predicted by Godschalk in his 1984 pilot study. For example, at North Topsail Beach, most of the large, multi-unit condominium projects are in the CBRS unit, although at Ft. Morgan, the opposite has occurred, with high-rise condominium buildings placed just outside the CBRS boundary.

State coastal managers surveyed stated that CBRA had little or no effect on development in the CBRS units. Eleven of the 15 coastal managers surveyed stated that CBRA has had no impact on land use in CBRS units, two said it had a little impact, and two said they don't know. Eleven respondents said that state policies and local land markets are the key determinants of land use in CBRS units, not CBRA. For example, the coastal manager in Rhode Island stated that CBRA has had very little impact, primarily because the state's coastal regulations are so strict. In Connecticut, the state coastal manager noted that the barrier beaches are short and narrow, usually less than 100 feet wide, and this poses a severe constraint on development in CBRS units. The same holds for Massachusetts. Several states (New York, Texas, Virginia, Florida, Maryland and New Jersey) stated that most of the CBRS units are owned by the public and thus precluded from development. Finally, several states (Connecticut, Florida, Maine, Massachusetts and Rhode Island) restrict the use of state funds for infrastructure on undeveloped coastal barriers. The survey of state coastal managers indicated that CBRA was one of several factors that determine whether or not development occurs, including land prices, the demand for development, ownership (public or private), and the availability of flood insurance.

Geology is also a factor, as is vehicle access. As mentioned previously, it is hard to discount the role of geology in discouraging development at some CBRS units. For example, most of the beaches in Louisiana are small, narrow, muddy and inaccessible. According to the deputy commissioner of South Carolina's coastal management program, "a lot of CBRS units wouldn't have developed anyway: They are low-lying, isolated and inaccessible." In other states, such as Maryland and New Jersey, most of the coast was developed long before CBRA was enacted, and most of the remaining undeveloped coastal areas are in public ownership.

Clearly, CBRA matters to some landowners and developers, as reflected by the numerous efforts to have their property removed legislatively from the system, e.g., in Florida and in North Carolina. In South Carolina, a developer decided to steer clear of the CBRS unit after he saw what The Litchfield Company had to go through to develop The Peninsula, e.g., building a private water and sewer system at a cost of $2 million.

Overall, I observed a gradual incursion of development in at least three CBRS units: Ft. Morgan peninsula, North Topsail Beach and Litchfield Beach. However, this was not the case at Hutchinson Island nor at Dauphin Island. Hutchinson Island may be a special case, due to the extensive amount of wetlands in the CBRS unit and the presence of a nuclear power plant on the island. At Dauphin Island, CBRA, state policies (setback provision) and the actions of the local group, Forever Dauphin Island, all have worked to prevent development from occurring in the CBRS unit.

Importance of State and Local Policies

At the state level, eight of fifteen coastal managers surveyed stated that state policies have a big impact on land use; three responded that state policies have a little impact; and four said they have no impact. State coastal managers were not asked about the impact of local policies. All state coastal managers surveyed stated that their state's coastal policies were pro-conservation. State actions, however, often supported development in CBRS units (e.g, at North Topsail Beach and the Ft. Morgan peninsula). Thus, state agencies often work against each other, with one agency promoting conservation of the coast and another facilitating development.

Local policies and actions typically supported development of the coast, except at Dauphin Island. But local agencies can work against each other, as can a state and a local agency. Also, there is a difference between policy adoption and policy implementation. For example, North Carolina coastal policies call for a minimum setback to protect structures along the coast from damage caused by coastal erosion. Yet, the state has granted numerous variances, especially at North Topsail Beach, to the setback requirement. At Hutchinson Island, St Lucie County took steps to facilitate development by creating a special assessment district for a water and sewer plant, which extended water and sewer lines through the length of the CBRS unit. Yet, the county had previously cut allowable densities in half, and state policies encourage conservation of the coast.

Probably the most important finding about state and local policies and actions is that state and local governments are not homogenous, but are comprised of different agencies and personalities, with different policies, agendas, resources and beliefs. In some cases, the agencies work together toward a common goal, in other cases they work against each other. Also, a single agency may have competing objectives, especially in the case of state coastal management agencies, whose mission, typically, is to "preserve and develop" the coastal resources of the state. State and local policies and actions were not uniform, but varied within and across levels of government. That is, some were strongly pro-conservation at the state level but strongly pro-development at the local level, e.g., North Topsail Beach and Hutchinson Island.

Overall, I found that state and local policies matter, and that where government actions, more than policies, facilitate development, development was likely to occur, as was the case at North Topsail Beach and Ft. Morgan. The corollary was also true, as was the case at Dauphin Island, where implementation of state (setback provision) and local (zoning) policies, helped prevent development from occurring in the CBRS unit. The results at Hutchinson Island were mixed, however, with the state and local governments often trying to achieve different objectives. Yet, virtually no development has occurred in the CBRS unit at Hutchinson Island. Finally, in South Carolina, neither the state nor local government strongly opposed or facilitated development at Litchfield Beach, although the local utility refused to extend its water and sewer lines into the CBRS unit. State policies in South Carolina strongly favor conservation, but a proposed project on the coast will likely receive the necessary permits as long as it complies with the state's setback requirements.

RECOMMENDATIONS

Given CBRA's shortcomings, should the Act be scrapped and relegated to a historical footnote or strengthened to improve its effectiveness? First, as stated previously, the vast majority of CBRS units remain undeveloped: only a handful or so have experienced development. Second, CBRA has achieved at least one of its objectives: reducing wasteful expenditures of taxpayer dollars. In several instances (Litchfield Beach, for example), the Act has forced developers to bear the risk of investing in CBRS units. And after Hurricane Fran damaged much of North Topsail Beach, CBRA restricted (although it did not completely prevent) the use of federal funds for disaster recovery in the CBRS unit. In addition, the Act has delayed the development of some CBRS units, buying time for state or local governments to purchase the land for public use. Still, there are a number of ways the Act could be strengthened, as summarized below.

Give the U.S. Fish and Wildlife Service a stronger oversight role

CBRS does not establish regulatory oversight mechanisms. Neither the USFWS nor any other federal agency is authorized to regulate or enforce CBRA. In fact, there are no regulations to enforce. Other agencies are required to consult with USFWS, but the Service's role is limited to reviewing actions proposed by federal agencies and providing its opinion regarding the consistency of those actions with the purposes of CBRA. USFWS is not authorized to investigate possible violations of CBRA's limitations on federal spending, nor is it authorized to enforce the law. The final determination of whether a proposed action is consistent with the purpose of CBRA rests with the consulting agency. The USFWS does not have veto power over other agency decisions. The agency should be provided with the authority to ensure that federal agency actions are consistent with the Act's objectives. This may require Congressional action.

Provide a final arbiter for interagency disputes

When interagency conflicts arise over CBRA, as they have most recently between the Fish and Wildlife Service and the Corps over dredging from CBRS units for use outside the unit, there is no final arbiter of such disputes. The Service can elevate disagreements to the assistant administrator, but agencies can proceed with a

project over FWS objections. An entity such as a Council on Environmental Quality could help resolve interagency squabbles over CBRA.

Incorporate CBRA's goals into local coastal zone management plans

Local government officials often adopt policies and conduct activities that are inconsistent with the intent of CBRA. The comprehensive plans of coastal jurisdictions should include policies that are consistent with CBRA. Such a requirement could be incorporated as a performance guideline under the Coastal Zone Management Act. Thus, local governments would adopt plans consistent with CBRA and federal actions, including federal spending for infrastructure, would have to be consistent with those plans. In addition, local plans should include maps that show the CBRS boundaries.

Improve outreach

No federal agency feels responsible for outreach on CBRA. As a result, many Realtors, buyers, developers, insurers and federal agencies are in the dark about the Act. As a result, insurance agents erroneously have issued federal flood insurance policies in CBRS areas. In its evaluation of CBRA, the General Accounting Office found that 42 of the 250 residences it sampled in five CBRS units had purchased federal flood insurance. On North Topsail Beach, over 100 National Flood Insurance Policies were issued in error. When these North Topsail Beach policy-holders filed claims for their damaged homes after hurricanes Bonnie and Fran, coverage was refused. Instead, FEMA simply refunded their premiums. The FWS should be given the responsibility and the resources to enhance and expand its outreach on CBRA. One possible remedy would be to include CBRS boundaries in parcel maps at all county assessor files (digital boundaries).

To many developers and landowners, CBRA seems unfair, especially when their neighbor just across the CBRS boundary has access to federal flood insurance. Also, the designation of CBRS units was not based on risk or vulnerability, so the delineation seems arbitrary to many. CBRS units may be less vulnerable than areas where federal flood insurance is available.

Limit federal spending for infrastructure on coastal barriers if it will encourage development in a CBRS unit

On coastal barriers containing both CBRS and nonCBRS areas, federal spending for roads, bridges, water and sewer systems to support development outside the CBRS area may also encourage development inside the CBRS unit. The President could beef up Executive Order 11988 on floodplain management, first issued by President Carter in 1977, to include measures that would limit federal support for infrastructure projects on coastal floodplains (coastal barriers) if such actions would encourage development in CBRS areas.

Section 1 of the Executive Order calls on federal agencies to "take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to, water and related and resources planning, regulating, and licensing activities."

Mr. GILCHREST. In light of Mr. Salvesen's testimony this morning and his recommendations, has there been, or I would assume it would be a pretty good idea based on one of Mr. Salvesen's recommendations of outreach to the community, to have town meetings or some type of outreach communication memos to the State governments and local governments to determine the policy about development, construction, financial support, and extension of a road, a water line, sewage treatment plant. All those things are local issues.

And I guess what seems to be important is to communicate to them once every few years about this Coastal Barrier Resources Act and what it means, because the turnover in local government is fairly frequent and we can't obviously assume that each new county commissioner or State legislators or planning person, who

is probably the cousin of the County Supervisor or the County Commissioner the way that things work in local government, knows anything about all the Federal programs.

So an aggressive outreach program every few years to reeducate local government as to all these Federal programs, I think would be highly recommended. If there is anything we can do to help facilitate that, we would like to be a part of that, or if you think it might be a good idea to make an amendment to the Act to have something like that be completed, and then as we authorize it, maybe we can help to fund FEMA and Fish and Wildlife Service to do those kinds of outreach programs.

I think it is important not only to preserve the ecology and the ecological integrity of coastal barrier habitat for a full range of wildlife and also retain the integrity of the coastal barrier itself for it to function the way it has been over the last tens of thousands of years. But there are taxpayer dollar issues involved in this. There are safety issues involved in this as far as search and rescue is concerned when a storm hits.

But what brought this home to me was the Hurricane Isabel that hit the East Coast. And as I traveled my district, which straddles the Chesapeake Bay, and whether it was a condominium owner that didn't realize—whether it was someone that owned the unit in a condominium that didn't realize that the condominium owner didn't have Federal flood insurance and so all his stuff was lost, to the insurance agent that didn't know about Federal flood insurance who issued the policy, to the bank that didn't know that the mortgage had to have, or was supposed to have Federal flood insurance in order to have that mortgage certified, to the full range down to the poor fellow who built the crab shack new Crisfield on the lower Eastern Shore that had it there for years and didn't even have it on the—never got a permit to build it, didn't know anything about permits, didn't know anything about Federal flood insurance, and the local government many times was confused even to the point where the representative from the State Insurance Commissioner didn't know all of the ins and outs of the Federal Flood Insurance Program when discussing it with someone that came from Missouri from FEMA to help out in Maryland.

So from Federal flood insurance issues to CBRA issues, I think the outreach recommendation, we will highly recommend and find some way for that information to be disseminated to all the areas where CBRA units exist.

And the last thing you wanted to do when you came here this morning was listen to a lecture. So it is not a lecture, it is just something that we can work more closely together on.

Dr. Tuggle, do you have some idea when the modernization effort of this mapping program will be completed?

Dr. TUGGLE. Yes, sir, Mr. Chairman. We are approximately about 55 or 60 percent finished at this point. We anticipate that we will have some news to share with you by the summer of 2004. We have made some giant strides in terms of our ability to be able to couple and leverage some resources.

As you know, in the reauthorization bill, we were authorized $1.5 million to start this pilot project, and because of competing priorities with the Fish and Wildlife Service, we were unable to request

those funds. However, we were very fortunate and very, shall I say, ingenious in the way that we looked at how we were going to leverage other resources, so we were able to come up with some money to start the pilot project and to get it initiated. So we fully anticipate that by next summer, we will have some good news to share with you in terms of the details.

Mr. GILCHREST. We will look forward to that, and I guess the time frame for another hearing then would be maybe June or July.

Dr. TUGGLE. Yes, sir. What we would like to do is we would like to come up and specifically talk to the Committee members and your staffs ahead of that hearing—

Mr. GILCHREST. Sure.

Dr. TUGGLE. —to explain to you not only some of the things that we have found out in terms of the benefits in terms of the digital mapping project, but also some of the problems that I think that we need to work with you to get them straightened out—

Mr. GILCHREST. OK.

Dr. TUGGLE. —as we move into this digital arena.

Mr. GILCHREST. Maybe we can sit down and have that meeting in, let us say, the February or March time frame.

Dr. TUGGLE. I will look forward to that.

Mr. GILCHREST. Thank you. I think I am into 8 minutes now. I have some more questions, but I will yield at this point to Mr. Pallone.

Mr. PALLONE. Thank you, Mr. Chairman.

Just so I understand, would that mean that by next summer, you would have digital mapping for the whole system? Is that—

Dr. TUGGLE. No, sir. We—

Mr. PALLONE. Would you explain, because I am not clear about when you say what is likely to be done by the summer.

Dr. TUGGLE. In the reauthorization bill, we were tasked with a pilot project that called for us to digitize 75 CBRA units, and those are the units that we will be presenting to the Committee in terms of the complexity of digitizing those maps and also looking at the benefits and also the costs associated with potentially digitizing all of the CBRA maps.

Mr. PALLONE. So what percentage is that, 75 of the total, approximately?

Dr. TUGGLE. Seventy-five units, you mean?

Mr. PALLONE. Yes.

Dr. TUGGLE. I would say about a third, close to a third.

Mr. PALLONE. So then you would come to us in the summer and use that as a demonstration and then maybe suggest that we do the rest?

Dr. TUGGLE. Yes, sir.

Mr. PALLONE. And then what do you think the cost or time table would be for that?

Dr. TUGGLE. I really think we would have a better idea when we have an opportunity to complete the study. A lot of times, what is happening is that when we get ready to map OPAs, there is a great deal of complexity associated with that because we have to go to the local areas and try to figure out who owns the property and also work with the county governments and the State governments in those cases to actually prove that they own those protected

areas. So there is a lot more complexity associated with OPAs than there really are with the other units.

Mr. PALLONE. And then Mr. Lowe, with these revised digital maps, I mean, to what extent is that a priority in terms of determining if an area is eligible for Federal flood insurance? How important is this process for you?

Mr. LOWE. Yes, it is quite important. We, too, are doing a map modernization process where we are digitizing our maps, too. We have approximately 100,000 panels, which are paper maps. Some of them have been digitized, but certainly not all of them. And so this will enable us to be very, very precise once we get that digital data from the Service. So we really look forward to it. I think it will help out a lot because we, too, have to kind of go back through the Service and then back out to our agents and homeowners and others who are trying to delineate whether their property is in or out. So this would be very important for us, as well.

Mr. PALLONE. This relates, I guess. The 1994 Flood Insurance Reform Act authorized FEMA to force place insurance for properties uninsured in flood zones. How often does FEMA use that authority and do you think it should be used?

Mr. LOWE. I am not aware of that being used. I think what that—my guess is what that is referring to, however, is the lenders' ability to force place—

Mr. PALLONE. I see.

Mr. LOWE. —for a homeowner who has a federally backed loan in a special flood hazard area, which does happen. Lenders do do that.

Mr. PALLONE. OK. And then I wanted to thank Mr. Salvesen for being here and for the information you provided us so far, particularly with regard to the outreach. But I just wanted to develop a little more in the time we have this idea of subsidies from States and localities, you know, whether it is infrastructure or whatever, that undermine the intent and effectiveness of the Act.

You mentioned that we should try to incorporate the CBRA's goals into local Coastal Zone Management plans. Would you just develop that a little more? In other words, what can we do in that regard to prevent these local governments from promoting development with these subsidies or infrastructure? How do we go about getting the towns to incorporate CBRA's goals? Is there something that we could do legislatively or otherwise?

Mr. SALVESEN. I am not sure how you can force local governments to do that, but what you could do is work with them through the development, their Coastal Zone Management plans, which is kind of a cooperative undertaking between the State and Federal Governments.

Some States like Florida and North Carolina require their coastal jurisdictions to prepare coastal elements in their local plans, and if working through the States through some sort of incentives through the Coastal Zone Management Program, I think you could do that.

In other cases, you could make sure that Federal funding isn't being used to undermine the spirit of CBRA. For example, in North Topsail Beach, a very, shall we say, creative developer convinced the State Department of Transportation to relocate a road away

from the beach so that his lots would be made large enough to develop. That was all in a CBRA area. I don't know if any Federal funding was used by the State Department of Transportation, but I would imagine some was.

So it is that kind of cooperation through the State and local governments, through State governments through the Coastal Zone Management Program and working through some sort of oversight mechanism to make sure that these kind of things, like moving a highway, don't slip through the cracks where Federal funding is involved.

There is another interesting case—I will just relay you one more. I am sorry to take up more time. But after Hurricane Fran washed out the water and sewer lines, there was a big disagreement with the Fish and Wildlife Service over whether or not they could use the money to expand the existing water line to serve more development in the North part of the island, and as I think I said before, the Fish and Wildlife Service said no, you could use our money to replace and repair but not to expand. But they did put in a larger pipe and through some creative financing they managed to use Fish and Wildlife Service funding only for—I shouldn't say Fish and Wildlife, Federal funding only for that portion that would have been spent to repair the pipe, but it indeed was enlarged, which would make more development possible.

Mr. PALLONE. Mr. Chairman, could I just ask him one more thing?

Mr. GILCHREST. Take your time.

Mr. PALLONE. My understanding is that the Coastal Barrier Resources System does not establish regulatory oversight mechanisms, so maybe what you are saying, Mr. Salvesen, is that we could get Fish and Wildlife to play a stronger role in implementing or issuing those kind of regulations?

Mr. SALVESEN. There are no regulations to enforce, as far as I know. The Fish and Wildlife Service, I believe, consults, or other agencies consult with Fish and Wildlife Service when they are doing something in the CBRA unit, but there are no regulations to enforce. There is no regulatory oversight. And the Service, correct me if I am wrong, Dr. Tuggle, doesn't have any power to veto the decisions of other agencies.

So, for example, if the Corps of Engineers wants to renourish a beach in a CBRA unit, or if the Department of Transportation wants to build a road or bridge in a CBRA unit, the Fish and Wildlife Service can consult with them, but can't veto that.

Mr. PALLONE. Did you want to comment on that consultation process and whether you think something should be strengthened, Dr. Tuggle?

Dr. TUGGLE. Well, certainly our role now is the keeper of the maps and the consultation process with the other Federal agencies. I would not at this time be able to comment with you regarding strengthening and encouraging some kind of regulatory capacity. I think at this point, it is going to take a little bit of providing more information, and it is really a sticky wicket when you start to talk about Federal oversight as it relates to local kinds of things.

We are comfortable with our consulting capacity right now and what we are trying to do is create a more visible product with the

maps so that the delineation of those lines can be detected at the local levels, and as they start their planning processes and they make those local land use decisions, that they can be aware. I think that the outreach component is one that we thoroughly endorse in that regard.

Mr. PALLONE. Thank you. Thank you, Mr. Chairman.

Mr. GILCHREST. Thank you, Mr. Pallone.

I think the beauty of the program at its inception was that it was not a regulatory program. It simply allowed people to do whatever they wanted. They weren't going to be subsidized by the Federal Government. And so for a large extent, as Mr. Salvesen has said, most of the CBRA units have not been developed. It has worked.

We held this hearing because since I have been in Congress and on the Merchant Marine and Fisheries Committee and now this Committee, we see members, for whatever reason, pressured by their constituents to create legislative action to take people out of the CBRA units. And since we now have nearly developed all the area outside of CBRA, people are now looking at the CBRA units and they know they can develop them.

And that is fine. They can build those houses. They get private insurance. They have those little units for $3,000 a week or $10,000 a week. We need to encourage people to use tents and kayaks more, but what we wanted to do is to see how we could take a look at the program, not bring about the heavy hand of the Federal Government, not to give FEMA or Fish and Wildlife any more responsibility in the vast array of responsibilities than they already have, to try to figure out a way to inform people, the public in general, that somebody living just on the mainland is subsidizing somebody living a half-a-mile from them on a coastal barrier island, the fragile ecosystem, all these things we are trying to protect.

Plus, I think it was in Mr. Salvesen's testimony that I went through last night, and Mr. Pallone brought it up here this morning, that the Corps of Engineers can scoop out sand from an area that is in a Coastal Barrier Resource Area and then take it over and dump it someplace else without Fish and Wildlife having any authority or anybody having authority to prevent that. That is a decision basically by the State government with a plan that they create the Corps follows through on with a full range of funding available from Congress.

So I think that without overburdening Fish and Wildlife, there ought to be some effort to have greater oversight in something like beach replenishment. But the issue of outreach, information transfer, to tell the State, the local government, the local planning office, that the CBRA system is alive and well and exists and here it is, is one of the most important things that we can do.

The lack of information on the local level, whether it is CBRA, whether it is Federal flood insurance, whether it is the concept of a flood plain, how to listen to the news, to know where your house is on that map, that if the sea level rises two feet, you are OK. If it rises four feet, you had better move out before it hits. The lack of information in the public arena is staggering. It is extraordinary. So the outreach would be pretty important.

I would like to ask one quick question of Dr. Tuggle. I know this will be our decision, but I would like an honest appraisal of the question. Should we as a Congress pass legislation for a moratorium on any technical changes in the CBRA units until the digital mapping of all CBRA units and OPA is complete?

Dr. TUGGLE. I will try to be honest as I can.

Mr. GILCHREST. OK.

Dr. TUGGLE. I would say no. Quite frankly, since 1999, we have developed a system by which we have embraced this comprehensive mapping technique, as well as using our contractors to get to the digital profiles associated with where these lines are, that we feel very comfortable at this point being able to make recommendations with development criteria as well as where the line falls on the face of the earth and make those recommendations to Congress in a way that we fully think we can support the ultimate goals of CBRA.

The world has changed so much since 1982 as it relates to mapping. In 1999, we finally figured out that we needed to be more aggressive with this digital arena. But the question was, how could we do that and how far would that range be in terms of the scope?

I think the combination, with the criteria that we have developed and has also been codified in the Reauthorization Act of 2000, that we are very comfortable in the way that we are assessing whether these lands should or should not be in CBRA at this time.

May I add one more thing?

Mr. GILCHREST. Yes.

Dr. TUGGLE. And I know I am running out of time and I apologize—

Mr. GILCHREST. That is all right.

Dr. TUGGLE. The real sticky wicket in all of this are the OPAs, and what we are seeing with OPAs are, originally when they were designed, nobody asked the question whether those lines mirrored the land ownership, and primarily they were put on a map as a line where we think the land ownership is. When those people come back to us and they say, this is an OPA, it is supposed to be a protected area, we have private land and you have included us in the OPA, we have to look at where that line is primarily because OPAs were designed strictly for protected areas. We are seeing a lot of those kinds of technical corrections come to us primarily because those lines are incorrect.

We don't see a lot of legislation that is being proposed that we support that are calling for removal for large pieces of property from CBRA units because they don't want to be there. If the criteria was met as it relates to development criteria, Mr. Chairman, we are holding the line in terms of whether we think they should be in or out.

Mr. GILCHREST. Thank you very much, Dr. Tuggle.

Mr. Pallone, any more questions?

Mr. PALLONE. No, I don't have any. Thanks, Mr. Chairman.

Mr. GILCHREST. I just have a few more. I know you have a caucus, but I am just going to—

Mr. PALLONE. I can leave if I have to.

Mr. GILCHREST. OK. Since 1990, Dr. Tuggle, and I am not sure, maybe Mr. Salvesen may know this after your research, do you

have any idea how many acres have been legislatively removed from the system?

Dr. TUGGLE. May I start?

Mr. GILCHREST. Yes, sir.

Dr. TUGGLE. We got that question, and quite frankly, through no disrespect to the question, we simply cannot answer that question at this time. We have discernible numbers since 1999 because we have been able to use the digital profiles that were associated with that. To go back to 1982 would require significant resources and a lot more time than we had to prepare for—

Mr. GILCHREST. I would assume that, actually since I asked this question, I just thought of this, we could probably figure that out, legislatively removed from—we could just go back and look at the Congressional Record and see how many times we passed a bill to remove somebody from CBRA.

Dr. TUGGLE. Even in those instances, I will be honest with you, administrative record does not always include acreage—

Mr. GILCHREST. You are right. That is right.

Dr. TUGGLE. and even in some cases when it does, they are not correct.

Mr. GILCHREST. Since the improvement of 1990 of CBRA, do you have any idea how many additional acres of FWS land has been added to the system?

Dr. TUGGLE. Added to the system?

Mr. GILCHREST. Added to the system.

Dr. TUGGLE. None.

Mr. GILCHREST. Nothing has been added to the system since—

Dr. TUGGLE. Not to the system, no.

Mr. GILCHREST. I see. Acres of wetlands or aquatic habitat added to the system?

Dr. TUGGLE. No. The only thing that would remotely rise to that level was some land in North Carolina that was originally an OPA and they wanted to be included as a system unit, so that particular one was included. But other than—but it still is a protected area. But we have not had instances where we have added FWS land that was not in a protected area to any of the CBRA units.

Mr. GILCHREST. Has anybody volunteered their land to be into the CBRA units?

Dr. TUGGLE. No, sir.

[Laughter.]

Mr. GILCHREST. Is there some—could you give us a recommendation—I realize that this is something that we really need to do—is there a recommendation by the Department to include similar units on the West Coast?

Dr. TUGGLE. We did a study where we basically determined that—the geological features on the West Coast are very different than they are on the East Coast, and a synopsis, it would require probably a change in the way the CBRA is written for the West Coast because it is basically a piece of legislation that is written for the East Coast.

We also found that there was not a whole lot of FWS land that was available to be included in a CBRA-esque type unit. There were a lot of protected areas that were there, but the topography was very different. They were not subject to the kinds of hurricanes

and storms that the East Coast is. A lot of the problems that you find there are the cliffs and the bluffs that are associated much more than the barrier islands.

So in our determination, we were very comfortable in saying that we would not recommend trying to extend CBRA to the West Coast.

Mr. GILCHREST. It would be, actually, I guess, based on what you just said, because of its topography and geology, it would have to be a different Act, I would suppose.

Dr. TUGGLE. Yes, sir.

Mr. GILCHREST. If you go to protected coastal areas.

Dr. TUGGLE. Yes, sir.

Mr. GILCHREST. Mr. Lowe, we have talked back in my office and here this morning, your discussion on FEMA's role in this area. You have said that the national Federal Flood Insurance Program, based on the premiums that are charged, is more or less self-financing. But, for example, when Fran hit or Isabel hit or other storms hit, the program is self-financing for reimbursing the homeowner if they have good coverage.

Mr. LOWE. Right. I—

Mr. GILCHREST. But the question, though, is the total cost of Isabel to local communities, to State and the Federal Government goes well beyond the homeowner. It is the cost to the National Guard, the local police, the local fire department, the local rescue department, areas that are set aside for homeowners because they can't go back into their home, so what it costs to house people, clothe people, feed people, haul debris away, all of these things. Is any of that, those ancillary damages and costs, is any of that covered by the Federal flood insurance?

Mr. LOWE. Let me answer your, kind of the premise of your question first. The 1994 Act, and I know it is not in my statement, doesn't talk that I am aware of about self-financing. It certainly doesn't require that of the National Flood Insurance Program. What you may, in fact, be referring to is—

Mr. GILCHREST. I guess I didn't mean that you are required to have it self-financing. The discussion around here, members of Congress—we are not always so well informed, believe me, myself included—is that when people talk about reforming Federal flood insurance to save the taxpayers money, other members will say, well, Federal flood insurance is self-financing. People pay premiums. So the whole program is covered.

But, in fact, if you looked at all of the costs in areas of high risk, Federal flood insurance, it seems to me, doesn't come close to covering the cost of a storm in a high-risk area.

Mr. LOWE. Right. No, I think that is absolutely correct. I mean, we cover damage to prescribed policy limits on residences and buildings. There are many, many indirect economic costs that simply are not going to be covered, of which you have named many of, and some of those can be astronomical. For us, when we look at Isabel right now, we are looking at the possibility of about 22,000 claims, about $450 million. Now, since 1986, the National Federal Flood Insurance Program has been able to, in fact, pay that and pay its claims without borrowing or certainly borrowing where it would have to go to Congress. We basically have a rolling line of

credit which we pay back with interest, and so we do that. And that is out of the fund.

Now, there is a Disaster Relief Fund, of course, that covers most of the other things which you mentioned. But the purpose of the Federal insurance program, in fact, was to try to reduce the drain, if you will, and the pull on taxpayers from the Disaster Relief Fund.

Mr. GILCHREST. Thank you very much.

That is a vote, but I have one more question for Mr. Salvesen. One of the recommendations that you made in your testimony was dealing with a stronger oversight role for Fish and Wildlife with the CBRA program, and you made another recommendation which provides a final arbiter for interagency disputes. It seems to me that in an arena where you can have the Corps of Engineers dredging sand in front of a CBRA unit to provide better protection for, let us say, a beachfront community a little further down or a little further up from that unit—and then I am going to ask Dr. Tuggle to quickly respond to that, as well—what role should the Federal Government or Fish and Wildlife have in negotiating that with the Corps of Engineers or even finding some way to prevent that?

Mr. SALVESEN. That is a good question. I don't know if Dr. Tuggle would even agree with my suggestion that perhaps Fish and Wildlife Service would have more oversight role. But there seems to be a need for somebody to perhaps elevate a decision when there are conflicts.

And if you look at something like under the Endangered Species Act, we have, what is it called, the "God Squad" or something like that it is sometimes known as. Where there are disputes between protection of an endangered species and proposed development, that decision can be elevated to this "God Squad" which consists of the directors of different administration—I think it is Commerce, Environment, I can't name all of them.

But maybe that is the kind of mechanism you could consider putting in place so that where there are disagreements between Fish and Wildlife Service and the Corps about some Federal action that may not be consistent with CBRA, you could—it is kind of like those of you who are old enough to remember "Get Smart," you remember whenever Max wanted to discuss something that was controversial and the Chief didn't agree, he would say, "Well, we need to bring out the cone of silence," you know, and the Chief hated that cone of silence.

So you need something that says, we need to elevate this to a higher level so that all of us can sit around and talk about this, and that very threat might get them to say, OK, look, you win. We will stay out of the CBRA unit. But some mechanism like that where the Fish and Wildlife Service would have a little more leeway about decisions that affect development in and around the CBRA units.

Mr. GILCHREST. Thank you very much. I will check that movie out this weekend.

[Laughter.]

Mr. SALVESEN. No, it wasn't a movie, it was just the daily, you know, weekly show.

Mr. GILCHREST. Oh.

Mr. SALVESEN. I am dating myself. I am sorry.

Mr. GILCHREST. OK.

Mr. SALVESEN. You never saw the cone of silence?

Mr. GILCHREST. I guess—no. We will talk about that later.

Mr. SALVESEN. It is classic. [Laughter.]

Mr. GILCHREST. It might be something useful for me to know, though.

Dr. Tuggle, any comment on that?

Dr. TUGGLE. Mr. Chairman, you know, it is—you are right in terms of your instincts in terms of this ability to try to arbitrate these kinds of decisions. Right now, the Fish and Wildlife Service's role is to advise the Corps of Engineers in regards to our interpretation of whether removing sand from a CBRA unit is appropriate or not.

One of the things that I might suggest is that you are in a situation where the Corps may have already gotten authorization as well as appropriation to fulfill this role and, therefore, which one supercedes. I would recommend that if we wanted to pursue this to a different degree, we might make a recommendation to CEQ, or the Council of Environmental Quality. That might be an excellent body by which we can explain our points of view and the Administration can make a decision in that regard, versus having the Service be burdened with some other responsibility or regulation, and I am, quite frankly, not an advocate of that.

Mr. GILCHREST. All right. Well, thank you very much.

One last comment. In Mr. Salvesen's testimony, you made a number of references to the conflicting role of the Federal Government. On the one hand, we are trying to protect a property and on the other hand we are financing the infrastructure for development.

What we would like to do as we move through this process of understanding this area of the Federal Government's role in CBRA, where some of those conflicts are, when we sit down maybe in March to look at the digital mapping in anticipation of another hearing in the June-July time frame, we would like to keep all three of you abreast of what we are doing so this review, when we have it, can bring some very clear, specific recommendations and some very positive changes.

Dr. Tuggle, Mr. Lowe, Mr. Salvesen, we appreciate your testimony very much and for traveling here to give it. Thank you.

This hearing is adjourned.

[Whereupon, at 11:10 a.m., the Subcommittee was adjourned.]

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