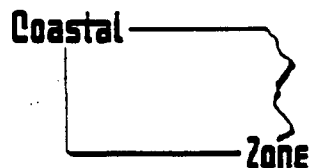


**STRATEGY
OF THE
PENNSYLVANIA
COASTAL ZONE MANAGEMENT PROGRAM**

**Performed Under the
Coastal Zone Enhancement Grants Program
Section 309
Coastal Zone Management Act**

March 26, 1992



**Prepared by
Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Water Resources Management
Division of Coastal Zone Management**

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PCZM to field office



PENNSYLVANIA COASTAL ZONE MANAGEMENT PROGRAM

SECTION 309 STRATEGY

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Introduction

This document contains the Section 309 final strategy for the Pennsylvania Coastal Zone Management Program (CZM). The strategy focuses on four priority enhancement areas: coastal hazards (CH), cumulative and secondary impacts (CSI), public access (PA), and wetlands. The following information is provided for each enhancement area: summary of the problem, program change, justification for the monies, change, cost, work schedule, and likelihood for success.

After a thorough review by CZM and NOAA, the draft strategy was significantly altered for the final version. Specifically, the changes involve special area management planning (SAMP), geographic areas of particular concern (GAPC) and wetlands.

In the draft strategy, SAMP was a priority enhancement area. Our proposal was to address the Bucks County disposal sites and the Presque Isle Bay issues under SAMP. NOAA's review, however, pointed out that although both were important projects, they did not qualify strongly as SAMPs because they lacked multi-issue and collaborative processes. We agreed with this finding, and after discussion with and concurrence from NOAA staff, decided to address these issues under cumulative and secondary impacts.

Use of the GAPC designation process for several of the enhancement areas was also changed. We agreed with NOAA's assertion that using GAPCs was weak because, in general, they cannot be made "enforceable." Therefore, in concurrence with NOAA staff, we have downplayed the importance of GAPC usage except to complement more enforceable tools when addressing the priority enhancement areas.

The wetlands enhancement area was also changed from the original version. Our initial approach was to develop new interagency agreements for additional coordination with local and county governments and county conservation districts. These new agreements, which would be enforced by the creation of a new wetlands policy, would provide the necessary review by CZM or local/county officials to protect wetlands from locally permitted development projects. After consultation with NOAA, we agreed that these changes could best be handled with 306 monies.

The "new" program change for wetlands is actually an extension of an original change from the draft strategy. CZM will explore the expansion of the coastal boundaries to include all wetlands that are hydrologically connected to coastal wetlands. This change will provide better protection from land and water resources outside the coastal boundaries that impact coastal wetlands. The other priority enhancement areas -- CH, PA, and CSI -- have slight modifications, specifically in the work schedules. Certain work tasks will be implemented earlier in the 5-year work plan than originally proposed.

The final strategy also contains specific task descriptions for the areas scheduled for work in 1992. These descriptions reiterate what is stated in the strategy, while offering a more detailed view of the work to be performed.

PENNSYLVANIA COASTAL ZONE MANAGEMENT
SECTION 309 STRATEGY
COASTAL HAZARDS

1A. Problem Summary

The major problems affecting the management of coastal hazards in Pennsylvania's coastal zones are improper structure siting (ISS) and unrestricted bluff development (UBD). Both of these problems are associated with the Lake Erie coastal zone. As discussed in the final assessment, the coastal hazards in the Delaware Estuary coastal zone are not current (or significant enough) problems and, therefore, will not be addressed through the strategy.

The major factors causing ISS along the bluffs of Lake Erie are incomplete monitoring of bluff recession (which may result in inaccurate erosion rate data), inconsistent local official decision making, and lack of a single file source of all legal interpretations of the Bluff Recession and Setback Act (BRSA) for both CZM and municipal reference. These factors can cause structures regulated by the BRSA to be placed within the bluff recession hazard area in a way that is inconsistent with the act.

UBD on the unregulated bluff face ranges from construction of structures, roads, and stairways to devegetation of forested areas. These activities, which often destabilize the bluff, can initiate or accelerate bluff recession. Even though these activities are not currently occurring at a high rate, Coastal Zone Management (CZM) strongly feels, as the bluff areas become more populated, the unregulated bluff face will experience increased use by a population wanting access to the lake.

1B. Program Change

Each program change will fall under either of the major management problems of ISS or UBD.

Amend "Shoreline Erosion and Flooding - Erie County" and Coastal Hazard Area Policy I-A.1 to Incorporate New or Updated Methods of Monitoring and Calculating the Rate of Bluff Recession (ISS)

This task will improve the accuracy of bluff recession rates. These more accurate recession rates will assure that new structures are placed safely within the Bluff Recession Hazard Area (BRHA) and improvements to threatened structures are limited.

Research will be conducted into new or better ways of measuring, calculating, and monitoring the rate of bluff recession. CZM staff will do extensive library searches and will contact state and federal agencies for current information on lake bluff monitoring (i.e., Ohio's new bluff setback regulations and the Federal Emergency Management Agency's new study of Illinois bluff recession). It is not known how the current process will change. It may be as complex as using remote sensing to as simple as increasing the density of monitoring control points. As a result of this research, the document Shoreline Erosion and Flooding - Erie County will be amended or rewritten. This document

is the primary support document for the BRSA and provides the basis for designating BRHAs and determining the rate of bluff recession for each township. If fundamental changes occur to the document, the BRSA/regulations may be amended. At a minimum, changing this document to address how bluff recession rates are obtained will require amending the Coastal Hazard Area Policy I-A.1. Briefly, this policy is the enforceable policy that requires coastal municipalities with BRHA to enact setback ordinances.

Using newer and updated methods of obtaining rates of bluff recession will result in more accurate predictions. These new rates will be incorporated into the local bluff setback ordinances. With better accuracy, it is likely that the bluff recession rates will increase. If this occurs, it will expand the BRHA and the minimum setbacks for residential, commercial, and industrial structures. Overall, new structures placed in the BRHA will provide better protection from the hazards of bluff recession. Also, CZM will use the new rates to accurately and safely relocate structures via the NFIP (which is a long-term savings for the federal government because of less repeat insurance claims from improperly relocated structures).

1C. Appropriateness of Tools

This task is the appropriate means of updating the methods used to calculate recession rates. Research will be necessary into new ways of measuring, calculating, and monitoring the rate of bluff recession in order to revamp the current method used in Shoreline Erosion and Flooding - Erie County.

1D. Costs

1992 - \$15,000 staff cost (weighted formula)/\$35,000 consultant cost (weighted formula)

1993 - \$10,000 staff cost (weighted formula)

1994 - \$22,000 staff cost (weighted formula)

Total Cost: \$82,000

1E. Schedule

1992 - Research into new techniques of measuring, calculating, and monitoring the rate of bluff recession. If possible, this grant year, determine new rates of bluff recession. (These new rates will be used to help support Program Change 3B.)

1993 - Amend Shoreline Erosion and Flooding - Erie County to incorporate new bluff recession rate techniques. Also, if not accomplished in 1992, develop new recession rates.

1994 - Amend local bluff setback ordinances to incorporate new bluff recession rates and amend the BRSA/regulations if fundamental changes occur to these regulatory documents.

1F. Likelihood of Success

The department already supports the concept of bluff setbacks by adopting the BRSA in 1980. By improving the accuracy of designating structure setbacks, this task is consistent with the intent of the BRSA. The likelihood that the department will support this task is very high. CZM foresees no opposition to this program change.

FY92 Work (weighted formula)

Research will be conducted into new techniques of measuring, calculating, and monitoring the rate of bluff recession. Library searches and surveys of coastal states and appropriate Canadian provinces will be completed to find the techniques to update the current erosion rate mechanisms.

First Quarter (Oct-Dec) Selection of a contractor to complete this first year grant task. A complete library search for techniques of measuring, calculating, and monitoring the rate of bluff recession will be completed this quarter.

Second Quarter (Jan-Mar) Federal agencies, coastal states, and appropriate Canadian provinces will be contacted and surveyed to gather information on optional ways of determining rates of bluff recession.

Third Quarter (Apr-June) Information gathered from library searches and surveys on techniques to amend how bluff recession rates are measured, calculated, and monitored will be analyzed to determine appropriateness to Pennsylvania's coastal situation.

Fourth Quarter (July-Sep) Review Shoreline Erosion and Flooding - Erie County and make recommendations on how the document can be changed to incorporate the selected mechanism from the Third Quarter work.

OUTYEAR TASKS

1993

Amend Shoreline Erosion and Flooding - Erie County - Incorporate the new techniques for determining the rates of bluff recession from the research and analysis completed in the 1992 grant year.

Benchmarks:

- a. Draft changes to the document. Circulate for comments (including public involvement).
- b. Amend document with approved changes.
- c. Measure and calculate new recession rates.

1994

Amend Local Ordinances, the BRSA, and Regulations - Determine new recession rates (if not already completed in 1993 grant year) and meet with and guide each municipality to amend their bluff setback

ordinances to incorporate the changed recession rates. If fundamental changes occur to the BRSA/Regulations, then these documents will also be amended.

Benchmarks:

- a. Remeasure or establish additional control points (or whatever techniques are chosen) and calculate new recession rates.
- b. Work with municipalities to adopt new recession rates and BRHA designation.
- c. Start the amending process for the BRSA/Regulations (if necessary).

2B. Program Change

Amend Coastal Hazard Area Policy I-A.1 to Include Guidance on Legal Interpretations to the BRSA (ISS)

The Coastal Hazards Policy I-A.1 will be amended to include official written guidance to local municipalities on legal interpretations and CZM field implementation policies concerning important aspects of the BRSA regulations. A compilation of interpretations and field policy decisions are important for consistent oversight and implementation of the BRSA. This information will be put into a document format that can be amended or superseded as new interpretation and field policy decisions are made. This document will be given to each municipality with the primary document and amending capability located in the CZM office. The document will go through extensive legal, CZM, and municipal review before it is finalized. As part of this process, CZM will also ask legal to interpret sections of the BRSA/regulations that are not clear and will need legal guidance in the near future (i.e., aspects of the variance and substantial improvement language relating to restoring fire damaged structures currently located inside the minimum bluff setback distance). CZM will seek public input into the existing and proposed legal interpretations and field operations' decisions. There will likely be many new interpretations and decisions in this document. The final document will be adopted by the department as official "guidelines" to guide CZM and municipal implementation of the BRSA. These guidelines are deemed crucial and timely and will be used to pilot municipal building permit programs in order to properly regulate home construction and improvements within hazardous areas.

This task is considered a program change because it represents the creation of new guidelines to provide specific interpretations of an enforceable policy (for local government use). Furthermore, these guidelines will result in meaningful improvements in coastal resource management. As stated in the final assessment, "The major factors causing improper structure siting along the bluffs of Lake Erie are ... lack of a single file source of all legal interpretations of the BRSA (regulations) for both CZM and municipal reference." This task will provide a single file source as guidelines for CZM and local implementation of the BRSA and, therefore, improve how new structures are located, and improvements to existing structures are monitored.

2C. Appropriateness of Tools

This program change will provide the means for legal interpretations and internal field implementation policy decisions to be put in the hands of those needing them. This information is necessary for the proper implementation of the municipal bluff setback ordinances. By creating a compilation of existing and proposed legal interpretations of the BRSA and field implementation decisions into a guidelines document for CZM and municipal use, proper implementation of the BRSA, regulations, and local ordinances will be improved. Also, as the regulations are interpreted in the future, the interpretations will be reviewed with the municipalities and incorporated into the guidelines document to be sent to the municipalities for their future reference. Written guidance in an expandable format is the best way to provide the necessary information to the coastal municipalities to assure proper implementation of their bluff setback ordinances. Therefore, this program change is the best way to provide new guidelines for specific interpretations of a major enforceable policy of the CZM Program.

2D. Costs

1992 - \$5,000 staff cost (weighted formula)

1993 - \$6,500 staff cost (weighted formula)

Total Cost: \$11,500

2E. Schedule

1992 - Compile legal interpretations of the BRSA and implementing rules and regulations into a guidelines document. See FY92 work for more details.

1993 - Amend Coastal Hazard Area Policy I-A.1 to include BRSA guidelines.

2F. Likelihood of Success

The department is committed to regulating development in the BRHA along Pennsylvania's portion of Lake Erie. The department adopted the BRSA/regulations in 1980 and has since committed substantial time and money to regulating development in the identified hazard areas. Providing additional tools for CZM and municipal use to help manage these areas more efficiently to prevent loss of property and threats to human health and safety are a high priority for the department. Furthermore, the guidelines will add clarity to the direction the department is providing regarding the municipal bluff setback ordinances to ultimately promote proper structure siting. Overall, this task has a very high likelihood of support by the department.

FY92 Work (weighted formula)

CZM will compile past legal interpretations to the BRSA, and Rules and Regulations (PA Chapter 85) and field implementation policy decisions into a draft guidelines document. CZM will: meet with the coastal municipalities to discuss the interpretations to determine appropriate-

ness of the interpretations and adjustments to be made (incorporate public involvement at this point); meet with department legal staff to also review proposed interpretations and recommended adjustments; and create a system to amend the guidelines document as new interpretations occur. Also, CZM will incorporate current and proposed field implementation policy decisions. These are decisions made by field operations staff on specific situations that occur during BRSA monitoring and technical assistance activities. These policies will be reviewed by the municipalities, department legal staff, and the public. CZM will finalize these guidelines as an official document, approved by the department. Work involved in completing this task will include extensive coordination with all coastal municipalities, department legal staff and the regulated public. Public involvement aspects of this task will include surveys, workshops, and information seminars.

Staff orientation and new project startup are time-intensive functions and will be part of the task work schedule.

First Quarter (Oct-Dec) Review CZM files to locate past legal interpretations and field implementation policy decisions. Also, complete list of areas that need legal interpretation and/or field policy decisions. Start meetings with coastal municipalities, department legal staff, and community groups to discuss all items.

Second Quarter (Jan-Mar) Complete meetings, prepare draft document, and incorporate comments.

Third Quarter (Apr-Jun) Conduct public workshops and seminars to generate additional comments and public understanding and acceptance.

Fourth Quarter (Jul-Sep) Incorporate final comments. Complete an additional legal review, finalize the guidelines document, have the document deemed "official," and distribute to the Erie County municipalities with bluff setback ordinances.

OUTYEAR TASKS

1993

Amend CHA Policy I-A.1 - Amend this enforceable policy to include the guidelines on legal interpretations on the BRSA/regulations, and field implementation policy decisions.

Benchmarks:

- a. Circulate draft policy change for formal review and comment.
- b. Amend CHA Policy I-A.1 to include the guidelines.

3B. Program Change

Amend the BRSA/Regulations and CZM Policy to Restrict Bluff Face Use (UBD).

Following the format of the BRSA/regulations, the protection of the bluff area will be extended lakeward of the bluff crest to the ordinary

high water mark (OHWM) at the base of the bluff. This will require an amendment to the BRSA and subsequent change to the coastal hazard area policy I-A.1. This amendment will regulate new structures and substantial improvements of these structures located between the OHWM and the bluff crest (an area known as the bluff face), and other uses which affect the stability of the bluff face.

This amendment will address two scenarios. First, for structures and other uses to be built on the bluff face, which are part of a lot subdivided after the adoption of this amendment, CZM will explore prohibiting construction of such structures and prohibit/restrict other uses based on the results of the research and testing. Second, structures and other uses to be built on the bluff face, which are part of a lot subdivided prior to the adoption of this amendment, will be restricted via variances based on criteria developed as a result of the research and testing.

Research and testing of uses of the bluff face (structures, stairways, roads, and devegetation) will lessen many negative influences on bluff stability. This will be accomplished by providing timely and accurate information and assistance to eliminate many poorly designed construction and man-induced impacts to the bluff. This effort will direct research into better and safer techniques of traversing and using the bluff face, i.e., stairway construction that will remain stable and will not cause bluff recession, road and new structures that will incorporate proper erosion and sedimentation controls and bluff stabilizing techniques, and the proper management of forested areas to maintain bluff stability. Proper methods/techniques to traverse/use the bluff face will provide safe and lasting structures on the bluff face that will not initiate or accelerate bluff recession.

This amendment is consistent with the intent of the BRSA to restrict development from the eroding bluffs along Pennsylvania's Lake Erie shoreline.

3C. Appropriateness of Tool

This task is the best way to restrict new structures and other uses on the bluff face. Restricting these activities will require more than an encouragement policy and technical assistance. In hazard areas such as the bluff face, these activities can have serious consequences. Therefore, restricting these activities via regulations is warranted. As stated in the final assessment "these areas (bluff face) are affected by bluff recession and should be covered by the BRSA (or a new statute)." A new statute will only be explored if the BRSA is not able to be amended.

Also, an additional benefit of this task will be a long-term savings to the federal government. By restricting uses on the bluff face (new home construction and other uses that may cause or accelerate bluff recession) fewer homes will be threatened by bluff recession and fewer claims will be filed under the National Flood Insurance Program (NFIP).

Research and testing are also the appropriate means to provide better and safer uses of the bluff face. By doing research into new methods of traversing and using the bluff face, new information can be given to

property owners to help them make better decisions on activities that effect their bluff properties. This new information, as a regulatory restriction and supplemented with a technical assistance delivery, is the best way to get this information to the public and to have them use it. This information can also be used to complement other areas of the strategy. As an example, new stairway design, researched and demonstrated as part of this task, can be used in public easement areas along Lake Erie. Public access through these easement areas is addressed in the public access strategy. Properly designed stairways will provide safe and lasting access that will not threaten bluff stability.

In the Lake Erie coastal zone there are approximately 900 property sites that have access to Lake Erie. The majority of these sites are either forested or partially forested and have potential for stairway, road, and development of structures. With the type of information provided via this task, many future construction activities will be properly designed and will not cause or accelerate bluff recession, thereby decreasing the overall threat and costs of coastal hazards.

3D. Costs

1993 - \$46,000 staff cost (weighted formula)

1994 - \$48,000 staff cost (weighted formula) ..

1995 - \$28,000 staff cost (weighted formula)

Total cost: \$122,000

3E. Schedule

1993 - Review of the statute amending process and the BRSA to determine how and where to amend to restrict development on the bluff face. Use workshops and seminars to gather comments and public acceptance/support.

- Amend the BRSA to include bluff face restrictions.

- Using research from the 1991 grant year on an inventory of bluff face uses, CZM will conduct research into innovative ways to traverse and use the bluff face. Use workshops and seminars to get new information to the public. Create a new coastal hazard area policy.

1994 - Amend the PA Chapter 85, Bluff Setback Regulations to restrict development on the bluff face.

- Incorporate BRSA/regulation changes into all the local ordinances.

- Initiate bluff face construction/use demonstration projects.

1995 - Monitor/evaluate demonstration projects.

- Create technical assistance package. Use slide shows, brochures, and fact sheets to get this information to the public.

3F. Likelihood of Success

The department has already committed resources to the problem of bluff recession by adopting the BRSA and implementing rules and regulations. There is a high possibility that the department will agree to expand the BRHA lakeward once shown the need for such actions. In addition, the Lake Erie legislative delegation has been very supportive of the BRSA and what the CZM Program has accomplished with the local municipalities in enforcing the regulation. Because of CZM's working relationship with many of the legislatures and the local municipalities, there is high probability that amending the BRSA and regulation will be successful.

Since all the mechanisms are in place for implementing the BRSA, there will be little, if any, additional commitment needed to carry out this task.

Through past CZM grants, the department has committed much time and money into providing technical assistance on how to maintain bluff face stability. To increase the effectiveness of this type of technical assistance, the department will support the development of new information on how to traverse and use the bluff face in a safe and lasting way. Therefore, there is a very high possibility that the department supports the technical assistance aspects of this task.

FY 92 Work

There is no work task this year. CZM will use the information from Program Change 1B (amend "Shoreline Erosion and Flooding - Erie County"...), being conducted in 1992, as baseline data for future year work under this program change.

OUTYEAR TASKS

1993

BRSA Amendment - CZM will conduct a thorough review of the statute amending process to determine the necessary steps and time schedule needed to properly amend the BRSA. Also, CZM will examine the BRSA to determine where the statute should be amended. A draft amendment package will be drafted for internal review and comment which will include a legal review to determine the validity of the change proposed. After state, federal, and public comment requirements are met, the BRSA amendment package will be finalized and submitted for adoption to the Environmental Quality Board.

In Grant Year 1991, CZM will inventory current uses of the bluff face. The inventory will be used to determine how many types of uses exist, how they are designed, and what affects they have on the bluff face. This information will be used in Grant Year 1993 to guide research into

new and innovative ways of traversing and using the bluff face, i.e., stairway, road and home construction, and management of forested areas.

Benchmarks:

- a. Conduct thorough review of statute amending process. In Pennsylvania, the program staff is responsible for completing the amendment package. The legal staff will give guidance, but will not undertake the amending process. Therefore, CZM staff must commit substantial time to this process.
- b. Examine the BRSA to determine where it needs amended.
- c. Draft amendment package for CZM and legal review.
- d. Present proposed amendment to CZSCs, CZAC, and other federal, state, and local agencies to get comments. Public involvement is an essential part of this task. Finalize amendment package.
- e. Formal review and comments on final amendment package.
- f. Review and approval by the Environmental Quality Board (EQB).
- g. Analyze information from the 1991 Grant Year inventory of bluff face uses and select the types of uses to focus Program efforts.
- h. Conduct library searches to gather information on successful construction types and bluff face uses.
- i. Conduct surveys of federal and state agencies and all coastal states to determine preferred construction types and uses of the bluff face or areas similar to Pennsylvania coastal bluffs.
- j. Conduct surveys of consultants and specialty construction companies to determine construction types that apply to Pennsylvania's coastal bluffs.

1994

Bluff Recession and Setback Regulation Amendment - Update Local Ordinances - Construction/Use Demonstration Projects - CZM will amend the regulations to restrict construction on the bluff face. This task will include all coordination and review procedures required by the state of Pennsylvania to amend a statute. CZM will also direct the construction of demonstration structures on areas of the bluffs experiencing various bluff conditions from stable to rapidly receding. These structures will be evaluated on their performances. Also, various forest management techniques will be studied on bluff face areas ranging from completely forested to partially devoid of vegetation and receding.

Benchmarks:

- a. Draft an amendment package and present to CZSCs, CZAC, and other federal, state, and local agencies for comments. Finalize amendment package.

- b. Formal review and comment on final amendment package.
- c. Review and approval by the Environmental Quality Board.
- d. Meet with each township to explain the changes and advise them on how to change their bluff setback ordinances to reflect the intent of the amendments.
- e. Compliance check to make sure townships amend their bluff setback ordinances correctly and in a timely manner.
- f. Develop MOUs with agencies of public lands to allow construction of the demonstration projects and for forested areas to be studied.
- g. Select the types of structures and contractors to do the work. This work includes contractors to operate the forested bluff projects.
- h. Supervise, observe, and document the progress of the projects.
- i. Assure projects are complete and approve final invoices.

1995

Monitoring/Evaluation - Technical Assistance Package - CZM will monitor the construction and the forested bluff projects. CZM will evaluate the results of the monitoring to determine success of the projects. Recommendations will be made on which construction types should be used and the changes to make them successful. This also applies to the forested bluff project(s). The task could take more than one year to complete. Depending on the structure/activity type, some projects may produce tangible results within one year, while others may take more time to produce results that are usable. Taking the information from the demonstration projects, a technical assistance package will be put together. This will include: brochures, fact sheets, and slide shows. This information will be made available to the public via general mailings, the SAR service, and CZM sponsored workshops/seminars.

Benchmarks:

- a. Establish monitoring techniques and schedules.
- b. Evaluate the monitoring results.
- c. Select successful structure/activities types and make recommendations for improvements.
- d. Develop brochures, fact sheets, and slide shows.
- e. Distribute the information and set up workshops/seminars.

TASK DESCRIPTION

No. 92-EG.01 Title: Bluff Recession and Setback Act (BRSA) Guidelines

Federal: \$ 5,000(309) Non-Federal: \$ 0 Total: \$ 5,000

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993
: _____
Grantee: X #Person Days: 20 :
: Section 309 Enhancement Area:
Others: _____ : Coastal Hazards
: _____
: GAPC Involvement:
: NV-1 (Lake Erie Bluffs)

Location: Lake Erie Coastal Zone, Erie County, Pennsylvania.

Background: The major factors causing improper structure siting along the bluffs of Lake Erie are incomplete monitoring of bluff recession (which may result in inaccurate erosion rate data), inconsistent local official decision making, and lack of a single file source of all legal interpretations of the BRSA for both CZM and municipal reference. These factors can cause structures regulated by the BRSA to be placed within the bluff recession hazard area in a way that is generally inconsistent with the intention of the act.

This project is the result of the Section 309 Strategy to address major program enhancement objectives for coastal hazards. This project, which will ultimately result in amending the CZM Programs Coastal Hazard Policy I-A.1, will provide the means for legal interpretations and internal field implementation policy decisions to be put in the hands of those needing them. This information is necessary for proper implementation of municipal bluff setback ordinances. By creating a compilation of existing and proposed legal interpretations of the BRSA and field implementation decisions into a guidelines document, proper implementation of the BRSA regulations and local ordinances will be improved. Furthermore, as regulations are interpreted in the future, they will be reviewed with the local municipalities and incorporated into the guidelines document.

These "guidelines" are deemed crucial and timely and will be used to pilot municipal building permit programs in order to properly regulate home construction and improvements within hazardous areas. This effort will result in meaningful improvements in coastal resource management. As stated in CZM's Section 309 Final Assessment, "The major factors causing improper structure siting along the bluffs of Lake Erie are ... lack of a single file source of all legal interpretations of the BRSA regulations for both CZM and municipal reference." This task will result in a single file source (guidelines) for CZM and local municipal implementation of the BRSA; and therefore, improve how new structures are located, and improvements to existing structures are monitored.

Project Description: For this effort CZM will compile past legal interpretations to the BRSA, Rules and Regulations (PA Chapter 85), and field implementation policy decisions into a "guidelines" document. that can be amended or superseded as new interpretation and field policy decisions are made. Copies of this document will be given to each municipality with the original document and amending capability located in the CZM office. The document will go through extensive legal, CZM, and municipal review before it is finalized. As part of this process, CZM will ask legal to interpret sections of the BRSA regulations that are not clear and require legal guidance (i.e., aspects of the variance and substantial improvement language relating to restoring fire damaged structures currently located inside the minimum bluff setback distance). CZM will also seek public input into the existing and proposed legal interpretations and field operations' decisions. The final document will be adopted by the department as official "guidelines" to guide implementation of the BRSA. All work under this task will be completed by CZM staff.

Work involved in completing this task will include extensive coordination with all coastal municipalities, department legal staff and the public as appropriate. Public involvement aspects of this task will include surveys, workshops, and information seminars.

Estimated Project Budget

| | |
|-----------------------|-------------|
| Salaries and wages | \$ 3,300 |
| Fringe benefits | 1,300 |
| Overhead | 100 |
| Travel | 200 |
| Materials & supplies | 100 |
| Equipment | 0 |
| Consultant/contractor | <u>\$ 0</u> |
| Total | \$ 5,000 |

Expected Products and Timetable: The product of this effort will be final "guidelines" which will be a single file source of all legal interpretations of the BRSA regulations. Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Review CZM files to locate past legal interpretations and field implementation policy decisions. Complete list of areas that need legal interpretation and/or field policy decisions. Initiate meetings with coastal municipalities, department legal staff, and community groups.
- 03-31-93 Complete meetings, prepare draft "guidelines" document and incorporate comments.
- 06-30-93 Conduct public workshops and seminars to generate additional comments and public understanding and acceptance.
- 09-30-93 Finalize and adopt the official "guidelines" document and distribution to the Erie County municipalities with bluff setback ordinances.

TASK DESCRIPTION

No. 92-EG.02 Title: New Techniques of Measuring, Calculating, and Monitoring the Rate of Bluff Recession

Federal: \$ 15,000(309) Non-Federal: \$ 0 Total: \$ 15,000

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993
Grantee: X #Person Days: 60 :
: Section 309 Enhancement Area:
Others: _____ : Coastal Hazards
: GAPC Involvement:
: NV-1 (Lake Erie Bluffs)

Location: Lake Erie Coastal Zone, Erie County, Pennsylvania.

Background: This project is the result of the Section 309 Strategy to address major program enhancement objectives for coastal hazards. The major factors causing improper structure siting along the bluffs of Lake Erie are incomplete monitoring of bluff recession (which may result in inaccurate erosion rate data), inconsistent local official decision making, and lack of a single file source of all legal interpretations of the Bluff Recession and Setback Act (BRSA) for both CZM and municipal reference. These factors can cause structures regulated by the BRSA to be placed within the bluff recession hazard area in a way that is generally inconsistent with the intention of the act.

This task is the appropriate means of updating the methods used to calculate recession rates. Research will be necessary into new ways of measuring, calculating, and monitoring the rate of bluff recession in order to revamp the current method used in Shoreline Erosion and Flooding - Erie County. This task will improve the accuracy of bluff recession rates. These more accurate recession rates will assure that new homes are placed safely within Bluff Recession Hazard Area's (BRHA) and improvements to threatened homes are limited.

CZM's Coastal Hazard Area Policy I-A.1 is an enforceable policy that requires coastal municipalities with BRHA to enact setback ordinances. Using newer and updated methods of obtaining rates of bluff recession will result in a more accurate prediction of how bluffs recede. These new rates will be incorporated into the local bluff setback ordinances. With better accuracy, it is likely that the bluff recession rates will increase. If this occurs, it will expand the BRHA and the minimum setbacks for residential, commercial, and industrial structures. Overall, new structures placed in the BRHA will be provided better protection from the hazards of bluff recession. Also, CZM will use the new rates to accurately and safely relocate structures via the NFIP (which is a long-term savings for the federal government because of less repeat insurance claims from improperly relocated structures).

Project Description: Research will be conducted into new or better ways of measuring, calculating, and monitoring the rate of bluff recession. CZM staff will do extensive library searches and will contact state and federal agencies for current information on lake bluff monitoring (i.e., Ohio's new bluff setback regulations and FEMA's new study of Illinois bluff recession). It is not known exactly how the current process will change. It may be as complex as using remote sensing to as simple as increasing the density of monitoring control points.

As a result of this research, the document Shoreline Erosion and Flooding - Erie County will be amended or rewritten. This document is the primary support document for the Bluff Recession and Setback Act (BRSA) and provides the basis for designating BRHAs and determining the rate of bluff recession for each township. If changes occur to the document, the BRSA regulations will be amended. At a minimum, changing this document to address how bluff recession rates are obtained will require amending the Coastal Hazard Area Policy I-A.1.

Estimated Project Budget

| | |
|-----------------------|-------------|
| Salaries and wages | \$ 9,800 |
| Fringe benefits | 3,800 |
| Overhead | 700 |
| Travel | 500 |
| Materials & supplies | 200 |
| Equipment | 0 |
| Consultant/contractor | <u>\$ 0</u> |
| Total | \$ 15,000 |

Expected Products and Timetable: The product of this effort will be the establishment of a new bluff recession rate technique developed through research into new methods of measuring, calculating and monitoring the rate of bluff recession. Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Selection of a contractor to complete this task which includes a complete library search for techniques of measuring, calculating, and monitoring the rate of bluff recession.
- 03-30-93 Federal agencies, coastal states, and appropriate Canadian provinces will be contacted and surveyed to gather information on optional ways of determining rates of bluff recession.
- 06-30-93 Information gathered from library searches and surveys on techniques to amend how bluff recession rates are measured, calculated, and monitored will be analyzed to determine appropriateness to Pennsylvania's coastal situation.
- 09-30-93 Review Shoreline Erosion and Flooding - Erie County and make recommendations on how the document can be changed to incorporate the selected mechanism as identified above.

PENNSYLVANIA COASTAL ZONE MANAGEMENT PROGRAM
SECTION 309 STRATEGY
CUMULATIVE AND SECONDARY IMPACTS

1A. Problem Summary

The assessment identified three issues which will be addressed under Cumulative and Secondary Impacts (CSI) associated with coastal growth and development. The issues are: finding dredge spoils disposal sites in Bucks County, impacts to Presque Isle Bay from increasing boater use, and nonpoint source pollution impacts on water quality.

Pennsylvania's Department of Environmental Resources (DER) is responsible for providing disposal sites for all channel maintenance dredging performed by the US Army Corps of Engineers (COE) on the Navigational Channel of the Delaware River from Allegheny Avenue in Philadelphia north to the Trenton Marine Terminal. Dredging is necessary in this area to maintain adequate channel depth for commerce on the river. Based on economics and environmental concerns, hydraulic dredging is the only prudent and feasible way to keep the channel open. The former USX site in this area has the potential to once again be a major economic factor. Maintaining shipping access in the area could play a vital role in future economic revitalization activities.

Because of growth and development that has taken place in this part of the coastal zone, there are few remaining areas where the dredge spoil can be placed. In the remaining undeveloped areas, wetlands, open waters, and fishery concerns further limit where dredge spoils can be placed. Furthermore, some previously used sites have been eliminated because, as a result of the disposal, wetlands have been created, or the spoils were contaminated. Therefore, these areas cannot be "cleaned out" and reused as spoils disposal areas. The Department may be faced with either not allowing the dredging to take place, thereby, severely restricting commerce in this area of the coastal zone, or else having to resort to bucket dredging which is environmentally damaging and more expensive.

All potential existing sites for spoil disposal are owned or controlled by Waste Management Incorporated. Because of the limited space, a system whereby the spoils can be periodically removed and the sites reused, must be devised to insure there will be future capacity. It is imperative that the Department secures disposal sites on a long-term basis and sets up a process that insures that their utilization will not negatively impact wetland and fisheries resources and that the areas can be "reused" to insure adequate future capacity.

After several years, the water drains out of the spoils and the resulting material can be used if it is not contaminated. Waste Management Inc., which runs a large landfill, is interested in using this material as cover layers for their landfill. Therefore, when selecting sites we will check to see if trucks, loaders, etc., could readily access the disposal sites, without harming adjacent wetlands, etc. Otherwise, even if there was a use for the material it might not

be feasible to recover it, therefore, this space would not be available for future disposal activities.

As mentioned earlier, one problem that has prevented the recovery of spoils disposal for reuse is that sometimes the disposal areas become wetlands. Therefore, these areas cannot be used again and new areas have to be found. The Bureau of Dams and Waterways Management has expressed a willingness to develop an agreement for specific future disposal sites targeted for "reuse." These specific sites would be targeted for recovery and; therefore, even if they exhibited wetland characteristics, they could still be allowed to be recovered. We believe such actions are environmentally sound and preferable to constantly placing spoils in new areas.

1B. Program Changes

New Designated GAPC, New MOU Covering Spoils Created Wetlands and New Department Policies Concerning the Placement and Future Use of Dredge Spoils.

Concerning the Bucks County Dredge Disposal Sites, a strategy will be developed. The strategy will assess all potential dredge sites in the area and rank them with regard to desirability. Desirability will be determined by proximity to the river, likelihood of impacts to wetlands and fisheries, capacity, and ability of the site to be reused.

The strategy will also explore means for the Department to secure the selected sites on a long-term basis, i.e., long-term lease or purchase. Also identified will be ways to reuse/dispose of the spoils on a periodic basis so that the sites can be reused. The strategy will also identify what action the Department should take to secure these sites.

Program changes resulting from the strategy are as follows. The area will be identified as a designated GAPC. A management plan will be developed for the GAPC which precludes any actions that affect the ability of this area to be used as a dredge spoils disposal site. An MOU will be developed with the Bureau of Dams and Waterway Management (BDWM) working out an agreement whereby these sites could be reused even if they developed wetland characteristics. Procedures for utilizing the clean spoils and disposing of contaminated spoils at upland sites will be developed and incorporated into Department policy. Any necessary inter/intra agency agreements needed to implement those procedures will also be developed.

Securing sites and developing a dredge disposal plan that is environmentally responsible will accomplish two major goals of the CZM Program. It will ensure that commerce can be maintained in this portion of the coastal zone; thereby, improving its chances for maintaining economic viability. It will also ensure that actions will not be taken that could compromise the environmental integrity of this area in an effort to keep the channel dredged if sites are no longer available where hydraulically dredge spoils could be disposed of in an environmentally responsible manner.

This project has transference implications because as coastal development increases, other states will be forced with fewer options for disposing of dredge materials and the concept of "recycling" these sites may prove very useful.

1C. Appropriateness of Tools

The proposed program changes concerning the Bucks County disposal sites are appropriate and address the concerns of the assessment. The assessment clearly showed the need to secure dredge disposal sites in this area that ensure the channel can be maintained, and thus the economic vitality of the area, without compromising the environment. The tools that CZM will use/develop are appropriate for the task. Securing sites either through purchase or long-term lease is critical. If these sites are not secured, coastal growth and development could eliminate all potential hydraulic disposal sites thus severely compromising the Department's ability to maintain commerce in this area without adverse environmental affects. Developing agreements, setting up guidelines as to how the spoils can be disposed and covering how they can be reused or, if contaminated, ultimately disposed of at an inland site is also necessary. If this area is to be utilized on a long-term basis, "recycling" will need to occur.

1D. Costs

1992 - \$7,500 staff cost (weighted formula)/\$50,000 consultant cost (Project of Special Merit)

1993 - \$7,500 staff cost (weighted formula)

1994 - \$10,000 staff cost (weighted formula).

Total Cost: \$75,000

1E. Schedule

1992 - Develop scope of work for dredging spoil disposal study which involves analyzing and ranking sites, determining how to serve sites on long-term basis, identifying agreements that need to be developed to be able to "recycle" sites, let contract, manage contract.

1993 - Analyze results of study and begin implementing recommendations. Develop purchase agreement, lease, etc. Develop MOUs and other agreements identified in study.

1994 - Finalize 1993 activities, secure the sites, and execute and implement the agreements.

1F. Likelihood of Success

The Department is responsible for securing dredge disposal sites and fully supports this effort. The Department is cognizant of the ramifications to commerce in this area and possibly the environment if environmentally responsible means for depositing of dredge disposals in the future is not assured.

FY92 Work (weighted formula and project of special merit)

A study will be undertaken which will identify sites that need to be secured by the DER to insure that dredging spoils can be disposed of in an environmentally safe and responsible manner on a long-term basis. The study will also recommend how these sites can be secured and will identify all inter/intra agency agreements that will need to be developed to insure that all actions concerning the deposition of the spoils and its eventual "reuse" will be accomplished in an environmentally responsible manner.

OUTYEAR TASKS

1993

Develop Agreement to Service Sites, Develop MOUs, Agreements, and New Department Spoils Disposal Policy

Benchmarks:

- a. Lease agreement will be developed on contract negotiations for purchase of the sites will be initiated.
- b. MOU with BDWM concerning wetland occurrence on dredge disposal sites will be developed and executed.
- c. Department policy concerning environmental parameters to be observed when "recycling" dredge spoils disposal will be developed.

1994 Execute Agreement Adopt Policies

Benchmarks:

- a. Lease agreement for contract will be executed.
- b. New Department policies concerning dredge spoils "recycling", will be adopted and implemented.

2A. Problem Summary

Presque Isle Bay is a popular boating and recreational area. The 3,200-acre bay is surrounded by five miles of shoreline. A large part of that shoreline is associated with Presque Isle State Park which receives 4.5 to 5 million visitors annually. Presque Isle shelters the bay which is not subject to as many rough water episodes as the surrounding open lake waters. This is one of the reasons why the bay is so attractive to boaters.

In the past decades, the number of marinas has increased significantly. The bay currently has approximately 2,500 public and private slips, and demand still exists. Additionally, many boats are launched in the bay from trailers and car tops.

The Department is currently developing a Remedial Action Plan (RAP) for Presque Isle Bay. The RAP is designed to address the Bay's water quality. The focus of the RAP is on land based sewage and contaminated sediment. The RAP will not be looking at the impact of recreational boating on the Bay's water quality. Therefore, a Boating Impacts study will complement the RAP and provide a missing link in addressing Bay water quality issues. As water quality improves, it will lead to increased boating demand and increased fishing pressure which could lead to conflicts between boaters and fishermen.

Presque Isle Bay is being subjected to increased recreational usage as a result of coastal growth and development. Boating pressure has increased significantly in the past decade and additional marina capacity is planned for the Bay. The City of Erie has recognized the need to do a study to determine what impacts recreational boating is having on the Bay for several years. Also they have recognized the need to develop a management plan to address existing impacts and prevent future impacts from uncontrolled boating pressure. Impacts from boating are both environmental and social.

Environmental impacts include: water quality (sewage and gasoline from the boats), as well as impacts from waves generated by the boats. Sewage from boats is a concern in all waters of the Commonwealth, but especially in enclosed bodies such as the Bay. There are currently no state regulations requiring marinas to have pump out stations for sanitary facilities on boats, or covering the usage of those pump out stations by boats having sanitary facilities. There is little doubt that sewage from boats is being pumped/dumped into the Bay. With such a concentration of boats fugitive escapes of gasoline and oils into the bay from boats and marina filling stations is occurring. The escapes could currently be adversely affecting the bays water quality and the severity is likely to increase as boating usage increases. Waves from boating causes shoreline erosion which can harm wetlands. The increased sediments and wave action can also harm fish spawning. Boating disturbance may also be resuspending contaminated sediments which are known to exist in the Bay.

Overuse by boating also has social impacts. Safety is a major concern as boating capacity for a given body of water is reached and ultimately exceeded. The Bay is an attractive site for power boaters, sailing craft, and small fishing boats. Overuse by boaters can also lead to a diminished recreational experience for all concerned, not only among the boaters. As the Bay's waters are cleaned up, there will be increasing demands placed on it by shore fishermen because of its proximity to a large urban population. The potential exists for increased conflicts among boaters and between boaters and shore fisherman.

2B. Program Changes

New State Authorities/Regulations Concerning Marina Pump Out Station Placement and Usage, and BMPs for Boat Fueling Activities. New MOUs with Erie City, PFBC, and Coast Guard Concerning Restrictions on Presque Isle Bay.

A management plan will be designed for Presque Isle Bay to ensure that boating activity does not degrade its environmental resources, and

prevent conflicts among boaters and between boaters and other recreational users of the Bay. A compendium of tools will be developed to implement the management plan.

New state authorities will be developed covering requirements dealing with placement of sanitary pump out stations at marinas and the usage of these stations by boat owners. These regulations will be designed to prevent the discharge of sewage from boats into the Bay. New regulations will be developed covering the implementation of BMPs for marina filling stations and boat fueling procedures in general to prevent the escape of gas and oil into the Bay. We will work with the City of Erie to limit new marina and boat launching development through the use of zoning ordinances. A new CZM policy concerning considerations of the waterbodies boating capacity will be developed to guide the program's review of new marina permits. CZM will work with the PFBC and local sportsman groups such as the S.O.N.S. of Erie to restrict boating activities around areas set aside for shore fishermen. CZM will also develop agreements with the PFBC and the Coast Guard to restrict boating in areas of sensitive habitats and areas where prop wash could be resuspending toxic sediments.

The changes will lead to improved water quality in the Bay. This effort will complement and provide a missing piece to the RAP which is currently being developed for the Bay. It will provide protection for wetlands and fishing from cumulative and secondary impacts from which they currently have no protection. The changes will eliminate present and future conflicts between Bay recreations users and will provide for a more enjoyable experience for all involved. Another major aspect of this action is that it will increase the Program's visibility in the Department and will help establish CZM as a proactive program that takes the lead on addressing coastal issues and problems.

This project has transference implications because other coastal states are/will be faced with problems associated with over use of water bodies by recreational boating.

2C. Appropriateness of Tools

The proposed Program changes for the Presque Isle Bay Boating Impact Analysis addresses all the issues raised in the assessment. New regulations are needed to address pump out station placement and usage and prevent sewage from entering the Bay from boats. New regulations covering the usage of various BMP designed to prevent gasoline and oils from boating activities contaminating the Bay are also needed. Both of these activities will not only help the Bay, but will lead to water quality improvement; both coastwide and statewide. A new CZM policy covering how the Program will revise future marina permit applications with regard to capacity, pump out stations and gasoline BMPs will provide assurances that the new activities will be properly implemented in the coastal zone in general and the Bay in specific. Agreements with the City of Erie, PFBC, and the Coast Guard are the proper way to limit boater capacity and restrict boating in a manner that addresses wetlands, fisheries, and water quality and boater safety issues as well as preventing conflicts between Bay recreational users.

2D. Costs

1992 - \$7,500 staff cost (weighted formula)/\$100,000 consultant cost
(Project of Special Merit)

1993 - \$7,500 staff cost (weighted formula)

1994 - \$10,000 staff cost (weighted formula)

Total Cost: \$125,000

2E. Schedule

1992 - Convene a task force to develop scope of Presque Isle Bay Study. Based on task force input, develop RFP, let contract, finalize scope of work, manage study/contract.

1993 - Review study recommendations and begin implementing them. Develop new pump out station regulations, agreements with City of Erie, Fish Commission and Coast Guard concerning fuel BMPs, marina restrictions, slow wake zones, no boating zones, etc.

1994 - Continue with 93 work. Finalize development of regulations, agreements, etc., and begin implementing.

2F. Likelihood of Success

The Department supports the clean up of Presque Isle Bay which this study will control so they will support this effort. The City of Erie has requested CZM funds in the past to conduct such a study and is very supportive of such an endeavor. The local sportsmen, boaters, and environmental groups will support this effort because they all want to see the water quality of the Bay and its resources improved and they want to see user conflicts avoided.

FY92 Work (weighted formula and project of special merit)

A study will be taken to document present and future environmental and social impacts that recreational boating is having on Presque Isle Bay. The study will also determine what capacity usage the Bay can support, a determination of what restrictions need to be placed on boating, how these restrictions should be applied, and who should be responsible for placing and enforcing those restrictions. The study will also determine where and how boating should be restricted to protect the environment and avoid user conflicts.

OUTYEAR TASKS

1993

Begin Implement Report Recommendations - Implement the recommendations of the report concerning what actions to take to manage boating in Presque Isle Bay in a way that minimizes environmental and social conflicts.

Benchmarks:

- a. Develop marina pump out station and usage regulations.
- b. Develop BMPs concerning marine fueling activities.
- c. Develop MOU agreements concerning boating restrictions in Presque Isle Bay.

1994

Finalize Implementation of Report Recommendations - Finalize the recommendations.

Benchmarks:

- a. Implement marina pump out station regulations.
- b. Implement BMPs concerning marine fueling activities.
- c. Implement MOUs concerning boating restrictions in Presque Isle Bay.

3A. Program Summary

The assessment showed that there is a general consensus that coastal water quality is suffering as a result of nonpoint source pollution (NPS) and that the threat will increase, from cumulative and secondary impacts associated with growth and development, as projected coastal growth occurs. Unfortunately, nobody has a good handle on what NPS pollutants are causing the most problems, i.e., toxins, BODS, heavy metals, etc. The Department and the Delaware River Basin Commission have some pertinent data but it has never been analyzed with respect to trying to determine how much of the pollution is attributable to NPS.

The Coastal Nonpoint Pollution Control Program (CNPCP) will require the Commonwealth to identify what NPS pollutants are impacting coastal waters and also identify critical coastal areas. The following is excerpted from CNPCP Draft Guidance "The establishment of critical coastal areas must focus on those areas with the greatest potential for causing or contributing to the impairment of or threat to coastal water quality from nonpoint source pollution." The implementation of additional management measures in these areas is required by the statute in order to protect against any increased contributions of pollutants which may result from any new or substantial expansion of existing land uses.

The statute specifically requires that the critical coastal areas be adjacent to the waterbodies to be protected. Selecting these adjacent areas for implementation of additional management measures can have a significant effect in preventing water quality problems and protecting designated uses of the coastal waterbodies."

Since the Commonwealth does not have a lot of resources to devote to CNPCP and since federal funds available for CNPCP development is limited, it is imperative that additional sources of funds be found to

enable Pennsylvania to develop a program that adequately addresses NPS pollution in coastal waters.

The aspect of the CNPCP that has the most relevance for CZM is the identification of critical coastal areas. This aspect of the CNPCP focus on addressing the land component of the problem via land use measures. CZM was designed to manage the land portions of the coastal areas. The CZM Program provides the best vehicle for implementing the critical coastal areas portion of the CNPCP. Therefore, CZM will undertake a study to identify geographic areas that possess the greatest potential for causing or contributing to the impairment of or threat to coastal water quality from NPS pollution.

CZM will contract to have these areas identified in both the Lake Erie and Delaware Estuary coastal zones. The following criteria will be used to identify critical coastal areas under this initiative.

- The nature of the coastal water quality problem(s) caused by nonpoint sources.
- The extent to which the nonpoint sources are located adjacent to the waterbodies vs. farther inland.
- The biophysical characteristics of the adjacent lands that will affect the extent to which uses of these lands will cause nonpoint source pollution problems. These include topography/slope, soil characteristics (erodibility, etc.); shoreline erosion characteristics; hydrology, in particular groundwater linkages to coastal waters and high water tables; and forest, wetlands, and other natural areas that may provide natural buffers or nutrient sinks
- Important biological features that should be included as a whole in critical coastal areas.
- The type(s), density, and characteristics of the new or expanded land uses that are anticipated and their effect(s) on water quality.
- The extent to which the above effects can be prevented or reduced by implementation of (g) management measures and/or the additional management measures for land uses.
- The need for an understandable and mappable area.

3B. Program Change

New Authorities Concerning Land Use Management and Regulatory Activities Associated With NPS Pollution Control, Development of New Designated GAPCs.

This project will provide the basis for determining what action needs to be taken to address land use issues that are contributing to NPS pollution problems in coastal waters. This will lead to significant program changes based on the development of new state authorities to address the identified land use issues. All the

identified areas will become designated GAPCs for NPS critical areas. Management plans will be developed for each of the GAPCs detailing how they will be managed to prevent NPS pollution impacts to coastal waters. Furthermore, a program enforceable policy will be developed, based on the new state authorities created, that will describe how Pennsylvania will address NPS critical coastal areas. Since the NPS problems and the land use issues creating those problems have not been identified yet, it would be extremely speculative to hazard a guess as to what specific new authorities will be developed.

This project will lead to program changes that will improve coastal water quality through controlling land use impacts. The new authorities that will be developed will give the program the ability to control land use impacts in the coastal zones. This will be critical not only to NPS water quality issues, but to other issues as well. Controlling land use activities/impacts will be critical to address other forms of Cumulative and Secondary Impacts that the resources of the coastal zone will be subjected to from future growth and development.

This project will have transference implications because all coastal states will eventually be faced with this task as they implement the CNPCP.

3C. Appropriateness of Tools

The proposed changes concerning identifying critical coastal areas and developing land use controls are appropriate. This process will address the concerns expressed in the assessment regarding the problems associated with NPS pollution. Additionally, it is appropriate to take this action under 309 because with the scarcity of resources available for the CNPCP this is one way to insure this aspect of it will be accomplished. It will further demonstrate the importance of the CZM Program and further its role as a leader on coastal issues.

3D. Cost

1992 - \$15,000 staff cost (weighted formula)/\$275,000 consultant cost
(Project of Special Merit)

1993 - \$7,500 staff cost (weighted formula)

1994 - \$10,000 staff cost (weighted formula)

Total Cost: \$307,500

3E. Schedule

1992 - Develop scope of work and let contract for identifying critical coastal areas in both coastal zones. Develop RFP, let contract, finalize scope of work, manage study and contract.

1993 - Work with CNPCP to develop authorities/tools to address land use general NPS problem identified in 1992 study.

1994 - Continue working on 1993 tasks, developing tools/authorities, etc.

3F. Likelihood of Success

The Department is required to accomplish the task as part of the CNPCP. If it does not, it will incur penalties as its federal funding for its 319 nonpoint source and CZM Programs. Resources to devote to this issue are scarce and this would provide the Department an opportunity to accomplish CNPCP requirements and avoid future penalties. The Department, therefore, strongly supports this effort because it provides an opportunity to fulfill a federal requirement that it may not be able to do otherwise.

FY92 Work (weighted formula and project of special merit)

The study will analyze existing water quality data, collect new data if necessary, and analyze existing land use data to identify critical coastal areas with regard to NPS pollution. Once these areas are identified the source(s) of NPS pollution will be identified. Recommendations will then be made as to what new regulations, authorities, tools, BMPs, agreements, etc., need to be developed to address the NPS pollution problem in these critical coastal areas.

OUTYEAR TASKS

1993

Initiate Development of Authorities and BMPs - As a result of the study recommendation new authorities and BMPs will have to be developed to address NPS pollution in critical coastal areas.

Benchmarks:

- a. Draft BMPs need to address NPS pollution in critical coastal areas will be developed.
- b. Authorities needed to implement the BMPs will be developed.

1994

Finalize BMPs and authorities.

Benchmarks:

- a. BMPs will be finalized.
- b. Authorities will be implemented as appropriate.

TASK DESCRIPTION

No. 92-EG.04 Title: Bucks County Dredge Disposal Study

Federal: \$ 57,500(309) Non-Federal: \$ 0 Total: \$ 57,500

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993

Grantee: X #Person Days: 30 :
: Section 309 Enhancement Area:

Others: X : Cumulative & Secondary Impacts

1. Consultant :
: GAPC Involvement:
: All as Appropriate (Bucks Co.)

Location: Delaware Estuary coastal zones, Bucks County, Pennsylvania.

Background: Pennsylvania's DER is responsible for providing disposal sites for all channel maintenance dredging performed by the US Army Corps of Engineers (COE) on the Navigational Channel of the Delaware River from Allegheny Avenue in Philadelphia north to the Trenton Marine Terminal. Dredging is necessary in this area to maintain adequate channel depth for commerce on the river. Based on economics and environmental concerns, hydraulic dredging is the only prudent and feasible way to keep the channel open. The former USX site in this area has the potential to once again be a major economic factor and maintaining shipping access in this area could play a vital role in future economic revitalization activities.

Because of growth and development that has taken place in this part of the coastal zone, there are few remaining areas where the dredge spoil can be placed. In the remaining undeveloped areas, wetlands, open waters, and fishery concerns further limit where dredge spoils can be placed. Furthermore, some previously used sites have been eliminated because, as a result of the disposal, wetlands have been created, or the spoils were contaminated. Therefore, these areas cannot be "cleaned out" and reused as spoils disposal areas. The DER may be faced with either not allowing the dredging to take place, thereby, severely restricting commerce in this area of the coastal zone, or else having to resort to bucket dredging which is environmentally damaging and more expensive.

All potential existing sites for spoil disposal are owned or controlled by Waste Management Incorporated. Because of the limited space, a system whereby the spoils can be periodically removed and the sites reused, must be devised to insure there will be future capacity. It is imperative that the DER secures disposal sites on a long-term basis and sets up a process that insures that their utilization will not negatively impact wetland and fisheries resources and that the areas can be "reused" to insure adequate future capacity.

This project continues CZM's effort regarding dredge disposal in Pennsylvania's coastal zones which was initiated under FY 1991 Section 309, Cumulative and Secondary Impacts, (Grant Task No. 91-EG.01).

Project Description: The proposed study will identify sites that need to be secured by the DER to insure that dredging spoils can be disposed of in an environmentally safe and responsible manner on a long term basis. The study will also recommend how these sites can be secured and will identify all inter/intra agency agreements that will need to be developed.

Estimated Project Budget

| | |
|-----------------------|------------------|
| Salaries and wages | \$ 4,900 |
| Fringe benefits | 1,900 |
| Overhead | 400 |
| Travel | 200 |
| Materials & supplies | 100 |
| Equipment | 0 |
| Consultant/contractor | <u>\$ 50,000</u> |
| Total | \$ 57,500 |

Expected Products and Timetable: The results of this effort will be a final report which identifies potential disposal sites the DER could secure and how these sites can be secured. Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Execute contract with consultant based on Scope of Work and RFP developed under FY 1991 Section 309 (Grant Task No. 91-EG.01).
- 03-31-93 Consultant will identify potential dredge disposal sites and make recommendation to the DER on securing these sites (i.e., outright purchase, lease, etc.)
- 06-30-93 Consultant will identify all environmental parameters and outline inter/intra agency agreements the DER needs to develop.
- 08-31-93 Draft report submitted to the DER-DCZM for review and comment.
- 09-30-93 Final report which incorporates all comments will be submitted to DER-DCZM.

TASK DESCRIPTION

No. 92-EG.05 Title: Presque Isle Bay Boating Impact Analysis

Federal: \$ 107,500(309) Non-Federal: \$ 0 Total: \$ 107,500

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993
: -----
Grantee: X #Person Days: 30 :
: Section 309 Enhancement Area:
Others: X : Cumulative & Secondary Impacts
1. Consultant :
: GAPC Involvement:
: OV-1 (Presque Isle Bay)

Location: Presque Isle Bay, Erie County, Pennsylvania.

Background: Presque Isle Bay is a popular boating and recreational area. The 3,200-acre bay is surrounded by five miles of shoreline. A large part of that shoreline is associated with Presque Isle State Park which receives 4.5 to 5 million visitors annually. Presque Isle shelters the bay; which is not subject to as many rough water episodes as the surrounding open lake waters (one reason why the bay is so attractive to boaters). However, the Bay is being subjected to increased recreational usage as a result of coastal growth and development. In the past decades, the number of marinas has increased significantly. Additionally, many boats are launched in the bay from trailers and car tops. The bay has approximately 2,500 public and private slips, and demand still exists. The City of Erie has recognized the need to study the impacts recreational boating is having on the Bay and develop a management plan to address them.

Environmental impacts include water quality (sewage and gasoline from the boats) as well as impacts from waves generated by the boats. Sewage from boats is a concern in all waters of the Commonwealth, but especially in enclosed bodies such as the Bay. There are currently no state regulations requiring marinas to have pump out stations for sanitary facilities on boats, or covering the usage of those pump out stations by boats having sanitary facilities. There is little doubt that sewage from boats is being pumped/dumped into the Bay. With such a concentration of boats fugitive escapes of gasoline and oils into the bay from boats and marina filling stations is occurring. The escapes could currently be adversely affecting the bays water quality and the severity is likely to increase as boating usage increases. Waves from boating causes shoreline erosion which can harm wetlands. The increased sediments and wave action can also harm fish spawning. Boating disturbance may also be resuspending contaminated sediments which are known to exist in the Bay.

Overuse by boating also has social impacts. Safety is a major concern as boating capacity limits are reached and ultimately exceeded. The Bay is an attractive site for power boaters, sailing craft, and small fishing boats. Overuse by boaters can also lead to a diminished

recreational experience for all concerned, not only among the boaters. As the Bay's waters are cleaned up, there will be increasing demands placed on it by shore fishermen because of its proximity to a large urban population. The potential exists for increased conflicts among boaters and between boaters and shore fishermen.

This project continues CZM's effort regarding boating capacity and boating impacts in Presque Isle Bay initiated under FY 1991 Section 309, Cumulative and Secondary Impacts, (Grant Task No. 91-EG.02).

Project Description: The study will document present and future environmental and social impacts that recreational boating is having on Presque Isle Bay. Also, the study will determine what boat capacity usage the Bay can support, a determination of what restrictions need to be placed on boating, how these restrictions should be applied, and who should be responsible for placing and enforcing those restrictions. The study will also determine where and how boating should be restricted to protect the environment and avoid user conflicts.

Estimated Project Budget

| | |
|-----------------------|------------------|
| Salaries and wages | \$ 4,900 |
| Fringe benefits | 1,900 |
| Overhead | 400 |
| Travel | 200 |
| Materials & supplies | 100 |
| Equipment | 0 |
| Consultant/contractor | <u>\$100,000</u> |
| Total | <u>\$107,500</u> |

Expected Products and Timetable: The results of this effort will be a final report identifying the impacts boating is having on Presque Isle Bay. This includes information regarding boat capacity, restrictions on boating, and who, how, and where these restrictions should be applied to protect the environment and avoid user conflicts. Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Execute contract with consultant based on Scope of Work and RFP developed under FY 1991 Section 309 (Grant Task No. 91-EG.02).
- 06-30-93 Consultant will identify present and future environmental and social impacts that recreational boating is having on Presque Isle Bay. Also, what restrictions are needed to protect the Bay environment and avoid user conflicts. This information will be reviewed and coordinated through the Presque Isle Bay Task Force.
- 08-31-93 Draft report submitted to the Presque Isle Bay Task Force and DER-DCZM for review and comment.
- 09-30-93 Final report which incorporates all comments will be submitted to DER-DCZM.

TASK DESCRIPTION

No. 92-EG.06 Title: Nonpoint Source Critical Coastal Area Identification

Federal: \$ 290,000(309) Non-Federal: \$ 0 Total: \$ 290,000

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993
Grantee: X #Person Days: 60 :
: Section 309 Enhancement Area:
Others: X : Cumulative & Secondary Impacts
1. Consultant :
: GAPC Involvement:
: All as Appropriate

Location: Both Delaware Estuary and Lake Erie coastal zones.

Background: Coastal water quality is suffering as a result of nonpoint source (NPS) pollution. This threat will increase from cumulative and secondary impacts associated with growth and development as projected coastal growth occurs. Unfortunately, nobody has a good handle on what NPS pollutants are causing the most problems (i.e., toxins, BODS, heavy metals, etc.). The DER and the Delaware River Basin Commission have some pertinent data but it has never been analyzed with respect to trying to determine how much of the pollution is attributable to NPS.

The Coastal Nonpoint Pollution Control Program (CNPCP) will require the Commonwealth to identify what NPS pollutants are impacting coastal waters and also identify critical coastal areas adjacent to the waterbodies to be protected. Including these adjacent areas for implementation of additional management measures can have a significant effect in preventing water quality problems and protecting designated uses of the coastal waterbodies.

Since the Commonwealth does not have a lot of resources to devote to CNPCP and since federal funds for CNPCP development are limited, it is imperative that additional sources of funds be found for Pennsylvania to develop a program that addresses NPS pollution in coastal waters. Therefore, CZM will use Section 309 monies to hire a consultant to identify these critical areas in both coastal zones. The following criteria will be used to identify critical coastal areas under this initiative.

- * The nature of coastal water quality problem(s) caused by NPS pollution.
- * The extent to which NPS pollution is located adjacent to the waterbodies vs. inland.
- * The biophysical characteristics of the adjacent lands that will affect the extent to which uses of these lands will cause NPS pollution problems. These include topography/slope, soil characteristics (erodibility, etc.); shoreline erosion

characteristics; hydrology, in particular groundwater linkages to coastal waters and high water tables; and forest, wetlands, and other natural areas that may provide natural buffers or nutrient sinks

- * Important biological features that should be included as a whole in critical coastal areas.
- * The type(s), density, and characteristics of the new or expanded land uses that are anticipated and their effect(s) on water quality.
- * The extent to which the above effects can be prevented or reduced by implementation of management measures for land uses.
- * The need for an understandable and mappable area.

Project Description: The proposed study will analyze existing water quality data, collect new data if necessary, and analyze existing land use data to identify critical areas with regards to NPS pollution. Once these areas are identified the source(s) of NPS pollution will also be identified. Recommendations will be made as to what regulations, authorities, tools, best management practices (BMPs), agreements, etc. need to be developed to address the NPS pollution problem in these critical coastal areas.

Estimated Project Budget

| | |
|-----------------------|------------------|
| Salaries and wages | \$ 9,800 |
| Fringe benefits | 3,800 |
| Overhead | 700 |
| Travel | 500 |
| Materials & supplies | 200 |
| Equipment | 0 |
| Consultant/contractor | <u>\$275,000</u> |
| Total | <u>\$290,000</u> |

Expected Products and Timetable: The product, a final report will identify critical coastal areas with regards to NPS pollution and the source(s) responsible for the pollution. Also, recommendations regarding how to address the NPS problem will result. Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Scope of Work and RFP developed. Consultant selected.
- 04-30-93 Consultant will collect data for review and analysis in determining and identifying critical coastal areas.
- 06-30-93 Consultant will identify and make recommendations for addressing the NPS problem (authorities, regulations, etc.).
- 08-31-93 Draft report submitted to the DER-DCZM as well as other appropriate agencies/programs for review and comment.
- 09-30-93 Final report which incorporates all comments will be submitted to DER-DCZM.

PENNSYLVANIA COASTAL ZONE MANAGEMENT
SECTION 309 STRATEGY
PUBLIC ACCESS

1A. Problem Summary

The need for increased public access in both the Delaware Estuary and Lake Erie coastal zones remains high. The approach the Coastal Zone Management Program (CZM) has used, directing 306/306A funds toward this issue, has not proven adequate to meet the needs/demand for public access. Additionally, the coastal zones do not always receive the attention from other state public access providers because of their statewide responsibilities to provide public recreation. The coastal zones are small geographic areas with respect to the whole state. Therefore, the Program needs to take a more active role as a public access facilitator and focus state, federal, local, and private resources to provide more public access opportunities in both coastal zones.

1B. Program Change(s)

The following Program Changes are proposed in addressing Public Access in Pennsylvania.

Program Change 1 - Development of Public Access Management Plan (PAMP)

Program Change 2 - Development of Memoranda of Understanding (MOUs) or letters of agreement

These program changes, further described within this strategy, will enable CZM to better focus its limited resources, help identify and clarify responsibilities of other entities who provide public access, and help define how CZM can act as a facilitator in fulfilling public access needs in both coastal zones. Additionally, this approach will consolidate all CZM and non-CZM resources (i.e., staff, money, etc.), thus providing a broader spectrum of opportunities for providing public access. This will enable CZM to address public access through a more unified approach by creating a better working relationship among all public access providers (i.e., those who build, fund or coordinate public access development) as well as focus limited resources on public access priorities in the coastal zones.

Initially in 1993, CZM is proposing a public access policy change. CZM will develop a new public access policy and present it to federal, state, and local agencies responsible for providing public access, for review, input, and ultimate adoption. This new policy is an important step in the entire process. Based on the Governor's Executive Order, *to the maximum extent permitted by law, all administrative departments, independent administrative boards and commissions, and other state agencies shall enforce and act consistently with the goals, policies, and objectives of the CZM Program.* By developing a formal policy statement it brings the public access issue to a higher level of visibility within the Commonwealth. Although not enforceable per se, once formulated it will provide the basis for discussions and action by those agencies with authorities to provide public access. The policy

will more clearly articulate responsibility as well as provide leverage in pursuing, managing, and directing other state and local resources toward this issue.

As part of this process, CZM will meet with these public access agencies/providers to discuss, negotiate, and coordinate the new policy concept and explain CZM's role as a coastal public access facilitator. Additionally, CZM will begin to investigate and analyze existing authorities, mechanisms, and tools these agencies/providers use to provide public access opportunities in Pennsylvania. This information will be further developed and incorporated as part of the PAMP which is discussed below.

In subsequent years (1994-1995), CZM will create a Public Access Task Force to assist in establishing public access priorities and guide the development of the PAMP. Furthermore, CZM will look at developing stronger links between appropriate public access providers through MOUs or letters of agreement to ensure these public access agencies adopt the new public access policy and PAMP.

Program Change 1 - Development of a PAMP

CZM will undertake the development of a PAMP. As part of this effort, CZM will create a Public Access Task Force, composed of representatives of federal, state, and local public access agencies/providers (possibly a subcommittee of the CZAC or local CZSC) to assist in establishing public access priorities and guide the development of the PAMP.

The PAMP (to be partially completed by a consultant) will include an inventory and analysis of existing access areas and use patterns (including legal property/ownership rights). In addition, CZM will meet with state and local public access agencies/providers (i.e., those who build, fund or coordinate public access development) and Commonwealth legal counsel to research and analyze the existing legal and regulatory authorities, mechanisms, and tools the Program can use to help improve and increase public access opportunities in Pennsylvania's coastal zones. This information is an integral part of the PAMP and will be useful in developing and identifying priority public access efforts.

The following are some of the mechanisms/tools Pennsylvania may have available in providing public access opportunities. CZM realizes that all of these may not be applicable to the Program; however, we anticipate that some could result or lead to program changes. Therefore, exploring all potential options is a necessary step in the overall process. Once completed, CZM will know what mechanism/tools the Program can use and the agencies that can help us in this endeavor. Furthermore, if other potential program changes are identified, CZM will amend the strategy to reflect them.

- * Use of state owned lands or public right-of-ways for providing increased active and passive public access opportunities.
- * Fee simple and less than fee simple acquisition options other than outright purchase.

Partial gift property donation (donor retains unrestricted title to portion of property).

* Easements (limited right owner grants for use of property).

Leasing property with option for purchase.

Working with local authorities toward adopting public access provisions as a component of their comprehensive plans and zoning ordinances. Local communities have the power to create special zones dedicated to specific uses while prohibiting other uses. These include waterfront districts, overlay districts (regulated development activities), incentive zoning (provide certain concessions to developers in exchange for public benefit), zoning of storm or flood damaged property for non-residential, recreational use, and adopting an ordinance that requires developers to provide public access or a fee in lieu of, to be placed in special fund designated for acquisition or development of public access areas and/or opportunities.

* Limited liability for private property owners who open land to public recreational use.

* Resolving how to overcome existing environmental barriers and conditions (i.e., bluffs, highways, etc.) to provide additional public access opportunities. For example, CZM will undertake a demonstration project in the Lake Erie coastal zone. An accessway will be installed through the bluff face to the water to determine what technique and materials are best and if a stabilized method of traversing the bluffs and providing increased access is possible. Once we establish a proven method, CZM can then proceed to use this approach in identifying and providing increased public access opportunities with local and state entities.

* Tax incentives for property owners who donate or sell property at reduced prices to local governments, nonprofit land trusts, etc.

* Donations of property (donor receives public recognition and avoids capital gain tax).

* Reduced price/installment sale (phased acquisition parcel by parcel).

* Flood damage property (difference between what HUD would normally pay to compensate for damages and the outright purchase price).

Prescriptions (if you use a piece of property long enough without the owner's permission, you acquire the right to continue using it).

Dedications (land owner dedicates land or the use of land to public with local government accepting on behalf of public).

Explore the use of access opportunities with commercial and/or industrial property owners in the coastal zones (potential to use facilities during weekends and off-work days).

- * Explore the creation or establishment of a revenue source (local or state level) to increase and improve public access opportunities in Pennsylvania's coastal zones. These funds could be generated through a special tax or fee and would be used strictly for development, acquisition, construction, and rehabilitation of specific access sites.

Also as part of the PAMP, Geographic Areas of Particular Concern (GAPC) will be incorporated into this process. CZM will assess its existing GAPC process and develop new or revised GAPCs for recreation (public access) which will identify specific allowable uses for each. CZM will negotiate with each coastal municipality, public access provider and/or public land administrator to set priority uses in each public access GAPC. CZM will expand its requirements so that NO CZM funding will be available to state or local government agencies for public access activities (planning, construction or acquisition) unless located in a recreation (public access) GAPC. Further, the MOUs/agreements (as discussed below) will include language to also preclude the use of any state funding for public access activities unless it is located in a designated public access GAPC. Periodically the Public Access Task Force will meet to discuss public access (update or revise existing GAPCs, discuss additional mechanisms to improve or provide more access, etc.). This process will force close coordination regarding public access and will also increase the focus and commitment of all affected parties to only provide public access opportunities identified by the GAPCs in the PAMP.

Program Change 2 - MOUs or letters of agreement

CZM will look at developing stronger links between appropriate public access providers through MOUs or letters of agreement. This is the enforceable mechanism CZM will use to ensure these agencies adopt the new public access policy and PAMP. MOUs are program agreements between the Department of Environmental Resources (DER) and other state agencies and/or commissions which details the manner in which they will use their authorities in the furtherance of the Program's policies. These MOUs will more closely link our agencies' involvement, provide an avenue to better coordinate and address the provision of public access, and direct limited resources (staff and money) toward providing public access opportunities, both active and passive, in Pennsylvania's coastal zones. Additionally, they improve the Program staff management capabilities by making CZM more aware of pertinent activities in the coastal zones.

CZM will develop new or revise existing MOUs and agreements with the Department of Community Affairs, DER Bureaus of State Parks and Dams and Waterway Management, PA Game Commission, PA Fish and Boat Commission, U.S. Fish and Wildlife Service, and National Park Service.

- * CZM will revise the existing MOU with the Department of Community Affairs (DCA) to better focus their efforts in providing greater funding opportunities for providing public access in the coastal zones. DCA has many programs that provide assistance both technical and financial that could augment and/or supplement CZM funding (i.e., Land & Water Conservation Fund (LWCF), Heritage Parks Program, Recreation Improvement & Rehabilitation Act (RIRA), etc.).

- * CZM will develop an MOU with the DER Bureau of State Parks to better direct and coordinate our agencies efforts in identifying and providing both passive and active access opportunities in the coastal zones (i.e., Presque Isle State Park and Neshaminy State Park). Additionally, this MOU will tie CZM more closely into the statewide comprehensive outdoor recreation planning process (SCORP). Because of the varied and diverse recreational needs, demands, and opportunities exclusive to Pennsylvania's coastal zones, CZM will pursue development of a more detailed coastal zone section for the next SCORP. This will help CZM to continually identify and update the focus of what the public demand is and what facility types to provide.
- * CZM will develop an MOU with DER's Bureau of Dams and Waterway Management to better focus our agencies efforts regarding assessing, monitoring, and enforcing public access rights in the coastal zones. As part of this, we will explore and analyze riparian rights under Chapter 105 regulations and the Public Trust Doctrine to determine additional means for public access.
- * Developing an MOU with the PA Game Commission will better focus their efforts in providing multiple-use public access opportunities on state game lands within the coastal zone.
- * Revising the existing MOU with the PA Fish and Boat Commission (formally PA Fish Commission) will better focus their efforts in providing new fishing, boating and passive recreational opportunities as well as rehabilitating existing access sites in both coastal zones. CZM will become more aware and involved in coastal land acquisition efforts and opportunities.
- * Development of an MOU/agreement with the National Park Service (NPS) will better focus their staff and financial support regarding public access opportunities in the coastal zones. The NPS has many programs that provide assistance both technical and financial to augment CZM funding (i.e., Historic Preservation Fund Grants-In-Kind, Rivers and Trails Conservation Programs, etc.).
- * Development of an MOU/agreement with the U.S. Fish and Wildlife Service will better focus their staff and financial support in providing new fishing and boating opportunities as well as rehabilitate existing access sites in both coastal zones. CZM will become more aware and involved in coastal land acquisition efforts and opportunities.

1C. Appropriateness of Tools

CZM has always had the mandate to address public access needs in the coastal zones; however, our approach has not proven adequate to meet the demand/needs. The new public access policy will more clearly articulate responsibility as well as provide leverage in pursuing, managing, and directing other state and local resources toward this issue. Proposed program changes (PAMP, MOUs, etc.) are necessary tools to implement the new policy. The end result will be greater substance and predictability to CZM's efforts to provide increased public access

opportunities in Pennsylvania's coastal zones. It will also ensure that CZM's limited program resources will be used in consort with other available resources to maximize public access efforts and impacts.

1D. Costs

1993 - \$20,000 staff cost (weighted formula)

1994 - \$15,000 staff cost (weighted formula)

1995 - \$37,000 staff cost/\$50,000 consultant cost (weighted formula)

Total cost: \$122,000

1E. Schedule

1993 - New public access policy development, meet and coordinate with affected agencies, and adoption of new policy.

1994 - Create Public Access Task Force to assist in establishing public access priorities and guide the development of a Scope Of Work (SOW) and Request For Proposals (RFP) for the PAMP.

1995 - Conduct and complete PAMP. Development MOUs/agreements with appropriate agencies. Develop additional policies, legal or regulatory mechanisms, etc. if appropriate. Revise and update CZM documents to reflect new direction and coordinate changes with affected entities.

1F. Likelihood of Success

CZM feels that the new public access policy and program change(s), (PAMP, MOUs, etc.) will be looked upon very favorably. We have the support from DER and the local municipalities in pursuing increased public access and the backing to implement the necessary changes to the program. Additionally CZM feels it has the acceptability of the other agencies identified in the strategy. Many of the identified agencies participate as members of CZM's Coastal Zone Advisory Committee or locally at the Steering Committee level. These groups had numerous opportunities to comment on the Assessment and CZM's direction with regards to Section 309. We received no negative input or comments. In fact, all of the access agencies/providers were supportive of the effort and optimistic of the potential to collectively address the problems of providing public access (i.e., scattered funding and limited financial and staff resources, etc.) to accomplish Pennsylvania's goals for coastal public access.

This is a high visibility issue. People want more public access opportunities (passive and active). To maintain the support for the intended program change(s), CZM will direct money and staff efforts in pursuing the above identified mechanisms (PAMP, MOUs, etc.) and toward providing improved and increased public access opportunities in Pennsylvania's coastal zones.

OUTYEAR TASKS

1993 - Public access policy development, coordination with affected agencies, and adoption of new policy.

12-31-93 Draft new public access policy.

03-31-94 Distribute policy and meet with appropriate federal, state, local, and private agencies for review/input.

06-30-94 Coordinate with affected agencies as to responsibilities under new policy and analyze legal and regulatory authorities, mechanisms, and tools available to help improve and increase public access in Pennsylvania's coastal zones.

09-30-94 Finalize and adopt policy.

Work Product: * New public access policy
* Meet and coordinate with public access providers to identify, analyze, and develop tools
* Adoption of new policy

1994 - Create Public Access Task Force and develop Scope of Work and RFP for PAMP.

03-31-95 Create Public Access Task Force.

09-30-95 Scope of Work and RFP for the PAMP (to be partially completed by a consultant) will be finalized.

Work Product: * Creation of Public Access Task Force
* PAMP Scope of Work and RFP

1995 - Conduct and complete PAMP. Develop MOUs/agreements with appropriate agencies. Develop additional policies, legal or regulatory mechanisms, etc., if appropriate. Revise and update CZM documents to reflect new direction and coordinate changes with affected entities.

12-31-95 Consultant selected and PAMP initiated.

03-31-96 Develop MOUs/agreements with appropriate agencies.

08-31-96 Complete PAMP, and if appropriate, develop additional policies or mechanisms for providing public access opportunities.

09-31-96 Revise existing procedures for soliciting projects i.e., application guidelines, selection criteria; coordinate changes with both local steering committees and advisory committee; and update FEIS and program document to reflect changes.

Work Product: * PAMP
* MOUs/agreements
* Updated program document and FEIS reflecting new public access direction

PENNSYLVANIA COASTAL ZONE MANAGEMENT PROGRAM
SECTION 309 STRATEGY
WETLANDS

1A. Problem Summary

Current regulations and Coastal Zone Management (CZM) monitoring activities adequately protect and preserve Pennsylvania's coastal wetlands within the CZM coastal boundaries. However, direct and significant impacts to coastal wetlands result from activities which occur in hydrologically connected waters/wetlands and surrounding uplands located beyond the current boundaries.

1B. Program Change

Expand the Pennsylvania CZM Boundaries to Include Significant Hydrologically Connected Wetlands

This task will result in a change to Pennsylvania CZM boundaries. CZM's wetland enhancement objective is to protect, restore, or enhance existing coastal wetlands. By expanding the CZM boundary to include hydrologically connected wetlands, it is estimated that CZM will increase the number of wetlands they currently protect by tenfold. CZM will expand the coastal boundaries in Erie, Delaware, Philadelphia, and Bucks counties to include wetlands that are hydrologically connected to coastal wetlands. A boundary change may not be explored in Philadelphia County if it is determined that there are too few wetlands within this highly urbanized portion of the coastal zone. Those wetlands that do exist may be so degraded it is doubtful they have any existing wetland value.

As stated in the final assessment, Chapter 105 Regulations require that mitigation for impacted wetlands within CZM boundaries must occur within those same boundaries. By expanding the boundaries, this additional protection can be extended to hydrologically connected wetlands.

In the Lake Erie coastal zone, the CZM boundary will be analyzed to the limits of the Lake Erie Primary watershed. All the streams within these limits (except those in Springfield Township) will flow into Lake Erie through Pennsylvania land. In Springfield Township, the majority of streams within the primary watershed flow west into Ohio and then into Lake Erie. The largest of these is Conneaut Creek. Turkey Creek, a smaller tributary closer to the Lake Erie shoreline and partially within CZM boundaries, also flows into Ohio. The existing CZM boundary will be analyzed south approximately two miles beyond the existing boundaries to take in all of Turkey Creek watershed drainage. The largest expansion analyzed will be approximately ten miles from the existing boundary line. The average planned expansion to be analyzed is approximately eight miles.

The expansion analysis of the CZM boundary in the Delaware Estuary coastal zone is much more complex than that of Lake Erie. The primary and secondary watersheds are too large for expansion purposes. A thorough field examination will analyze the limits and process of

expansion. For purposes of this strategy, average limits will be approximately three to five miles. This distance was determined by measuring smaller (some unnamed) tributaries and the upper limits of free flow (dams/reservoirs) of larger streams. The purpose of this task would be to analyze all available information and determine a process to expand the CZM boundary limits. There is a possibility that the Delaware Estuary coastal zone boundary may not be expandable or only expandable in special areas subject to special criteria such as unique wetlands, rare and endangered species, etc.

This program change will involve close public involvement and coordination with federal, state, county, and local agencies.

1C. Appropriateness of Tools

Current regulations and monitoring activities adequately protect wetlands within the CZM boundaries. The only feasible way to address impacts from hydrologically connected impacts to coastal wetlands is to expand the CZM boundaries to include upland drainage areas/watersheds.

1D. Costs

1992 - \$30,000 staff cost (weighted formula)

1993 - \$10,000 staff cost (weighted formula)

Total Cost: \$40,000

1E. Schedule

1992 - Evaluate existing boundaries and collect information to determine the appropriate expansion process and limits. Draft/finalize boundary change proposal.

1993 - Develop amendment package to distribute for public review and comments. Hold public hearings to receive testimony. Complete final documents and submit to NOAA/OCRM for approval.

1F. Likelihood of Success

There is no perceived negative impacts to having Pennsylvania's CZM Program boundaries expanded. There will be adequate federal, state, and local support for this action. The department will provide additional support for this effort through additional staff to handle the wetland protection/monitoring/coordination work. This task has a high likelihood of success.

FY92 Work Program (Project of Special Merit)

CZM will complete a thorough analysis of boundary, hydrologic, topographic, geologic, and political boundary maps. Other resource documents will be analyzed along with conducting field work in the affected areas. This will be done to determine how far the boundaries must extend in order to include all or as many wetlands hydrologically connected to coastal wetlands.

First Quarter (Oct-Dec) - Analyze all existing data, maps, and reports that may have relevance to how hydrologically connected wetlands can be included within CZM boundaries. Draft a boundary change proposal for both.

Second and Third Quarter (Jan-Jun) - Public involvement and coordination meeting with federal, state, and local agencies on proposed boundary changes.

Fourth Quarter (Jul-Sep) - Finalize boundary change proposal.

OUTYEAR TASKS

1993

Develop amendment package of boundary changes and submit to NOAA/OCRM for approval.

Benchmarks:

- a. Develop amendment package to distribute for public review and comment.
- b. Hold public hearings to receive testimony on boundary changes.
- c. Compile final documents and submit to NOAA/OCRM for amendment approval.

TASK DESCRIPTION

No. 92-EG.03 Title: CZM Boundary Change

Federal: \$ 15,000(309) Non-Federal: \$ 0 Total: \$ 15,000

Work being done by: : Start Date: October 1, 1992
: Completion Date: September 30, 1993
: _____
Grantee: X #Person Days: 60 :
: Section 309 Enhancement Area:
Others: _____ : Wetlands
: _____
: GAPC Involvement:
: All as Appropriate

Location: Both Delaware Estuary and Lake Erie coastal zones.

Background: CZM's wetland enhancement objective is to protect, restore, or enhance existing coastal wetlands. By expanding the CZM boundary to include hydrologically connected wetlands, it is estimated the CZM will increase the number of wetlands they currently protect by tenfold. CZM will expand the coastal boundaries in Erie, Delaware, Philadelphia, and Bucks counties to include wetlands that are hydrologically connected to coastal wetlands. A boundary change may not be explored in Philadelphia County if it is determined that there are too few wetlands within this highly urbanized portion of the coastal zone. Those wetlands that do exist may be so degraded it is doubtful they have any existing wetland value.

As stated in the final assessment, Chapter 105 regulations require that mitigation for impacted wetlands within CZM boundaries must occur within those same boundaries. By expanding the boundaries, this additional protection can be extended to hydrologically connected wetlands. Other benefits derived will include a more realistic fulfillment of the needs and desires of the coastal residents, businesses, industries, and interest groups that were expressed during the formulation of the Pennsylvania CZM Program, and to address wetland preservation - a national priority.

Project Description: The purpose of this task is to analyze all available information and determine a process to expand the CZM boundary limits. CZM will complete a thorough analysis of boundary, hydrologic, topographic, geologic, and political boundary maps. Other resource documents will be analyzed along with conducting field work in the affected areas to determine how far the boundaries must extend in order to include all or as many wetlands hydrologically connected to coastal wetlands.

Following the analysis of existing data (maps, reports, etc.), draft boundary change proposals for both coastal zones will be developed. They will be subject to review by federal, state and local agencies and the public prior to finalizing the boundary change proposals.

Estimated Project Budget

| | |
|-----------------------|-----------|
| Salaries and wages | \$ 9,800 |
| Fringe benefits | 3,800 |
| Overhead | 700 |
| Travel | 500 |
| Materials & supplies | 200 |
| Equipment | 0 |
| Consultant/contractor | \$ 0 |
| Total | \$ 15,000 |

Expected Products and Timetable: The product of this effort will be a final determination on how far the CZM boundaries need to be extended in order to include wetlands hydrologically connected to coastal wetlands (boundary change proposal). Information regarding the status of this effort will be submitted to OCRM as part of DER-DCZM's quarterly performance report. The anticipated timetable for completing this effort is as follows:

- 12-31-92 Analyze all existing data, maps, and reports that may have relevance to how hydrologically connected wetlands can be included within CZM boundaries. Draft a boundary change proposal for both coastal zones.
- 06-30-93 Public involvement and coordination meeting with federal, state, and local agencies on proposed boundary changes.
- 09-30-93 Finalize boundary change proposal.

COST SUMMARY

PENNSYLVANIA COASTAL ZONE MANAGEMENT PROGRAM
SECTION 309 STRATEGY SCHEDULE AND COST

| MAXIMUM PER YEAR WEIGHTED FORMULA: \$114,800 | Program Change Areas | Weighted Formula 309 Funding | Projects of Special Merit 309 Funding |
|--|----------------------------|---------------------------------------|--|
| <hr/> | | | |
| 1992 | | | |
| CH - Bluff points/Measures/Monitor | 1B | \$ 50,000 | |
| - Compile legal interpretation changes; BRSA | 2B | 5,000 | |
| WL - Inventory boundary changes and develop proposal | 1B | 30,000 | |
| C&SI - Develop Bucks Co. dredge disposal study | 1B | 7,500 | \$ 50,000 |
| - PIBay - convene study, develop RFP, execute consultant contract | 2B | 7,500 | 100,000 |
| - NPS - let contract for identifying critical coastal areas | 3B | 15,000 | 275,000 |
| | | ----- | ----- |
| | | \$115,000 | \$425,000 |
| 1993 | | | |
| CH - Amend Shoreline Erosion and Flooding, Erie Co. | 1B | \$ 10,000 | |
| - Amend CH policy IA.1 to include BRSA guidelines | 2B | 6,500 | |
| - Pre BRSA Amendment work | 3B | 10,000 | |
| - Amend Act; BRSA | 3B | 18,000 | |
| - Research new bluff traverse/use possibilities | 3B | 18,000 | |
| WL - Develop amendment package for OCRM approval | 1B | 10,000 | |
| C&SI - Analyze dredge study, implement recommendations, develop purchase/lease agreements, and MOU/agreements | 1B | 7,500 | |
| - PIBay - Review study recommendations, implement them | 2B | 7,500 | |
| - NPS - develop authorities/tools to address land use NPS problems | 3B | 7,500 | |
| PA - Develop new public access policy, meet and coordinate with analyze tools and mechanisms, and adopt policy | 1B | 20,000 | |
| | | ----- | |
| | | \$115,000 | |

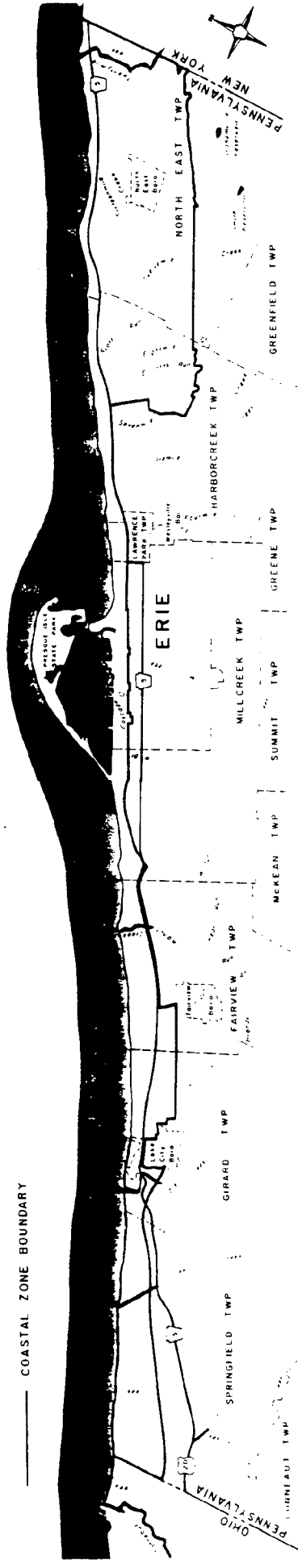
1994

| | | | |
|------|---|----|-----------|
| CH | - Amend Regs, local ord. for recession rate changes | 1B | \$ 22,000 |
| | - Amend Regs, local ord. for bluff face restrictions | 3B | 26,000 |
| | - Demonstration projects on traversing/using bluff face | 3B | 22,000 |
| C&SI | - Finalize activities, secure sites, execute/implement agreements | 1B | 10,000 |
| | - PIBay - finalize regulations, agreements and implement | 2B | 10,000 |
| | - NPS continue developing tools/authorities | 3B | 10,000 |
| PA | - Create public access task force and develop PAMP SOW and RFP | 1B | 15,000 |
| | | | ----- |
| | | | \$115,000 |

1995

| | | | |
|----|---|----|-----------|
| CH | - Monitor and evaluate bluff face use demo projects | 3B | \$ 13,000 |
| | - Develop technical assistance package | 3B | 15,000 |
| PA | - Develop public access management plan | 1B | 62,000 |
| | - Develop MOUs and agreements | 1B | 10,000 |
| | - Develop additional public access policies if necessary | 1B | 10,000 |
| | - Revise existing project selection criteria and procedures and inform CZSCs and CZACs and update (RPI) FEIS program document | 1B | 5,000 |
| | | | ----- |
| | | | \$115,000 |

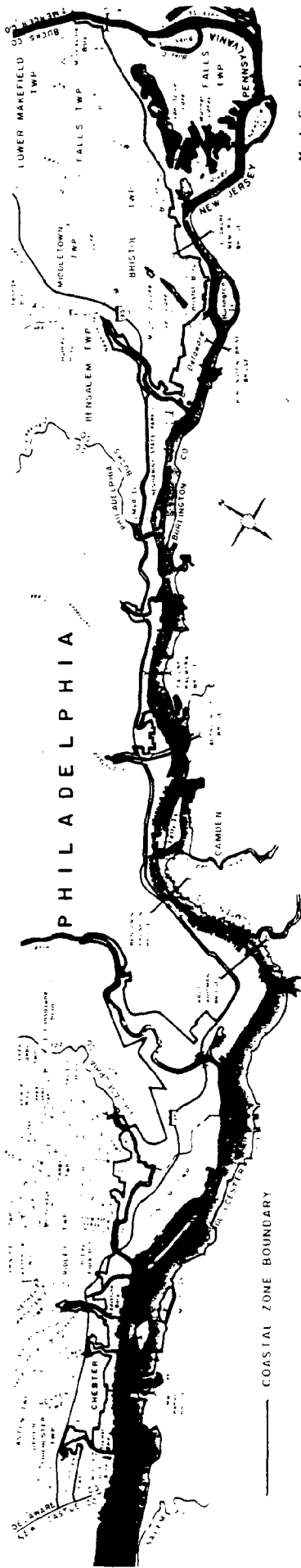
Lake Erie Coastal Zone



Map by Gene Barkman

Note: In accordance with a 1976 ruling of the U.S. Department of Justice, all lands owned, leased, held in trust or which use is otherwise, by law, subject solely to the discretion of the federal government, are excluded from the coastal zone. Federal agencies must still comply with the consistency provisions of the federal act when actions on these excluded lands directly affect coastal zone areas, uses or resources.

Delaware Estuary Coastal Zone



Map by Gene Burkman

Note: In accordance with a 1970 ruling of the U.S. Department of Justice, all lands owned, leased, held in trust or otherwise, by law, subject solely to the discretion of the Federal Government, are excluded from the coastal zone. Federal agencies must still comply with the consistency provisions of the Federal act when actions on these excluded lands directly affect coastal zone areas, uses, or resources.

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