STATE OF WISCONSIN

COASTAL ZONE MANAGEMENT PROGRAM

NEEDS ASSESSMENT AND MULTI-YEAR STRATEGY

WISCONSIN
COASTAL
MANAGEMENT
PROGRAM

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WISCONSIN COASTAL MANAGEMENT PROGRAM

NEEDS ASSESSMENT/ MULTI-YEAR STRATEGY

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STATE OF WISCONSIN
COASTAL ZONE MANAGEMENT PROGRAM
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EXECUTIVE SUMMARY

The Wisconsin Coastal Management Program (WCMP) completed a Needs Assessment regarding coastal issues on Lake Michigan and Lake Superior. The assessment dealt with a thorough evaluation of the following areas, which are the national priority issues: wetlands, coastal hazards, public access, cumulative and secondary impacts of development, non-point source pollution, contaminated sediments, natural hazards, special area of management planning, energy and government facilities siting activities and marine debris. The needs assessment process included establishing technical work groups to review the issue areas, and conducting public meetings to openly discuss the topics.

Based on the outcome of the needs assessment, the Wisconsin Coastal Management Program developed a multi-year strategy for the Program which addresses the most important needs in Wisconsin's coasts. The Program will focus its efforts on wetlands protection, public access issues and cumulative and secondary impacts of development. Non-point source pollution, contaminated sediments, natural hazards, and special area of management planning are addressed as they relate to cumulative and secondary impacts and wetlands.

The strategy includes Section 306 and Section 309 funding sources. Section 306 concentrates on implementation of the core activities of the Wisconsin Coastal Management Program, while Section 309 is to be used to make significant improvements or changes to the implementation of the Program.

Under wetland protection, the WCMP will concentrate efforts on the following issues: activities related to monitoring and enforcement of state and local regulatory efforts, educational activities, adoption of local zoning ordinances, wetland restoration programs, etc. Under public access issues, the Program will concentrate efforts on the development of a long range coastal public access plan, and the implementation of selected public access projects. Regarding cumulative and secondary impacts, efforts will be concentrated on non-point source pollution control activities, contaminated sediments and associated water quality problems, model comprehensive ordinances addressing stormwater, nonpoint source pollution, wetlands, erosion, waterways management, etc.

The Wisconsin Coastal Management Council (WCMC) recognizes its priority responsibility is to protect and preserve the wetlands and funding decisions will be made accordingly. Ensuring compliance with this core authority will be pursued through a number of different strategies including enforcement, permit monitoring, education, zoning, encouraging ownership and well as subjecting the public to the proper usage and appreciation by making our overall coastal zone more accessible to the public.

Although the WCMC will proceed in the aforementioned manner to ensure mutual priorities (NOAA/OCRM and Wisconsin's) are

adequately addressed, a long term WCMC goal is for Wisconsin's Coastal Program to become more balanced (e. g. 30% of program budget for wetland activities; 35% for public access projects; and, the remaining 35% on cumulative and secondary impacts). Current reality, however, require flexibility as actual percentage allocation of funds will be "driven" by established priority needs, proposals received, and the degree to which the core activities of the Program are addressed.

Fiscal and Technical Needs Documentation

The current state budget is balanced, as mandated by the state constitution. State statute also requires that a reserve be maintained. The agency which implements most of the Coastal Management Program's enforceable policies is the Wisconsin Department of Natural Resources (WDNR). The WDNR is asking for increases in staffing and funding for the Water Regulation and Zoning Program in their current state budget request. That budget has not yet been presented to the state legislature. The funding increases will be from segregated funds (fees) and/or program revenue. However, the funding requests do not cover the proposed 309 projects.

The technical knowledge and skills needed to carry out the proposed projects are available through local units of government, state agencies, Wisconsin colleges and universities, regional planning commissions and private, non-profit organizations. The WCMP will develop a request for proposals from these sources to perform the work tasks outlined in this strategy.

WETLANDS

LEGISLATIVE OBJECTIVES

1. Protection, restoration or enhancement of existing coastal wetlands base or creation of new coastal wetlands [Coastal Zone Management Act, s. 309(a)(1)];

2. Maintain safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses and reserve shore cover and natural beauty [Wisconsin. Statutes., s. 144.26];

3. Avoid or minimize adverse effects on wetlands due to actions over which the Department of Natural Resources has regulatory or management authority and to maintain, enhance and restore wetland values [NR 1.95, refer. to Wisconsin. Statutes., s. 144.025, 1.11 and 23.09, 29.02];

4. Protect, preserve, restore and enhance the quality of waters in wetlands and other waters of the state influenced by wetlands [NR 103].

CHARACTERIZATION OF THE ISSUE

Filling, draining or otherwise altering wetlands can degrade water quality, decrease fish and wildlife habitats, populations and diversity, increase flooding and shoreline erosion, and affect groundwater quality and quantity. Rare plants and animals frequently live in wetlands. Wetlands are often the last remaining open spaces in urban areas.

An estimated 50% of the wetlands that originally covered Wisconsin have been lost. Losses may be up to 90% in Southeastern Wisconsin. Wetlands continue to be filled, drained and altered each year.

Wisconsin has a framework of laws and programs to prevent continued loss and to restore some wetlands. Yet wetland losses continue because some activities and some wetlands are not covered by existing laws, and because of insufficient resources to enforce the laws and carry out programs as designed.

Extent and Type of Wisconsin Wetlands: Wisconsin currently has approximately 5.3 million acres of wetlands. About 25% of those wetlands are in the 15 counties adjacent to the Great Lakes mostly in the northwestern and northeastern part of the state.

There are four categories of wetlands and a variety of subcategories throughout Wisconsin as well as in the coastal zone. The four categories are:

* *Open water marshes:* Herbaceous plants growing entirely on or in a water body;

* *Wet meadow wetlands:* Herbaceous plants which stand above the surface of the water or soil;

* *Scrub/shrub wetlands:* Composed of woody plants less than 20 feet tall; and,

* *Forested wetlands:* Woody plants taller than 20 feet.

Two unique types of wetlands occur only within Wisconsin's coastal zone. These are:

* *Red clay complex wetlands:* Composed of small areas of intermingled wet and dry red clay soils. They occur mainly on old lake plains adjoining Lake Superior.

* *Ridge and swale complexes:* Landforms occurring mainly along the Lake Michigan coast, where narrow beach ridges (strand lines) were formed parallel to the shore as the water in Lake Michigan receded during post-glacial times. Depressions (swales) between the beach ridges contain wetland vegetation, but the ridges themselves are dry.

Trends and Threats: Pre-settlement wetland acreage estimates for Wisconsin, based on the original government land surveys of the early 1800's and modern soil surveys, show that approximately 10 million acres of wetlands were present prior to settlement. While Wisconsin has no comprehensive data base on losses or threats to wetlands in the coastal zone, statewide estimates are available through the Wisconsin Wetland Inventory (WWI) -- a mapping project authorized by the state legislature. Based on aerial photography done for the Inventory from 1978-79, experts estimate that approximately 5.3 million acres of wetlands remain in the state -- representing a loss of about 47% of original wetland acreage.

Wetland losses continue, but it is difficult to determine how many acres of wetlands have been lost since the first wetland inventory. The maps are being updated very slowly, on about a 20-year cycle. Until maps are updated, there is nothing with which to compare the original survey. However, some efforts have been made to estimate the extent of wetland loss. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) has determined that wetland losses in its seven-county region for a recent 15-year period (1970-85) amounted to 4,010 acres, and that the rate of loss has accelerated. The commission has not fully analyzed the data, but believes the increased loss rate is due to accelerated drainage (possibly in response to anticipated stronger wetland protection legislation) and increased development pressures.

In addition, the Wisconsin Department of Natural Resources (DNR) has completed a study of Army Corps of Engineers (COE) Section 404 individual wetland permit decisions made in Wisconsin from 1982 to August, 1990. The study shows wetland losses of approximately 11,800 acres statewide. Annual wetland losses during 1989-90 were a 220% increase over average annual wetland losses during the period 1982-89. Wetland losses are probably higher than this study indicates. A comparison of the DNR permit study and the SEWRPC study shows actual wetland losses to be at least 337% more than that revealed by the permit study for the SEWRPC region.

A DNR study of Section 404 individual permits from 1982 to 1986 indicates the types of threats to wetlands. Of the 9,249 acres lost statewide during that period, 54% of those acres were lost due to cranberry culture, 11% from development and 10% from agriculture. Since cranberry culture is not a major factor in the loss of coastal wetlands, the main pressures on the coast are from development and agriculture. The study did not include historic losses or losses due to drainage.

CHARACTERIZATION OF EXISTING PROGRAMS

Three major state regulatory programs are intended to prevent harmful wetland alterations. The DNR issues permits for activities in waterways (Chapters 30 & 31). In addition, local governments are required to adopt wetland zoning for corridors along waterways with DNR assistance and oversight (Shoreland and Wetland Zoning). DNR staff comment on federal wetland fill permit applications determine if permits can be issued based on compliance with water quality standards (Section 401 of the Federal Clean Water Act, NR103, and NR299).

The major federal wetland protection program is the Section 404 permit program administered jointly by the U.S. Army Corps of Engineers (COE) and the Environmental Protection Agency (EPA). Based on an evaluation of its wetland programs and other factors, Wisconsin has declined to assume the Section 404 program.

On the restoration side, DNR wildlife specialists guide property owners in promoting wildlife use of wetlands and in taking advantage of various land management incentive programs. Major acquisition and incentive programs include the Stewardship Program at the state level, and Swampbuster, Conservation Reserve Program, Wetlands Reserve Program and other provisions of the Federal Farm Bill.

The WCMP is a "networked" program. The Department of Administration which administers the Coastal Program does not enforce the laws that make up the state's coastal policies. Therefore, the Coastal Program relies on the agencies that do have enforcement responsibilities within the state, primarily the Department of Natural Resources. The Council's staff, however,

is responsible for seeing that a comprehensive strategy for coastal wetlands is implemented through the distribution of resources to various state and local agencies and other groups with expertise in the coastal area.

The following is a discussion of the current regulatory programs that the WCMP tracks for both federal consistency purposes and for opportunities to supplement or enhance their implementation.

I. REGULATORY PROGRAMS

A. Wisconsin Department of Natural Resources

Navigable Waters Protection (Chapter. 30 & 31, Statutes.). Regulates construction and waterway alteration in and adjacent to navigable waters, including dams, filling, water diversion, grading, and dredging. Alteration of non-navigable waterways, such as dredging, is also regulated.

Shoreland and Wetland Zoning Oversight (Ss. 59.971, 61,351 & 62.231, Statutes.). State law requires that counties, villages and cities regulate activities in wetlands adjacent to navigable waters ("shorelands"). State law requires DNR to provide technical assistance to local zoning officials, oversight of local decisions, and set minimum general development & wetland protection standards for shorelands adjacent to navigable waters. The regulations are administered by local government.

"Shorelands" means lands within the following distances from the ordinary high-water mark of navigable waters: 1,000 feet from a lake, pond or flowage; and 300 feet from a river or stream or to the landward side of the flood plain, whichever distance is greater. DNR is responsible for technical assistance to local governments and general oversight of the programs. All development (broadly defined) in mapped areas requires a permit. Uses are generally restricted to open space or those related to wetland functions. Other uses require re-zoning if a determination of insignificant wetland value can be made.

Water Quality Certification (S 401 Federal Clean Water Act, NR 103, & NR 299). Certifies whether Corps federal permits are consistent with state wetland water quality standards. Corps may not issue permits if water quality certification is denied.

Floodplain Zoning Oversight (S. 87.30, Statutes. and NR 116.22) Counties, Cities and Villages (S. 87.30, Statutes., & NR 116). State law requires that local governments regulate development in areas subject to flooding (often including wetlands) to prevent loss of life and property damage. Statute requires DNR to provide technical assistance to local zoning officials, oversee local decisions, approve local floodplain zoning ordinances, and assist municipalities in enforcing those ordinances.

Sewer Service Area Planning Oversight (S. 144.025(1)-(2), 147.25, Statutes. NR 121. DNR delegates work activities, and provides funding and technical assistance to local planning agencies for the development of sewer service area plans. These plans become effective upon DNR approval.

Threatened/Endangered Species (S. 29.415, Statutes.). Protects habitat for endangered species.

Wisconsin Wetland Inventory (WWI) (S. 23.32, Statutes.). Classifies and maps wetlands 2 acres and larger throughout the state. WWI maps are the basis for many federal, state and local wetland regulatory programs.

B. Local Zoning

Shoreland and Wetland Zoning: Counties (S.59.971, Statutes. & NR 115). Regulates general development & activities in wetlands in corridors adjacent to navigable waters ("shorelands"). May comment on state and federal permit applications.

Shoreland and Wetland Zoning: Villages & Cities (Ss.61.351 & 62.231, Statutes. & NR 117). Regulates activities in wetlands adjacent to navigable waters ("shorelands"). May comment on state and federal permit applications.

Floodplain Zoning: Counties, Cities and Villages (S. 87.30, Statutes., & NR 116). Regulates development in areas subject to flooding (often including wetlands) to prevent loss of life and property damage.

Sewer Service Area Planning (S. 144.025(1)-(2), 147.25, Statutes. & NR 121). As part of the development of statewide water quality management plans, DNR contracts with local planning agencies to develop sewer service area plans to protect water quality, encourage cost-effective methods for sewer extensions, and protect environmentally sensitive areas including wetlands. Local governments have the option to adopt the sewer service plans as part of their zoning ordinances.

Comprehensive and Other Zoning (Ss. 59.97, 61.35 & 62.23 and Chapter. 91, Statutes.). Regulates a wide range of land uses to protect public health, safety & welfare, and offer wetland protection.

C. Federal

Clean Water Act (S.404). COE and EPA Regulates discharges to "waters of the U.S." including filling of wetlands. Pre-approved "general" or "nationwide" permits may be available for specific minor activities. Compensatory mitigation is only accepted for unavoidable losses under federal program.

Rivers & Harbors Act (S. 10). COE Regulates most activities in major "navigable waters of the U.S." including the Great Lakes and most major river systems.

II. ACQUISITION AND INCENTIVE PROGRAMS

Agriculture Stabilization and Conservation Service (ASCS). Administers 1985 and 1990 federal Farm Bills, which make agricultural producers who alter wetlands ineligible for federal farm program benefits.

Soil Conservation Service (SCS). SCS field offices in most counties conduct wetland inventories and make wetland determination for the Swampbuster provisions of federal Farm Bills. SCS wetland maps identify wetlands in agricultural regions based on presence of hydric soils and eligibility for federal farm program benefits.

Stewardship Program. Provides $25 million annually for 10 years to DNR for conservation land acquisition, property development, and local conservation aids. Some projects include wetlands.

U.S. Fish and Wildlife Service (FWS). Main federal agency involved in wetland acquisition. Nine FWS field offices in Wisconsin assist with wetland restoration plans and management questions. The FWS field office in Green Bay also reviews federal 404 permit applications and related mitigation plans.

Pitman-Robertson Wildlife Restoration Act. Provides federal funds to states for the acquisition of lands to enhance wildlife habitat.

Dingell-Johnson Sport Fish Restoration Act. Provides federal funds to states for the acquisition of lands to improve fisheries management.

Land and Water Conservation Fund Act (Lawcon). Provides federal funding for acquisition of outdoor recreational and open space areas.

Private Acquisition Efforts. Several environmental organizations have worked in coordination with state, federal and local agencies to acquire wetlands for protection. Examples are Ducks Unlimited, Natural Resources Foundation of Wisconsin, and The Nature Conservancy.

III. EFFECTIVENESS OF EXISTING PROGRAMS

Wetland protection in Wisconsin has improved within the last year, especially with the adoption of wetland water quality standards, Administrative Rule NR 103. Unfortunately, even with these standards, wetland losses in Wisconsin continue to increase

and regulatory effectiveness is difficult to achieve and maintain.

Wetland protection in Wisconsin is at the state and local levels and studies show that problems are experienced at both. Local zoning administrators note problems of inadequate staff size and a lack of resources to train staff in wetland recognition, identifying wetland boundaries, and understanding what regulations are applicable. Problems identified by state and local staff include: confusion due to differing requirements in federal, state and local regulations; hindered wetland protection because of limited resources; and a lack of procedural guidance, technical training, and public information.

Specifically, a study of compliance in the state demonstrated that during 1988, over a seven county area, 56% of permitted activities were carried out according to permit conditions. Those conditions which were most commonly not met were erosion control, followed by extra fill or extra construction.

The general public also experiences problems associated with current levels and types of wetland protection. Applicants requesting a permit to alter a wetland say that often they are unaware of which conditions require a permit and which permits are needed. For wetland advocates, problems were listed such as increasing losses and decreasing quality of wetlands due to a lack of understanding of regulations and a lack of an effective enforcement presence.

The following section outlines the needs identified by a workgroup of state and local officials and the input offered by the public to improve the effectiveness of the existing programs. It is organized according to the types of activities that could be funded by the Coastal Zone Enhancement Grants Program established under section 309 of the 1990 reauthorization of the Coastal Zone Management Act (CZMA).

PROGRAMMATIC OBJECTIVES

I. PROTECT AND PRESERVE EXISTING LEVELS OF WETLANDS ACREAGE AND FUNCTIONS FROM DIRECT, INDIRECT AND CUMULATIVE ADVERSE IMPACTS, BY DEVELOPING OR IMPROVING REGULATORY PROGRAMS.

The WCMP needs to expand existing regulatory programs. Local Shoreland-Wetland Zoning Programs (NR 115 and 117) which currently protect wetlands in corridors adjacent to navigable waters, apply to only approximately 50% of Wisconsin's remaining wetlands. Water quality standards also only apply in corridors adjacent to navigable waters.

Need: Legislation to expand current shoreland wetland regulatory jurisdiction to include all mapped wetlands. This expansion would build on existing state/local

partnership, integrate wetland decisions with other local land use controls, and eliminate complex jurisdictional determinations. Particular attention should be paid to unique wetland types (for example, calcareous fens) which should be protected regardless of size.

The WCMP needs to improve compliance monitoring and enforcement programs at the state and local levels by: A) Supporting efforts to characterize wetland problems; B) Improving voluntary compliance; C) Supporting local regulatory efforts; and D) supporting state regulatory efforts.

A. Support Efforts to Characterize Wetland Problems

As mentioned in the introduction, the annual losses of wetland acreage has increased dramatically during the 1989-90 time period -- a 220 to 337% increase over the average losses from 1982-89. In order to prevent further losses, it will be important to know what areas are losing wetlands at the fastest rate and then determine the major causes for the losses. Seven of the 15 coastal counties are subject to high development pressure, seven are subject to a medium level of pressure. Only one has had little pressure. An inventory of existing wetlands is critically needed.

Detailed maps of the State's wetlands are also the regulatory map base for locally administered shoreland wetland protection programs and the State Water Regulation Permit Programs. In order to more accurately characterize the status of coastal wetlands and to improve state and local regulatory efforts, Wisconsin must deal with the following issues.

Needs:
* Update and digitize Wisconsin Wetland Inventory maps for coastal counties on a ten-year cycle;
* Perform analysis of existing data to determine coastal wetland losses and threats;
* Develop a data base to analyze losses associated with federal, state, and local permits easily and routinely, including interim or temporary conversions, e.g. some roads and plowed lands;
* Publicize Wetland Inventory map availability; and,
* Analyze the demographic trends in coastal communities to better understand the development pressures in those areas in relation to their impact on coastal wetlands.

B. Improve Voluntary Compliance

Most permit applicants know little about the requirements of Wisconsin's wetland protection programs. Those who know about the requirements often find them, particularly the state requirements, confusing. A recent DNR survey of permit applicants revealed that people had various misconceptions about which agency they needed to see for a permit. Everyone knew they needed a DNR permit, half knew they needed a local permit and few

knew they needed a Corps permit. In addition, many applicants do not know who to contact for the permits or how to design their projects. Some written materials are available, but they are either not updated often enough or are not delivered effectively.

Need: A comprehensive outreach program is needed to inform the public of the need to protect wetlands, especially in the coastal zone. This can be accomplished through developing or updating a series of brochures focusing on common types of development activities around the shoreland and explaining what agencies need to be contacted for each type of activity, what permits are needed, the steps in the process and where to go for help. A series of information videos and slide shows on wetland and shoreland zoning regulations should also be developed for use at lake association meetings, real estate conventions, banking association meetings, etc. Finally, an effective distribution strategy for outreach materials must be developed.

C. Support Local Regulatory Efforts

A recent DNR study found that local zoning programs need additional resources to get current work done. Local zoning staff also have problems recognizing wetlands, identifying wetland boundaries and understanding what is and is not allowed. DNR is responsible for providing technical assistance to local zoning programs, but has insufficient staff to perform this responsibility. Written guidance materials for local zoning officials are often incomplete or out-of-date. Finally, where strong wetland protection is supported, the counties are not always supported by the Department of Natural Resources and the Corps of Engineers through consistent decisions by all the agencies. Thus, an applicant for a permit may get conflicting signals depending on the agency that they contact first.

Needs:

* Develop a program to require minimum professional standards for local zoning staff and training/orientation for local decision making boards;
* Provide mapping and study grants to local units of government administering state wetland regulations. These grants would be used to enlarge the Wetland Inventory Maps so that they contain enough detail to implement zoning requirements;
* Provide grants to local governments for day-to-day assistance in administering existing state mandated zoning;
* Provide up-to-date, written reference materials to provide guidance on the shoreland wetland regulations to local zoning officials and potential permit applicants; and,
* Develop a certification program for wetlands contractors.

* Authority requiring a uniform disclosure to accompany all land use and building permits advising applicants of environmental and other statewide regulatory requirements and appropriate contacts.
* A way to insure consistent decisions between all agencies.

D. Support State Regulatory Efforts

A recent DNR study field checked federal, state and local permits issued during 1988 in seven counties to determine whether they were carried out according to specified conditions. Overall, 56% of permitted activities were carried out according to permit conditions. Counties led in compliance (75%), followed by the Corps (57%) and then DNR (45%). Improved monitoring and enforcement should lead to fewer permit violations. Also, substantial disincentives are necessary for a credible enforcement program.

DNR's Bureau of Water Regulation and Zoning has undertaken an intensive workload analysis. Currently, DNR processes over 4,000 water regulation permits each year not including the local decisions reviewed. This represents a 10% increase per year over the last 3 years, yet there have been no staff increases in that time period.

Needs:
* Authority and funding to enable DNR wardens to assist local government in enforcement of local wetland regulations using civil citation procedures. A mechanism for consultation with local zoning staff would be necessary to assure technical adequacy of complaints;
* Authority requiring that full wetland restoration be a mandatory consequence of violation of wetland protection laws. Failure to obtain permits where the project could otherwise be authorized should require a monetary forfeiture;
* Authority providing for a penalty assessment to be levied as a percentage of civil forfeitures for violation of wetland regulations;
* Encourage the development of a streamlined approach to make monitoring efforts more efficient; and,
* Authority requiring the adoption of a statewide schedule of minimum forfeitures.
* Authority to allow DNR appeal of local wetland re-zoning decisions to an administrative hearing examiner with subsequent judicial review of the administrative record The same procedure should be used for initial ordinance adoption for noncomplying municipalities.
* Authority to automatically order restoration of an illegally altered wetland in the case of overturning of a local decision (DNR should not have to commence a separate action to compel local enforcement).

* Authority to make local wetland decisions automatically void if timely notice of petitions, hearings and decisions are not provided to DNR.
* Provide adequate fiscal and personnel resources to ensure quick and thorough permit and local decision review and follow up monitoring and day-to-day technical assistance for wetland regulatory and management programs.

II. INCREASE LEVELS OF WETLAND FUNCTIONS WITHIN EXISTING DEGRADED WETLANDS BY DEVELOPING AND IMPLEMENTING COMPREHENSIVE WETLANDS RESTORATION PROGRAMS.

The coastal program currently does not have a strategy for restoring coastal wetlands. Yet, the Department of Natural Resources has management plans which include restoring or improving coastal wetlands.

Needs:
* Develop a comprehensive restoration plan for restoring coastal wetlands. This would include putting together a workgroup of DNR staff and local government staff to develop a priority plan for restoring coastal wetlands. Part of the work of this group would be to explore the need to expand the Wisconsin COASTAL ZONE MANAGEMENT boundaries to include significant hydrologically connected wetlands, if necessary to improve the quality of the Great Lakes.
* Use the priority plan to: 1) Work with existing wetland acquisition and management programs to have them afford a high priority to restoration of the priority wetlands; and 2) Use public information projects, and public and professional training projects to encourage wildlife-wetland restoration to focus on priority wetland identified in the plan.

III. INCREASE WETLAND ACREAGE AND FUNCTIONS THROUGH THE DEVELOPMENT AND IMPROVEMENT OF WETLANDS CREATION PROGRAMS.

Land acquisition usually ensures permanent protection of a wetland. Wetland acquisition should be based on careful wetland inventories that identify areas meriting priority attention. In general, they are: 1) Wetlands where all private actions must be prohibited because of the unique features of the land, such as habitat for rare and endangered species; 2) Wetlands performing important natural functions that are subject to development threats; and 3) Wetlands needed for active public use (e.g., recreation or scientific study).

Need: Develop a comprehensive and prioritized wetland acquisition program that addresses all wetland uses and functions. The plan should include federal, state,

local, and private sources of funding and incorporate existing plans (for example, the North American Waterfowl Management Plan).

IV. UTILIZE INNOVATIVE TECHNIQUES TO PROVIDE FOR THE PROTECTION AND ACQUISITION OF COASTAL WETLANDS.

The Wisconsin Coastal Management Council is in a unique position to influence the legislative process in Wisconsin because several of its members are also members of the state legislature. Through their efforts, the Council hopes to increase wetland protection in Wisconsin via the legislative process.

Need: The Wisconsin Coastal Management Council should become actively involved in supporting legislative measures which will increase wetland protection. Specifically, tax laws should be adjusted to provide an incentive to the landowner to protect wetland property. Wetland owners paying the same property taxes as owners of developable land think their property rights are being violated when not permitted to use the land as they wish. Unrealistic expectations of a property's development potential often lead to this situation.

State and local decision makers need to consider the cumulative impacts of various decisions that directly and indirectly affect wetlands. Viewed independently, a particular wetland use may not appear to have serious consequences, but when repeated many times in an area it can have negative consequences. The cumulative impacts of projects are often not addressed because it is difficult to establish the criteria to be considered. Likewise, the secondary, or indirect effects must be considered before permitting actions in wetlands.

Needs:
* Summarize existing research assessing cumulative and secondary impacts on wetlands. Determine how to apply cumulative and secondary impacts analysis to DNR permitting actions.
* In collaboration with federal, state, and local governments, and with public input, develop Special Area Management Plans to provide predictability in permitting and land use decisions.

Wetlands will never be adequately protected until the public understands their importance to the environmental and economic health of Wisconsin. Curriculums on the functions and values of wetlands should be available for primary and secondary schools. Courses on wetlands ecology should be available at public universities. It is particularly important that attorneys, judges and the land development sector understand the wetland regulatory programs and the importance of wetlands.

Need: Support public information efforts to acquaint citizens with the important values that wetlands provide. Continue to encourage environmental ethics and ecological sciences training as part of primary, secondary, university and adult education in schools and other educational institutions. Educational programs should be developed for attorneys, judges, and the land development sector.

STRATEGY FOR WISCONSIN'S COASTAL WETLAND PROGRAM

I. SUMMARY OF THE ISSUE

The Wisconsin Great Lakes Needs Assessment identifies problems such as wetland losses due to inadequate regulatory authority and lack of resources to implement existing regulations, incomplete data on wetland losses, confusion for applicants and local officials regarding when and what regulations are applicable, and other implementation problems on the state and local levels. Attendants of the public meetings generally concurred with these results. The overall consensus at the meetings was that Wisconsin needs to increase coastal wetland protection.

Based on the needs assessment, the core program funds will be directed towards: supporting local program implementation; supporting educational programs for the public; improving state and local compliance monitoring and enforcement programs; supporting efforts to characterize wetland problems; and establishing a comprehensive wetland preservation program.

II. THE CORE PROGRAM PROPOSED OBJECTIVES

SECTION 306 FUNDING

The Wisconsin Coastal Management Program currently supports compliance monitoring and enforcement programs for wetlands protection which are located at the state and local levels. WCMP priorities include implementation of wetland protection at the local level; local programs which educate citizens and local officials about wetlands in their area; and wetland protection through various incentive programs. The WCMP also supports completion of the Wisconsin Wetland Inventory for the coastal counties. As a general goal, the Wisconsin Coastal Management Council supports that at least 30% of 306 funds available for grants should be spent on the wetlands projects.

1) SUPPORT LOCAL PROGRAM IMPLEMENTATION.

Multi-Year Strategy

Goal: Support local implementation by providing reference materials and guidance for local officials and potential permit applicants.

FFY 94
Update the Floodplain Zoning Handbook.

FFY 95 - 97
The WCMP will continue to monitor existing regulatory programs at the state and local levels and fund at least one update or handbook development project each fiscal year.

Impact of change: The state and local officials implementing wetland regulatory programs are understaffed. The WCMP can help assist their program implementation by funding guidance documents that will help them train their staff and reduce the amount of time they must spend explaining regulations to applicants. This assistance can help them stretch their scarce resources further.

Goal: Provide mapping and study grants to local units of government

FFY 94 - 97
Every fiscal year, the WCMP will provide funding for local units of government to update their wetland maps or study an issue of concern to local governments

Impact of change: These grants will assist local governments in characterizing the wetlands in their area and thus enhance their ability to implement local zoning programs.

Goal: Provide grants to improve local program implementation.

FFY 94 - 97
The WCMP will solicit proposals each fiscal year from local governments in the coastal counties. The proposal should address the following implementation areas:

* Adoption of local shoreland wetland ordinances.
* Tracking of compliance to permit conditions.

Impact of change: Again, this funding opportunity will assist local governments to implement their local zoning programs by providing a supplement to their operating budgets to address very specific issues.

2) SUPPORT FOR LOCAL PROGRAMS WHICH EDUCATE CITIZENS

Multi-Year Strategy

FFY 93 - 97
The WCMP will support public information and educational programs that teach wetland values. The WCMP will solicit projects which educate citizens each fiscal year and fund at least one project per year.

3) IMPROVE ENFORCEMENT AND COMPLIANCE MONITORING PROGRAMS

Multi-Year Strategy

Goal: Develop a comprehensive outreach program

FFY 93
Develop/update a brochure for applicants which explains what agencies to contact, steps in the permit process, and where to go for help. Develop a distribution strategy for outreach materials.

FFY 94
Develop/Collect a series of information videos that explain the need or process for wetland permits. Make the videos available to local officials and the public.

FFY 95
Develop a slide show for local officials to use at lake association meetings, etc.

FFY 96
Assess the remaining needs.

Impact of change: The WCMP believes that an understanding of wetlands by users will help in making informed choices about alternative uses of wetlands and other resources. An understanding of wetlands by citizens will encourage their support for increased wetland protection and management.

Goal: Assure adequate staffing in the DNR for compliance monitoring in the coastal counties.

FFY 93 - 97
In FFY 91, the WCMP began funding project positions in the DNR to improve state monitoring of the shorelands-wetland Program at the State and local levels. In FFY 92, the WCMP continued the funding for three project positions. In FFY 93 the WCMP will be increasing its support by funding four project positions in the DNR to increase service to local governments administering wetland zoning programs and to increase the level of compliance monitoring for local and state wetland permit programs.

In its state FY 94 budget request, the DNR has requested an increase in their water regulation and zoning permanent staff to cover existing staff shortfalls. The Wisconsin Coastal Management Council will support this request and closely monitor the outcome in order to evaluate the need to continue WCMP funding for project positions in future years. The WCMP will acknowledge the critical importance of effective implementation of the local shoreland and wetland zoning programs when performing its evaluation. The WCMP will complement funding for monitoring and enforcement depending the level of staffing required to maintain an effective shoreland wetland program.

Goal: Develop a voluntary certification program for local officials

FFY 93
Study existing wetland certification programs; study work tasks of potential participants; determine their needs; develop standards which must be met by participants prior to certification; and begin to formulate the program.

FFY 94
Work with the Wisconsin County Code Administrators to pilot the training portion of the program in a coastal county. Develop a way to evaluate the success of the program.

FFY 95
Implement the program in all coastal counties. Evaluate the success of the program using the criteria developed.

FFY 96
Revise the program based on the evaluation findings.

FFY 97
Expand the delivery of the certification program to all of Wisconsin.

Impact of change: A certification program for local officials will help them implement their programs more effectively by providing access to educational programs and providing a consistent delivery of information to all Wisconsin Counties.

4) SUPPORT EFFORTS TO CHARACTERIZE WETLAND PROBLEMS

Multi-Year Strategy

Goal: Continue program support to the Department of Natural Resources until the Wisconsin Wetland Inventory is updated for all coastal counties.

FFY 93
Using reprogrammed money from FFY 92, Department of Natural Resource staff would complete updating and digitizing Douglas and

Bayfield county maps. Gathering data necessary for the updating process; digitize and process; and make digital maps available for public use.

FFY 94
Department of Natural Resource staff would update and digitize Ashland and Iron county maps. Gathering data necessary for the updating process; digitize and process; and make digitized maps available for public use.

FFY 95
The Department of Natural Resources would have aerial photos taken and wetland mapping done for Ozaukee, Milwaukee, Racine and Kenosha counties. Through a bidding process, the DNR would contract to have: 1) aerial photos flown for the four counties; 2) the wetlands in each county mapped; and 3) the mapped wetland data transformed into a form which could be processed into the DNR's Wisconsin Wetland Inventory.

FFY 96
Department of Natural Resource staff would update Ozaukee, Milwaukee, Racine, and Kenosha counties. Gather data necessary for the updating process; digitize and process; and make digitized maps available for public use.

FFY 97
Department of Natural Resource staff will finalize the updating of all coastal counties and compile wetland loss analysis reports and make digital maps available for public use.

Impact of Change: Once the maps are complete, losses and threats to coastal wetlands will be documented in a comprehensive and accessible data base. The Wetland Inventory maps will also be made available to local regulatory agencies to aid in the revision and adoption of ordinances in villages, cities and counties.

Goal: Analyze Demographic Trends

FFY 93-97
The WCMP will analyze the demographic trends in coastal communities to better understand the types of development pressures in those areas and their impact on wetlands. This analysis will allow the WCMP to focus the project proposals to address very specific problems.

5) ESTABLISH A COMPREHENSIVE WETLAND PRESERVATION PROGRAM

Multi-Year Strategy

Goal: **Develop a comprehensive wetland preservation program similar to the Farmland Preservation Program.** NOTE: Dates are subject to change based on the legislative process.

FFY 94
Monitor the development of legislation. Choose or establish a work group of WCMP staff, local officials/staff, and DNR staff; monitor the development of legislation which allows for special assessments of wetlands and donation of wetlands to the state.

FFY 95
Begin process of passing the legislation. Finalize legislative recommendations; create a support network; introduce the legislation; and create a final legislative package.

FFY 96
The legislation would be adopted. Begin implementation process.

Impact of change: A wetland preservation program is a means of encouraging landowners to preserve, rather than alter, wetlands. If the incentives for wetland preservation are great enough, it is conceivable that thousands of acres of wetlands would be preserved a year. The WCMP decided against developing an acquisition program because there was not enough funding available in the program to effectively purchase wetlands, and there were legal roadblocks to the solicitation of outside funds.

III. ENHANCEMENTS TO THE CORE PROGRAM

SECTION 309 FUNDING

The needs assessment shows that Wisconsin can improve existing wetland programs in many areas. The Wisconsin Coastal Management Council considers coastal wetlands as a priority for the program to address. The following projects represent enhancements to the core wetlands program that are eligible for 309 Funds.

1) ENHANCE EXISTING REGULATORY PROGRAMS

Multi-Year Strategy

GOAL: LEGISLATIVE INITIATIVES

Problem Summary: Pre-settlement wetland acreage estimates for Wisconsin, based on the original government land surveys of the early 1800's and modern soil surveys, show that approximately 10 million acres of wetlands were present prior to settlement. Based on aerial photography done for the Wisconsin Wetland Inventory (WWI) from 1978-79, experts estimate that approximately 5.3 million acres of wetlands remain in the state -- representing a loss of about 47% of original wetland acreage.

While Wisconsin has major state regulatory programs which are intended to prevent harm to wetlands, wetland losses continue. The Wisconsin Coastal Management Council has expressed a desire to become more actively involved in supporting legislative measures which will provide incentives to protect wetlands. Specifically, the Council has recognized a need to have the tax laws adjusted to provide an incentive to the landowner to protect wetland property. Wetland owners paying the same property taxes as owners of developable land think their property rights are being violated when they are not permitted to use the land as they wish.

Program Change: This program change will result in new statutes and regulations that will improve the state's ability to achieve the coastal zone enhancement objectives to protect and preserve existing levels of wetlands acreage and functions from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs, as well as increasing wetland acreage and functions through the development and improvement of wetlands creation programs.

Impact of Change: This program change will result in increased wetland protection by providing incentives to private owners of wetlands to keep the wetlands in their natural state. The current regulatory framework requires permits for activities in waterways (Chapters 30 & 31) and local ordinances which prevent and control water pollution, protect spawning grounds, fish and aquatic life and control placement of structure and land uses and reserve shore cover and natural beauty. This regulatory approach

is necessary, however, an incentives approach is also very effective in protecting and preserving wetlands.

Tasks:
FFY 94-95: Form a workgroup of state and local units of government and other interested parties to monitor and/or develop comprehensive wetland legislation. Research the following legislative initiatives:

- Tax Credit for owners of mapped wetlands
- Other Tax Incentives to preserve wetlands
- Uniform Disclosure during real estate transactions
- Wetland Acquisition Program

Develop a legislative proposal based on the research.

Budgets: FFY 94: .3 FTE = $15,000
FFY 95: .3 FTE = $15,000

Likelihood of Success: The Wisconsin Coastal Management Council has voiced a strong desire to support legislation to protect wetlands. Wetland legislation was introduced in the last legislative session which did not pass. However, there is continuing interest to pass such legislation by such groups as the Wetlands Legislative Working Group (sponsored by the Sierra Club) and the Joint Venture Steering Committee (approved under the North American Waterfowl Management Plan). The WCMP staff will work with these existing groups to help promote wetlands initiatives that are approved by the Council. These efforts, in conjunction with the proposed project, have a good chance of producing wetland legislation.

GOAL: DEVELOP A CERTIFICATION PROGRAM FOR WETLAND CONSULTANTS

Problem Summary: Wisconsin has a framework of laws and programs to prevent continued loss and to restore wetlands. Yet wetland losses continue both because some activities and wetlands are not covered by existing laws and because of insufficient resources at the state and local levels to carry out the laws and programs as designed, much less to improve their implementation.

For example, the Wisconsin Department of Natural Resources recently performed an intensive workload analysis. Currently, DNR processes over 4,000 water regulation permits each year, not including all the local decisions reviewed. This represents a 10% increase per year over the last three years, yet there have been no staff increases in that time period.

Given these staff shortfalls identified in the needs assessment, the WCMP has developed a proposal to help stretch current state and local staff resources. To develop this proposal, WCMP staff held informal discussions with the DNR field staff to and found that that much of their time is spent in pre-application

conferences in which they assist project applicants to design their projects according to regulatory requirements. This pre-application phase can last from one month to a year depending on the complexity of the project. In a complex permit situation, such as a project requiring sewer lines for a housing development or a golf course, the field staff work with the applicant, visit the site, review proposals, etc. before the application is submitted. Approximately 50% of one field person's time is spent on complex applications each year. A certification program would require that the professional staff who develop the application for a complex project would have sufficient background to limit their need for pre-application assistance.

Program Change: This program change will result in mandatory certification program for professionals who design projects which will directly or indirectly impact wetlands. Educational products and testing standards specifically designed to promote compliance with various permit conditions will be developed. The specific provisions of the certification program will be developed in cooperation with other state agencies, local units of government and other interested parties. The program change will be either new or revised enforceable authorities or new guidelines which are formally adopted by the state. Potentially, the state would have to adopt a new rule which would authorize the program and specify the agency which would be responsible for maintaining the program.

Impact of Change: The program change will improve the protection of Wisconsin's wetlands by enhancing the technical background of professionals who both design and implement projects which will directly or indirectly impact wetlands. This will increase voluntary compliance with wetland regulations because permit applicants will have a better understanding of the regulations. The change will potentially allow the state to spend less staff time in both pre-application meetings and project oversight since the professionals who work in this area will be better equipped. This will free state and local staff time for compliance monitoring/enforcement and other activities.

Tasks:
FFY 94: A consultant will be hired to perform the following tasks:

* Form a workgroup of state agency and local units of government staff, and industry representatives and use their guidance to formulate the specific provisions of the program;
* Study existing wetland certification programs and study work tasks of potential participants to determine their needs;
* Develop educational materials to assist permit applicants, materials such as a handbooks, etc.;
* Develop standards which must be met by participants prior to certification; and
* Develop the mechanism needed to achieve certification (ex. test, classroom requirements).

FFY 95: The consultant will develop a demonstration certification program in a coastal county to test the educational materials and the standards. The results will be used to develop specific authorities or guidelines that will be required to implement the program.

FFY 96: The consultant will develop the new state authorities or guidelines as needed to implement the program.

Budgets: FFY 94: $47,000 for consultant cost
FFY 95: $40,000 for consultant cost
FFY 96: $40,000 for consultant cost

NOTE: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent technical advisory committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of Success: A certification program that has an educational component and is developed in cooperation with the professionals who will be licensed has a good chance of winning support in the state legislature. Also, since other States have already developed certification programs similar to the one proposed here, Wisconsin will be able to learn from their experience. Finally, the Coastal Council has voted to support the development of a certification program.

PROJECT OF SPECIAL MERIT FUNDING

1) DEVELOP A PRIORITY WETLAND RESTORATION PROGRAM FOR THE COAST

Multi-Year Strategy

GOAL: DEVELOP A PRIORITY WETLAND RESTORATION PLAN

Problem Summary: Pre-settlement wetland acreage estimates for Wisconsin show that approximately 10 million acres of wetlands were present. Based on aerial photography done for the Wisconsin Wetland Inventory (WWI) from 1978-79, experts estimate that approximately 5.3 million acres of wetlands remain in the state -- representing a loss of about 47% of original wetland acreage. Losses are continuing, especially in the southeast region, due to development pressures. The Coastal Council has voted to address this situation by developing a comprehensive wetland restoration program.

Major acquisition and restoration programs which operate in the state include the Stewardship Program at the state level which provides $25 million annually for ten years to the DNR for

conservation land acquisition, property development and local conservation aids. Federal programs include the Department of Interior, Coastal Wetland Conservation Grants and the U.S. Fish and Wildlife Service wetland restoration and management plans. Finally, several environmental organizations have worked in coordination with state, federal and local agencies to acquire wetlands for restoration and protection.

The Coastal Program currently cannot participate in these programs since the WCMP does not have background or a plan that shows the existing wetland resources on the coast in terms of their priority or need for restoration. Therefore, federal, state, and private resources are not dedicated in any coherent way to restoring coastal wetlands. This lack of a management plan has made it difficult for the state to apply for federal grants which are directed to restoring coastal wetlands or to work with private groups to direct their efforts towards the coast.

Program Change: This program change will result in new a Wisconsin coastal wetland restoration program that will improve the state's ability to increase levels of wetland functions within existing degraded wetlands. Specifically, new guidelines/policy documents or memorandums of understanding (MOUs) will be formally adopted by the state which will outline priority restoration areas for Wisconsin's coast. The state will use the guidelines to focus the efforts of existing wetland restoration and mitigation programs towards the priority areas identified on the coast.

Impact of Change: This change will provide the background to allow Wisconsin to compete on a national level for grants to restore wetlands. The benefits of restoring degraded coastal wetlands include improving the water quality of the Great Lakes, providing habitat for wildlife, and mitigating the effects of high lake levels. The results of this project will also provide the technical background necessary to pursue efforts to balance development pressures with environmental protection, such as with Special Area Management Plans (SAMPs). This project is the first step in expanding the scope of the current Wisconsin Wetland Program from assisting regulatory programs and developing educational programs to enhancing existing wetland resources.

Tasks:
<u>FFY 94</u>: A consultant will be hired to perform the following tasks:

* perform field assessments and other studies to supply a necessary to identify coastal wetlands that require restoration;
* produce a report which identifies specific wetlands in the coastal area which require restoration;
* develop priorities for the restoration work --organized by coastal counties;

* develop specific guidelines or MOUs to implement the provisions of the report.

Budget: FFY 94: $50,000 for consultant cost

NOTE: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent technical advisory committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of Success: Wetland restoration on the coast will improve the ecological diversity and water quality of the Great Lakes. Since the priority program will be developed in close cooperation with other local and state agencies, they will have a better understanding of the natural resources which require restoration. As a result of this project, when private and federal grants become available, they will have a priority management plan and the reference documents needed to develop competitive applications. The specific guidelines or MOUs that result from the project will also ensure that the program is adopted in the state.

2) UTILIZE INNOVATIVE TECHNIQUES TO PROVIDE FOR PROTECTION AND ACQUISITION OF WETLANDS

Multi-Year Strategy

GOAL: ANALYZE CUMULATIVE AND SECONDARY IMPACTS ON WETLANDS

Problem Summary: An estimated 50% of the wetlands that originally covered Wisconsin have been lost. Losses may be up to 90% in southeastern Wisconsin. While, Wisconsin has a framework of laws and programs to prevent continued loss, many of them, such as the Shoreland Wetland Zoning Program and the Chapter 30 and 31 statutes, consider each permit on a case-by-case basis.

The problem with this approach is that State and local decision makers need to consider the cumulative impacts of various decisions that directly and indirectly impact wetlands. Viewed independently, a particular wetland use may not appear to have serious consequences, but when repeated many times in an area it can have negative consequences. The cumulative impacts of projects are often not addressed because it is difficult to establish the criteria to be considered, and there is no "substantive reach" built into the rules to allow cumulative impacts to be considered.

Program Change: The program change will result in either new enforceable authorities or state guidance that will enhance the

state's ability to protect and preserve existing levels of wetlands acreage and functions from cumulative adverse impacts by improving regulatory programs.

Impact of Change: This change will enhance wetland protection by allowing an analysis of each individual project to be based on other current or potential impacts on the resource.

Tasks:
FFY 94: A consultant will be hired to perform the following tasks:

* analyze cumulative impacts trends in the state;
* summarize existing research on cumulative impacts on wetlands;
* develop guidance for standardizing the use of cumulative impacts analysis on permitting decisions.

Budget: FFY 94: $50,000

NOTE: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent technical advisory committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of Success: The cumulative impacts of many individual projects are difficult to address when individual permitting decisions are being made. The summary analysis of cumulative and secondary impacts on wetlands and developing a method for consistently applying them to permit actions would increase the effectiveness of wetland protection in all of Wisconsin, including the coastal counties. The Department of Natural Resources is already aware of the problem of cumulative impacts on wetlands and are developing proposals to begin to address the issue. The project would greatly assist their efforts to address the difficult and complex problem of cumulative impacts of case by case decision making.

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Building Near Wetlands, the Dry Facts, DNR Fact sheet. Madison: DNR, August, 1991.

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Strategy for Wetlands Program

FY 94 Goal: 218,442 30%

306 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Guidance Document							0			0	
Mapping/study grant							0	0			
Implementation grant							0	0			
Education project	12,975						12,975	12,975			
Outreach product	0						0	0		0	
DNR staff positions	211,000						211,000			211,000	
Cert program for locals	0						0	0			
Wetland Inventory	51,000 FFY 92 funds						51,000			51,000	
Analyze demographics	0						0			0	
Wetland preservation program							0			0	
306 Subtotal	274,975	0	0	0	0	0	274,975	12,975	5%	262,000	95%
Diff from Goal		218,442	218,442	218,442	218,442	218,442					

309 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Legislative initiatives	0	15,000	15,000				30,000			30,000	
Certification program	0	47,000	40,000	40,000			127,000	127,000			
Restoration program (project of special merit)	0	50,000	0				50,000	50,000		0	
Analyze cum/sec impacts (project of special merit)	0	50,000	0				50,000			50,000	
309 Subtotal	0	162,000	55,000	40,000	0	0	257,000	177,000	69%	80,000	31%
Grand Totals	274,975	162,000	55,000	40,000	0	0	531,975				

All 306 project funding is determined by the Coastal Council, using Strategy Goals.

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Wetlands
SECTION 306 FUNDING

OBJECTIVE: Protect and preserve existing levels of wetlands acreage and functions from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Support local program implementation																								
Goal: Develop/update one guidance document per year																								
Goal: Provide one mapping/study grant to locals per year																								
Goal: Provide one local implementation grant per year																								
Support local programs which educate citizens																								
Goal: Fund one project per year - chosen by the Council																								
Improve enforcement and compliance monitoring programs																								
Goal: Develop a comprehensive outreach program																								
- Develop/update a brochure for applicants. Develop a distribution strategy for outreach materials.																								
- Develop an information video on permit process																								
- Develop a slide show for local officials																								
Goal: Fund staff positions in the DNR for compliance monitoring as needed																								
Goal: Develop a voluntary certification program for local officials																								
- Study existing certification programs																								
- Pilot test the program in a coastal county																								
- Implement the program in all coastal counties																								
- Revise the program as needed																								
- Expand delivery to all Wisconsin Counties																								

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Wetlands
SECTION 306 FUNDING

OBJECTIVE: Protect and preserve existing levels of wetlands acreage and functions from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Support efforts to characterize wetland problems																								
Goal: Support the Wetland Inventory Project																								
Digitize Douglas and Bayfield county maps																								
Digitize Ashland and Iron county maps																								
Aerial photos and mapping done for Ozaukee, Milwaukee, Racine, and Kenosha counties																								
Digitize Milwaukee, Racine, and Kenosha counties																								
Finalize the updating of all coastal counties and compile wetland loss analysis reports; make maps available for public use.																								
Goal: Analyze demographic trends																								

OBJECTIVE: Increase wetland acreage and functions through development and improvement of wetlands creation programs.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Establish a comprehensive wetland preservation program																								
- Support the development of legislation																								
- Begin process of passing legislation																								
- Legislation adopted. Begin implementation.																								

TIME LINE FOR GOAL ACHIEVEMENT

ENHANCEMENT AREA : Wetlands
SECTION 309 FUNDING

OBJECTIVE: Protect and preserve existing levels of wetlands acreage and functions from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Enhance existing regulatory programs. Promote legislative initiatives:																								
- Tax credit for wetlands; other incentives for landowners to keep wetlands in natural state																								
- Uniform disclosure during real estate transactions																								
- Wetland Acquisition Program																								
Tasks:																								
- Form workgroup to develop legislation proposal																								
- Support legislative proposal																								
Goal: Support state and local regulatory programs by developing a mandatory certification program																								
- Develop the program features																								
- Implement demonstration project																								
- Develop authorities to implement the program																								

TIME LINE FOR GOAL ACHIEVEMENT

ENHANCEMENT AREA : Wetlands
Project of Special Merit Funding

OBJECTIVE: Increase levels of wetland functions within existing degraded wetlands by developing and implementing comprehensive wetlands restoration programs.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Develop a Priority Wetland Restoration Program - Produce a Priority Restoration Plan and a mechanism to implement the plan																								

OBJECTIVE: Utilize innovative techniques to provide for the protection and acquisition of coastal wetlands.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Analyze Cumulative and Secondary impacts on wetlands - Analyze Cumulative impacts trends; summarize existing research; determine how to apply cumulative impacts analysis to permit decisions																								

PUBLIC ACCESS

LEGISLATIVE OBJECTIVES

1. Attaining increased opportunities for public access, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value [Coastal Zone Management Act, S. 309 (a) (3)];

2. Public Access of at least 60 feet width shall be provided at not less than one-half mile intervals by all subdivisions abutting navigable lakes or streams. Once provided, public access to navigable waters shall not be discontinued without state approval [Wis. Stats. Sections 80.41 and 236.16 (3)];

3. Providing public access to the waters by the Department of Natural Resources is a variable requirement based on the quality of the resource, the space available and levels of use experienced [Wis. Admin. Code NR 1.90, 1.91 and 1.92];

4. Local communities shall be encouraged to provide local recreational and educational opportunities [Wis. Stats. Section 23.30];

5. The State shall establish a state park system and shall give principal emphasis to the acquisition of recreational lands in heavily populated areas of the state and in places readily accessible to such areas [Wis. Stats. Sections 23.09, 23.091, 27.01 and Wis. Admin. Code NR 1.04].

CHARACTERIZATION OF THE ISSUE

In 1986, the SCORP Recreational Access Study (book VI), identified four major problems facing recreational water access in the Great Lakes region, including:

* Increasing water pollution
* Insufficient harbors of refuge
* Too many user conflicts (especially among boaters)
* Not enough money for water access

According to the 1991 SCORP plan, "nearly half the people who did swimming or boating during 12 months in 1989-1990 said crowding by others doing the same activity sometimes makes their experience less enjoyable. In the Southeast District, which includes Kenosha, Racine, Milwaukee, Ozaukee and Sheboygan counties, 52% complained of crowding. Poor quality of the water was noted by nearly 25% of the boaters and swimmers, and about 25% complained about the quality of beaches, piers, boat landings, etc"....

The draft plan places fishing-related needs highest on the list of needs for Wisconsin's coastal counties. These needs include fish habitat improvements, fishing piers, and public access to uncrowded waters. More hiking and walking trails are also needed in coastal counties, according to the draft plan.

CHARACTERIZATION OF EXISTING PROGRAMS

I. GRANT PROGRAMS

A. Programs administered by the Wisconsin Department of Natural Resources

Land and Water Conservation Fund (LAWCON) [Public Law 88-578 (1964)]. The objective of the program is to encourage creation and interpretation of high quality, outdoor recreational opportunities. Approximately $300,000 yearly are spent on the acquisition of land for public outdoor recreational areas and preservation of water frontage and open space, and the development of public outdoor park and recreational areas and their support facilities. Funding available for inland and coastal projects.

Federal Aid in Sport Fish Restoration (D-J) Wallop Beraux [Act of August 9 of 1950. P. 64- Stats.-430 as amended]. Acquisition, development, renovation and maintenance of motorboat access sites are the objectives of this $600,000 grant. Most projects involve the renovation of existing access sites or developing access on lands already under state or local government ownership. Funding available for inland and coastal projects.

Recreational Boating Facilities Program [S. 30.92, Stats., and NR 71]. $3,800,000 of annual funds are provided to local units of government for the construction of capital improvements to provide safe recreational boating facilities on all waters of the State including the Great Lakes. The program also provides financial assistance for feasibility studies related to the development of safe recreational boating facilities. (Facilities such as ramps and service docks required to gain access to the water, and structures such as bulkheads and breakwaters necessary to provide safe water conditions for boaters.) Support facilities are limited to parking lots, sanitary facilities and security lighting. Dredging to provide safe water depths for recreational boating. Funding available for inland and coastal projects.

Aids for the Acquisition and Development of Local Parks [Section 23.09 (20)]. The purpose is to assist local communities in acquiring and developing public outdoor recreation areas. Approximately $1,500,000 yearly are provided for the acquisition and development of public outdoor recreation areas. Funding available for inland and coastal projects.

B. Program Administered by the Wisconsin Department of Administration

Wisconsin Coastal Management Program [Coastal Zone Management Act of 1972 as amended]. Approximately $830,000 yearly are provided to preserve, protect, develop and, where possible, to restore or enhance the resources of Wisconsin's coastal area. The WCMP funds resource management projects such as wetland protection, non-point source pollution abatement, natural hazards, low-cost technical assistance and low-cost public access construction projects. For the past few years an average of $200,000 yearly has been spent for construction or enhancement of public access projects.

II. REGULATORY PROGRAMS

A. Wisconsin Department of Natural Resources

These programs regulate and control the development of public access sites. These programs warrant that State environmental standards are considered prior to the construction or improvement of public access sites. The programs assure that any public access sites developed or enhanced do not have a negative impact on the environment.

Water Regulation and Zoning [Chapter 30, Stats. Physical Alterations to Waterways. Chapter 31, Stats. Regulation of Dams]. The objective is the protection of public rights and interest in surface waters through regulation of proposed alterations of waterways and adjacent wetlands and upland areas, the protection of life, health, and property from the effects of floods and dams, and the identification of wetlands. About $1.8 million annually are spent on water regulation projects such as the following: about 2,100 formal permit applications are received annually and reviewed by program staff; shoreland zoning; dam safety; flood plain zoning; and wetlands inventory.

Environmental Analysis and Review [Wisconsin Environmental Protection Act (Chapter 274, Laws of 1971. Section 1.11 Wis. Stats.)]. It is the DNR's responsibility, through the environmental analysis and review process, to understand the environmental consequences of its actions and to use all practicable means and measures to create and maintain conditions under which people and nature can exist in productive harmony and fulfill the requirements of present and future generations. Approximately $1 million of funding are provided annually for the preparation of environmental impact statements; the coordination and approval of 150 to 300 DNR prepared and publicly reviewed environmental analyses; and the review of 150 to 200 environmental documents prepared by state and federal agencies.

III. EFFECTIVENESS OF EXISTING PROGRAMS

The programs that deal with funding public access projects in Wisconsin have been very successful, since public access in the State is not such an adverse problem as in other parts of the country. Thanks to the effectiveness of these programs, the state has promoted access to recreational opportunities for the public at large. There is a need, however, to continue support for funding public access projects. The demand for public access projects is evident. In general, public access grant programs in the State fund no more than one fifth of the project proposals received every year. While some of the programs concentrate on purchasing land and providing basic infrastructure such as breakwaters, others concentrate on funding recreational facilities such as swimming pools, ball diamonds and recreational paths.

Coordination among state agencies has made it possible to share and appropriately channel appropriately funding activities. The Coastal Management Program, for example, concentrates on projects such as fishing piers and waterfront paths in Wisconsin's coastal zone, while some of the other programs fund the same type of activities in inland lakes.

Regulatory programs have assured that all the public and private developments go through a permitting process to assure that access improvements do not have a negative effect on the natural resources.

PROGRAMMATIC OBJECTIVES

I. IMPROVE PUBLIC ACCESS THROUGH REGULATORY, STATUTORY AND LEGAL SYSTEMS.

The Department of Natural Resources, the state agency that provides most public access sites throughout the State, is currently developing a state public access policy issue paper which will cover purchase, development and maintenance of public access sites to lakes, flowages and streams in Wisconsin. The goal of the proposed water access policy is to provide and maintain adequate public access to water consistent with the public's right to use the waters of the State and the ability of the resource to provide recreation. A policy paper is currently under review by the Natural Resources Board. Staff are preparing legislative and rule changes necessary to implement the policy. This policy proposal is expected to be developed by December of 1992.

Need: Once the DNR public access policy proposal is approved and accepted as Wisconsin's public access policy, it should be implemented to its fullest extent. This may include: drafting new legislation, revising rules and

regulations, purchasing land, development and enhancement of public access sites, etc.

II. ACQUIRE, IMPROVE AND MAINTAIN PUBLIC ACCESS SITES TO MEET CURRENT AND FUTURE DEMAND THROUGH THE USE OF INNOVATIVE FUNDING AND ACQUISITION TECHNIQUES.

Wisconsin already uses many innovative methods to implement public access. For example, DNR district community services specialists act as brokers to mix and match federal and state funds available for public access. (The City of Kewaunee benefited from five different state and federal programs in developing its public access facilities.)

Easements have been used as an alternative to outright land acquisition. In two public access projects funded by the Wisconsin Coastal Management Program (Milwaukee's riverfront walkway system and Green Bay's downtown waterfront walkway), easements were a key to their success.

In Wisconsin, a boat tax is partially used for access funds. According to a formula based on the number of boats registered in any given year, some gas tax money goes to the Water Resources Account which in turn provides funds for DNR's recreational boating facilities program.

User fees also help fund access sites. According to NR 1.93, only local governments charging user fees more than the daily state park entrance fee face any loss of DNR services. DNR is considering revising this rule.

Even with these innovative funding mechanisms used in Wisconsin, funding for public access projects is scarce. Grant programs for public access projects are found to be an effective instrument to promote and assure public access to recreational opportunities.

Need: Continue to develop innovative measures to provide for public access. A new innovative program could identify potential public access sites currently under private ownership and encourage landowners to donate easements. Signs at the site would acknowledge the landowners' donation. Another innovative program could encourage public access on privately owned land through tax incentives. This "blue belting" strategy, which has been implemented in Massachusetts, would be especially useful in urbanized areas where demand for waterfront access is great.

Need: Continue support for public access grant programs. Public access grant programs have proven to be an effective instrument to encourage the development and improvement of public access sites. Support for this type of programs should continue at state and federal levels.

III. DEVELOP OR ENHANCE A COASTAL PUBLIC ACCESS MANAGEMENT PLAN WHICH TAKES INTO ACCOUNT THE PROVISION OF PUBLIC ACCESS TO ALL USERS OF COASTALAREAS OF RECREATIONAL, HISTORICAL AESTHETIC, ECOLOGICAL, AND CULTURAL VALUE.

There is no comprehensive public access management plan for the coastal zone of Wisconsin. In the past years, federal and state programs have funded many necessary coastal public access sites; however, those improvements have not benefited from comprehensive planning.

Any development of a comprehensive coastal public access management plan must begin with an inventory of existing sites. In FFY92, the Wisconsin Coastal Management Program, with the assistance of state agencies and local units of government, will fund the development of a comprehensive coastal public access guide. This guide will include all waterfront parks, trails, harbors of refuge, boat ramps and marinas with transient dockage. This information is the first step in evaluating the availability of public access sites in the coastal zone. This information will serve as a valuable tool in estimating future demand for coastal public access.

A coastal public access management plan would include analysis of the types of public access sites needed, the types of facilities required and the necessary levels of funding to meet these needs. Eventually, this management plan could be incorporated into the statewide public access plan.

Need: Develop a comprehensive public access management plan to assure future public access along Wisconsin's Great Lakes coasts. The plan should be based on a thorough inventory of existing public access sites and should take into consideration current and future needs.

Wisconsin does not have a sign system to highlight public access sites or to indicate specific facilities available at each site. Signage is left to local governments.

Need: Develop a uniform state sign system to designate public access facilities throughout Wisconsin. A uniform state sign system would allow people to easily identify public access sites. The same sign system would be used throughout the state.

Barrier free access for persons with disabilities is a priority in Wisconsin. While new state public access sites meet guidelines designed to provide access to all, Wisconsin has not yet developed administrative standards for handicapped access. Federal agencies and the State Organization of Boating Access (SOBA) are developing standards that will ensure access to

recreational facilities for persons with disabilities, but they have not yet finalized them.

Need: Develop a state policy and implementing standards that will provide handicapped access to all new, and when possible, to existing public access facilities. Implementing access standards for the handicapped would assure that everyone has the same access opportunities to recreational facilities.

IV. MINIMIZE POTENTIAL ADVERSE IMPACTS OF PUBLIC ACCESS ON COASTAL RESOURCES AND PRIVATE PROPERTY RIGHTS THROUGH APPROPRIATE PROTECTION MEASURES.

Public access decisions of the Department of Natural Resources are subject to DNR's environmental assessment process, which considers impacts of proposals on: historical and archaeological resources, wetlands and floodplains, socioeconomic resources, scenic values, cumulative decisions and other environmental factors.

An environmental assessment or an environmental impact statement is an effective tool to assess the environmental consequences of a project. Many times, however, it is a lengthy process and could perhaps be shortened without sacrificing effectiveness.

Need: Develop a streamlined environmental assessment system for evaluating proposed public access sites. This system would help make an easy environmental evaluation of the proposed improvements to a site and determine that the proposed improvements do not represent an environmental hazard to the site.

STRATEGY FOR WISCONSIN'S COASTAL PUBLIC ACCESS PROGRAM

I. SUMMARY OF THE ISSUE

The Wisconsin Coastal Management Program found that there is a need for public access along Wisconsin's Great Lakes coasts. This need was highlighted during four public hearings held in the needs assessment process. At these hearings, the public and municipality officials expressed their concern regarding the need for new and improved public access to the waterfronts of Wisconsin's coast.

There is a need for the development of a long range coastal public access plan to assure future public access to the coast of Wisconsin, especially to those areas where pressure for public access is greater. Handicapped accessibility and an appropriate signage system throughout the State will enhance public access use of the Great Lakes.

II. THE CORE PROGRAM PROPOSED OBJECTIVES

SECTION 306 FUNDING

For the past years, the Wisconsin Coastal Management Program has provided funding to coastal communities for the expansion, improvement or new development of public access sites along the Great Lakes coasts. Based on the need for public access improvements, the Coastal Management Program will selectively consider funding public access projects.

Environmental protection is a major concern of the Wisconsin Coastal Management Program. In an effort to link this important component of the program with public access projects, the coastal program will give higher consideration to those public access applications whose sponsors have adopted wetland zoning ordinances.

As a general goal, Wisconsin Coastal Management Council suggests that about 35% of funds available for grants should be spent on public access projects. This goal is flexible depending on the quality of the proposals, and need for public access in the area. The Wisconsin Coastal Management Council would consider public access vis a vis the other issue areas in the WCMP strategy when defining priorities in funding allocation decisions.

1) PROVIDE FUNDING TO LOCAL UNITS OF GOVERNMENT TO IMPROVE OR DEVELOP COASTAL PUBLIC ACCESS THROUGH LOW-COST CONSTRUCTION PUBLIC ACCESS PROJECTS

Low-cost construction projects have helped local units of government to improve and develop needed public access along Wisconsin's coast. Continuation of these public access projects

will help local units of government defray the cost of these improvements.

Multi-Year Strategy

Goal: Fund improvement or development of coastal public access projects.

FFY 93-FFY 97

Accept proposals from local units of government.
The Coastal Management Program will accept proposals from coastal communities for public access, low-cost construction projects.

Assessment of proposals on technical merits.
The proposals will be given to a technical committee to be ranked according to need and merit.

Funding decisions by the Coastal Council.
After the projects are ranked, Coastal Management Program staff will present them to the Council. The Council will select projects for funding.

Monitoring of projects.
Projects selected will be monitored for compliance with specifications.

Funding allocations.
Funding allocations will be made according to the following matching grant program:

Project's Total Cost	Matching Program
< $30,000	WCMP - 50%
	Local - 50%
> $30,000	WCMP - 40%
	Local - 60%

Impact of Change: Funding low-cost construction projects will help alleviate the need for public access. Problems of overcrowding will be eliminated and higher quality access will be available to all users. Also, continued public access funding will help the economy of many Wisconsin coastal communities.

SOURCES

SCORP Recreational Access Study. Book VI. Wisconsin Department of Natural Resources. January, 1986.

Wisconsin Statewide Comprehensive Outdoor Recreation Plan, Wisconsin DNR. Draft June 1991.

State and Federal Financial Assistance Programs Administered by the Department of Natural Resources Fiscal Year 1989-1991. Wisconsin Department of Natural Resources. Madison, 1989.

Recreational Boating Facilities Program, Chapter NR 7. Department of Natural Resources. Register, January, 1989, No. 397.

Administration of Outdoor Recreation Program Grants and State Aids, Chapter NR 50. Department of Natural Resources, Register, April, 1984, No. 340.

Navigable Waters, Harbors and Navigation, Chapter 30. 89-90 Wisconsin Statutes.

Environmental Analysis and Review Procedures for Department Actions, Chapter NR 150. Department of Natural Resources. Register, January, 1987, No. 373

Wisconsin Coastal Management Program for the Great Lakes 1987 Update. Department of Administration. July 9, 1987.

Strategy for Public Access Program

FY 94 Goal:	173,182	35%

306 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals
Low Cost & Wtrfrnt Proj's	138,000						138,000
306 Subtotal	138,000	0	0	0	0	0	138,000
Diff from Goal		173,182	173,182	173,182	173,182	173,182	

Funding to Locals	%	Funding to the State	%
138,000			
138,000	100%	0	0%

All 306 project funding is determined by the Coastal Council, using Strategy Goals.

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Public Access
SECTION 306 FUNDING

OBJECTIVE: Provide funding to local units of government to improve or develop coastal public access through low cost construction public access projects.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Fund improvement or development of coastal public access projects																				
Accept proposals from local units of government																				
Assessment of proposals on technical merits																				
Funding decisions by the Coastal Council																				
Monitoring of projects																				

ENHANCEMENT AREA : Public Access
SECTION 309 FUNDING

OBJECTIVE: Develop a comprehensive long-term coastal public access plan, to assure future public access to Wisconsin's Great Lakes coast.	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Completion of a public access data base																				
Establish work group																				
Define methodology for analyzing inofrmation																				
Preparation of information necessary to develop the plan																				
Goal: Completion of a long-term public access development plan																				
Develop a long-term access development plan																				
Set priorities for coastal public access																				
Means for implementing the plan																				

CUMULATIVE AND SECONDARY IMPACTS

LEGISLATIVE OBJECTIVES

Development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect of various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources. [Coastal Zone Management Act, Section 309]

CHARACTERIZATION OF THE ISSUE

The Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) define cumulative impacts as:

> *...the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

For example, a single person's decision to litter may seem like a minor, independent decision, unless viewed in the context that thousands of others may be making the same decision. Similarly, in coastal regions, the regional effects from many individual decisions must be considered.

Secondary effects are the indirect consequences of actions and policies. For example, the primary impact from sewer extension may be loss of open space, but important secondary effects include increased urban runoff, loss of coastal habitat, decreased access, and congestion.

The Wisconsin Coastal Management Program considers cumulative effects and secondary impacts analysis to be both a tool to assist in the management of resources, such as wetlands, as well an issue area that considers the problems of water quality, overcrowding, and habitat and open space loss in urbanized coastal areas.

As a tool, cumulative effect and secondary impact analysis will be incorporated into existing management practices to consider comprehensive and long-term impacts. For example, it will be used to consider the cumulative effects of individual activities upon wetlands. A detailed characterization and description of wetland issues and objectives and how this tool will be used is given in the Wetland Assessment section.

As an issue area, this section considers the cumulative impacts and secondary effects of coastal urbanization on Great Lake water quality. Nonpoint urban runoff and storm sewer discharge are significant sources of water pollution.

Treated as separate issues, but also addressed as subparts of this issue are nonpoint source pollution and contaminated sediments. These issues will be addressed generally within this section but have also been analyzed individually in following sections. Funding for nonpoint source pollution abatement and contaminated sediment issues will be provided under the broad category of cumulative and secondary impacts.

CHARACTERIZATION OF EXISTING PROGRAMS

I. STATE AND LOCAL PROGRAMS

Generally, few state or local agencies use procedures that consider cumulative and secondary impacts. Most state programs consider only the impacts of individual decisions on the individual resources or concerns which they regulate. Few local governments consider cumulative and secondary impacts because they lack resources or jurisdiction. Some state and local programs that do address some aspects of cumulative and secondary impacts are sewer service area planning, non-point source pollution abatement, and shoreland zoning.

Sewer service area plans are regional plans to determine the service area of treatment facilities, the location of sewer lines, and the necessary capacity of treatment plants. These plans are prepared by the regional planning commissions and sewage districts, and must be approved by the Wisconsin Department of Natural Resources. The plans are important because of their influence on the location and density of urban development. Without addition to existing sewer service areas or the creation of new facilities, increased development of significant density is generally not possible. However, when DNR reviews sewer service development, it examines only water quality impacts of sewer service area changes and does not consider the impacts of growth on other public services, on congestion or the like.

Much nonpoint source pollution is the result of development and urbanization. The Department of Natural Resources nonpoint source pollution programs are designed to reduce pollution from existing sources, rather than reduce the cumulative impacts of new or proposed sources.

Likewise, while development of some wetlands require a permit, the permit process does not consider the impacts of issuing many different permits in an area.

II. EFFECTIVENESS OF EXISTING PROGRAMS

Two of Wisconsin's largest metropolitan areas, Milwaukee and Green Bay are located along Great Lakes coasts, and many other regions experiencing development pressure are located along the coast. Managing growth is important not only for areas currently undergoing growing, but also for regions of low growth to plan for potential future growth pressure. Development in coastal areas creates a number of problems.

First, increased runoff from developed and rural areas decreases the water quality of coastal waterways and the Great Lakes. Storm water collects oils, chemicals, soils, trash, road salt and other waste from paved surfaces, agricultural fields, and construction and earth-moving activities increase the amount of sediment in rivers and the Great Lakes.

Second, as communities urbanize, open space and coastal habitats are lost and existing habitats suffer loss of quality. The extent of these losses may not even be realized by local decision-makers who consider consequences to their own jurisdiction rather than area-wide.

Third, urban development leads to increased runoff from paved and built land, which can cause storm water flooding. Paved surfaces collect more water and transport it more quickly, causing higher and faster peaking floods. Floods can endanger people and property, and the general increase in runoff will increase erosion along coastal waterways.

Finally, as cities grow, waterfront access and recreational facilities become overcrowded as land available for public use becomes more and more limited and as more and more people want to use the coastline. As coastal areas continue to become urbanized, the cumulative and secondary impacts of this development must be considered.

PROGRAMMATIC OBJECTIVES

I. INCREASE THE AWARENESS OF CUMULATIVE AND SECONDARY IMPACTS

The public is generally unaware of all the cumulative impacts and problems caused by coastal development. Some of these problems include the impacts on water quality and coastal habitat from existing development, and the impacts of future development.

Need: There needs to be additional support for public information and education initiatives. This is particularly true in those areas where continued urban development is perceived to be damaging to the environment. Additionally, public awareness of issues related to potential problems from developmental activities should be enhanced. Local government

regulatory staff and decision makers, and the public must be continually informed of the increased understanding of cumulative and secondary impacts.

The general public is not familiar with the term "nonpoint source" and not well aware of the water quality problems caused by nonpoint sources. In addition, the Coastal Nonpoint Source Pollution Abatement Program may have far reaching impacts on local units of government.

Need: Raise citizen awareness by educating the public about the types of nonpoint sources and their control, and publicizing the programs available. The WCMP could develop or assist in developing newsletters or seminars so that the general public will understand what programs are being developed or implemented.

There is also a need to conduct public awareness and involvement activities when developing the Coastal Nonpoint Source Pollution Abatement Program and other nonpoint source initiatives in the coastal areas.

The issue of contaminated sediment management is constantly placed before coastal citizens and communities in many forms, fish advisories; dredging proposals, either maintenance or new work; locating dredged disposal sites and alternatives for disposal. In all of these activities, additional information concerning the degree of contaminated and the potential effects of the sediment material on the ecosystem should be available to citizens, representatives of local governments, and others who are involved in the decision making process.

Additionally, it is critically important that dredging sponsors (normally local governments) become more knowledgeable about the types of sediment testing that is required to process dredging permit applications, regulatory monitoring requirements during the period of construction, and the future direction of both state and federal regulations concerning this activity.

Needs: Currently, there is inadequate federal information available to the citizens and local authorities in coastal areas with sediment contamination. Citizens need to be informed of potential risks, warned about problem areas, and informed of actions being taken. Authorities from local governments and ports or harbors need to be informed about state and federal actions, regulatory changes, and new information or procedures for dealing with contaminated sediments.

II. DEVELOP, REVISE OR ENHANCE PROCEDURES OR POLICIES TO PROVIDE CUMULATIVE AND SECONDARY IMPACT MANAGEMENT AND PLANNING.

A. Local Government Assistance

Local governments often inadequately consider impacts of regional urbanization and sprawl on water quality, coastal natural resources such as coastal habitats, wetlands, and other open space. This is especially true when they make individual decisions which together can have serious impacts. Local units of government can take steps towards the understanding of the cumulative and secondary impacts problem. Through staff education and training efforts the local regulatory staff, zoning administrators, local planning commissioners, and board of adjustment members can make more effective decisions related to cumulative and secondary impacts. Through studies, management plans and ordinance adoption and/or revision, communities can become more effective managers of the concerns related to cumulative and secondary impacts.

Need: Local government regulatory staff, planning and building inspection officials, should be provided with seminars to learn about cumulative impacts of development decisions. Consideration should be given toward the creation of a certification program for staff and local officials. Information and education efforts identified above should analyze impacts of growth on a watershed basis. Local units of government, particularly cities and villages, need to manage both quality and quantity of storm water discharge to receiving streams, wetlands and coastal waters. Local ordinances adoption and/or revision are likely needed to provide for proper storm water management.

Besides problems of awareness, local governments often do not have the data, information, or staff to address cumulative and secondary impact issues. Also the limited jurisdiction of cities, towns and villages means they are unable to address the issue on a regional scale.

Need: Regional meetings should be established to consider cumulative and secondary impacts of development in specific coastal areas that encompass multiple political jurisdictions. Additional resources should be provided to fund local and regional land use inventories and plans in coastal areas that would be used to consider cumulative and secondary impacts. GIS data should be shared between state and local governments. Finally, consideration should be given to adoption and/or revision of ordinances, regulations and codes to help local governments establish a framework for decision-making.

Farmers, developers, municipal officials, and other clients and/or applicants are generally unaware of all the nonpoint source pollution impacts and problems caused by coastal and urban development. Some of these problems include the impacts on water quality and coastal habitat from existing development, and the impacts of future development.

Need: There should be additional support for information and education initiatives. This is particularly true in those areas where continued urban development is perceived to be damaging to the environment. Additionally, public awareness of issues related to potential problems from developmental activities should be enhanced.

Once the Coastal Nonpoint Pollution Control Program is approved, there needs to be training of local government agencies in the understanding and implementation of the program.

B. State Program Enhancement

No state procedures exist for evaluating both secondary effects and cumulative impacts. Some activities, such as nonpoint source pollution, sewer service area planning, storm water planning, and infrastructure decision-making, address the direct impacts, but most do not adequately consider cumulative impacts and none consider secondary effects. Furthermore, there is inadequate state and regional oversight of local decision-making.

Needs: State programs and statutes must be reviewed to determine if consideration of cumulative impacts and secondary effects should be incorporated, and to determine the possible need for creation and/or revision of legislation requiring analysis of cumulative impacts and secondary effects.

Sewer service area planning procedures and policies must be examined to determine if impacts other than just water quality should be addressed. Additional staffing may be needed to assist in the coordinated review process of permits and projects to allow consideration of multiple impacts rather then single resource impacts. Also, additional staffing may be needed to examine impacts from construction of new highways and enlargement of existing highways, and to assist in areas of fast growth or intense user conflict.

Changes are needed to Wisc. Stat.144 to allow the DNR to continue cost share funding of storm water management practices which are being implemented to meet permit requirements. Changes are also needed to Wisc. Stat. 147 to provide a more straight forward definition of storm

water, and to allow a more efficient mechanism to issue permits for discharges of storm water. Regulations will need to be promulgated to formally adopt the federal storm water regulations, and additional water quality standards for storm water flows will be developed and codified.

Local units of government - particularly cities and villages - need to manage both the quality and quantity of storm water discharge to receiving streams, wetlands and coastal waters. Local ordinances are likely needed to provide for proper storm water management.

Development of Best Management Practices for controlling contaminated storm water discharges must also be initiated.

Lastly, additional staff to develop and administer a permit fee program to fund administrative costs of a storm water permit program may be needed.

Determining the quality of material to be dredged is a complicated technical process. Regulatory organizations approach testing requirements from slightly different perspectives; thus, project applicants receive different guidance in sediment sampling and testing requirements for specific project proposals. These differences can be regionalized due, in part, to the decentralization of regulatory agencies. The establishment of specific quantifiable testing protocols would greatly aid potential project applicants in developing information that is needed to evaluate a specific proposal.

Needs: To determine a course of action for handling contaminated sediments in Wisconsin harbors and streams, the state needs to develop an approach to analyze sediments and assess the human risk of contaminated sediments. This includes developing statewide procedures for evaluating contaminated sites. The Department of Natural Resources (DNR) has begun to develop a triad approach program to address these gaps, and continued work is needed to complete the three elements of this approach.

In addition to testing procedures and protocols, there is an on-going need to broaden information on background levels of chemical concentrations in areas which have had little development pressures. A fuller understanding of upland concentrations of elements can provide baseline information related to the type of dredging and disposal which are needed.

Each of these needs are an attempt to quantify type of management which is needed to safely dispose of dredged material without degrading water quality or allowing for

the ingestion of contaminants into the food chain. The specific needs are discussed in the contaminated sediments section.

III. ADOPT AND IMPLEMENT PROGRAMS THAT DEAL WITH CUMULATIVE AND SECONDARY IMPACTS.

The non-point source pollution and contaminated sediments programs already in place in Wisconsin would continue to be implemented. These programs are discussed in further detail in the non-point source, and contaminated sediments sections.

STRATEGY FOR WISCONSIN'S COASTAL CUMULATIVE AND SECONDARY IMPACT PROGRAM

I. SUMMARY OF THE ISSUE

Along certain stretches of Wisconsin's Great Lakes coasts, especially the Milwaukee and Green Bay areas, cumulative and secondary impacts are felt strongly. Unfortunately, cumulative and secondary impacts can not be attributed to a single activity and must be addressed by managing many components. Urban development, nonpoint source pollution, contaminated sediments, natural hazards, and other urban and rural activities which alter natural conditions all need to be considered. Therefore, to adequately address cumulative and secondary impacts, the Wisconsin Coastal Program has decided to address many of these issues under this broader context.

Controlling cumulative and secondary impacts was a concern shown in the needs assessment. The needs assessment discussed the lack of consideration for cumulative and secondary impacts in current regulations.

II. THE CORE PROGRAM PROPOSED OBJECTIVES

SECTION 306 FUNDING

The Wisconsin Coastal Management Program provided past funding for environmental issues which would have otherwise resulted in cumulative and secondary impacts. However, this is the first time all of the issues have been grouped under this broad category. Specifically, the WCM Council feels that nonpoint source pollution and contaminated sediments should be addressed. The nonpoint source issue can best be addressed by meeting the requirements of Section 6217,. Similarly, the contaminated sediments issue can be addressed by developing a program for regulating dredging and disposal, based on sediment quality criteria.

Many other issues also result in cumulative and secondary impacts. It would be too costly and time consuming to address

each individually, therefore the WCMP feels that providing data and technical assistance as well as local education, would be a way of addressing cumulative and secondary impacts and recommends setting a strategy which creates tools to address these issues within existing regulations.

The WCM Council decided that to address all of these issues, a goal of 35% of total section 306 funding or the amount available after public access and wetlands are addressed, will go to cumulative and secondary impacts.

Currently, local and state regulations addressing cumulative and secondary impacts are ineffective. As noted in the needs assessment, there is a lack of CSI analysis in local planning as well as in state permitting and other decisions. The WCMP recommends, based on the findings of the assessment and public meetings, that local comprehensive ordinances addressing individual components of cumulative and secondary impacts be established.

1) IMPROVE AWARENESS BY THE PUBLIC AND LOCAL OFFICIALS/STAFF OF NONPOINT SOURCE POLLUTION, AND CONTAMINATED SEDIMENTS ASSOCIATED WITH CUMULATIVE AND SECONDARY IMPACTS

Multi-Year Strategy

GOAL: PRODUCE AND DISTRIBUTE AWARENESS INFORMATION

FFY 94
Produce and distribute initial informational materials for citizen's groups and local government on non-point source pollution and contaminated sediments, emphasizing its relationship to cumulative and secondary impacts;

FFY 95
Produce and distribute information for non-point source pollution

GOAL: CONTINUE TO MONITOR, UPDATE AND DISTRIBUTE AWARENESS INFORMATION

FFY 96
Update awareness informational materials for contaminated sediments

FFY 97
Continue to distribute awareness materials

FFY 98
Update awareness informational materials for non-point source pollution and contaminated sediments

Impact of Change: The WCMP feels that increasing awareness by coastal citizens and local officials/staff about cumulative and

secondary impacts will help lessen environmental consequences. Specifically, if citizens are aware that individual actions cumulatively cause problems, they will be more conscientious. Also, local officials and staff will be more capable of controlling and managing impacts at the local level. As the council has indicated previously, coastal issues are best managed by local municipalities because they are generally more cognizant of, and dedicated to, local issues.

2) ADOPT PROGRAM CHANGES NEEDED TO MEET REQUIREMENTS OF SECTION 6217 OF THE COASTAL ZONE ACT REAUTHORIZATION AMENDMENTS OF 1990

(Section 6217 requires states with federally-approved coastal zone management programs to develop coastal nonpoint programs. Specifically, "the purpose of the program is to develop and implement technology and water quality-based management measures for nonpoint source pollution to restore and protect coastal waters".)

Multi-Year Strategy

GOAL: COMPLETION OF AN EPA AND NOAA APPROVED NONPOINT SOURCE POLLUTION ABATEMENT PROGRAM.

FFY 95
Establish a work group consisting of the DNR and other state agencies. The work group in concurrence with the WCMP would: develop and submit a Nonpoint Source Pollution Abatement Program to the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA).

FFY 95
DNR tasks: Make necessary changes in the states current nonpoint source program.

FFY 96
DNR tasks: Finalize any program changes; submit the program by November 1995, to EPA and NOAA for approval.

GOAL: IMPLEMENT AN APPROVED PROGRAM OR REEVALUATE A NON-APPROVED PROGRAM

FFY 96-98
DNR tasks: Implement an approved program through state agencies, local governments, and the general public; reevaluate a non-approved program.

Impact of Change: EPA and NOAA are requiring innovative approaches to implementing the nonpoint source program which will result in an efficient and equitable workload distribution between state and local levels. Once the program is approved by

EPA and NOAA and implemented, nonpoint source regulatory tasks will become routine for local and state staff. Overall, Wisconsin will have stronger environmental protection and restoration incentives for coastal waters.

3) TO DEAL WITH CONTAMINATED SEDIMENTS AND ASSOCIATED WATER QUALITY PROBLEMS, DEVELOP A PROGRAM FOR REGULATING DREDGING, DISPOSAL AND OTHER MANAGEMENT ALTERNATIVES, BASED ON SEDIMENT QUALITY CRITERIA (TRIAD APPROACH)

Multi-Year Strategy

GOAL: OFFICIAL GUIDANCE ON CONTAMINATED SEDIMENTS TESTING

FFY 94
Establish a work group consisting of Federal/State/Local personnel to collect data on contaminated sites. Work group tasks: collect data on sediment chemistry; conduct lab bioassay; perform in-field biological studies.

FFY 95
Work group tasks: Experiment with sediment tests; develop guidance for useable tests by conducting biological and chemical tests on sediments.

GOAL: COMPLETION OF A CONTAMINATED SEDIMENT DATA BASE

FFY 96
Work group tasks: Finalize the collection of field data; develop a contaminated sediment data base; develop guidance on dredging and remediation.

GOAL: COMPLETE GUIDANCE ON MANAGING CONTAMINATED SEDIMENTS.

FFY 97 - 98
Work group tasks: Finalize a guidance on testing sediments based on the contaminated sediment data, including statewide methods to conduct sediment quality assessment, and a quality program for private laboratories; finalize guidance on dredging and remediation based on the contaminated sediment data; develop sediment quality criteria based on the contaminated sediment data.

Impact of Change: Unfortunately, Wisconsin's regulatory mechanisms for contaminated sediments are not effective. This is often due to the fact that there is not a clear understanding of the condition of many contaminated sites. A comprehensive data base of these sites would allow local and state staff to work more efficiently at remediating them. Likewise, developing sediment quality criteria would give regulators a better understanding of when environmental damage becomes irreversible.

The end result of developing a program to manage contaminated sediments would be stronger environmental protection.

4) PROVIDE FUNDING TO LOCAL UNITS OF GOVERNMENT TO MANAGE AND PLAN FOR CUMULATIVE AND SECONDARY IMPACTS THROUGH LOW-COST PROJECTS, STUDIES AND TRAINING

Low-cost projects, studies and training have helped local units of government to manage and plan for cumulative and secondary impacts along Wisconsin's coast. Continuation of projects, studies and training will help local units of government defray the cost in controlling cumulative and secondary impacts.

Multi-Year Strategy

GOAL: FUND LOW-COST PROJECTS, STUDIES AND TRAINING

FFY 93-97

Accept proposals from local units of government.
The Coastal Management Program will accept proposals from coastal communities for projects, studies and training to which address cumulative and secondary impacts.

Assessment of proposals on technical merits.
The proposals will be given to a technical committee to be ranked according to need and merit.

Funding decisions by the Coastal Council.
After the projects are ranked, Coastal Management Program staff will present them to the Council. The Council will select proposals for funding.

Monitoring of proposals.
Proposal selected will be monitored for compliance with specifications.

Impact of Change: Funding low-cost projects, studies and training will help in the management and planning of cumulative and secondary impacts. Problems of particular concern for a community can be controlled, and a higher quality environment will be available to all. Also, continued cumulative and secondary impact funding will help contribute to the overall improvement of Wisconsin's coastal environment.

III. ENHANCEMENTS TO THE CORE PROGRAM

SECTION 309 FUNDING

1) DEVELOP TOOLS TO ADDRESS CUMULATIVE AND SECONDARY IMPACTS WHICH CAN BE USED WITHIN EXISTING STATE AND LOCAL MANAGEMENT AND REGULATORY PROGRAMS

GOAL: DEVELOP A STORM WATER MANAGEMENT ORDINANCE UNDER SECTION 144.266, WISCONSIN STATUTES.

Problem Summary: No state procedures exist for evaluating both secondary effects and cumulative impacts. Present storm water planning may address the direct impacts, but may not adequately consider cumulative impacts and never consider secondary effects. Furthermore, there is inadequate state and regional oversight of local decision-making.

Local units of government, particularly cities and villages, need to manage both the quality and quantity of storm water discharge to receiving streams, wetlands and coastal waters. Ordinances are needed at the local level to provide for proper storm water management.

Program Change: The program change would result in a model storm water management ordinance, based upon the state storm water management plan, to be prepared in the form of an administrative rule. The new administrative rule and corresponding state statute language would become part of the WCMP's specific policies through a RPI.

Impact of Change: A model storm water management ordinance as proposed, will ensure that minimum standards for storm water management regulation at the local level will be conducted on a consistent manner. The program change will allow state and regional oversight of local storm water management decision making. The ordinance would be consistent with the Section 6217 (g) management measures for developing areas, and compatible with the National Pollutant Discharge Elimination System storm water discharge regulations. The ordinance would also incorporate storm water quantity management, to enhance flood management.

Tasks:
FFY 94: A consultant will be hired to form a workgroup of state agency staff, local units of government, and other interest groups. With input from the workgroup, the consultant will formulate the specific provisions of the program through the following efforts:

* Develop the ordinance.
* Locate a local unit of government (demonstration community) for ordinance adoption and implementation.
* Initiate adoption of the ordinance in the demonstration community.

* Initiate activities needed to promote the ordinance.

FFY 95: The consultant will work to finalize adoption of the ordinance in the demonstration community, and implementation will take place. The consultant will continue activities needed to promote the ordinance.

FFY 96: The consultant will provide technical assistance to the demonstration community for ordinance application. Also, activities needed to promote the ordinance will be continued.

Budgets: FFY 94: $40,000 for consultant cost
FFY 95: $22,000 for consultant cost
FFY 96: $22,000 for consultant cost

Note: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of success: Section 6217 requires states with federally-approved coastal zone management programs to develop coastal nonpoint programs. Since the model storm water management ordinance is consistent with the section 6217 (g) management measures, it can enhance more then one part of the coastal program. Also, specific provisions of the ordinance would be developed with the involvement of coastal municipalities and other interest groups, significantly increasing acceptance of the ordinance. Finally, the Wisconsin Coastal Management Council feels that nonpoint source pollution and contaminated sediments should be addressed in a manner that will allow for local government participation.

SOURCES

Wisconsin Coastal Management Program for the Great Lakes 1987 Update, Wisconsin Coastal Management Program

NR 120 - Nonpoint Source Pollution Abatement Program, Department of Natural Resources, November, 1989.

Storm Water Management Practices, [Stat.144].

Coastal Zone Management Act, [Section 6217].

Clean Water Act, [Section 319].

Land Management Practices, [Wis. Stats. Ss.92.01-92.14]

Financial and Technical Assistance, [Wis. Stats.,144.24-.25]

Strategy for Cumulative and Secondary Impacts Program

FY 94 Goal: 173,182 35%

306 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Local Projects	61,060						61,060	61,060		0	
Nonpoint Source Project	51,990						51,990			51,990	
Awareness info	0						0			0	
Cont Sed Project	43,826						43,826	0		43,826	
306 Subtotal	156,876	0	0	0	0	0	156,876	61,060	39%	95,816	61%
Diff from Goal		173,182	173,182	173,182	173,182	173,182					

FY 94 Goal: 90,000 *

6217 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Adopt CZMA changes*	51,000	90,000	90,000	90,000	90,000	90,000	501,000	0		501,000	100
6217 Subtotal	51,000	90,000	90,000	90,000	90,000	90,000	501,000	0	0%	501,000	100%

*Assuming that 6217 funding will increase from the FFY 93 $51,000 level to at least $90,000.

309 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Stormwater Mgmt Regs (project of special merit)	0	40,000	22,000	22,000	0	0	84,000	0		84,000	
309 Subtotal	0	40,000	22,000	22,000	0	0	84,000	0	0%	84,000	100%
Grand Totals	156,876	40,000	22,000	22,000	0	0	240,876				

All 306 project funding is determined by the Coastal Council, using Strategy Goals.

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Cumulative and Secondary Impacts
SECTION 306 FUNDING

OBJECTIVE: Improve awareness by the public and local officials/staff of nonpoint source pollution, and contaminated sediments associated with cumulative sediments.

MULTI-YEAR STRATEGY	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Produce and distribute awareness inofrmation																				
Produce initial comprehensive informational materials on non-point source poluution and contaminated sediments																				
Distribute the materials																				
Produce additional informational materials on non-point source poluution																				
Distribute the materials																				
Goal: Monitor, update and distribute awareness information																				
Produce additional informational materials on contaminated sediments																				
Distribute the materials																				
Produce additional informational materials on non-point source poluution																				
Distribute the materials																				
Produce additional informational materials on contaminated sediments																				
Distribute the materials																				

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Cumulative and Secondary Impacts
SECTION 306 FUNDING

OBJECTIVE: Adopt program changes needed to meet requirements of section 6217 of the coastal zone act reauthorization of 1990	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Completion of an EPA and NOAA approved Nonpoint Source Pollution Abatement Program																				
Establish work group																				
Develop a Nonpoint Source Pollution Abatement Program																				
Make necessary changes in the state's current nonpoint source program																				
Finalize any program changes																				
Submit the program for approval																				
Goal: Implement an approved program or reevaluate a nonapproved program																				
Implement an approved program																				
Reevaluate a nonapproved program																				

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Cumulative and Secondary Impacts
SECTION 306 FUNDING

OBJECTIVE: To deal with contaminated sediments and associated water problems, develop a program for regulating dredging, disposal and other management alternatives, based on sediment quality criteria (triad approach)

MULTI-YEAR STRATEGY	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Official guidance on contaminated sediment testing																				
Establish work group																				
Collect data on sediment chemistry																				
Conduct lab bioassay																				
Perform in-field biological studies																				
Experiment with sediment tests																				
Develop guidance for useable tests																				
Goal: Completion of a contaminated sediment data base																				
Finalize the collection of field data																				
Develop a contaminated sediment data base																				
Develop guidance on dredging and remediation																				
Goal: Complete guidance on managing contaminted sediments																				
Finalize guidance on testing sediments																				
Finalize guidance on dredging and remediation																				
Develop sediemnt quality criteria																				

TIME LINE FOR GOAL ACHIEVEMENT

CORE PROGRAM AREA : Cumulative and Secondary Impacts
SECTION 306 FUNDING

OBJECTIVE: Provide funding to local units of government to manage and plan for cumulative and secondary impacts through low-cost projects, studies and training.	FFY 93 (By Quarter)				FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Fund low-cost projects, studies and training																				
Accept proposals from local units of government																				
Assessment of proposals on technical merits																				
Funding decisions by the Coastal Council																				
Monitoring of projects																				

TIME LINE FOR GOAL ACHIEVEMENT

ENHANCEMENT AREA : Cumulative and Secondary Impacts
Section 309 Funding

OBJECTIVE: Develop tools to address cumulative and secondary impacts which can be used within existing state and local management and regulatory programs	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Develop a model storm water management ordinance under section 144.266, Wisconsin Statutes																				
Workgroup formed by consultant	■																			
Develop the model ordinance		■	■																	
Locate demonstration community for model ordinance adoption and implementation		■	■																	
Initiate adoption of the model ordinance in the demonstration community			■	■																
Initiate activities needed to encourage adoption of the model ordinance in other communities				■																
Finalize adoption of the model ordinance					■	■														
Implement the model ordinance in the demonstration community							■	■												
Continue activities to encourage adoption of the model ordinance in other communities					■	■	■	■												
Provide technical assistance to the demonstration community									■	■	■	■								
Continue activities to encourage adoption of the model ordinance in other communities									■	■	■	■								

NONPOINT SOURCE

LEGISLATIVE OBJECTIVES

1. Development and implementation of management measures for nonpoint source pollution to restore and protect coastal waters. [Coastal Zone Management Act, Section 6217 (a)];

2. To restore and maintain the chemical, physical and biological integrity of the Nation's waters.[Clean Water Act, Section 319];

3. The state shall provide financial and technical assistance to abate point and nonpoint sources of water pollution [Wis. Stats., ss. 144.24-.25, and NR 120].

4. The state shall halt and reverse pollution of its waters by soil erosion by administering goals and standards for conservation of soil and water resources, providing for cost sharing, technical assistance and educational programs to improve land management practices, and enabling the regulation of harmful land use and land management practices [Wis. Stats. ss.92.01-92.14].

CHARACTERIZATION OF THE ISSUE

Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 requires that states with approved coastal zone management programs develop and implement a Coastal Nonpoint Pollution Control Program. This program will be implemented through changes to the existing state coastal zone management program, approved under the Coastal Zone Management Act, and to the state nonpoint source management program, approved under section 319 of the Clean Water Act. The Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) will administer the new requirements jointly.

EPA, in consultation with NOAA, U.S. Fish and Wildlife Service, and other Federal agencies, has published guidance specifying management measures for controlling sources of nonpoint pollution in coastal waters. Each state Coastal Nonpoint Pollution Control Program in order to be approvable must provide for the implementation of the management measures contained in the federal guidance and must:

a) Identify land uses causing or contributing significantly to a degradation of coastal waters.

b) Identify critical coastal areas within which any new land uses or substantial expansion of existing land uses will be subject to the management measures.

c) Modify the State coastal zone boundary to implement the needed management measures.

States must submit to EPA and NOAA a Coastal Nonpoint Pollution Control Program by November 1994. The Wisconsin Department of Natural Resources with WCMP funding will start to develop Wisconsin's Coastal Nonpoint Source Pollution Control Program in October, 1991.

The International Joint Commission, the U.S. Environmental Protection Agency and individual states have called for control of urban and rural nonpoint sources to attain and maintain water quality goals in the Great Lakes. The water quality concerns are most significant in the harbors and near shore or coastal waters where the majority of the recreational and water supply uses occur. The water quality problems include sedimentation of harbors, increased turbidity, increased nuisance aquatic plant growth and bioaccumulation of toxic substances and heavy metals in fish. Lower Green Bay, for example, is extremely eutrophic; experiencing heavy algae blooms. These algae blooms cause low oxygen levels that are detrimental to fish and block light needed for beneficial aquatic vegetation.

About 1.2 million pounds of phosphorus reach Lower Green Bay annually. About 60% of the phosphorus is from "uncontrolled" nonpoint sources. About 20% is from municipal wastewater treatment plants already removing phosphorus. The remainder is from industrial and atmospheric sources.
Coastal residents suffer decreased quality of life as a result of nonpoint source pollution. Their recreational activities are impaired and drinking water costs more. The costs to dredge harbors and properly dispose of the dredged materials fall to taxpayers nationwide.

The International Joint Commission has identified five areas in Wisconsin as having the most significant water quality problems. These Areas of Concern are the Milwaukee River Harbor, the Sheboygan River Harbor, Lower Green Bay, Menominee River Harbor and the Duluth-Superior Harbor. Remedial Action Plans are being prepared for each of these locations.

Nonpoint Sources - Nonpoint pollution sources are developed areas or human activities which contribute significant sources of sediment, nutrients, bacteria, heavy metals and other pollutants to water which runs off the land into coastal waters. These nonpoint sources include:

Agriculture
* Eroding croplands
* Eroding stream banks

* Animal lots with runoff reaching tributary streams
* Fields spread with manure during the winter and early spring
* Lack of proper nutrient and pesticide management

Urban
* Construction sites
* Commercial area streets and parking lots
* Freeways and highways
* Residential streets and lawns

Silviculture
* Timber harvesting
* Logging roads and stream crossing

While point sources in coastal areas are largely controlled, most of these nonpoint sources must now be classified as the largest source of pollutants to coastal waters. Costs to control urban and rural nonpoint sources in coastal areas exceed $300 million.

Nonpoint source pollution problems are of considerable size on their own, but also contribute largely to the problems of cumulative and secondary impacts. Funding from within the Coastal Management Program will be awarded partly to nonpoint source projects and partly to projects which address nonpoint source pollution, but are characterized under the broader heading of cumulative and secondary impacts. Refer to Cumulative and Secondary Impacts section.

CHARACTERIZATION OF EXISTING PROGRAMS

Wisconsin, through a number of state programs initiated during the last five to 15 years, is a leader in controlling pollutants from urban and rural nonpoint sources. Despite the significant accomplishments of Wisconsin's ongoing efforts, many urban and rural nonpoint sources contributing pollutants to coastal waters are not controlled.

Legislation currently being drafted seeks to increase the magnitude of these programs and increase their effectiveness. The pending proposal accelerates the start of nonpoint source control project, increases financial assistance, increases regulatory authority to control nonpoint sources, mandates construction site erosion control statewide, requires stepped-up efforts to encourage excluding cattle from streams, and furthers nonpoint source controls within drainage districts.

I. STATE PROGRAMS.

A. Wisconsin Department of Natural Resources

Areawide Water Quality Management Planning [s.144.025 and 147.25, Stats.]. As required by the Clean Water Act, areawide water

quality management plans are developed for each of the 22 basins in Wisconsin.

These plans identify the water quality problems in each basin, and serve as the basis for selection of watersheds in the basin for nonpoint source control. Each watershed in the basin is evaluated and ranked in order to identify waters which are impacted significantly by nonpoint sources of pollution.

In addition, the Remedial Action Plan (RAP's) are being developed to address water quality problems in 5 harbors/bays on the Great Lakes. These RAP's are being developed to address problems identified by the International Joint Commission (IJC) as an international effort to clean up the Great Lakes. These plans have identified the specific problems in these areas of concern and in the next step, they will identify who should do what, and when, in order to eliminate the problems. Stormwater runoff and nonpoint sources of contaminants have been identified as significant sources of both conventional (BOD5 and suspended solids) and toxic contaminants in these areas.

Wisconsin Nonpoint Source Water Pollution Abatement Program (Priority Watershed Projects) [S. 144.25, Stats.]. The Wisconsin Nonpoint Source Water Abatement Program, established in 1978 under section 144.25 of the Wisconsin Statutes, provides educational, financial and technical assistance to control urban and rural nonpoint sources. The program is administered at the state level by the Department of Natural Resources, with involvement of the Department of Agriculture, Trade and Consumer Protection in agricultural aspects of the program. The program is implemented by counties (through their land conservation departments), cities and villages with state oversight. The University of Wisconsin - Extension and Soil Conservation Service are also involved. The program's current base budget is $6.4 million. Funds are used to cost share best management practices (generally 70%) and support local project staff. Landowners, land users and municipalities may voluntarily enter into cost share agreements (generally between the county and the landowner) to install best management practices needed to control critical nonpoint sources.

The program is implemented through watershed projects, called priority watershed projects. Presently, 51 priority watershed projects, varying in size from less than one square mile to nearly 300 square miles, have been started. Eighteen of the projects are in the Great Lakes drainage area.

Construction Site Erosion Control Ordinances (S.144.26, Stats). Requires the Department of Natural Resources to promote voluntary, local adoption of construction site erosion control ordinances. The Department has prepared a model ordinance and a companion technical handbook. Many coastal communities have enacted ordinances based on the model ordinance, but enforcement is lacking.

Nonpoint Source Order (S.144.025, Stats). Provides authority to the Department of Natural Resources to order control of very critical urban and rural nonpoint sources, excluding animal waste sources. This "Bad Actors" law can be used anywhere in the state. If the order applies to a critical agricultural nonpoint source, the Department of Agriculture, Trade and Consumer Protection may provide technical and financial assistance.

Wisconsin Pollution Discharge Elimination System Program, Storm Water Discharge. The recent Environmental Protection Agency storm water discharge regulations, now part of the Wisconsin Pollutant Discharge Elimination System Program, control nonpoint sources. Administration of the national program is delegated to the Department of Natural Resources. Presently, the city of Milwaukee is required to obtain a permit to control urban storm water pollutant discharges. In addition, thousands of industries in coastal areas potentially could come under these regulations.

Animal Waste Management [NR 243]. Provide authority to the Department of Natural Resources to require operators of animal waste sites causing a significant water pollution problem to obtain a permit. In addition, livestock operations of 1000 or more animal units must obtain a permit. The Department of Agriculture, Trade and Consumer Protection may provide technical and financial assistance to the operators.

Shoreland Zoning Program. Wisconsin's shoreland zoning regulations also are a nonpoint source control mechanism. These regulations control development within a specified zone along or around lakes, and navigable streams. The Department of Natural Resources sets minimum standards that counties, cities and villages must adopt and enforce. The Department also provides planning and education assistance, and regulatory oversight. The planning and education assistance includes furnishing: model zoning ordinances; regulatory wetland maps; and program and legal guidance. Recent additions to the regulations require protection of wetlands in shoreland zones. (see also section on Local Zoning)

B. Wisconsin Department of Agriculture, Trade, and Consumer Protection

Soil and Water Resource Management (SWRM) Program. The SWRM program provides approximately $3 million annually to counties to, control soil erosion on agricultural lands, assist drainage districts in complying with state regulations, properly manage animal waste, and to judiciously use nutrients and pesticides. Funds are used for cost sharing control measures with farmers and supporting county staff.

Farmland Preservation. Through the use of property tax credits, the Farmland Preservation Program pursues the goals of protecting

farmland from development, providing property tax relief and promoting soil conservation through cross compliance requirements. SWRM Farmland Preservation Projects assist by providing funds for county staff to help participating farmers meet county soil and water conservation standards.

Pesticide Applicator Certification Program. The Pesticide Applicator Certification Program assures a minimum level of competence for both private and commercial applicators of pesticide to minimize the risk for humans, animals and the environment. Certification program staff work cooperatively with the University of Wisconsin Extension, which is responsible for providing training materials and training sessions.

Groundwater Management Plan for Pesticides. Protects Wisconsin water supplies, including surface water and groundwater, from pesticide contamination. Under this charge, the DATCP has prepared rules restricting use of certain compounds such as atrazine that have been found to contaminate groundwater.

Sustainable Agriculture Program. Researches and promotes sustainable agriculture by providing funding annually to private landowners and others for demonstration and research projects.

Agriculture Clean Sweep. Collects old and unused agricultural pesticides. A pilot Clean Sweep project was conducted in three counties, and demonstrated a high need to conduct additional projects.

C. Wisconsin Department of Industry, Labor and Human Relations

The Department of Industry, Labor and Human Relations (DILHR) administers three rules related to nonpoint sources of pollution: erosion control, underground storage tanks, and private sewage (septic) systems. DILHR is revising ILHR 20 of the Wisconsin Administrative Code to incorporate construction site erosion control requirements for all one and two family residential developments. ILHR 10 of the administrative code regulates the installation, operation and closure of over 140,000 underground petroleum storage tank systems. DILHR also manages the Petroleum Environmental Cleanup Fund for the remediation of leaking tank systems. In 1991, the program processed $24 million in reimbursement claims. Through its plumbing and platting codes (ILHR 83, 85 and 88), DILHR is responsible for siting, design, installation and operation requirements for Wisconsin's 500,000 private sewage systems. Presently, DILHR is addressing nitrate groundwater standards.

D. The University of Wisconsin Extension - Cooperative Extension (UWEX-CE)

Education is a key component of nonpoint source pollution because actions to reduce pollution are largely voluntary. Education programs and materials have focused on: watershed management, solid waste management, domestic water supply and waste disposal, groundwater protection, lake planning and management, floodplain and shoreland protection, pesticide fertilizer management, livestock waste management, and numerous other topics. County faculty draw on state specialist support to develop and deliver local programs throughout the state. Activities range from targeting education support for state funded priority watersheds to organizing conferences and workshops, and carrying out applied research and demonstration projects.

E. Local Zoning

Shoreland and Wetland Zoning: Counties (S.59.971, Stats. & NR 115). Regulates general development & activities in wetlands in corridors adjacent to navigable waters ("shorelands"). May comment on state and federal permit applications.

Shoreland and Wetland Zoning: Villages & Cities (Ss.61.351 & 62.231, Stats. & NR 117). Regulates activities in wetlands adjacent to navigable waters ("shorelands"). May comment on state and federal permit applications.

II. FEDERAL

Clean Water Act, Section 319. Provides funds to states to assess the need for nonpoint source control in state lakes, streams, wetlands and groundwater to achieve the water quality goals and to prepare and implement a nonpoint source pollution management program.

III. EFFECTIVENESS OF EXISTING PROGRAMS

Existing nonpoint source pollution abatement programs have been determined to be inadequate by the federal government and under s. 6217 of the Coastal Zone Act Reauthorization Amendments of 1990, states with approved Coastal Management Programs are required to develop and implement Coastal Nonpoint Pollution Control Programs. However, until programs can be developed, there is a need to accelerate the implementation of current regulatory programs in order to assure that nonpoint source pollution issues remain manageable.

PROGRAMMATIC OBJECTIVES

I. IMPROVE THE QUALITY OF COASTAL WATERS, INCLUDING HARBORS, BAYS AND NEAR SHORE WATERS, BY ACCELERATING THE INSTALLATION OF BEST MANAGEMENT PRACTICES TO CONTROL CRITICAL NONPOINT SOURCE IN COASTAL WATERSHEDS.

To accelerate the installation of best management practices to control critical nonpoint sources, existing state programs need to be expanded and enhanced, local government actions need to be expanded and new federal programs need to be initiated.

A. State Nonpoint Source Water Abatement Program

Presently, there are 18 priority watershed projects (nonpoint source control projects) in coastal areas being developed, being implemented or completed. These projects are consistent with Wisconsin's Section 319 Management Program. At a minimum, 25 to 30 additional priority watershed projects are needed to address the nonpoint source control needs in coastal watersheds.

Need: Additional funding is needed to provide financial (cost sharing), technical and educational assistance for nonpoint source control in 25 to 30 coastal watersheds. Cost estimates exceed $100 million.

B. Local Government Actions

Most nonpoint source control activities are implemented by counties, cities and villages. County Land Conservation Departments staff levels are generally insufficient to meet the work load necessary to deal with the nonpoint source control needs in a timely manner.

Need: County department staffing levels need to be increased to provide technical assistance to farmers for controlling nonpoint sources in a timely manner. Staff are also needed to assist farmers in the proper operation and maintenance of best management practices and to assist in dealing with changes in farm operation. Specifically, staff are needed to provide technical assistance to farmers in additional priority watershed projects and soil erosion control implementation projects and to monitor landowner adherence to conservation plans for the Farmland Preservation Program.

In urban areas, storm water discharges are largely uncontrolled; resulting in both downstream flooding and stream bank erosion and discharge of pollutants to coastal waters.

Need: Local units of government - particularly cities and villages - need to manage both the quality and quantity

of storm water discharge to receiving streams, wetlands and coastal waters. Local ordinances are likely needed to provide for proper storm water management.

C. New federal program initiative - Coastal Nonpoint Source Pollution Abatement Program.

To improve and protect the water quality of coastal waters, section 6217 of the 1990 Amendments to the Coastal Zone Management Act requires states to develop Coastal Nonpoint Source Pollution Abatement Programs by November 1994. These programs must include "enforceable management measures and additional management measures", and be approved by EPA and NOAA. The intent of this law is to enhance state and local efforts to control urban and rural nonpoint sources. It is also the intent of the law for this Coastal Nonpoint Source Pollution Abatement Program to complement state's Section 319 Nonpoint Source Management Programs. (See State Nonpoint Source Water Pollution Abatement Program.)

Need:

1. The Department of Natural Resources, in conjunction with the Department of Administration, Department of Agriculture, Trade and Consumer Protection, other state agencies, local units of government and the general public need to develop a Coastal Nonpoint Source Pollution Abatement Program consistent with the guidance prepared by EPA and NOAA. As part of this program development, there is a need to identify how the best management practices and other management practices presently used in Wisconsin's program compare to the "management measures" and "additional management measures" identified in the EPA and NOAA guidance.
2. Training local agencies of government in the understanding and implementation of the Coastal Nonpoint Pollution Control Program.

II. EXPAND NONPOINT SOURCE REGULATORY AUTHORITIES AND ENHANCE ENFORCEMENT OF EXISTING REQUIREMENTS.

Historically, farmer and other rural landowner participation in nonpoint source control programs has been voluntary. Recently, however, "cross compliance" provisions of the 1985 Farm Bill and various state laws require nonpoint control in order to be eligible for benefits. Voluntary participation appears to be inadequate to provide for protection of coastal waters. For example, landowner participation levels in priority watershed projects in coastal areas has varied from less than 25% to over 75%. In projects with low participation levels, the level or pollutant control is definitely inadequate.

Need: Identify as part of the Coastal Nonpoint Source Pollution Abatement Program what legislative authorities and programmatic procedures are needed to apply "enforceable

management measures" in completing nonpoint source priority watershed projects.

Eroding construction sites are a major nonpoint source in coastal areas. A number of coastal cities and counties have enacted construction site erosion control ordinances based on a Department of Natural Resources model ordinance. However, enforcement in these communities is less than adequate.

Need: Local units of government need to enact construction site erosion control ordinances. Training and staff support is also needed for counties, cities and villages to adequately enforce construction site erosion control ordinances.

Wisconsin deals with serious livestock waste pollution problems, pesticide and nutrient contamination, and other significant agricultural and urban storm water discharge sources under regulations which require case-by-case documentation of the deleterious consequences of the polluting activities. This cumbersome enforcement procedure requires more state agency staff and more staff training than is available.

Need: Proposed legislation to make specific actions subject to enforcement without the necessity to prove harm to water resources.

III. ENHANCE STATE AND LOCAL PROGRAMS THROUGH GREATER PUBLIC INVOLVEMENT AND RESEARCH.

The general public is not familiar with the term "nonpoint source" and not well aware of the water quality problems caused by nonpoint sources. In addition, the Coastal Nonpoint Source Pollution Abatement Program may have far reaching impacts on local units of government.

Need: Raise citizen awareness by educating the public about the types of nonpoint sources and their control, publicizing the programs available. WCMP could develop or assist in developing newsletters or seminars so that the general public will understand what programs are being developed or implemented.

There is also a need to conduct public awareness and involvement activities when developing the Coastal Nonpoint Source Pollution Abatement Program and other nonpoint source initiatives in the coastal areas.

Farmers, developers, municipal officials, and other clients and/or applicants are generally unaware of all the nonpoint

source pollution impacts and problems caused by coastal and urban development. Some of these problems include the impacts on water quality and coastal habitat from existing development, and the impacts of future development.

Need: There should be additional support for information and education initiatives. This is particularly true in those areas where continued urban development is perceived to be damaging to the environment. Additionally, public awareness of issues related to potential problems from developmental activities should be enhanced.

For many aspects of nonpoint source control, additional knowledge is needed to better focus limited financial and technical assistance and enhance the overall efficiency of the program.

Need: The coastal nonpoint source program will be requesting all agencies to identify their research needs so that all collectively all nonpoint source programs as well as the coastal program can assist in supporting those needs.

IV. IMPROVE WATER QUALITY MONITORING EFFORTS TO BETTER IDENTIFY THE LEVEL OF POLLUTANT CONTROL NEEDED TO IMPROVE AND PROTECT THE QUALITY OF COASTAL WATERS.

There is very limited information on the quality of coastal waters. The information available may not be adequate to determine where "additional management measures" required under the Coastal Nonpoint Source Pollution Abatement Program will need to be applied.

Need: A monitoring strategy for coastal waters needs to be developed and implemented. This strategy should contain roles for state and federal agencies (e.g. Wisconsin Department of Natural Resources, U. S. EPA and NOAA).

STRATEGY FOR WISCONSIN'S COASTAL NONPOINT SOURCE POLLUTION PROGRAM

The Work Group recommends a dual thrust approach towards accelerating nonpoint source control efforts in the coastal areas. The first thrust is to move ahead, as soon as possible, with developing the Coastal Nonpoint Source Pollution Abatement Program as required by s. 6217, Coastal Zone Reauthorization Act. This is covered under cumulative and secondary impacts.
The second thrust is to continue to foster Wisconsin's efforts to control nonpoint sources by enhancing state and local government programs.

SOURCES

Wisconsin Coastal Management Program for the Great Lakes 1987 Update, Wisconsin Coastal Management Program

Nr 120 - Nonpoint Source Pollution Abatement Program, Department Of Natural Resources, November, 1989.

Storm Water Management Practices, [Stat.144].

Coastal Zone Management Act, [Section 6217].

Clean Water Act, [Section 319].

Land Management Practices, [Wis. Stats. Ss.92.01-92.14]

Financial and Technical Assistance, [Wis. Stats.,144.24-.25]

CONTAMINATED SEDIMENTS

LEGISLATIVE OBJECTIVE

The State of Wisconsin has adopted legislation to maintain safe and productive water bodies [Pollution Discharge Elimination Wis. Stats. 147.01], and to provide for effective movement of commodities through Wisconsin harbors [Wis. Stats. 85.095].

The policy of the state is to improve the quality of the waters of the state; to restore the chemical, physical and biological integrity of its waters; to protect public health, safeguard aquatic life and scenic and ecological values; and to enhance the domestic, municipal, recreational, industrial, agricultural and other uses of water. This policy reflects federal provisions of the Clean Water Act. The role of the Wisconsin Coastal Management Program is to assist in the implementation of this policy.

CHARACTERIZATION OF THE ISSUE

Sediment contamination is a serious environmental and economic problem in some coastal areas of Wisconsin. Sediments are naturally deposited by rivers and streams that empty into the Great Lakes, but in the past, some of these waterways have carried toxic materials that have become associated with the sediments. This situation is especially problematic in the older industrialized areas of Wisconsin, where toxic materials discharged into the river and settled to the bottom, contaminating sediment in river mouths, bays, harbors, estuaries, and other coastal areas.

Natural processes and human actions stir sediments up. In some cases, sediments may be able to be treated in place or capped with clay. However, many ports and harbors must be periodically dredged to maintain navigation channels, and regardless of navigation, some places may have to be dredged to maintain environmental quality. If contaminants are present and biologically available, they can enter the food chain through aquatic organisms. This situation poses a threat not only to fish, birds and other organisms, but also to people who eat fish and come in contact with contaminated lake water and sediments.

Although there are limitations to our understanding of the impacts of contaminated sediments, the presence of toxins in sediments poses a potential threat to the ecosystem and to humans. For example, reduced populations of mink and cross-billed (deformed) terns have been noted along industrialized and developed rivers and harbors. Fish with high levels of PCBs and other toxic contaminants have been found in the Sheboygan River, Cedar Creek, the Lower Fox River, and other waterways. Data from

studies at specific sites in the Great Lakes suggests that exposure of aquatic organisms, fish and birds to toxic pollutants has:

a) Decreased the abundance and diversity of certain species
b) Reduced phytoplankton growth (a common source of food for other organisms)
c) Affected the survival, growth and reproduction of organisms that live on the lake bottom
d) Affected the ability of fish-eating birds to reproduce
e) Caused birds to decrease defense of nests and have abnormal incubation behavior
f) Been associated with increased tumor frequencies and abnormalities

If this data is correct, all of the above effects suggest impairments to the integrity of the Great Lakes ecosystem, and serve as an early warning indicator of potential hazards to people. Humans are at the top of the aquatic food chain and consume substances that have accumulated in the lower levels of the chain. In other words, if contaminants are present and available-bottom feeding organisms that contain low levels of toxins are eaten in large quantities by fish, which then accumulate the toxins. In turn, humans can accumulate higher levels of toxins by eating large quantities of fish.

Studies have shown that women who regularly ate fish from Lake Michigan gave birth to infants with different birth weights, skull sizes, and motor and behavioral development than children of women in a control group (group did not eat fish). A study conducted by the Wisconsin Division of Health in 1984 sampled blood from sport fishing people statewide for PCB and DDE (a pesticide). Those that consumed greater amounts of fish tended to have higher amounts of PCB and DDE in their blood. In limited areas, contamination is high enough to pose a human health hazard. For example, the Sheboygan River and Harbor (a Federal Superfund site) has PCB contamination of bottom sediment high enough to be harmful when it comes in contact with skin.

All of these factors are especially important to local communities and regions that rely on their waterfront areas as focal points of economic development, recreation and access for community residents. These areas are not only a scenic and recreation resource, but harbors and ports in coastal communities contribute to their economic well being. In some cases, the best solution may be to leave the sediment in place and/or use in-situ treatment or capping. In other cases, sediment has to be removed due to ecological threats or to maintain adequate depths for navigation.

Removing contaminated sediments is especially problematic, because the dredged materials must be disposed in appropriate locations. Due to the many communities that must maintain navigation channels and the amount of potentially contaminated

sediment that must be removed, disposal is a significant problem. The dredged material varies in sediment quality and quantity. Sediments in smaller and less developed (industrialized) harbors often can be disposed of in environmentally sound and inexpensive ways. Sediments in the ports of larger and more industrialized communities are often contaminated and require special dredging and disposal techniques, or other treatment. The improper removal or disposal of contaminated sediments can result in environmental damage or degradation. Proper action requires an accurate characterization of the physical, chemical, and toxicological properties of the sediments and an accurate identification of appropriate action.

Dredging for navigational purposes in Wisconsin Great Lakes harbors normally involves the removal of over 700,000 cubic yards of sediment material annually. The U.S. Army Corps of Engineers (COE) is the major agency directly involved in the initiation and completion of maintenance dredging in federally-designated navigation channels. In addition, many local governments and private harbor facility owners and operators undertake their own dredging projects. For all dredging projects, questions and uncertainties arise concerning dredging methods and disposal because of the potential for contaminants in the sediment.

The contaminated sediment issue is of considerable size on its own, but it is also a major component in the issue of cumulative and secondary impacts. Funding from within the Coastal Management Program will be awarded partly to projects specific to contaminated sediments and partly to projects addressing contaminated sediments, but characterized under the broader heading of cumulative and secondary impacts. Refer to Cumulative and Secondary Impacts section.

CHARACTERIZATION OF EXISTING PROGRAMS

There are no federal or state regulatory standards for disposal of contaminated dredged material from Great Lake Harbors. However, several federal and state agencies are in the process of developing regulatory standards and some funds are available to finance project implementation.

I. FEDERAL PROGRAMS

Contaminated sediment research is being conducted on the federal level by the Environmental Protection Agency and other federal agencies. One specific EPA effort has been initiated through the Assessment and Remediation of Contaminated Sediments (ARCS) program. ARCS has three objectives: 1) To assess the nature and extent of bottom sediment contamination at selected Great Lakes Areas of Concern, 2) To evaluate and demonstrate remedial options, including removal, immobilization and advanced treatment technologies, as well as the "no action" alternative, and 3) To provide guidance on the assessment of contaminated sediment

problems and the selection of necessary remedial actions in the areas of concern as well as other Great Lakes locations.

In addition, EPA is currently working with the Army Corps of Engineers to develop regional guidance for implementing Section 404(b)(1) of the Clean Water Act, as it applies to the disposal of Great Lakes sediments into the open water. The guidance will address not only the Corps' dredging projects, but will also apply to private dredging projects which are permitted by the Corps. The guidance, as it is currently being developed, will have a tiered framework, beginning with existing information, moving to chemical testing, and then to biological testing. The EPA and the Corps plan to have a draft document completed in late Fall 1991, which will be circulated for review. The EPA and the Corps plan to begin implementing the framework in the Spring of 1992.

Other federal efforts are contained in the recently proposed Great Lakes and Coastal Sediment Assessment and Restoration Act (Sen. Moynihan) and the Great Lakes Sediment Reduction Act of 1991 (Sen. Glenn). The first act is designed to address the matter of sediment contamination in the Great Lakes. It would direct EPA and the COE to develop sediment quality criteria and would direct the COE to conduct contaminated sediment restoration projects in certain areas. The second Act is intended to reduce upstream erosion and runoff of soil and pollution along the Great Lakes Basin.

Major efforts were taken by Congress in the late 1970's to establish a system of dredged disposal sites on the Great Lakes. This program, P.L. 91-611, created confined disposal facilities (CDF's) in many of the Great Lakes commercial harbors. The facilities were constructed to have a ten year design capacity for dredged material. Many of those facilities are now approaching full capacity; thus, communities are facing the continued need to dredge harbor areas, but disposal sites for the material are limited. This program has not been reauthorized.

II. WISCONSIN PROGRAMS

The implementation of state regulatory policies concerning contaminated sediments rests with the Department of Natural Resources. Department personnel provide both public and private dredging sponsors with technical information requirements so that an adequate evaluation of the method of dredging and disposal location can be determined. Following the completion of this process, state permits, if authorized, are issued. Concurrently with the state permitting process, permits are sought from other regulatory agencies: The U.S. Army Corps of Engineers and, if applicable, local governments.

The development of regulatory standards is a long and complicated process. The Department of Natural Resources has embarked on a

sediment triad approach of sediment assessment: 1) bulk chemistry, 2) laboratory bioassay, and 3) in-field biological studies. The outcome of this study design will be to provide a higher degree of certainty in making regulatory decisions concerning the adequate placement of dredged material. The information should provide future dredging applicants with guidance on how regulatory decisions will be made.

To identify sites that are causing impairment of the beneficial uses of water resources, the Wisconsin Department of Natural Resources (DNR) is developing a contaminated sediments inventory in conjunction with the U.S. EPA. The inventory will identify contaminated sediment and wetland soil sites that cause or have some potential to cause impairment of beneficial uses of the associated water resources. In 1989, the Wisconsin DNR developed a comprehensive sediment management program and selected a few sites for clean-up demonstration projects and/or remedial investigation/feasibility studies (Little Lake Butte des Mortes, Starkweather Creek, Cedar Creek). Existing programs with a partial or full goal of evaluating and remediating contaminated sediments in the State of Wisconsin include:

a. The Green Bay Mass Balance Project, a multi-agency effort focusing on the fate of PCBs, dieldrin, cadmium, and lead, directed by EPA Great Lakes National Program Office;
b. The Sheboygan Superfund site investigation where researchers from UW-Madison have investigated in-situ biodegradation of PCBs; and,
c. Remedial Action Plans initiated by the International Joint Commission (IJC) use citizens' and technical advisory committees to examine and make recommendations for remediation at critical locations (Milwaukee Harbor Estuary, Green Bay, Sheboygan River/Harbor, Duluth-Superior, and Menominee-Marinette).

The Wisconsin Department of Natural Resources (DNR) offers funding programs for the development of recreational harbor facilities; however, maintenance of facilities, such as dredging shoals at launch sites or marina basins, is outside the scope of the grant programs. Through the state's Harbor Assistance Program (Wis Stats. 85.095), Wisconsin's Department of Transportation (DOT) provides financial assistance to local governments for the maintenance and development of commercial ports along the Great Lakes and Mississippi River. The department can provide up to 80% of the cost of dredging, dredged material disposal, and the construction and repair of publicly-owned dock walls and disposal facilities. All eligible projects must demonstrate an improvement to transportation efficiency, and project benefits must exceed project costs.

III. EFFECTIVENESS OF EXISTING PROGRAMS

Although there are a number of existing federal, state, and local programs which address contaminated sediments, the issue

continues to lack proper control and handling. Primarily, there is inadequate information for citizens, local authorities, and state and local staff on the issues of problem areas, potential risks, and applicable regulations.

Second, local communities are in need of assistance to develop and implement regulatory, dredging and disposal plans. Many communities do not address contaminated sediments and others address problems on a case by case basis, resulting in inconsistent regulations.

Finally, before a regulatory framework can be developed, research needs to be done to determine methods of measuring for contaminants and assessing risks to humans. The lack of widely accepted quantifiable testing methods makes establishing guidelines a difficult process.

PROGRAMMATIC OBJECTIVES

Based on the existing conditions in the State of Wisconsin and the mechanisms currently in place to address contaminated sediments, the Work Group identified three programmatic objectives: Education and information, disposal planning, and regulatory guidance/standards.

I. INCREASE THE KNOWLEDGE AND AWARENESS OF LOCAL GOVERNMENTS AND CITIZENS IN COASTAL AREAS

The issue of contaminated sediment management is constantly placed before coastal citizens and communities in many forms, fish advisories; dredging proposals, either maintenance or new work; locating dredged disposal sites and alternatives for disposal. In all of these activities, additional information concerning the degree of contaminated and the potential effects of the sediment material on the ecosystem should be available to citizens, representatives of local governments, and others who are involved in the decision making process.

Additionally, it is critically important that dredging sponsors, normally local governments, become more knowledgeable about the types of sediment testing that is required to process dredging permit applications, regulatory monitoring requirements during the period of construction, and the future direction of both state and federal regulations concerning this activity.

Needs: Currently, there is inadequate information available to the citizens and local authorities in coastal areas with sediment contamination. Citizens need to be informed of potential risks, warned about problem areas, and informed of actions being taken. Authorities from local governments and ports or harbors need to be informed about state and federal actions, regulatory changes, and

new information or procedures for dealing with contaminated sediments.

II. PROVIDE ASSISTANCE AND SUPPORT TO LOCAL COMMUNITIES IN THE DREDGING AND DISPOSAL OF TOXIC SEDIMENTS

The full development and implementation of a regulatory and disposal program will take many years to implement. In the meantime, many local governments, ports and marinas will have to take action to maintain navigation channels and their facilities. Because of the complexity of sediment removal and disposal, determining solutions will require the cooperation of many different state, federal and local agencies.

Needs: The successful implementation of a dredging project(s) requires cooperation and communication between many separate partners and institutions. To create a systems approach to dredging, a committee should be established to review and convey to port and harbor communities "leading edge" technological concepts to implement specific dredging projects. Bringing together diverse interests early in the planning process can provide a basis for expedited decision-making, thus, assisting both the applicant as well as the regulator.

The implementation of dredging planning activities for specific harbors has the potential of selecting disposal locations and alternatives from an ecosystems perspective. Through this process, an estuary would be reviewed in total for areas of potential disposal facility siting. These locations, combined with dredged material quality and quantity, can be used for long-term planning for disposal site locations. A systems approach to this issue can utilize recommendations prepared through the Remedial Action Plan process; thus, allowing for citizen review and input. Early participation can lead to a broad based acceptance of the selected disposal option.

III. DEVELOP A PROGRAM TO PROVIDE REGULATORY GUIDANCE AND STANDARDS FOR INVESTIGATING, EVALUATING, ASSESSING THE RISKS OF AND DISPOSING OF CONTAMINATED SEDIMENTS

A. Triad Approach

Determining the quality of material to be dredged is a complicated technical process. Regulatory organizations approach testing requirements from slightly different perspectives; thus, project applicants receive different guidance in sediment sampling and testing requirements for specific project proposals. These differences can be regionalized due, in part, to the decentralization of regulatory agencies. The establishment of

specific quantifiable testing protocols would greatly aid potential project applicants in developing information that is needed to evaluate a specific proposal.

Needs: To determine a course of action for handling contaminated sediments in Wisconsin harbors and streams, the state needs to develop an approach to analyze sediments and assess the human risk of contaminated sediments. This includes developing statewide procedures for evaluating contaminated sites. The Department of Natural Resources (DNR) has begun to develop a triad approach program to address these gaps, and continued work is needed to complete the three elements of this approach.

In addition to testing protocols, there is an on-going need to broaden information on background levels of chemical concentrations in areas which have had little development pressures. A fuller understanding of upland concentrations of elements can provide baseline information related to the type of dredging and disposal which are needed.

Each of these needs are an attempt to quantify type of management which is needed to safely dispose of dredged material without degrading water quality or allowing for the ingestion of contaminants into the food chain.

B. Sediment Quality Criteria Development

Once a system is in place for investigating sediment contamination, there are no established procedures for evaluating the degree of contamination of the sediment. Furthermore, the effects of contaminated sediments on water quality are not known.

Needs: Criteria and methodology should be developed to calculate a single index from each of the sediment chemistry, bioassy, and in-field studies data sets. The single index will indicate the degree of system degradation due to contaminants in sediment compared to sites that have not been affected. Further, there should be continued sediment investigations to determine critical levels of sediment contamination that affect water quality.

C. Dredging and Remediation Activities

Although individual remediation plans may be developed for specific sites, there are no statewide plans or guidelines for carrying out dredging and remediation activities.

Needs: Statewide guidance for implementation of dredging projects should be established. This would include requirements for the utilization of specific technology

in the dredging process to limit, to the extent possible, the impact of the dredging process on the ecosystem.

D. Associated Sediment Management Program Needs

Currently, there are no established programs to oversee the management of sediment sampling and handling samples. This is important for assuring the accuracy and quality of data.

Needs: The successful implementation of dredged material sampling and testing requires adherence to acceptable testing methods. Establishment of a procedures manual to implement and complete this process will assist both the applicant and regulator.

STRATEGY FOR WISCONSIN'S COASTAL CONTAMINATED SEDIMENTS PROGRAM

The Wisconsin Department of Natural Resources, with the assistance of the Wisconsin Coastal Management Program, will continue to develop a comprehensive contaminated sediment management program to address the restoration of beneficial uses of coastal surface waters that have been impaired or damaged by the presence of contaminated sediments. The activities which either are being or will be undertaken include: the evaluation , development , and application of sediment quality assessment procedures; completion of an inventory of contaminated sediment sites and development of prioritization schemes to select sites for detailed assessments and remediation; coordination of contaminated sediment issues for the various management and regulatory programs (Remedial Action Plans, dredging projects, Superfund, Resource Conservation and Recovery Act, State Environmental Repair); development of general and site-specific sediment quality standards and criteria for use in decision-making regarding site remediation, navigational dredging projects, and point and nonpoint source control efforts; and implementation of remedial options at contaminated sediment sites in Great Lakes Harbors and tributaries. Each of the activities must also be accompanied by the development of appropriate guidance documents and public informational materials and the provision of technical assistance to public parties affected by contaminated sediments.

SOURCES

<u>Chapter NR 347 of the Wisconsin Administrative Code</u>
<u>Clean Water Act</u>

NATURAL HAZARDS

LEGISLATIVE OBJECTIVES

1. Prevention or significant reduction of threats to life and destruction of property by eliminating development and redevelopment in high hazard areas, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise and Great Lakes levels rise [Coastal Zone Management Act, Section 309(a)(2)].

2. "It is the policy of the state to mitigate risks to public health and safety and risks to property damage in areas subject to natural hazards by:
   a. Providing that all development in areas subject to serious flooding will not materially alter the natural capacity of the lake or river so as to intensify the magnitude of floods, expose citizens to hazards or cause future public expenditures for flood disaster relief; and,
   b. Regulate those earth moving, de-vegetation, and construction activities now reviewed by state agencies so as not to accelerate the rate of shoreline erosion or bluff recession" [Wisconsin Coastal Management Program 1987 Great Lakes Program, p. 16].

CHARACTERIZATION OF THE ISSUE

Three primary types of hazards in Great Lake coastal areas are:
1. Erosion of coastal bluffs, banks, beaches and near shore lake beds;
2. Flooding from upland runoff, high lake levels and storm-induced surge (temporary water level changes); and,
3. Damage to shoreline structures from storm waves.

Natural coastal hazards such as: earthquakes, hurricanes or typhoons are not concerns in the Great Lakes.

Natural changes in lake levels are caused by changes in precipitation, evaporation, and changes in the rate at which water enters or leaves each lake through connecting channels. Storms during very high lake levels increases erosion, creating a significant hazard to coastal properties. In the decade prior to 1986, precipitation throughout the Great Lakes was much greater than average and evaporation was lower than average. The combination of these two changes brought record high water levels in 1985 and 1986. Lake Michigan reached levels not seen since 1886. Even though storms were less severe and less frequent, never the less Wisconsin experienced $16 million of documented damage to public facilities and millions more in undocumented damage to public and private property.

The decades of the 1950's, 1970's and 1980's each experienced higher water levels. Each successive high water period brought higher waves and greater wave damage to the coast where the lake bed had been steadily eroding, even during years of modest lake levels. The combination of these factors has probably accelerated bluff and bank recession rates, and with each decade has come more extensive and intensive coastal development. Consequently, the cost and risks of damage to coastal homes, businesses and public facilities has risen substantially over the years. Studies in 1979 and 1989 indicated that the type and degree of the natural hazard threat varies along the Lake Michigan and Superior coast. The major types of natural hazard threats consists of the following:

1. General shore erosion from Kenosha to Sturgeon Bay;
2. Isolated shore erosion from Sturgeon Bay to Green Bay (individual bays and clay bank areas);
3. Coastal flooding from Green Bay to Marinette; and,
4. General shore erosion from Saxon Harbor to Superior (except for bedrock areas).

Where shore erosion exists, average recession rates of 2-5 feet per year are common in bluff areas, and in some sections rates equaling 10 feet per year have been recorded.

CHARACTERIZATION OF EXISTING PROGRAMS

I. REGULATORY PROGRAMS

Local, state, federal and international programs address coastal hazards. In Wisconsin, four programs address shoreland erosion and flooding.

A. Local

Shoreland/Floodplain Zoning, Counties with Adopted Zoning Ordinance (Counties, S.59.97 and 59.971). Counties can establish recession (erosion and/or bluff/ravine) based setbacks, under a general zoning or shoreland zoning ordinance, that is more restrictive than the 75 foot setback required under NR 115. In Wisconsin, several coastal counties have more restrictive recession based setbacks in their general zoning ordinances.

Shoreland/Floodplain Zoning, Counties without Adopted Zoning Ordinance (Counties, S.59.971). Counties that have no general zoning ordinance, can establish recession based setbacks under a shoreland/floodplain zoning ordinances, that is more restrictive than the 75 foot setback required under NR 115. In Wisconsin, several coastal counties have more restrictive recession based setbacks in their shoreland/floodplain zoning ordinances.

B. State

Shoreland and Wetland Zoning: Counties (S.59.971, Statutes. & NR 115). Applies to unincorporated (rural) areas. It requires all counties in the state to adopt zoning and subdivision regulations for the management of all shorelands. In this zoning classification, upland development is generally restricted in type and intensity. Generally, the use of properties in this classification is limited to passive recreation, agriculture, parks, boating access locations, and utility crossings. Further, NR 115 establishes a minimum setback, at 75 feet, from areas subject to the controls listed in the code.

Shoreland and Wetland Zoning: Villages & Cities (Ss.61.351 & 62.231, Statutes. & NR 117). Applies to incorporated areas within the state (cities, towns and villages). Similar to the Shoreland Management Program (NR 115), this program requires the protection of lands within 1,000 feet of a lake or 300 feet of a stream or river. The major difference between NR 115 and NR 117 is that NR 117 does not establish the 75 foot setback for development as is required in NR 115.

The Wisconsin Floodplain Management Program (NR 116). Provides a uniform basis for preparing and implementing floodplain regulations across the state. Areas potentially subject to flooding are identified by incorporating mapping information from the Federal Emergency Management Agency (FEMA). The code applies to "coastal floodplains," defined as areas along the coast of Lake Michigan or Lake Superior which are inundated by regional flood and subject to additional hazards due to wave run-up. All counties, cities and villages are required to adopt and administer floodplain zoning ordinances that meet the minimum requirements set up in the code. These requirements include criteria for establishing and rezoning floodplain districts, development standards in floodway areas, development standards in flood fringe areas, standards for nonconforming uses, criterion for flood proofing, and other requirements.

Chapter 30 Permit Program. Under Chapter 30 of the Wisconsin Statutes, the DNR provides technical, planning and training assistance to counties, cities and villages so they can properly administer their shoreland, wetland and floodplain ordinances. Monitoring and compliance is achieved through audits of local programs and enforcement of violations through local courts or the Attorney General's office. The DNR works with local communities to develop mitigation plans to prevent damage from natural flooding and erosion. The DNR also regulates construction and waterway alteration in and adjacent to Lakes Michigan and Superior.

II. NON-REGULATORY PROGRAMS

In addition to the DNR regulatory programs, the Wisconsin Division of Emergency Government (DEG) is preparing mitigation plans, public information, and local training to assist in preparing for and recovery from human-induced or natural emergencies. The Division of Emergency Government responded to the 1985-86 water level crisis with public information and damage assessment activities.

Finally, the Wisconsin Sea Grant Institute's technical expertise helped identify what information is still needed to determine the effects of high lake levels on both shore structures and upland erosion rates. Sea Grant also produced public information materials for local governments and others on natural coastal hazards. In 1987 Sea Grant published *Coastal Process Handbook - Evaluating the Risks of Flooding and Erosion for Great Lakes Capital Property*, with assistance from the Wisconsin Coastal Management Program.

The International Joint Commission (IJC), a U.S.- Canadian body dedicated to Great Lakes concerns, has also been involved in erosion and flooding issues. The IJC outlined a Phase II, Plan of Study for the Levels Reference Study Board to update erosion data, establish benefit/cost ratios for protection of facilities, and review present regulatory issues. The $6 million study will also try to develop a method for estimating the probabilities of future high and low lake levels.

III. EFFECTIVENESS OF EXISTING PROGRAMS

Even with the existing regulations, Wisconsin has suffered over the years and continues to suffer from problems associated with natural hazards. Specifically, regulatory and management programs are needed for: erosion of coastal bluffs, banks, beaches and near shore coastal areas; flooding from upland runoff, high lake levels, and storm-induced surges; and damage to shoreline structures from stormwaves.

Another significant problem when addressing the issue of natural hazards is that the degree of the hazards varies along Wisconsin's coasts, making a management plan for the entire coast a difficult proposal. Studies addressing the issue on an area wide, instead of coast wide basis will be needed if coastwide relief will be possible.

PROGRAMMATIC OBJECTIVES

I. DIRECT FUTURE PUBLIC AND PRIVATE DEVELOPMENT AND REDEVELOPMENT AWAY FROM HAZARDOUS AREAS

A. General

Current state regulatory policies and programs are designed to lessen the potential economic losses brought about by hazard occurrence. To date there has been no information collected or analysis conducted to assess the existing shoreland policies for the Green Bay, Lake Michigan or Lake Superior shorelands. It is not known if the setback requirements in county ordinances have been adequate or successfully applied and enforced. Also, it is not known whether setback requirements have had positive or negative impacts on building location. For example, in the past, many owners may have used their own judgement and built buildings farther away from the shoreline than current regulations require.

Need: Present shoreland policies (county regulations, and state policies, programs and regulations) need to be reviewed to determine effectiveness in the Green Bay, Lake Michigan or Lake Superior shorelands. The review should lead to recommendations for changes to present shoreland policies.

The goal of hazards regulation is to reduce property damage brought about through a natural erosion process and enhanced by storm, events. Sea Grant maintains an ongoing public information and education program about hazards in coastal areas. However the public is still uninformed about the rationale for new setback and flood plain regulations. This lack of knowledge is coupled with a public perception that regulators are acting arbitrarily toward property owners who were allowed to build under prior ordinances. Property owners' opposition is aroused, reducing the effectiveness of the regulations and minimizing awareness of the issue. Differences in ordinances between counties, due to varying dates of adoption, gives an appearance of arbitrariness and further diminishes public support.

Need: Updated information needs to be presented to coastal governments and property owners to explain the rationale for new or revised setback and flood plain regulations, so that informed decisions on future coastal land uses can be made.

The potential impact of natural hazards on upland land uses and structures can be monumental. Besides property owners, many other people including lenders, realtors, developers, insurance agents, and prospective buyers are potentially impacted by damages and liabilities of coastal hazards.

Need: Continual education of those persons and institutions which are involved in the development process is needed, so that the full potential of development actions can be adequately evaluated prior to taking place.

B. Coastal Damage/Erosion

The existing data on coastal erosion is inadequate for determining the extent of the problem, the number of people and structures at risk, and the success or failure of existing programs. Without this basic background data, standards cannot be set and regulations cannot be developed for local governments.

Some of the data gaps include:
* Recession rates;
* Damage and risk assessment;
* Effect of human-built structures on coastal erosion;
* Improvements in lake level predictive capabilities;
* Comparison of recommended wave run-up criteria with actual extreme wave run-up;
* Verification of the existence of lake bed erosion (down cutting) and its significance in rate and extent along the coast.

Need: The documentation of baseline information is needed to adequately determine areas which are susceptible to natural hazards impacts. There needs to be additional effort placed on gathering data on erosion rates, plotting this in this information on current shoreline maps and determining updated erosion rates.

Recession rate information assembled and published in the mid-1970's is inadequate because it was incomplete, the recession rates were too generalized, and the rates understate erosion because high erosion periods in the 1980's were not included. The development of new recession rate data will lead to better evaluation of risks in investing in coastal property, better decisions about relocating threatened coastal buildings, and a more accurate determination of adequate construction setbacks.:

Need: Recession rates on the Great Lakes vary by location, soil type and other natural items; thus, a constant numerical setback can provide both under and over protection. Setback regulations should be variable and based on natural features for a specific location.

C. Flooding

The Federal Emergency Management Agency (FEMA) and the Army Corps of Engineers calculated 100-year flood plain zones for most of

the state. However, many of these zones have not been transferred to maps, and consequently most communities use outdated flood plain maps to regulate land use. When neighboring counties use different maps to regulate flood plain levels, some property owners and municipalities resist regulation because neighboring counties use lower, outdated flood plain levels. Implementation is held back because of insufficient state and local staff, resulting in poor maps, and lack of awareness by the local officials and the public.

Need: The effective implementation of flood plain maps can only be conducted through the use of accurate and consistent maps. All coastal county flood plain maps must be brought up to date, and be consistent.

II. PRESERVE AND RESTORE THE PROTECTIVE FUNCTIONS OF NATURAL SHORELINE FEATURES SUCH AS BEACHES, DUNES AND WETLANDS.

A. General

Structural systems are often used to protect upland improvements. Structures built to reduce coastal erosion can have adverse effects on natural shoreline features as well as neighboring property and structures. Frequently, natural features will provide adequate protection if left undisturbed. However, without information and analysis to determine which features provide adequate protection, policies cannot be developed to make these determinations.

Need: Non-structural and structural means for hazards protection needs to be analyzed in providing the desired protection to the riparian owner as well as neighboring properties. Policies should be established to determine when non-structural or structural means should be used. Finally there needs to be additional resources committed to the educational process of gaining community acceptance of policies.

III. PREVENT OR MINIMIZE THREATS TO EXISTING POPULATIONS AND PROPERTY FROM BOTH EPISODIC AND CHRONIC COASTAL HAZARDS.

A. General

Presently, there is only limited, and out-of-date information concerning the number of individuals, values of properties, both private and public, and importance of properties which are susceptible to hazard impacts.

Need: To adequately protect people and structures in coastal areas, more information and data is needed on the extent of the threats and the areas of greatest concern. Also,

the impacts of hazards on facilities important to local economies, and public safety need to be determined.

Few communities subject to flooding or erosion have prepared pre-disaster mitigation plans, and are therefore unprepared to undertake any measures other than restoration of previous conditions. After flooding, typically they restore previous conditions only to find them flooded again. If the community develops a mitigation plan, rebuilding after a flood may be done in such a way to prevent future property damage.

Need: The preparation of local flood mitigation plans.

STRATEGY FOR WISCONSIN'S COASTAL NATURAL HAZARDS PROGRAM

I. SUMMARY OF THE ISSUE

Based on preliminary assessments, Wisconsin could pursue a natural hazards program with two components. The first could improve the regulatory foundation and the second could assist in having an effective program.

Initially, Wisconsin should evaluate and monitor existing flooding and erosion zoning programs to determine their adequacy and effectiveness. First, existing county and state setback regulations and procedures need to be evaluated for effectiveness. Second, closer monitoring and evaluation of actions taken under the Shoreland Management Program, the Shoreland-Wetland Protection Program, the Flood Plain Management Program, and Chapter 30 should determine effectiveness and identify necessary changes. From the evaluation, guidelines would be developed for revising existing shoreland policies (county regulations, and/or state policies, programs or regulations). The evaluation of existing flooding and erosion zoning programs would be conducted through a project of special merit.

Next, for the coastal erosion and flooding programs, Wisconsin should provide technical assistance, information management and analysis, increased local training and education, increased public education and awareness, and increased coordination among state agencies. These activities would be conducted in future years as part of the WCMP core program.

II. THE CORE PROGRAM PROPOSED OBJECTIVES

SECTION 306 FUNDING

In the past, the Wisconsin Coastal Management Program has funded projects for the study of natural hazards. The funding of these projects never evolved into a core area for the WCMP. In future years a technical assistance program that could operate under the natural hazards core program will allow past funding of natural hazards projects to resume. Also, the nature of the voluntary program will provide incentives that will ensure the acceptance of the technical assistance being provided by the WCMP.

1) Implement a low-cost technical assistance program

GOAL: IMPLEMENT A LOW-COST TECHNICAL ASSISTANCE PROGRAM FOR LOCAL UNITS OF GOVERNMENT

FFY 95: The WCMP could implement a low-cost technical assistance program for local governments to provide information management and analysis, increased local training and education, increased

public education and awareness, and increased coordination among state agencies to deal with present shoreland policies.

FFY 96: The WCMP would continue the low cost technical assistance program for local governments.

Budgets:	FFY 95:	Amount to be determined by the Wisconsin Coastal Management Council (Section 306 funding)
	FFY 96:	Amount to be determined by the Wisconsin Coastal Management Council (Section 306 funding)

III. ENHANCEMENTS TO THE CORE PROGRAM

PROJECT OF SPECIAL MERIT

1) Develop a low-cost technical assistance program

GOAL: DEVELOP A LOW-COST TECHNICAL ASSISTANCE PROGRAM FOR LOCAL UNITS OF GOVERNMENT

Problem Summary: To date there has been no information collected or analysis conducted to assess the existing shoreland policies for the Green Bay, Lake Michigan or Lake Superior shorelands. It is not known if the setback requirements in county ordinances have been adequate or successfully applied and enforced. Also, it is not known whether setback requirements have had positive or negative impacts on building location. Present shoreland policies (county regulations, and state policies, programs and regulations) need to be reviewed to determine effectiveness in the Green Bay, Lake Michigan or Lake Superior shorelands. The review should lead to recommendations for changes to present shoreland policies.

Program Change: The program change would result in a new core area for the WCMP, Natural Hazards, under which low cost technical assistance will be provided to local units of government. The program change could result in new or revised recession based setbacks in general zoning or shoreland/wetland ordinances, that would be implemented by local units of government through the low cost technical assistance grants.

Impact of Change: Low cost technical assistance would enable and ensure that more local units of government adopt or revise ordinances that are more responsive to coastal natural hazards.

Tasks:
FFY 94: A consultant would conduct a study of present shoreland policies (county regulations, and state policies, programs and regulations) and evaluate for effectiveness, and community need. Based on the study, the consultant would develop a program to

provide technical assistance addressing needs identified by coastal communities. The needs may include; continual education of those persons and institutions which are involved in the development process, protection of upland improvements, preparation of local flood mitigation plans. The program would be developed in cooperation with state agency staff, regional planning commissions, local units of government, and other interested parties.

Budgets: FFY 94: $40,000 for consultant cost

Note: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of Success: The availability of low cost technical assistance to local units of government will greatly increase the state's chance for developing a workable natural hazards program. Local governments that show an initiative towards managing their natural hazards threat will be rewarded, thus providing an incentive for other local governments to enter the program. Finally, the WCMC feels that the managing of the natural hazards threat should be undertaken at the local level, with the assistance of the WCMP.

SOURCES

Federal Emergency Management Agency (FEMA). Washington, D.C. Chapter 22

Department of Military Affairs, Division of Emergency Government (sec. 166)

Wisconsin's Shore Erosion Plan: An Appraisal of Options and Strategies, by Roger Springman and Stephen M. Born, 1979.

A Lake Michigan Shoreline Erosion Management Plan for Milwaukee County, Wisconsin, prepared by the Southeastern Wisconsin Regional Planning Commission, 1987.

Discussions with Regional Planning Commissions (Bay Lake, Northwest and Southeastern Wisconsin), and DNR staff

Strategy for Hazards Program*

FY 94 Goal:	0	0%

306 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Natural Hazards Program **							0			0	
							0	0		0	
							0	0		0	
							0	0		0	
306 Subtotal	0	0	0	0	0	0	0	0	0%	0	0%
Diff from Goal		0	0	0	0	0					

** Funding for a Natural Hazards Program depends on an increase in 306 funding.

309 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals	Funding to Locals	%	Funding to the State	%
Develop model ordinance		40,000					40,000	0		40,000	
							0			0	
309 Subtotal	0	40,000	0	0	0	0	40,000	0	0%	40,000	100%
Grand Totals	0	40,000	0	0	0	0	40,000				

All 306 project funding is determined by the Coastal Council, using Strategy Goals.

TIME LINE FOR GOAL ACHIEVEMENT

ENHANCEMENT AREA : Natural Hazards
PROJECT OF SPECIAL MERIT FUNDING

OBJECTIVE: Develop a low-cost technical assistance program for local units of government to help deal with Natural Hazards	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Develop a low-cost technical assistance program																				
Study existing shoreland policies																				
Based on study, develop the low-cost technical assistance program																				
Goal: Implement a low-cost technical assistance program																				
Implement a low-cost technical assistance program for local units of government																				

SPECIAL AREA MANAGEMENT PLANNING

LEGISLATIVE OBJECTIVE

Preparing and implementing special area management plans (SAMP) for important coastal areas (Coastal Zone Management Act, Section 309)

CHARACTERIZATION OF THE ISSUE

The special area management plan (SAMP) is a comprehensive planning mechanism that integrates natural resource protection with sustainable land use practices. The plan contains; detailed and comprehensive statements of policy, standards and criteria to guide public and private uses of lands and waters, and implementation mechanisms for specific areas in the coastal zone.

Special area management planning follows a process of public consensus building through issue identification and dispute resolution techniques such as mediation, negotiation and systematic planning. Special area management planning can be used as the basic framework in which to resolve future land use conflicts, as is done in Oregon.

Special area management plans can address development, and specific environmental concerns, such as wetlands, or general environmental concerns, such as those of an expanding metropolitan area. Examples include, Chiwaukee Prairie, a rare and isolated natural area which is a specific concern, or the City Superior, where overall environmental protection is a general concern.

CHARACTERIZATION OF EXISTING PROGRAMS

Wisconsin currently has no formal special area management planning program, though SAMP's have been conducted in Wisconsin. The Chiwaukee Prairie-Carol Beach SAMP, located in Kenosha County in southeastern Wisconsin, is presently being implemented. A SAMP for the City of Superior, in northwestern Wisconsin, is presently going through the final stages of development.

Planned Development Districts in cities and villages (61.35 and 62.23(7)(b), Statutes). State statutes allow for the use of special zoning districts, called planned development districts. Cities and villages may, with the consent of the owners, establish planned development districts. The regulations in these districts are designed to, over a period of time, promote the maximum benefit from coordinated area site planning, diversified location of structures and mixed compatible uses.

PROGRAMMATIC OBJECTIVES

I. DEVELOP AND IMPLEMENT SPECIAL AREA MANAGEMENT PLANS FOR AREAS OF THE COAST WITH HIGH NATURAL RESOURCE AND LAND DEVELOPMENT PRESSURES.

Wisconsin currently has no specific guidance for special area management planning. The WCMP should develop a process by which SAMPs can be designed and implemented, and criteria established to identify eligible geographic areas.

Need: The state needs to develop guidelines for the development and implementation of special area management plans. The regional planning commissions, state and federal agencies, and local units of government could provide assistance for the development of the SAMP guidelines.

STRATEGY FOR WISCONSIN'S COASTAL SPECIAL AREA MANAGEMENT PLANNING PROGRAM

I. SUMMARY OF THE ISSUE

The needs assessment identifies existing SAMPs, and concerns for which SAMPs can be utilized. In particular, SAMPs can be used to address specific concerns such as wetlands, nonpoint source pollution and natural hazards. In general, SAMPs can address broad environmental concerns which may include certain specific concerns.

SAMPs have already been conducted in Wisconsin. The needs assessment identified the fact that Wisconsin has no formal SAMP mechanism, and no guidelines for developing and implementing SAMPs. Prior to initiating another SAMP, guidance and criteria need to be established.

II. THE CORE PROGRAM PROPOSED OBJECTIVES

Wisconsin currently has no core special area management planning program. The WCMP may provide support for SAMPs to enhance the other core program areas. Prior to any SAMP support, the WCMP will need to established guidelines and criteria for SAMPs.

SECTION 309 FUNDING

III. ENHANCEMENTS TO THE CORE PROGRAM

1) Develop guidelines, and initiate a Special Area Management Plan

GOAL: DEVELOP GUIDELINES AND INITIATE A SPECIAL AREA MANAGEMENT PLAN APPLYING THE NEWLY DEVELOPED GUIDANCE

Problem Summary: Wisconsin currently has no formal special area management planning program, though SAMP's have been conducted in Wisconsin. Guidelines do not exist for the SAMP planning process. Furthermore, there are areas of the state that could benefit from the SAMP process, including the Ashland area, Door County, Green Bay - West Shore, and Kewaunee Harbor. Prior to initiating another SAMP in Wisconsin, an analysis of the SAMPs already conducted in the state must be undertaken.

Program Change: The program change will result in guidelines necessary for a clear description of the SAMP planning process in Wisconsin. The guidelines will include criteria and procedures for SAMPs that will improve the state's ability to achieve the enhancement objectives of the WCMP in cumulative and secondary impacts, and wetlands.

Impact of change: Guidelines for the SAMP process will ensure that future SAMPs are conducted in a more predictable manner. The program change will allow a process of public consensus building through issue identification and dispute resolution techniques. Also, with guidelines in place, a SAMP will derive the maximum benefit from coordinated area site planning, diversified location of structures, and mixed compatible uses. Prior to initiating another SAMP in Wisconsin, an analysis of the SAMPs already conducted in the state should be undertaken. From this analysis, a set of guidelines can be developed, for use in future SAMPs.

Tasks:
FFY 94: The Wisconsin Coastal Management Council, in cooperation with the regional planning commissions and applicable federal and state agencies, would select the location of the Special Area Management Plan.

FFY 95: A consultant will be hired to form a workgroup of federal and state agency staff, regional planning commission staff, local units of government, and other interest groups. With input from the workgroup, the consultant will formulate the specific provisions of the program through the following efforts:

* Study the existing SAMPs, and develop guidelines for future SAMPs

* Develop an inventory of the natural resources, land use, and infrastructure of the SAMP location.

FFY 96: The consultant, in cooperation with the workgroup, would complete the inventory of the natural resources, land use, and infrastructure of the area. Development of Special Area Management Plan would start.

Budgets:

FFY 94:	No Funding
FFY 95:	$25,000 for consultant cost
FFY 96:	$40,000 for consultant cost

Note: The WCMP will issue a request for proposals to develop the specific budget for these tasks. The request will go out to local units of government, state agencies, colleges, universities, regional planning commissions, and private organizations. An independent committee will assist the WCMP in evaluating project proposals. Detailed budgets will be submitted to OCRM after the consultant is selected.

Likelihood of Success:
The two SAMPs that have occurred in the state will provide a an excellent basis for developing guidelines for the SAMP process. Also, several areas along the state's coast are prime targets for special area management plans, due to the high natural resource base and development pressure. Finally, the Wisconsin Coastal Management Council views special area management planning as a

tool to address specific issues such as wetlands, and cumulative and secondary impacts. Guidelines would help make SAMP funding decisions more systematic, thus increasing the funding of SAMPs in the future.

SOURCES

Villages, Chapter 61. Wisconsin Statutes.
Cities, Chapter 62. Wisconsin Statutes.

Oregon Coastal Management Program. An Assessment of Oregon's Coastal and Ocean Resource Issues and Management Capability: A Basis for Needed Program Changes and Federal Coastal Management 309 Priority Funding Assistance. Salem, OR: OCMP, January, 1992.

Strategy for Special Area Management Plans (SAMPs)

309 Goals	FFY 93	FFY 94	FFY 95	FFY 96	FFY 97	FFY 98	Project Totals
Develop guidance and implement one SAMP		0	25,000	40,000			65,000
							0
309 Subtotal	0	0	25,000	40,000	0	0	65,000

Funding to Locals	%	Funding to the State	%
65,000		0	
		0	
65,000	100%	0	0%

All 306 project funding is determined by the Coastal Council, using Strategy Goals.

TIME LINE FOR GOAL ACHIEVEMENT

ENHANCEMENT AREA : Special Area Management Planning
SECTION 309 FUNDING

OBJECTIVE: Develop guidelines, and design and implement a special area management plan (SAMP)	FFY 94 (By Quarter)				FFY 95 (By Quarter)				FFY 96 (By Quarter)				FFY 97 (By Quarter)				FFY 98 (By Quarter)			
MULTI-YEAR STRATEGY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Goal: Develop guidelines and initiate development of the SAMP																				
Select the location of the SAMP																				
Workgroup formed by consultant																				
Study the existing SAMPs																				
Develop guidelines for use with SAMPs																				
Start to develop an inventory of the natural resources, land use, and infrastructure of the SAMP location																				
Complete the inventory																				
Initiate development of the SAMP																				

ENERGY AND GOVERNMENT FACILITY SITING

LEGISLATIVE OBJECTIVES

Adoption of procedures and enforceable policies to help facilitate the siting of energy facilities and Government facilities and energy-related activities and government activities which may be of greater than local significance [Coastal Zone Management Act, Section 309]..

CHARACTERIZATION OF THE ISSUE

Government and especially energy facilities are commonly located along coastlines to take advantage of transportation access and abundant supplies of fresh water. Examples of energy facilities are coal docks, coal transshipment facilities, as well as nuclear, coal and other power plants; government facilities include military installations, nuclear waste repositories, and other buildings and structures.

Currently there is only one proposed energy plant in the process of being sited; possible sites will be narrowed down to 3 or 4 around the end of 1991. However, Advanced Plans recently submitted by Wisconsin utility companies forecast 44 new plants by the year 2010. Thirty-seven of these are smaller size plants to meet energy demand during periods of peak energy use. Eight of the facilities, including all of the large plants, are proposed to be fueled by coal. While the location of these plants has yet to be determined, the attractiveness of coastal sites may make plant siting an issue in the future.

There are no known major government facilities currently being proposed in Wisconsin.

Energy and government facilities have a variety of impacts depending on the size and type of project. They can impact: water quality, air quality, coastal habitats, coastal accessibility, as well as the employment and economic development of a region.

Some of the general impacts during construction of large-scale projects are: changes in land use patterns, deterioration of air and water quality, loss of vegetation, loss of fish and wildlife as well as their habitats, community disruption, employment opportunities, and other secondary economic benefits. Energy facilities also have visual impacts, may affect regional transportation (coal and other deliveries), and can have additional impacts from the development of transportation access and power transmission lines. The effects of government facilities vary from potential regional consequences of nuclear

waste repositories to localized impacts of buildings and facilities.

CHARACTERIZATION OF EXISTING PROGRAMS

There are three levels of regulations and laws governing power plant siting in Wisconsin. This section will briefly describe the federal level, discuss Wisconsin state mechanisms in detail, and outline the types of authorities granted to local governments in Wisconsin.

I. REGULATORY AUTHORITY

A. Federal Authority

The following table briefly outlines the types of projects regulated at the federal level and the agencies and/or laws that apply. Some of the federal agencies delegate administration of their laws and programs to states; consequently some of the federal programs are administered by Wisconsin state agencies.

Projects	Agencies/Laws
Major projects affecting human environment	National Environmental Policy Act Environmental Impact Statement administered by various agencies, depending on project
Projects discharging waste into air or water	U.S. Env. Protection Agency Clean Water and Air Acts
Land disposal of waste	U.S. Env. Protection Agency Resource Conservation and Recovery Act (RCRA)
Nuclear Facilities and associated facilities	Nuclear Regulatory Commission license construction and operation
Facilities with structures in navigable waters	U.S. Army Corps of Engineers Clean Water Act Section 404

B. State Authority

Major facility siting. Regulated by the state equivalent to the National Environmental Policy Act and the Federal Clean Air and Clean Water Acts. These laws provide the same mechanisms as the federal laws, except that they are carried out by state rather than federal agencies. The Wisconsin Environmental Policy Act requires an assessment of the environmental impacts of major projects affecting the environment (Environmental Impact Statements or EIS). The State also regulates air emissions, waste

discharge into waterways, and disposal of solid waste through the Wisconsin's master environmental quality statute, Chapter 144 of the Wisconsin Statutes. Chapter 30 of the Wisconsin Statutes contains authority similar to Section 404 of the Clean Water Act. In addition to these regulatory mechanisms, the Wisconsin Department of Industry, Labor and Human Relations (DILHR) also regulates petroleum storage tanks over 8,000 gallons, and periodically inspects them as a precaution against fire.

Energy-related Facilities. Before a utility can build a power plant in Wisconsin, approvals are required from state agencies. These approvals generally fall under the Power Plant Siting Act (Section 196.491, Wis. Stats.) and the Wisconsin Environmental Policy Act (Section 1.11, Wis. Stats). The two major agencies involved are the Public Service Commission (PSC) and the Department of Natural Resources (DNR).

Utilities must obtain state approval for new power plants through a two stage process. The first stage is a process called the Advanced Plan; the second stage is the granting of specific permits to build a particular plant at a specified location.

During the planning stage, the PSC evaluates the state's future electric needs. Specific issues include: forecasts of future electric demand, alternate ways to meet demand, plant types, plant size, timing of new plants, siting criteria, and lists of alternative sites.

After planning approval, a utility must obtain construction approval for a specific proposal. The PSC must issue a Certificate of Public Convenience and Necessity (CPCN) and DNR must issue a number of related permits. As part of this construction review, the PSC and the DNR prepare a joint Environmental Impact Statement (EIS). The EIS looks at plant design, impacts of the proposal and alternatives. All of the factors in the Advance Plan (energy forecasts, available technologies, alternative ways to meet the load) are checked to see if any major changes have occurred since the planning level review. In addition to the EIS, many other types of analyses are done by both agencies.

The EIS and the results of the other agency evaluations are presented at public hearings on the proposed power plant. Public participation is encouraged at those hearings. Following the hearings, the PSC (Public Service Commission) and the DNR (Department of Natural Resources) will decide on the various permits for the project. The PSC may approve the project as proposed, may reject it or may approve it contingent on many major changes. The DNR will decide on the issuance of permits for the project's air pollutant emissions, ash and other solid waste disposal, water discharges, high capacity wells and any structures or fills in navigable waters.

C. Local Authority

Local government authorities extending to power plant and government facility siting include zoning regulations and other ordinances. Municipalities (counties, cities and villages) have the power to plan for the physical development and zoning within their jurisdictions. Local planning and zoning may be useful guides for agencies and power companies, but local ordinances may be preempted for the siting of power plants. However, because there are no comprehensive siting laws for coal docks or petroleum storage areas, local zoning ordinances can be an important regulatory tool. Local government ordinances may require: permits to erect structures on shorelines, permits needed to fill or dredge shoreline, and occupancy permits necessary for the occupation of a structure.

STRATEGY FOR WISCONSIN'S COASTAL ENERGY AND GOVERNMENT FACILITY SITING PROGRAM

The existing siting procedures in Wisconsin were part of the original policies approved by the U.S. Department of Commerce/NOAA/ Office of Ocean and Coastal Resource Management. It is the belief of the Wisconsin Coastal Management Program that the existing state policies and procedures are adequate to facilitate the siting of government and energy-related facilities which may be of greater than local significance.

SOURCES

Bay Lake RPC Energy Facility Impact Report

Wisconsin Statutes Chapters 196, 144, 66 (Municipal Law)

Administrative Chapters: NR 150, NR 170, PSC 2, PSC 111, PSC 112

Discussions with PSC and DNR staff

Wisconsin Statewide Joint Plan, 1991, Advance Plan 6, plans filed with the Public Service Commission of Wisconsin.

Bay lake Regional Planning Commission, 1981, Energy Facility Impacts.

MARINE DEBRIS

LEGISLATIVE OBJECTIVES

Reducing marine debris entering the Nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris [Coastal Zone Management Act, Section 309].

CHARACTERIZATION OF THE ISSUE

Marine debris includes an array of trash and debris from both land and lake vessels. Types of debris include trash, plastic waste, tires, barrels, fishing line, and wood materials. Land sources include solid waste disposal sites, storm sewer outfalls, litter and illegal dumping. Lake vessel sources include fishing, shipping, passenger, and recreational.

Discussions with officials at state parks on both Lake Superior and Lake Michigan indicate that marine debris is not a significant problem. An assistant supervisor at Kohler-Andrea State Beach near Milwaukee said that their most persistent problems were with tires and metal drums. Tires appear regularly, but not in large numbers; most are believed to broken loose from boats and docks. Occasionally, metal 55-gallon drums wash up, requiring costly testing and disposal.

Staff at Bradford and Grant County Beaches in the Milwaukee area also indicated that marine debris was not a significant problem. A staff person at Grant beach said that waste that does wash onto the beach, such as cans, coolers, lures and fishing line, appears to come from boats.

CHARACTERIZATION OF EXISTING PROGRAMS

The U.S. Coast Guard is the primary federal agency involved with the prevention of marine debris. It responds to oil and gas spills, chemical releases, and retrieves floating barrels. If there are chemicals in barrels that are retrieved, it will attempt to determine the source. The Coast Guard also administers and enforces Annex V of the International Convention for the Prevention of Pollution from Ships.

The Bureau of Solid and Hazardous Waste in the Wisconsin Department of Natural Resources handles issues related to waste, including those that occur along the coastline. This includes landfill waste, illegal dumping, and medical and infectious waste. The DNR also administers and monitors discharge of wastewater and storm water.

STRATEGY FOR WISCONSIN'S COASTAL MARINE DEBRIS PROGRAM

It is the conclusion of the Wisconsin Coastal Management Program that marine debris is not a major problem along the Great Lake Coasts. The existing policies and programs for reducing marine debris are adequate.

DATE DUE

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