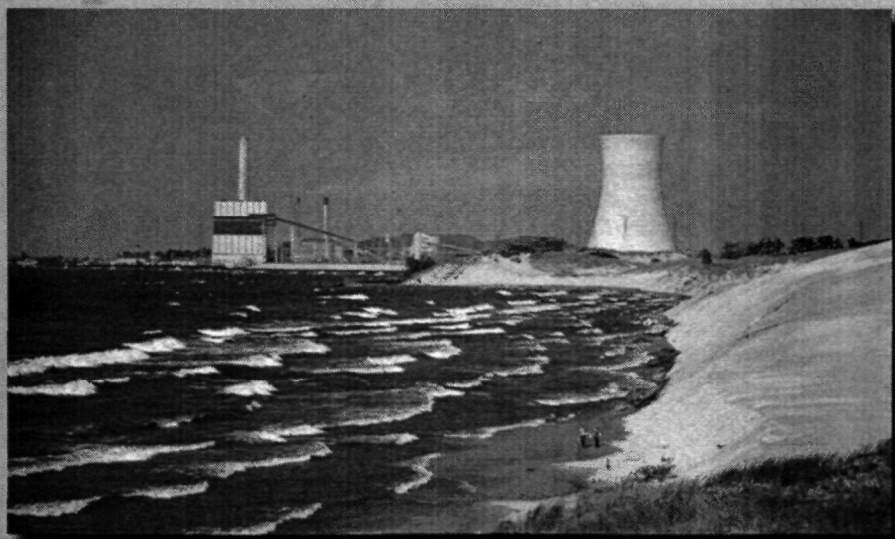




Northwest Indiana Environmental Initiative Action Plan





A Message from Valdas Adamkus and Michael O'Connor

Since 1992, the Indiana Department of Environmental Management (IDEM) and the United States Environmental Protection Agency (U.S. EPA) have been joined together in a geographic initiative to address the complex environmental challenges confronting Northwest Indiana. During this time, we have strengthened and built upon our partnership. We reassessed our strategies, conferred with the public, and have now updated our original 1992 Northwest Indiana Initiative Action Plan (Action Plan).

This document is the result of much hard work between IDEM and U.S. EPA Region 5. It reflects the strategies that we, in concert with the public, agree to use in the coming years to effect real environmental improvements, and to decrease environmental risks that threaten the health and vitality of the community. The Action Plan establishes land and groundwater remediation, sediments, pollution prevention, air quality, the Remedial Action Plan, and compliance and enforcement, as areas of priority focus for our joint actions.

This plan does not address all activities currently engaged in by both agencies, but rather those that U.S. EPA and IDEM agree are conducive to collaboration or in need of strong coordination to bring about long term restoration and environmental protection, stronger communications, and more effective use of resources. It also does not focus on the extensive environmental work being done by others outside the Agencies. We recognize the valuable contributions made by local governments, citizens, and industry, and believe that the partnerships already formed between these groups and our agencies will continue to gain strength and multiply.


As a result of public meetings held during the development of the Action Plan, we expanded the initiative area to include portions of northern Porter and LaPorte Counties, in addition to northern Lake County. We included non-traditional issues such as sustainable development, which is the concept of doing economic development in an environmentally sound way. Finally, this plan continues to emphasize public involvement in developing a locally suitable and effective environmental approach for the region.

Both IDEM and U.S. EPA have recognized the importance of focusing dedicated staff on environmental issues in Northwest Indiana. In addition to work done by the

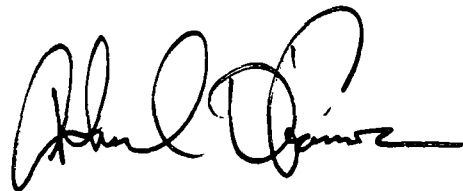
Northwest Indiana Regional Office, several teams of IDEM staff focus on air, water, non-point source reduction, natural resources, solid waste, sediments, and data management issues in Northwest Indiana. In addition, U.S. EPA has recognized this initiative by establishing a team, with a full time manager and members from each of the Region's environmental programs. This team is charged with finding and implementing environmental solutions for Northwest Indiana by involving the local community as an integral element of those solutions.

Public involvement will be vital to the success of Action Plan implementation and achieving environmental results in Northwest Indiana. Already, the work of environmental groups, industry, and communities in the area, has made a significant impact on environmental quality. Staff involved with these activities will identify, pursue, and welcome opportunities for meaningful public involvement that actively create a dialogue among all stakeholders. A recently conducted survey of community, industrial, and environmental leaders regarding implementation of this plan is an excellent starting point for enhancing public involvement. We want to make certain that listening to and addressing the concerns of the public are an integral part of our work.

Northwest Indiana offers tremendous challenges in environmental protection, stewardship, and restoration. This Action Plan offers a framework for furthering our progress in meeting these challenges.



Valdas V. Adamkus
Regional Administrator
Region 5



Michael O'Connor
Commissioner
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August, 1996

Northwest Indiana Environmental Initiative Action Plan

1. Background and Vision of the Northwest Indiana Environmental Initiative

Northwest Indiana has suffered the effects of severe pollution through a century of industrial activity. As a consequence, contamination threatens the health and vitality of communities and surrounding ecosystems. The air quality of Lake and Porter counties does not meet Federal standards. Five to ten million cubic yards of contaminated sediments cover the bottom of the Grand Calumet River and Indiana Harbor Ship Canal, of which 150,000 cubic yards enter Lake Michigan each year. Millions of gallons of petroleum float atop the ground water in certain portions of Northern Lake County. Hundreds of sites require clean up, including seven Superfund sites and numerous leaking underground storage tank sites. The extent of these and other environmental challenges require special governmental action. During the last several years, EPA and IDEM have worked together to prevent further degradation and have begun developing long term solutions to restore ecological balance in the region.

Starting with the 1992 Northwest Indiana Action Plan, EPA and IDEM joined in the Northwest Indiana Environmental "Initiative," designed to direct significant federal and state resources to the region. We have pursued certain short term strategies to relieve immediate threats to the environment and provide the ground work for longer term, more comprehensive solutions for the region. The heightened enforcement strategy of EPA and IDEM sends an important signal to the affected communities that future abuses will not be tolerated and past wrongs will be remediated.

With the current Northwest Indiana "Action Plan," we intend to continue our geographic focus on Northwest Indiana. It reflects our agencies' continued commitment to work cooperatively to address some of the most environmentally challenging problems in the nation. Both agencies seek to clean up major waterways and contaminated lands, reduce the use of toxic substances, restore and protect strained ecosystems, and foster practices among industry and citizens that are sustainable for the long term health of the environment and people of Northwest Indiana. To that end, we have established a collaborative management arrangement involving teams from both agencies to craft strategies and work with the community to achieve the objectives of this Action Plan. By sharing information and strategically focusing our joint resources, we can use the limited resources each have to maximize governmental efforts in the

area. Together, U.S. EPA and IDEM have already enhanced our communications and coordination in Northwest Indiana. Our evolving relationship allows us to continue collaborative strategies, maximize our resources, and bring about better environmental results for everyone in Northwest Indiana.

II. Major Environmental Goals and Key Principles of the Northwest Indiana Environmental Initiative:

EPA and IDEM seek environmental restoration of the region and elimination of serious environmental stresses now threatening Lake Michigan. Several strategies, many initiated through the 1992 Northwest Indiana Action Plan, will be pursued under the Action Plan, including: improving the area's air quality; cleaning up contaminated sediments in the Indiana Harbor Ship Canal and Grand Calumet River; remediating and restoring contaminated lands and ground water; using pollution prevention as a tool to develop an overall environmental strategy with local industry and citizens; attaining high compliance with state and federal environmental laws; and continuing to develop and implement the Remedial Action Plan (RAP) for the Grand Calumet River, Indiana Harbor Ship Canal and Nearshore Lake Michigan Area of Concern and the Lake Michigan Lakewide Management Plan (LaMP).

Several key principles will guide our efforts. Success will be measured through:

- achieving tangible environmental improvements;
- developing creative solutions and non-traditional ways of dealing with environmental problems that foster cooperation among affected groups;
- closely coordinating strategies and action with other federal and state agencies and local governments;
- encouraging involvement by affected groups such as industry, environmental groups, and citizens; and
- using integrated, multi-media approaches consistent with long term environmental goals.

The Initiative is based on a collaborative effort between EPA and IDEM. We have agreed to work together, sharing resources and information, and engaging in informed decision-making by involving all those who hold a stake in the process.

III. Scope of the Northwest Indiana Environmental Initiative

This Initiative focuses on the most industrialized and developed portions of Northwest Indiana. Its geographic boundary approximates a crescent along the shore of Lake Michigan. In Lake County, the Action Plan addresses the area north of Route 30; in Porter County, the area north of Route 30 west of Valparaiso and north of Route 2 to the east of Valparaiso; and in LaPorte County, the area north of Route 2.

This "Initiative" complements other major environmental planning efforts underway in Northwest Indiana, though their geographic boundaries differ. The RAP, which is lead by IDEM, designates the northern portion of Lake County as its area of concern. Both the LaMP, which is lead by EPA, and the Coastal Zone Management Program (CZMP), which is lead by DNR, address the drainage basin of Lake Michigan, although the boundaries for the CZMP have not been finalized. A number of watershed management planning efforts focus on drainage areas for specific waterbodies, including the Trail Creek Watershed in LaPorte County and the watersheds for George and Wolf Lakes in Hammond. IDEM's Northwest Regional Office augments these planning processes, and supports traditional regulator activities by providing services to the counties of Lake, Porter, and LaPorte.

The objectives of this Action Plan represent strategies that EPA and IDEM have identified as critical to the long term restoration and protection of the region. **NOTE: SPECIFIC ACTIVITIES UNDER EACH OBJECTIVE DO NOT REPRESENT ALL THE ACTIVITIES ENGAGED IN BY THE TWO AGENCIES, NOR DO THE OBJECTIVES THEMSELVES INDICATE ALL MATTERS OF CONCERN. RATHER, THEY REPRESENT THOSE ACTIVITIES THAT BOTH AGENCIES HAVE AGREED ARE CONDUCTIVE TO JOINT COLLABORATION OR IN NEED OF STRONG COORDINATION TO SUPPORT LONG TERM RESTORATION AND PROTECTION EFFORTS.** Activities not jointly undertaken by EPA and IDEM will still be coordinated through the Initiative and be consistent with major Initiative strategies. The result of such cooperation will bring about stronger communications, more effective use of resources, and a better environment.

IV. Relationship of the Northwest Indiana Action Plan with Other Planning Processes

The effectiveness of this Action Plan depends greatly on maintaining close coordination and frequent communications with other major planning processes underway in the region. The activities under the Action Plan will further mutual goals shared by these longer term planning processes, and augment ongoing regional regulatory activities required by state and federal laws. Efforts will be made to strengthen communications

and coordination among federal, state, and local units of government and agencies, as well as with private groups working within Northwest Indiana. Such coordination will ensure that the Initiative promotes broadly shared environmental priorities and the cooperative use of government and private resources to address regional problems.

V. Public Involvement in the Northwest Indiana Environmental Initiative

EPA and IDEM are committed to providing citizens of Northwest Indiana with opportunities for input into the decision making process. We recognize that public involvement is important to our success. Consequently, our process to revise the 1992 Northwest Indiana Action Plan began with several "roundtable" meetings held among agency representatives and community leaders in Northwest Indiana. The comments of more than 60 individuals, representing industry, environmentalist, labor, and local government, helped guide the preparation of this Action Plan. In addition, the final draft of this Action Plan was widely circulated for public review and comment before final adoption. Our Action Plan seeks to create wide spread understanding of environmental challenges in Northwest Indiana and foster development of opportunities for the public and industry to cooperatively address environmental problems. To achieve this goal, IDEM and EPA will: (1) enhance public access to information concerning environmental problems (including consent decrees, technical documents and reports); (2) provide the public with opportunities for input and interaction; (3) identify and communicate both challenges and milestones; and (4) maintain flexibility to allow for implementation of new and different communication strategies to meet the public's changing priorities and needs.

VI. Environmental Justice

Protecting the public health and the environment for everyone in Northwest Indiana is central to our mission. Yet because of the level of past environmental degradation, the historic concentration of industry in the region, the environmental issues presented by industry located there, and the presence of ethnic and socio-economic minorities within certain communities, the environmental challenges of Northwest Indiana raise unique concerns. Although our geographic initiative has allowed us to focus resources and efforts on Northwest Indiana, with this current Action Plan we have made emerging environmental justice issues an important consideration for our agencies.

As society at large struggles with environmental justice concerns, EPA and IDEM are focusing on this issue. We are committed to working with the public to develop a mutual understanding of environmental justice and a direction for our work. By involving minority communities in our outreach efforts and exploring ways that we can

be responsive to their concerns, we will further our efforts to protect everyone in Northwest Indiana, regardless of ethnic background or financial resources. As we identify and define environmental justice issues, we will undertake appropriate responses to them.

VII. Sustainable Development

In the December 1993 roundtable meetings, several commenters suggested that "Sustainable Development" should be included in the Action Plan. EPA and IDEM agree that the concept and practice of sustainable development should be one of the guiding principles of how we accomplish our goals in Northwest Indiana. Indeed, President Clinton, announcing his Executive Order creating the President's Council on Sustainable Development, stated the following: "to grow the economy and preserve the environment for our children and our children's children, bringing together some of the most innovative people from business, from government, from the environmental movement, the civil rights movement, and the labor movement...I am asking [the Council] to find new ways to combine economic growth and environmental protection; to promote our best interests in the world community; to bring our people together to meet the needs of the present without jeopardizing the future."

But sustainable development as a global vision for the Northwest Indiana area is not so clearly defined. EPA and IDEM recognize that the agencies need to begin working with the communities of the area to come to some common understandings of what sustainable development is, what the desired outcomes of work should be, who the interested parties are, and what roles parties can and should play. The agencies will work together with the public to open up avenues for dialogue on these issues. For example, currently there is a significant movement toward redeveloping abandoned and unused urban sites. EPA and IDEM both recognize the importance of this "Brownfields" concept. EPA sees its role as one of removing impediments to redeveloping these Brownfield sites, providing the market with clear signals of EPA's interests, sharing information, and testing ideas. IDEM has an active role in cleaning up these sites through various state programs including the state's Voluntary Clean Up program. In addition, both agencies are engaged in transportation planning activities aimed at promoting growth patterns consistent with our environmental goals. These activities will be continued, and other activities will be explored, as we cooperate with communities in Northwest Indiana in the development of a shared vision of sustainable development for their region.

VIII. Implementation and Future Review of the NWIAP

The Action Plan, with its six major strategies - Air Quality, Compliance and

Enforcement, Land and Ground Water Remediation, Pollution Prevention, Remedial Action and Lakewide Management Plans, and Sediments - will be implemented jointly by EPA and IDEM. This Action Plan is not inflexible. It will be assessed continuously for progress by the agencies, and periodically reviewed by the public for major shifts in strategies and changing environmental priorities. Joint agency committees have been charged with implementation for strategies not already coordinated and implemented through base program work. Our agencies will work cooperatively with the public to ensure that the goals of this Initiative are achieved. Indicators of progress based on tangible environmental improvements will be developed and reported to the public. Our six strategies follow, with a brief explanation of our goals and objectives and the major activities that will guide our efforts over the next several years.

AIR QUALITY

Goal:

The air quality in Northwest Indiana will not interfere with the citizens' enjoyment of their region or threaten their health.

Objective:

To improve the area's air quality by: ensuring compliance with the new Clean Air Act Amendment requirements for the area; taking all steps needed to achieve and maintain health-based air quality standards; involving the public and improving their awareness of what we all can do to lessen air pollution; and initiating targeted efforts through enforcement, rule development, and public awareness.

Definitions:

Criteria Pollutants: Pollutants identified in Title I of the Clean Air Act that include carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur dioxide.

VOC: Volatile organic compounds, active in formation of ozone/smog.

PM-10: Fine particulate matter (measured as PM-10).

Title III: Portion of Clean Air Act Amendments of 1990 that outlines hazardous air pollutant control program.

Title V: Portion of Clean Air Act Amendments of 1990 that outlines new state operating permit program.

Background:

Lake County has the poorest overall air quality of any area within Indiana. Over the years, portions of this county have not met state and federal health standards for most of the criteria air pollutants. The smog problem persists in Porter County and possibly LaPorte County. Northwest Indiana, and Lake County in particular, also have high air emissions of hazardous air pollutants.

EPA and IDEM have spent considerable time and effort developing new rules and programs and enforcing existing laws to improve air quality in this region. These efforts have resulted in substantial improvement in air quality, especially for particulate matter, sulfur dioxide and carbon monoxide. However, problems still persist for ozone and other hazardous air pollutants.

New control plans for particulate matter and sulfur dioxide have been established and are being implemented. The State of Indiana is working with Illinois, Wisconsin, and Michigan on a new smog/ozone control program aimed at eliminating the health threat from ozone before 2007. IDEM is also launching the Title III (Air Toxics) program that will lead to substantial reduction in emissions of hazardous air pollutants to reduce risk to public health. EPA is participating in developing these new programs and in guaranteeing their success.

Major Activities:

1. IDEM and EPA will develop a targeted compliance and enforcement strategy aimed at addressing the area's major air quality problems (ozone, PM-10 and toxic substance exposure). IDEM will work to reduce major nuisance problems related to odor, dust, and other air quality problems.
2. IDEM will prepare a state wide air toxic substances control program with an emphasis on activities in Northwest Indiana that will both evaluate the extent of excessive risk and address major problems with rules, compliance and outreach efforts. EPA will actively support IDEM through technical assistance and other means. The state air toxic substances program will incorporate all mandatory elements of the hazardous pollutant provisions of the Clean Air Act Amendments.
3. IDEM will work with the Clean Air Act Advisory Council - Northwest Indiana Committee to focus on their concerns relative to air quality in Northwest

Indiana.

4. IDEM and EPA will continue to coordinate and cooperate in the Lake Michigan Ozone Project, and develop control measures to reduce ozone and smog.
5. IDEM and EPA will continue to coordinate closely on all significant regulations and programs required as part of the Clean Air Act Ozone State Implementation Plan to assure that the state rules and programs meet the federal requirements and to assure that EPA's review process supports the state's actions.
6. IDEM will collect and evaluate air quality monitoring data in the area to track improvements, and will increase sampling for hazardous air pollutants as part of the air toxic substances program.
7. IDEM and EPA will promote pollution prevention approaches during compliance and enforcement activities, public outreach efforts and, whenever practical, rulemaking.
8. IDEM will work to secure approval from EPA on the state's Fine Particulate Matter Implementation Plan and then closely coordinate state and federal compliance activities in the area.
9. IDEM will pilot an odor control program for the area, working with EPA wherever there is federal authority for effective air pollution reduction.
10. IDEM will implement an effective enhanced vehicle emission testing program with assistance from EPA that will provide better service to the motorists and more emission reductions.
11. IDEM will incorporate air quality consideration into transportation planning decisions and identifying effective mobile source control measures.
12. IDEM will prioritize implementation of the Clean Air Act's new Title V operating permits for major sources in Lake and Porter counties. IDEM's Small Business and Technical Assistance Program will work to assure compliance with Clean Air Act requirements for small businesses in the area.

Opportunities for Public Involvement:

IDEM and EPA will meet regularly to discuss progress and coordination on joint efforts in Northwest Indiana. The IDEM/EPA Northwest Indiana Air Committee is responsible for communicating on all matters involving or affecting the other agency to

assure proper coordination and effective actions.

The public, industry and local government can participate in meeting these objectives through IDEM's Clean Air Act Advisory Committee, public meetings and hearings, and other public processes associated with regulatory activity.

COMPLIANCE AND ENFORCEMENT

Goal:

Reduce the quantities of conventional and toxic pollutants existing within and entering the environment in Northwest Indiana.

Objective:

Use enforcement actions and other statutory authorities to achieve a high level of compliance with all federal and state environmental laws and to remediate contaminated sites.

Definitions:

Supplemental Environmental Project (SEP): A project carried out by a polluter which has direct environmental benefits and is not otherwise required by law. Such projects can be used to offset a portion of the cash penalty.

RCRA: Resource Conservation and Recovery Act of 1976; the law established rules to monitor hazardous substances from the time of production to disposal. It requires that safe procedures be used in treating, handling, using and disposing of hazardous substances.

Background:

Many of EPA's and IDEM's joint efforts under the Action Plan focus on remediation and restoration of Northwest Indiana because of the environmental degradation that has occurred over many decades. But the long term benefits to the environment and to the citizens in Northwest Indiana, as well as the success of the Initiative, depend on whether ongoing regulated activities comply with federal and state environmental laws and regulations, now and in the future. Therefore, it is critical that IDEM and EPA continue our joint efforts in determining the compliance status of the industries and other regulated facilities operating in Northwest Indiana, and when appropriate,

vigorously enforce against those not in compliance.

Northwest Indiana presents difficult challenges with regard to compliance and enforcement for several reasons. First, many industries located in Northwest Indiana were established decades prior to modern environmental laws and regulations. Their processes and equipment were not designed to control or limit pollution into the environment. Some of these facilities have had difficulty adapting their processes and equipment to meet current environmental standards. As a result, many have experienced chronic compliance problems. In addition, and unfortunately, there have been some who have chosen to locate in Northwest Indiana who have not taken their environmental responsibilities and obligations seriously. Regulating such facilities requires vigilance and aggressiveness. Finally, because of the past significant degradation of all the environmental media - air, water and land - compliance and enforcement strategies must take into account that pollution can be shifted from one medium to another. As a result, IDEM and EPA will continue to focus on environmental improvement through a multi-media approach to compliance and enforcement, and by actively seeking through enforcement actions remediation of past contamination.

Major Activities:

1. Coordinate state and federal enforcement actions through the Compliance and Enforcement Committee (CEC) to ensure efficient use of state and federal resources.
2. Prioritize and target inspections and enforcement to ensure compliance.
3. Research the legal/judicial facets of sediment remediation, the remediation of contaminated ground water and the development of natural resource damage claims to enable state and federal enforcement personnel to bring cases which, if successful, will compel the remediation of past damages to the environment. Evaluate cases to determine the applicability of additional statutory authorities.
4. Consistent with Number 1, both agencies will pursue civil litigation and seek voluntary actions to remediate contaminated sites, including contaminated sediments in the Grand Calumet River/Indiana Harbor Ship Canal, and compel responsible parties to undertake clean up at contaminated sites to remove hazardous, toxic and solid wastes and to clean up leaking underground storage tanks.
5. EPA will follow its Supplemental Environmental Project Policy to facilitate inclusion of environmental and pollution prevention projects in its enforcement

settlements. IDEM will complete its Supplemental Environmental Project Policy in order to do the same.

6. Work with local governments to identify their authorities and use them more effectively to address violators, including open dumpers, air pollution sources, and industrial dischargers to municipal sewage treatment plants.
7. At permitted and closing RCRA sites, prioritize and complete closure and/or corrective action.
8. Implement a compliance and enforcement strategy which increases inspection surveillance of and enforcement against sources of Volatile Organic Compounds (VOCs), Particulate Matter (PM-10), and toxic sources.
9. Continue to implement the Great Lakes Enforcement Strategy dated 9-15-93 for reducing toxic discharges to Grand Calumet River/Indiana Harbor Ship Canal.

Opportunities for Public Involvement:

The citizens of Northwest Indiana have the opportunity and responsibility to be aware of problems and call them to the attention of their city and/or county officials, or contact IDEM or EPA about them. Additionally, citizen suit provisions exist in many state and federal laws, as another means to bring about compliance with the law.

LAND AND GROUND WATER REMEDIATION

Goal:

Protect Northwest Indiana from the release of hazardous substances, petroleum or petroleum-related substances and clean up of contaminated lands and ground water.

Objective:

Prevent the release of hazardous substances, petroleum or petroleum-related substances to the land or ground water; if releases occur, ensure the immediate containment and clean up; and use all applicable Federal and State authorities and programs to address

the containment, removal and/or treatment of hazardous substances, petroleum or petroleum-related substances currently contaminating land or ground water of Northwest Indiana.

Definitions:

Northwest Indiana Brownfields Redevelopment Project: A local initiative of East Chicago, Gary, and Hammond and IDEM to identify properties unused because of potential environmental contamination, and to encourage their remediation and reuse.

Superfund: The Comprehensive Environmental Response, Compensation and Liability Act of 1980; the federal law which established a mechanism for identification and remediation of the worst hazardous substance contaminated sites in the U.S.

Voluntary Remediation Program: A cooperative initiative between the state and private parties in which contaminated sites are remediated with state oversight and, upon successful completion of the remediation, a Covenant Not To Sue is issued to the property.

Background:

Northwest Indiana has been the site of substantial industrial activity for over 100 years. Past industrial practices in Northwest Indiana often did not consider their future impact upon the environment and have resulted in significant contamination of the soils and ground water. This historical contamination has not only resulted in potential threats to human health and the environment but is now impacting the local economies through the real or perceived threat of environmental liability on properties within Northwest Indiana.

IDEM and EPA have many different programs within their authority over the prevention and correction of pollution of the land and ground water. Northwest Indiana, because of its size and density, presents a major challenge to all involved. Through this Action Plan, EPA and IDEM will work to coordinate, and where possible, accelerate addressing land and ground water contamination.

Major Activities:

1. Continue to coordinate and aggressively pursue targeted actions to protect and remediate contaminated land and ground water through federal and state Superfund emergency and remedial programs, petroleum clean ups, corrective

actions, closures and non-traditional efforts.

2. Improve coordination with other units of government to enhance protection and achieve clean up where no one agency or department has complete authority, and foster partnerships with other major stakeholders.

Efforts will continue to work with state and federal agencies, such as the Indiana Department of Natural Resources, Indiana Department of Commerce, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, the National Biological survey, and local units of government. Through such efforts EPA and IDEM can effectively extend their programs and resources to address egregious problems over which neither agency has complete authority.

3. Identify and encourage the use of both innovative approaches and innovative technologies for land and ground water remediation.

The August 1994, execution of a voluntary Memorandum of Cooperation (MOC) by IDEM and EPA with local industries is an example of an innovative approach to a vexing problem. The MOC describes a way to prevent future releases of petroleum to the Indiana Harbor Ship Canal from the ground water beneath the properties of the signatories. Several companies have agreed to voluntarily take measures to prevent the migration of petroleum to the canal which may be currently occurring. EPA and IDEM will also continue to research and use, where appropriate, new technologies to enhance the effectiveness of clean up actions.

4. Continue efforts to map, locate, and define the extent and thickness of petroleum-related products on or within, the soils and ground water.

The continuing mapping efforts will provide the location of pockets of "floating oil" on the ground water; assist in prioritizing clean ups and assist in evaluating the impacts on the environment.

5. Continue to assist and coordinate with the Northwest Indiana Brownfields Redevelopment Project through the identification of potential sites and through the innovative use of Indiana's Voluntary Remediation Program. IDEM and EPA will also seek out further opportunities to work with local units of government and industry for further "Brownfield" redevelopment opportunities throughout the entire geographic initiative area.

The implementation of the "Brownfields" approach will not only provide enhanced clean up and the protection of green fields outside the metropolitan areas but has the potential to result in positive economic impacts.

6. Identify and resolve regulatory barriers to achieving remediation of contaminated sites.

The purpose of this activity is to clearly define the authorities and tools state and federal staff may use to prevent and/or address spills, releases or existing contamination in the most effective manner. IDEM and EPA will review and develop a "tool box" of mechanisms which may be employed to obtain compliance under state and federal hazardous substance and oil pollution legislation.

Opportunities for Public Involvement:

IDEM and EPA rely on the public to help identify suspected locations of contamination in the soil and/or ground water. We will keep the public current on activities associated with clean ups and continue to encourage their participation in formal comment periods used to gather input on site specific projects. Throughout the implementation of this element of the Action Plan, EPA and IDEM will continue to look for and provide opportunities for further cooperation with the public, government agencies and industry.

POLLUTION PREVENTION

Goal:

Integrate pollution prevention and environmental stewardship into industry practices and public behavior in Northwest Indiana.

Objective:

IDEM and EPA will engage in a consistent effort promoting pollution prevention and environmental stewardship in Northwest Indiana. In general, IDEM will take the lead on pollution prevention in the region. Through this consistent effort by the agencies, industry and the public in Northwest Indiana can adopt pollution prevention and environmental stewardship practices. Success will be measured by integration of pollution prevention measures into other Action Plan activities. When this objective is met, the pollution prevention and environmental stewardship committee should no longer be necessary.

Definitions:

Environmental Waste: All environmental pollutants, wastes, discharges or emissions, regardless of whether or how they are regulated, and regardless of whether they are released to the general environment or the workplace environment.

CFR: Code of Federal Regulations.

Toxic Materials: For purposes of this Action Plan, toxic materials are substances on the CERCLA Hazardous Substance list (40 CFR Part 302), and they also include toxic chemicals as defined by 40 CFR Part 372.

Background:

Pollution prevention and, in the broader sense, environmental stewardship, are the primary mechanisms for positive change for IDEM and EPA activities in Northwest Indiana. Each agency has committed resources to the issues and will continue to emphasize pollution prevention as a priority. These efforts will be aggressively incorporated into the agencies' activities whenever possible.

Indiana's program seeks a dramatic shift in perspective to pollution prevention, rather than incremental shifts towards this best approach. These incremental shifts from disposal to treatment to recycling, and then finally prevention, delay the time when the economic and environmental benefits of prevention can be realized. To promote this shift, Indiana has a strong definition of pollution prevention that is unique in the United States.

EPA and IDEM believe it is important to recognize that while there are differences between state and federal pollution prevention legislation, EPA and IDEM are committed to working as partners in Northwest Indiana to achieve reductions in the generation of pollution and/or its release to the environment.

Pollution prevention means the use of practices that reduce or eliminate the industrial use of toxic materials or the hazards associated with an environmental waste without diluting or concentrating the waste before the release, handling, storage, transport, treatment, or disposal of the waste.

Pollution prevention consists of activities that directly impact the production of a product or the providing of a service. It includes product reformulation, production process redesign, housekeeping, environmental and process training, inventory control, preventive maintenance, energy conservation by the energy producer, and on-site closed-loop recycling. It does not include waste burning, waste exchanges, most recycling, or environmental remediation activities.

Environmental stewardship includes pollution prevention, but is a broader concept. It

means activities that protect the environment either directly or indirectly. Some examples of activities that are not pollution prevention but are environmental stewardship include: energy conservation (unless activity is by energy producer), waste minimization, environmental education, household hazardous waste collection, and sediment remediation.

IDEM and EPA have active pollution prevention and environmental stewardship efforts in the region. For the most part, IDEM has taken the lead in implementing these efforts, with financial and/or technical support from EPA. The exceptions to this are the Steel Industry Pollution Prevention effort, which is entirely state funded, and EPA's Hazardous Waste Minimization Assessments, which were entirely federally funded. Other efforts include the Enviromobile, Hazardous Waste Minimization Studies, and the Grand Calumet River District Pollution Prevention Effort. In general, IDEM has taken the lead on these efforts with support from EPA.

Major Activities:

1. The Pollution Prevention Implementation Committee will aggressively integrate pollution prevention objectives into the other components of this Action Plan over the next two years. IDEM will facilitate integration by assigning a representative of the Office of Pollution Prevention and Technical Assistance to work on each of the objectives that address preventing future pollution. EPA will work with its staff to ensure that pollution prevention is an integral part of the Action Plan and the agency's efforts.
2. The EPA, with IDEM support, will continue to assist companies in their efforts to identify and evaluate pollution prevention, waste minimization, and environmental stewardship opportunities. In the future, assessment results will distinguish between pollution prevention, waste minimization, and environmental stewardship.
3. IDEM, with the support of EPA, has developed a measure of pollution prevention progress among manufacturers in the region. This committee will work with the citizens to get the information out in a format that is understandable.
4. This committee will promote opportunities within this Initiative for public and industry awareness of and participation in pollution prevention and environmental stewardship activities.

Opportunities for Public Involvement:

The public, industry and local government are already working toward pollution

prevention and environmental stewardship by participating in household hazardous waste collection, and environmental education, including the Enviromobile, teacher education, and continuing public forums on pollution prevention and environmental stewardship.

REMEDIAL ACTION PLAN AND LAKEWIDE MANAGEMENT PLAN

Goal:

Eliminate pollution that impairs beneficial uses in Lake Michigan and the Grand Calumet Area of Concern and restore those beneficial uses.

Objective:

Implement Annex 2 (see definition below) of the Great Lakes Water Quality Agreement (GLWQA) through the use of an ecosystem approach to address the environmental problems which impair beneficial uses of Lake Michigan and the Grand Calumet Indiana Harbor Ship Canal Area of Concern.

Definitions:

Annex 2: A section within the GLWQA that requires any Great Lakes State with an area of concern to prepare a Remedial Action Plan (RAP). Annex 2 also requires the United States and Canada prepare Lakewide Management Plans (LaMP's) for each of the five Great Lakes.

Area of Concern (AOC): A geographic area that fails to meet the objectives of the GLWQA and where such failure has caused or is likely to cause impairment of beneficial uses. There are 43 AOCs' surrounding the Great Lakes, one of which is in Indiana. The Grand Calumet Indiana Harbor Ship Canal Area of Concern is bounded by the State of Illinois on the west, Porter County on the east, Interstate 80/94 on the south, and the Indiana portion of Lake Michigan on the north.

Ecosystem: The interacting components of air, land, water, and living organisms, including humans.

Great Lakes Water Quality Agreement: A product of the 1909 Boundary Waters

Treaty between the United States and Canada. The agreement, last amended in 1987, was negotiated and signed by both countries to protect and restore the water quality of the five Great Lakes and the waterways which connect them.

Impairment to beneficial use: A change in the chemical, physical, or biological integrity of the Great Lakes System sufficient to cause any of the following: restrictions on fish and wildlife consumption; tainting of fish and wildlife flavor; degradation of fish and wildlife populations; fish tumors or other deformities; bird or animal deformities or reproduction problems; degradation of benthos; restrictions on dredging activities; eutrophication or undesirable algae; restrictions on drinking water consumption, or taste and odor problems; beach closings; degradation of aesthetics; added costs to agriculture or industry; degradation of phytoplankton and zooplankton populations; and loss of fish and wildlife habitat.

International Joint Commission: The Boundary Waters Treaty of 1909 between the United States and Canada established a six-member commission which oversees water quality matters with regards to the Great Lakes and advises both countries. The commission reviews Lakewide Management Plans and Remedial Action Plans.

Combined Sewer Overflow: A combined sewer system is a sewer system owned by a state or municipality that collects waste water and storm water through a single-pipe system and conveys it to a publicly owned treatment works plant. A combined sewer overflow is a structural device which discharges from the combined sewer system at a point prior to the publicly owned treatment works plant.

Lakewide Management Plans: A comprehensive effort to identify the critical pollutants within a Great Lake and determine what steps need to be taken to eliminate lakewide problems caused by both conventional and toxic pollutants.

Remedial Action Plan: The identification of the causes of use impairments within a harbor, bay or tributary to a Great Lake, and the development of an implementation plan and schedule to address the problems which caused the impairments using an ecosystem approach.

Background:

Annex 2 of the GLWQA requires Indiana to prepare a RAP for the Grand Calumet/Indiana Harbor Ship Canal AOC. In addition, Annex 2 requires the United States Government to lead the development of a lakewide management plan for Lake Michigan. Close collaboration between the federal government and the state of Indiana on both planning efforts is essential to their ultimate success and the long term protection and restoration of the AOC. While IDEM is charged with developing the

process to produce a RAP, the comprehensive nature of the problems facing Northwest Indiana will require the continued involvement of many stakeholders, public and private, as long-term ecosystem approaches are pursued. EPA provides a uniquely supportive role of the State's RAP efforts, offering financial, technical and capacity building resources. Moreover, Indiana's contribution to the Lake Michigan LaMP will rely heavily on the remedial strategies developed through the RAP. The LaMP, in turn, will assist the development of the RAP by assessing the environmental impacts of current loadings to Lake Michigan and helping identify how future loadings can be reduced.

Stage 1 of the RAP, an assessment of beneficial use impairments, was completed in January 1991. The development of key strategies to address such impairments during Stage II, which is the implementation phase of the RAP process, will be completed in 1995. The long term protection and restoration of the AOC is the chief aim of the tasks targeted initially for implementation or subsequently selected in bi-partisan fashion.

Considerable progress has been made through IDEM and EPA's cooperation on AOC activities. Enforcement actions taken against polluters located within the AOC has prevented hundreds of thousands of pounds of pollutants from entering the environment. A household hazardous waste collection program, funded by EPA and implemented by IDEM, resulted in the proper disposal of many harmful substances which might have ended up in the sewers, landfills or waterways. Another joint project between the agencies resulted in the Grand Calumet Sanitary Districts Toxic Pollution Prevention Project. This voluntary, collaborative project works with cities and industries to reduce discharges of chemicals to sewage treatment plants and, ultimately, the Grand Calumet River. Future efforts will include identifying further opportunities, and working with local communities, to minimize the adverse impacts of combined sewer overflows which have historically resulted in annual discharges of up to 7.3 billion gallons of untreated sewage and storm water in the Grand Calumet and Indiana Harbor Ship Canal.

Major Activities:

1. Identify persistent toxic substances and the sources from which they are being released into, and are affecting the ecosystem health of, Lake Michigan from the Grand Calumet River and Indiana Harbor Ship Canal through the review of existing data and information.
2. Estimate, on a gross scale, total pollutant loadings from the Grand Calumet River and Indiana Harbor Ship Canal into Lake Michigan through the review of

all existing information systems, such as the Toxic Release Inventory, data bases, and sediment transport information generated by the U.S. Army Corps of Engineers.

3. For future reduction activities, develop critical pollutant load estimates for individual sources where data exists, and develop monitoring plans to gather data where none currently exist.
4. Identify and implement short-term and long-term pollution prevention and environmental stewardship activities to further reduce critical pollutant loads to Lake Michigan.
5. Complete the revisions to the Stage I RAP called for by the International Joint Commission in its review of the document. Establish a firm schedule to complete all remaining components of the Stage II RAP.
6. Implement watershed management plans for both Wolf and George Lakes and for the Grand Calumet River Lagoons at Marquette Park. Support the restoration of natural areas, especially wetlands, to continue the ecosystem restoration required by Annex 2.
7. Develop greater public involvement in pollution control, ecosystem protection, and the responsibilities of municipal government through workshops, open houses, and other events as may be determined by the agencies and the public and by facilitating open house events.
8. Support and provide special assistance to the LaMP/RAP Toxic Pollution Prevention Project as it expands in scope, providing limited technical assistance to dischargers to the Grand Calumet River and Indiana Harbor Ship Canal to reduce these dischargers' toxic pollutant loads on a voluntary cooperative basis.

Opportunities for Public Involvement:

Annex 2 requires that the public be extensively involved in the development of every facet of both the RAP and LaMP. To meet this requirement the State of Indiana has established the Citizens Advisory for the Remediation of the Environment (CARE). CARE is an advisory group to the state composed of citizen members representing a broad array of backgrounds and interests. EPA and the four Great Lakes States rely on citizen input from groups such as the LaMP public forum. Additionally, both IDEM and EPA have held, and will continue to host, public workshops on specific issues brought forward by the public. The Action Plan was initiated to address several of the

most difficult immediate environmental problems facing Northwest Indiana; the RAP process, however, is designed to protect and restore the environment in the Grand Calumet Area of Concern through the development of long term remedial and preventive strategies. That environment is shaped by the citizens of the area and the RAP must reflect their views of the future and what must be done to create that future.

SEDIMENTS

Goal:

To reduce the adverse impacts of contaminated sediments flowing into Lake Michigan from the Indiana Harbor Ship Canal and the Grand Calumet River and to restore these waterbodies for uses including fishing and wildlife habitat.

Objective:

EPA and IDEM will support the development of and implementation of the RAP for the Area of Concern to protect Lake Michigan from toxic sediments and restore the Grand Calumet River-Indiana Harbor Ship Canal ecosystem. These efforts will control contaminated sediments by means including dredging, in-place treatment and disposal.

Background:

More than twenty-five percent of the nation's steel making capacity is located in Northwest Indiana, along with several major petroleum facilities and other manufacturing plants. Largely as a result of past industrial pollution, substantial deposits of contaminated sediments have formed in the area's various waterbodies. The U.S. Army Corps of Engineers estimates that the Grand Calumet River and the Indiana Harbor and Ship Canal alone contain five to ten million cubic yards of contaminated sediments. This accumulation is due in large part to the suspension of maintenance dredging since 1972 because of the contaminated sediments. This in turn has led to approximately 150,000 cubic yards of these sediments carried into southern Lake Michigan annually. Therefore, IDEM and EPA have developed and will continue to develop strategies, not only to remediate existing contaminated sediment deposits, but to prevent future sediment contamination. Development of sediment disposal facilities, with public participation, is central to the resolution of this problem.

Major Activities:

Because of the extent and variability of sediment contamination, EPA and IDEM have divided their activities into two categories. Category I consists of on-going or planned projects in the Indiana Harbor Ship Canal and Grand Calumet River aimed primarily at protecting Lake Michigan from the effects of contaminated sediments and improving quality. Category II activities involve development of further actions, using a basin or ecosystem wide approach. These activities will proceed, to the extent possible, as a joint venture between EPA and IDEM. Other long-range control and prevention strategies, such as ground water characterization, source controls, and ground water remediation, will eventually be developed as part of the RAP for the Area of Concern.

Category I activities will:

- pursue the dredging and disposal of contaminated sediments from the navigable portion of the Indiana Harbor Ship Canal -- the Federal Navigation Channel -- by cooperating with the U.S. Army Corps of Engineers. Such dredging will create a trap to reduce the flow of contaminated sediments into Lake Michigan. For other areas of the Indiana Harbor Ship Canal, IDEM and EPA will use all available tools, including the Inland Steel and LTV Steel Consent Decrees, to control as much sediment as possible;
- focus on controlling contaminated sediments in the East Branch of the Grand Calumet River using all appropriate tools, including the implementation of the USX and Gary Consent Decrees;
- pursue contaminated sediment control for the West Branch of the Grand Calumet River.
- define appropriate measures for remediation and disposal of sediments addressed by the foregoing actions.
- continue study of environmental conditions in the Indiana Harbor Ship Canal Grand Calumet River ecosystem and organize data to support site-specific actions, as well as analysis of basin-wide impacts of various sediment clean up or control alternatives.

Category II activities will:

- begin development of a comprehensive treatment/storage/disposal strategy for sediments removed from the Indiana Harbor Ship Canal and Grand Calumet River.

- continue to identify and evaluate available mechanisms including enforcement, corrective action, and voluntary projects, to address non-remediated areas of the Indiana Harbor Ship Canal and Grand Calumet River;
- continue the development of individual strategies targeting specific polluters and broad strategies bringing together "responsible parties" to address key geographic areas.

Opportunities for Public Involvement:

The successful completion of this strategy requires significant public outreach by EPA and IDEM, and other involved agencies, on all aspects of this sediments strategy. The agencies will seek out opportunities for education and dialogue with the public regarding sediment control and remediation, and encourage their participation and comment on future sediments work.

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