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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATERS

STRATEGIC PLAN

DECEMBER, 1992



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INTRODUCTION AND BACKGROUND

The purpose of this strategic plan is to identify future directions for the Division of Waters (DOW). It takes a step back from day to day problems and takes a longer range view of problems, issues and opportunities over the next five to ten years. To some people this time frame seems too long when they see budget cuts occurring on an annual basis. Others think that a strategic plan for the DOW should have been done ten years ago to put the DOW in a better position to deal with the problems that are occurring today. Both points of view are correct.

The important thing is that the DOW is developing a plan and there is general agreement among staff and management that these are the directions that the DOW should be going in. There is also general agreement that the strategies and actions in the plan should be implemented. It may be an indicator of interest in the success of the plan that 120 people generally agree about anything.

This strategic planning effort is not the first time the DOW has attempted to develop a strategic or long-range or comprehensive plan. DOW planning efforts were attempted in 1982 and 1986. The 1982 effort resulted in reorganization of the DOW that lasted until 1987. This addressed some personnel and organizational issues but did not proceed beyond those issues. The 1986 effort was oriented toward program analysis but did identify some more general or strategic concerns. This effort was discontinued when the DOW was again reorganized in the fall of 1987. Some of the issues and concerns identified in the 1986 planning effort are still issues that the DOW will have to address.

The DOW has also been involved in a number of other planning efforts of varying scales over the past 10-15 years including two state water plans, four "Directions" planning processes, development of shoreland management rules, numerous local water plans and several interstate river basin organization planning efforts. Plans that addressed a small number of issues over a short time frame were generally more successful than broader plans implemented over a long time frame. A significant problem with these planning efforts was that the DOW was never able to enunciate where it wants to go, what the State's water resources should look like in the future and what the role of the DOW in water resource management should be. This planning effort provides an opportunity to answer these questions.

It is appropriate for the DOW to undertake strategic planning at this time. Budgets have been reduced and will be reduced further. The DOW cannot continue to be everything to everybody, especially with fewer staff and funding resources. Many staff have been doing the same or similar job for much of their careers. They desire changes to allow them to do something

different. Water resource management problems are becoming more complex as users place increasing demands on limited water resources. New institutional arrangements are emerging as more local, state, federal and private interests are involved in water management. The Governor and the Legislature are looking at reorganizing the environmental management agencies to reduce overlap and duplication. The public is expecting the DOW to be more responsive as issues arise and for DOW to be accountable for its actions. The public demands more and better information about water resources and needs to have water information more accessible. All of these factors converge to indicate that a strategic plan is needed now.

This document defines the DOW mission and describes the programs implemented by the DOW. The process DOW staff used to identify the major issues, problems and opportunities is described. The goals and strategies selected for dealing with the issues, problems and opportunities are explained. Finally, actions are identified that lay out the steps necessary to implement the plan.

VISION AND MISSION STATEMENTS

MINNESOTA DEPARTMENT OF NATURAL RESOURCES VISION STATEMENT

We will work with the people of Minnesota to manage the state's diverse natural resources for a sustainable quality of life.

DIVISION OF WATERS MISSION STATEMENT

We will provide leadership in the cooperative management of activities affecting Minnesota's water resources to promote resource protection while allowing reasonable use.

"We"

* dedicated field and central office staff that know water management programs and are willing to work with the public

"will provide leadership"

- * design and implement new water management approaches that serve the needs of the citizens of Minnesota
- * provide technical assistance and advice on water resources to local decision makers

"in the cooperative management"

- * improve cooperation within the DOW, among DNR disciplines, other agencies, local government units, interest groups and the public
- * promote partnerships with local units of government that implement state mandated programs

"of activities affecting Minnesota's water resources"

- * all activities affecting surface and ground water availability and quality
- * people's ideas, expectations, proposals and activities that impact water resources
- * alterations to the land and water that have cumulative impacts on water availability and quality

"to promote resource protection"

- * be a steward of water resources and all natural resources that depend on water availability and quality
- * promote non-degradation of water quantity and quality
- * provide education and training to local officials and citizens who make decisions on water resources

"while allowing reasonable use."

- * protect public values while recognizing private rights
- * acknowledge riparian rights to use water as long as individual and cumulative impacts are minimized
- * realize that public opinion may over time change the definition of reasonable use

DIVISION OF WATERS MANAGEMENT PROGRAMS

The DOW currently has 21 basic p ograms, many of which are interrelated with other DOW and DNR programs. Some of the basic programs and authorities of the DOW go back to legislation passed in 1937 which established permit programs to regulate the appropriation of water and work in the beds of public waters. The DOW grew during the "environmental movement" of the 1960's and 1970's. The authorities were expanded to incorporate shoreland, floodplain and wild and scenic rivers management. Technical capabilities also expanded to enable the DOW to conduct ground water investigations and surface water hydrology and hydraulic studies. The following is a brief description of each program.

1. PROTECTED WATERS PERMIT PROGRAM

This program manages activities conducted in the beds of Protected Waters. The purpose is to reduce or eliminate negative impacts of activities that affect the course, current or cross-section of a water body while permitting reasonable use or development to occur. An application is made from a riparian landowner to conduct some activity below the ordinary high water level of a protected lake, stream or wetland. The permit application is reviewed by DOW, other DNR disciplines, the MPCA, the Corps of Engineers and local agencies. The application is issued, modified or denied. The applicant can request a public hearing to seek reversal of a permit decision. Violations occur when an activity is conducted without a permit or conditions of a permit are not met. Violations can be pursued through the court system and some violations lead to restoration orders to return a water body to its previous condition.

2. DAM SAFETY PROGRAM

The purpose of this program is to insure that dams are designed, constructed, operated and maintained to protect public safety and welfare. The DOW reviews designs and plans and issues permits for dam construction. The DOW inspects dams to detect unsafe conditions. Large and potentially-hazardous dams are inspected annually. Smaller dams are inspected less often. The DOW provides grants to local government units to assist them in making dam repairs. In some cases older dams are removed when they are safety hazards or when it becomes too expensive to repair or maintain them.

3. WATER APPROPRIATION PERMIT PROGRAM

This program manages the appropriation of surface and ground water to avoid interference among users and to insure that sufficient water is available. This program is similar to the protected waters permit program. Large appropriators(>10,000 gallons per day) are required to get permits. Annual water use fees, based on the amount of water used, are collected from appropriators to recover program costs. This program is closely

coordinated with the surface water and ground water monitoring programs to identify and resolve water use conflicts. A priority system allocates water when a water source is limited. Protected flows for streams, protected elevations for basins and safe yields for aquifers are being identified to protect instream needs, higher priority users and insure that long-term withdrawals do not exceed the available supply.

4. WETLAND CONSERVATION PROGRAM

This program protects all wetland areas not subject to the Protected Waters Permit Program. Wetland draining and filling are prohibited without a locally approved wetland replacement The Wetland Conservation Act of 1991 established wetland preservation area options, the permanent wetland preserves program, a wetland establishment and restoration program and an option for wetland banking. The DNR is assisting the Board of Water and Soil Resources in rule development and is instrumental in enforcing provisions of the Act. The DOW is also digitizing the National Wetland Inventory, the Protected Waters Inventory and watershed boundary information into a geographical information system(GIS). This information will be made available to local units of government and state agencies to administer the Wetland Conservation Act and other water and related land resource programs.

5. FLOODPLAIN MANAGEMENT PROGRAM

This program implements state and federal floodplain management regulations, administers the state's flood damage reduction grant program and coordinates federal flood control projects. The DNR and the Federal Emergency Management Agency have established regulations to prevent unwise development of floodplain areas. These regulations are implemented through local zoning ordinances. The DOW provides technical assistance to communities to adopt and administer these ordinances. The program also monitors the communities for compliance. The flood damage reduction grant program provides cost-sharing grants to local government units to alleviate flooding problems. Grants have averaged about \$1.7 million each year. Federal flood control project coordination involves working with the Corps of Engineers and the Soil Conservation Service to plan for and implement flood control projects.

6. SHORELAND AND WILD & SCENIC RIVERS MANAGEMENT PROGRAMS

These programs implement minimum statewide standards in shoreland areas of lakes and streams and customized standards on specially designated wild and scenic river segments. The purposes are to protect, preserve and enhance the natural and economic values of lakes and rivers. This is accomplished by establishing regulations and assisting local governments in adopting and administering local zoning ordinances. These ordinances establish minimum lot sizes, building and septic system setbacks, vegetation removal restrictions, etc. A recent addition to the program is the shoreland grant program. Cities and counties can receive cost-sharing grants to implement the new

shoreland regulations and in the future will be able to receive grants for other shoreland management activities.

7. OBSERVATION WELL PROGRAM

This program operates the observation well network developed to monitor water levels in areas of present or expected ground water use. This data is used to assess ground water supplies, interpret impacts of pumping and climate, plan for water conservation, evaluate local water complaints and provide support for the management of ground water resource. The network is composed of approximately 650 wells throughout the state. The network includes aquifers in common use and is constantly being expanded.

8. GEOPHYSICS PROGRAM

This program uses seismic reflection and refraction, electrical resistivity, and electromagnetic induction techniques to investigate geological formations. These techniques are used to map subsurface units, evaluate mineral resources, quantify ground water supplies, locate buried wastes and trace contaminant plumes. New ground water management initiatives will use geophysical techniques for regional aquifer studies and county and regional geologic atlas maps.

9. GEOLOGIC SENSITIVITY MAPPING PROGRAM

This program investigates factors associated with aquifer sensitivity to pollution. Criteria and guidelines were developed to determine geologic sensitivity. This program, in cooperation with the MN Geological Survey, is collecting data and completing evaluations to construct county and regional geologic sensitivity and hydrogeologic maps.

10. GROUNDWATER TECHNICAL ANALYSIS PROGRAM

This program provides technical support for allocating ground water. Technical analysis is provided to resolve well interference complaints, water use conflicts and contamination remediation pump-out permits. Investigations include assessing the impacts of resource development on ground water, quantifying ground water supplies and providing the technical understanding for ground/surface water resources management.

11. REGIONAL AQUIFER STUDIES PROGRAM

This program conducts technical investigations of aquifers that extend into several counties or the entire area where an aquifer is present. These studies involve gathering data, modeling the flow system, and predicting yield capability, water level changes resulting from development and ground water quality information. These studies are 50 percent funded by the U.S.Geological Survey, with the remainder paid by the DNR and local interests. Regional aquifer studies are underway in northwestern Minnesota and the southern Red River Valley.

12. OTHER GROUNDWATER PROGRAMS

These programs inventory wells on state-owned lands and regulate gas storage in underground formations. Since 1989 the DNR is responsible for locating, identifying the status of and properly abandoning wells on state property. The storage of gas and other liquids in underground formations, that serve as reservoirs, is regulated because the gas or liquid displaces water in the aquifers. Gas is injected under high pressure into a dome-shaped sandstone aquifer over 900 feet below the surface in Rice, LeSueur and Waseca Counties. DNR reviews, monitors, analyzes and regulates this storage.

13. STREAM FLOW MANAGEMENT PROGRAM

This program provides technical services to other DOW programs and to other state and federal agencies. Activities include establishing stream gaging sites, conducting stream flow measurements and monitoring 50 to 100 USGS and DOW stream gages. This program also provides hydrologic, hydraulic and statistical analyses; and assists in the technical review of water appropriation permits, federal hydropower license applications and dam operating plans. Instream flow studies are conducted to establish minimum stream flow levels.

14. SURFACE WATER GAGING PROGRAM

This program gathers, processes and disseminates water level and quantity information. This is done by establishing and checking monitoring sites, recruiting and training volunteer data collectors and establishing cooperative monitoring programs with other units of government. Data is processed using a computerized data base of current and historical data, checking the integrity of the data in the system and analyzing the data collected. The data collected, summary reports of the data, and special reports are disseminated to water resource professionals and to the public.

15. SURFACE WATER TECHNICAL ANALYSIS PROGRAM

This program provides surface water engineering support to DOW programs by analyzing hydrologic and hydraulic data. Specific activities include conducting or reviewing watershed studies, reviewing protected waters permits for sizing of culverts or outlet controls, determining flood elevations, reviewing flood insurance studies, reviewing hydrology reports and reviewing water appropriation permit applications. Information from these studies and reviews is written up as observations and recommendations to program managers.

16. DAM MAINTENANCE PROGRAM

This program inspects, maintains and repairs about 315 stateowned dams. These are usually small dams that are water level control structures at lake outlets. Many of these dams are over 50 years old so maintenance and repair are needed on a regular basis.

17. ENVIRONMENTAL REVIEW & LOCAL WATER PLANNING PROGRAMS

These programs coordinate and review environmental documents, local water plans, public drainage projects and watershed district projects and plans. The largest category of review documents is Environmental Assessment Worksheets(EAW). These documents are required for projects that may have environmental impacts. Environmental Impact Statements(EIS) are not required very often but they are used to assess the environmental impacts of large complex projects. Local water plans are a recent addition to the plans and documents requiring review. Almost all 80 non-metro counties and 46 metro water management organizations are developing and implementing plans.

18. ADMINISTRATIVE SERVICES PROGRAM

This program provides clerical, fiscal and human resources support services to the DOW. Clerical support includes typing or word processing of technical reports, manuals, the quarterly newsletter, most correspondence and final permit processing. Other services include mail handling, data entry and telephone answering. Fiscal services include budget preparation, contract management, bill payment and daily budget management and record keeping. Human resource support activities include the creation and allocation of positions and coordination of hiring and affirmative action functions.

19. CLIMATOLOGY PROGRAM

This program collects, stores, retrieves and analyzes climatological data. The major data items are current and historical temperature and precipitation data. This program works with the National Weather Service and the National Climatic Data Center to insure that climate data are available and usable for Minnesota. Climate data are used to develop hydrologic models and to monitor flood and drought conditions.

20. DATA MANAGEMENT PROGRAM

This program designs, develops and programs most major DOW data bases; implements and maintains the local area network, coordinates software and hardware acquisition; maintains hardware and; conducts data entry. This program coordinates information system activities with other divisions and agencies. This program also is responsible for implementing the DOW MIS Plan and developing the Comprehensive Water Resources Management Information System.

21. SURVEY, DRAFTING & GRAPHICS PROGRAMS

These programs provide technical support to all DOW programs by obtaining field survey data, determining ordinary high water (OHW) level elevations for protected waters and preparing topographic drawings, cross-sections, profiles or maps from field survey notes. These programs also provide computer-aided and manual drafting and graphics support for all DOW programs and coordinate all printing of informational materials, newsletters, forms and publications.

THE DOW ISSUE IDENTIFICATION PROCESS

A first step in developing a strategic plan is to identify the major issues for the planning period. These issues can be identified in several ways. Methods include focus groups, public meetings, other planning efforts, questionnaires or interviews. A combination of these methods was used. The process consisted of a series of meetings with DOW staff in each region and in each central office section as well as a separate meeting with the Water Management Committee(WMC). All staff had an opportunity to identify important issues, problems and opportunities.

DOW staff identified about 660 issues. Not all issues were unique and there was repetition or similarity among the issues. At each meeting issues were identified, placed into groups of related issues and an indication of importance was assigned to the issue groups through a voting process.

The issue groups that evolved during this process are as follows: Management, Wetlands, Environmental Review, Coordination, Education, Data Management, Water Quantity, Records Management, Local Water Planning, Expectations of Staff, Water Quality, Existing Programs, Human Resources and Drought & Flood Planning.

These 14 issue areas were presented to the WMC at its June, 1992 meeting. There was extended discussion about the issue areas. The general consensus was that while the issues were important, they were not strategic in nature. Based on this discussion, the issue areas were compiled into seven strategic issue areas. These issue areas included: Human Resources, Regulatory Activities, Water Supply, Water Information Management, Comprehensive Water Resources Management, Communication and Coordination and Program Maintenance and Expansion. Specific issues were reassigned to these categories and were sent to regional offices and central office sections for review.

Another series of meetings and further review of the issues and goals of the plan occurred during July and August, 1992. This process resulted in the following six issues being carried into the strategic plan. Each issue is described in the upcoming paragraphs.

ISSUE #1. HUMAN RESOURCES

The DOW staff are the resources that allow the DOW to effectively manage the State's water and related land resources. There are a large number of long-term employees in the DOW and many of them have held the same positions for many years. This indicates that many people like their work and their organization. Many newer employees are more mobile and may be less inclined to work for the same organization for a long period of time. The DOW will identify opportunities to attract and keep

new employees and find ways to make the jobs of long-term amployees more interesting and varied.

ISSUE #2. REGULATORY ACTIVITIES

For years DOW staff have desired a reduced role in directly regulating water related activities. The land use management programs are already implemented by local governments under state standards and guidelines. Some mechanism like this including delegation, deregulation or some combination of these actions should be applied to other programs. There are concerns that water resources will not be as well protected with these approaches. Standards and guidelines will have to be well defined for activities to be deregulated or delegated. Efforts to educate local officials and the public about impacts of various activities will need to be intensified. If these actions are done properly, certain activities could be effectively regulated with less direct DOW involvement.

ISSUE #3. COMPREHENSIVE WATER RESOURCES MANAGEMENT

In recent years there has been a lot of emphasis on local water planning and comprehensive water management. It is sometimes difficult to use these approaches when the water management programs of the DOW are somewhat compartmentalized and water management authorities are spread among agencies with differing goals and objectives.

The DOW, however, will assist and encourage local planning and comprehensive approaches to water management. The DOW is in a unique position to assist local water planning efforts because it is involved with a wide range of water management problems. The DOW needs to review program rules to see that the rules function in a coordinated manner. This requires more public participation than has occurred in the past. More information needs to be provided about the impacts of activities on water resources. There is a need to work closely with other local, state and federal agencies to reduce overlap and duplication of programs. These issues need to be addressed to improve management programs and make them operate in a comprehensive and coordinated fashion.

ISSUE #4. WATER SUPPLY

Water supply problems are generally quite isolated except during severe drought periods when they become more regional in scope. Supply problems will expand as water use becomes more concentrated and pollution restricts use of some surface and ground water sources. Appropriations will be restricted to reflect protected flows or levels for streams and lakes and safe yields for ground water systems. The DOW must better monitor and manage the availability and use of water to insure that uses are reasonable and supplies are adequate. Water conservation will become essential in some areas to maintain growth without resorting to diversions or inter-basin transfers.

ISSUE #5. WATER INFORMATION MANAGEMENT

Four factors have hampered DOW efforts to provide more information about water resources to the public and constituent groups. First is a lack of water resources data. Surface and ground water data are unavailable for some parts of the state. Second is a need for more computerized approaches to organize and analyze the data. Data bases exist for climatology, lakes, some ground water and some water use information but do not exist for many other programs. Third is a lack of funding to devote to data system development projects. Many data bases were developed as special projects with dedicated funding. These types of projects have not been funded as readily in recent years. Fourth is the lack of time available to interpret and disseminate data that is available. The emphasis has been on slowly developing data bases. It has not been on making information available to people that have a use for it. The DOW has recently adopted an information systems plan that addresses these issues.

ISSUE #6. COMMUNICATION AND COORDINATION

The DOW must improve how it communicates program information to other DNR disciplines; other local, state and federal agencies; interest groups; and the public. Many DOW programs are complex and often there is a lack of understanding about the purposes, the health and safety aspects, resource protection benefits and the processes used to implement the programs. Local agencies administering state-mandated programs and organizations assisting with state programs are particularly important when targeting information and education programs. Brochures and slide shows have been used but television and computer technologies offer new opportunities to communicate information. DOW staff need to understand how DOW programs affect and are affected by other programs within the DNR.

It is difficult to take 660 separate issue statements and boil them down to six strategic issues. A lot of detail that was present is no longer apparent, but it is hoped that the underlying concerns that caused an issue to be identified have not been lost. The next chapter will establish goals and describe strategies and actions for dealing with these issues over the next five to ten years.

DIVISION OF WATERS GOALS, STRATEGIES AND ACTIONS

During the period June-October, 1992 the DOW developed goals, strategies and actions to address the issues described in the previous chapter. Many of these goals, strategies and actions will be implemented during the next five to ten years. Some can be implemented immediately at little or no cost. Others, especially actions that call for inter-disciplinary coordination or rule changes will be time consuming and potentially expensive to implement.

GOAL #1. HUMAN RESOURCES

The DOW will address human resource issues in order to maintain a high-quality, dedicated and diverse work force to carry out the DOW mission.

Strategies:

- A. Recognize that all DOW staff are part of a team and their work is important to the success of the DOW and the DNR.
- B. Take advantage of the wide variety of available education and training opportunities.
- C. Accelerate efforts to improve working conditions.
- D. Develop additional mechanisms to recognize and reward outstanding performance.
- E. Develop a plan for organizational change.

Strategy A. Recognize that all DOW staff are part of a team and their work is important to the success of the DOW and the DNR.

Actions:

- A1. Define and improve channels of communication so that employees know how their programs and jobs fit into the DOW and the DNR.
- A2. Managers shall use work plans and annual priorities to evaluate positions that they supervise because jobs evolve over time.

Strategy B. Take advantage of the wide variety of available education and training opportunities.

- **B1.** Develop a list of the types of training that are available and suitable for DOW staff including a list of required courses for various levels of staff.
- **B2.** The Training Committee should develop a master list of training that staff have taken to inform staff about the opportunities available.
- **B3.** Supervisors should work with staff to develop and improve individual training plans.
- **B4.** Training for all DOW employees should emphasize teamwork, communications and continuous performance improvement.
- **B5.** Develop additional interdivisional training courses from each section in the DOW.
- B6. Expand the membership of the Training Committee.
- **B7.** Provide more training opportunities in outstate locations.

Strategy C. Accelerate efforts to improve working conditions.

Actions:

- C1. Support DNR efforts to get funding for building improvements and replacements.
- C2. Staff should be appropriately equipped and trained to perform their jobs.
- C3. Inform staff about equipment needed or available to do their jobs.
- **C4.** Investigate job-sharing and voluntary time reduction options to make it easier for staff to adjust to job and family responsibilities.
- **Strategy D.** Develop additional mechanisms to recognize and reward outstanding performance.

- **D1.** Establish immediate awards to recognize outstanding performance in short term work situations.
- D2. Recognize outstanding work or accomplishments in "WATERTALK".
- Strategy E. Develop a plan for organizational change.
 Actions:
 - E1. Create new growth opportunities for all employees including mobility assignments, special assignments, job switches or job-sharing.
 - E2. Periodically review internal and external forces to determine how they affect positions in the DOW.
 - E3. Work with Human Resources to establish career development plans for all employees.
 - E4. Develop a plan for organizational change including an investigation of a technical career ladder and a review of position classifications.

GOAL #2. REGULATORY ACTIVITIES

The DOW will insure that regulatory programs are efficient and better reflect the impacts of activities and resource protection needs.

Strategies:

- A. Develop common goals and expectations about the outcomes of the regulatory process.
- B. Develop monitoring programs to measure the efficiency and effectiveness of regulatory programs.
- C. Investigate alternatives to direct regulation in providing resource protection.
- D. Determine the degree of regulation needed based on the potential impacts of activities and the resource values to be protected.

Strategy A. Develop common goals and expectations about the outcomes of the regulatory process.

Actions:

- A1. Create a broad-based task force to evaluate the regulatory process and determine the results desired from the regulatory programs.
- A2. Utilize mediation or dispute resolution processes to address problems with regulatory programs.
- A3. Work with others to streamline the environmental review process and more clearly define staff roles in the process.
- **Strategy B.** Develop monitoring programs to measure the efficiency and effectiveness of regulatory programs.

Actions:

B1. Develop mechanisms to measure the efficiency and effectiveness of DOW programs and develop monitoring and/or reporting systems for organizations implementing state-mandated programs.

Strategy C. Investigate alternatives to direct regulation in providing resource protection.

Actions:

- C1. Work with other gover ment units and affected interests to identify incentive-based water management programs as alternatives to DOW's direct regulatory programs.
- **C2.** Determine whether deregulation with guidelines can meet regulatory goals without direct DOW regulatory involvement.
- C3. Conduct pilot studies to evaluate whether delegation or deregulation is feasible.
- C4. All alternative means of protecting the environment should be evaluated before new regulatory programs are considered.

Strategy D. Determine the degree of regulation needed based on the potential impacts of activities and the resource values to be protected.

- D1. Establish an inter-disciplinary committee to examine current rules looking specifically at the impacts of activities and the resource values of water resources in different areas of the state.
- **D2.** Evaluate the DOW role in reviewing conditional uses and variance requests related for land use management programs.
- D3. Delegate the responsibility for some regulatory activities in the DOW or the DNR.

GOAL #3. COMPREHENSIVE WATER RESOURCES MANAGEMENT
The DOW will take a comprehensive approach to water resources
management that integrates perspectives from interested and
affected parties while complying with appropriate laws and
regulations.

Strategies:

- A. Expand the opportunities for public input on major water resource management decisions.
- B. Balance the public interests in protecting water resource quantity and quality and health and safety issues with public and private water rights.
- C. Encourage comprehensive watershed management approaches to water resource problems.
- D. Work with local, state and federal agencies to reduce overlap and duplication in water resource management programs.
- E. Participate more fully in local water planning and implementation efforts to ensure that important water issues and problems are considered.
- **Strategy A.** Expand the opportunities for public input on major water resource management decisions.

Actions:

- A1. Implement major rule and regulation changes using advisory committees and other forms of public input in addition to formal public hearing and notification processes.
- **Strategy B.** Balance the public interests in protecting water resource quantity and quality and health and safety issues with public and private water rights.

Actions:

- **B1.** Emphasize the water quality benefits from DOW programs.
- B2. Define what activities riparian property owners can do without a permit.
- **Strategy C.** Encourage comprehensive watershed management approaches to water resource problems.

- C1. Determine if DOW programs adequately address long-term cumulative impacts of activities.
- **C2.** Adjust work plans to provide greater assistance to local efforts actively pursuing watershed planning and implementation programs.

Strategy D. Work with local, state and federal agencies to reduce overlap and duplication in water resource management programs.

Actions:

- D1. Investigate regulatory programs that are implemented at different levels of government and negotiate agreements that reduce regulatory overlap and duplication.
- D2. Convene biennial meetings with local, state and federal agencies to delineate and clarify the roles of each agency and identify future directions for programs.
- D3. Work with the Division of Emergency Management and other agencies to develop a plan for DNR involvement before, during and after floods and other disasters.

Strategy E. Participate more fully in local water planning and implementation efforts to ensure that important water issues and problems are considered.

Actions:

E1. Reduce the amount of direct DOW regulation so it can fully participate in local water planning efforts.

E2. Revise local grant programs to provide a consistent application process, materials and evaluation criteria.

Strategy C. Disseminate more water resource information including interpretations of data, discussions of trends and analysis of issues.

Actions:

- C1. Publish an annual report on water conditions around the state, including new water issues and special conditions such as droughts, floods or major contamination situations.
- C2. Consult with constituency groups to identify what types of water information they need.
- C3. Develop watershed fact sheets.
- C4. Publish brochures that identify where people can get different types of water information.

Strategy D. Incorporate new computer technologies into all DOW business functions.

- D1. Implement new technology such as electronic mail, electronic filing, document scanning, total station and GPS surveying satellite imagery and improved communications when feasible and cost-effective.
- **D2.** Integrate Geographic Information Systems(GIS) into all DOW programs.
- D3. Design DOW data systems to accommodate GIS systems.

GOAL #6. COMMUNICATION AND COORDINATION

The DOW will provide more information to the public about water resources programs and will become more aware of the views of others about water resource issues.

Strategies:

- A. Expand information and education efforts to inform the public about the impacts of activities on natural resources and the resource protection services provided by DOW programs.
- B. Identify and work more closely with groups and individuals that have interests and concerns with water resource issues.
- C. Improve relationships with local government units that implement programs administered by the DOW.
- D. Improve communication and coordination with other disciplines in the central and field offices to develop a better understanding of the unique problems in different locations.

Strategy A. Expand information and education efforts to inform the public about the impacts of activities on natural resources and the resource protection services provided by DOW programs.

Actions:

- A1. Develop and disseminate brochures, videos and other materials to explain the purposes, benefits and functions of DOW programs.
- A2. Develop educational and reference materials to support and promote watershed management approaches.
- A3. Develop more information about alternatives to and consequences of water development activities.
- A4. Publish brochures identifying sources of water resource information.

Strategy B. Identify and work more closely with groups and individuals that have interests and concerns with water resource issues.

Actions:

B1. Become more involved with organizations that share interest and concerns about water resource protection and development including hunting and fishing groups, local water planning organizations, and statewide organizations for watershed districts, building officials, housing and redevelopment authorities, engineers and planning and zoning officials.

B2. Develop a public involvement plan including surveys, open meetings, round tables and other methods to seek input from the public.

B3. Investigate methods to improve the ability of all staff to communicate with each other and the public.

Strategy C. Improve relationships with local government units that implement programs administered by the DOW.

Actions:

C1. Expand efforts to provide regular training and workshops about DOW programs to local staff and officials so that they can understand and more effectively administer the programs.

C2. Involve other related agencies and programs in workshops and training sessions for local officials. C3. Prepare a coordinated grant program guide that

explains grant programs and provides application

materials and evaluation criteria.

Strategy D. Improve communication and coordination with other disciplines in the central and field offices to develop a better understanding of the unique problems in different locations.

Actions:

D1. Attend staff meetings and schools of other DNR disciplines to explain DOW programs, to identify DOW programs impacts and to assess strategies to assist them in implementing their programs.

D2. Promote interdisciplinary assignments to develop

better coordination and consistency.

D3. Establish an improved new employee training program to promote departmental identity.

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