



department of water, air and waste management

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JAN 21 1985

GEOL. SURVEY

DATE: January 16, 1985

TO: All Interested Parties

Please find enclosed a copy of The State Water Plan as prepared by the Department of Water, Air and Waste Management. The Plan was delivered to the General Assembly by the Water, Air and Waste Management Commission on January 14, 1985 in response to a 1982 legislative mandate.

The State Water Plan contains several recommendations under the following topics.

1. Conservation
2. Priority Allocation System
3. Mechanisms to Define Shortage and Initiate the Allocation System
4. Better Defining Beneficial Use and Improving Daily Management of Water Rights
5. Well Interference and Compensation
6. Groundwater Protection Strategy

The recommendations are the result of technical assessments by Department staff and input by the public. Public input was solicited during a series of public meetings in 1984 and through a Water Plan Technical Advisory Committee.

More detailed technical information is available from the Department.

Should you have any questions, comments, or require additional information, please contact Brian Borofka, Project Manager, State Water Plan, at the above address, or call (515) 281-4968.

The State Water Plan

prepared by:

Iowa Water, Air and Waste Management Commission

Department of Water, Air and Waste Management

Des Moines, Iowa

January, 1985



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# Executive Summary

## MANDATE AND GOAL

The State Water Plan was mandated by the 1982 Legislature. Chapter 455B of the Iowa Code requires the Water, Air and Waste Management Commission, "to assess the water needs of all water users...and prepare a general plan of water allocation in this state considering the quantity and quality of water resources available in this state designed to meet the specific needs of the water users." The Code also requires that the Commission deliver the water plan as a bill enacting a general plan of water allocation priorities by January 15, 1985 to the General Assembly.

Several objectives are to be met by the Water Plan.

1. Describe the availability and quality of water in Iowa.
2. Estimate present and future use.
3. Prepare an allocation plan.
4. Propose a means of implementation.

Longer term objectives include implementation of the plan, and periodic updating of the water use projections.

## COORDINATION

Throughout the preparation of the Water Plan the Department and Commission have sought to inform Iowans of the Plan's development and their input in its preparation.

This has included several actions.

1. Public Meetings conducted to identify issues and evaluate options for action.
2. Technical Advisory Committee participation, involving 15 members of water user and interested groups that assisted the Department in preparing the Plan.
3. Commission Presentations.
4. Newsletter, Press Releases.

## APPROACH AND RESULTS

Because the primary focus of the mandate was towards the quantitative aspects of the state's water resources, part of the present effort was to examine overall availability and use. This resulted in the preparation of three supporting technical reference documents describing in detail water availability and use in the state.

The availability studies examined both surface and groundwater. The water use studies delineated present and projected water use for the next twenty years for all major types of use. These included municipal, industrial, livestock, irrigation, power production, and privately supplied. Total demand for the state is expected to increase, with irrigation potentially being the largest water use by 2005.

The water planning effort also identified key water resource



issues in Iowa and potential alternatives for action. These were outlined in a report entitled Water Resource Issues in Iowa which served as the focus of discussion for the public meetings conducted in late 1984. Issues were examined in three broad areas; quantity, quality, and interstate. From the input received at these meetings the Department and Commission developed the recommendations listed below.

#### HISTORY OF IOWA'S WATER LAW

Iowa has only actively managed and regulated its water resources since 1957 when the Iowa Water Law was unanimously adopted by the legislature. Prior to that time disputes regarding water use were settled by the involved parties or the courts.

The 1957 action came as a result of a severe two-year drought that either reduced or threatened both public and private supplies across Iowa. Similar droughts occur on a 20-22 year cycle, with others occurring in the 1930's and late 1970's.

The 1957 Iowa Water Law has been the cornerstone from which most management decisions have been made since that date. Major actions and concepts of that act included:

1. Waters were declared the wealth of the people.
2. Permit system was established for larger users.
3. Some small and other "grandfathered" users were nonregulated.
4. Protected stream flow levels were established.
5. The policies and principles of beneficial use were codified.

Only minor changes in the original law have been made since its adoption. The most recent was in 1982 when the Department of Water, Air and Waste Management was formed, and the mandate for the Water Plan was codified.

#### RECOMMENDATIONS

A primary objective of the Water Plan has been to examine how the state's water shall continue to be used by both large regulated and non-regulated users on a daily basis, as well as during times of shortage. The key question to be answered has been, "How do we share the water during a shortage, or who should have priority?" In answering this question the Commission has examined the state's waters as having certain economic, social and aesthetic values necessary for the continued well-being of the state. The results of this analysis are several recommendations, including a priority allocation scheme.

#### Water Conservation

One of the main points to come out of the planning effort was the idea that before users are restricted from using water due to an allocation scheme, water conservation should be required. Simply stated, there are two options: We can share a shortage, or someone will go without. The approach being proposed is that we embrace the former action through conservation in an attempt to avoid the latter.

Therefore, the Commission recommends that the Department be given the authority to require conservation both on a daily basis, as well as under emergency conditions. Conservation measures would be stated by all permit applicants, including such steps the applicant could take during times of impending shortage.



The recommendation for conservation measures is made in lieu of a priority system that would be applied on a full time basis. With this recommendation, the priority allocation system (outlined below) would only be implemented during severe droughts when conservation steps alone would not alleviate a shortage of water.

#### Priority Allocation System

It is recommended that a structured priority allocation system be adopted that would only be implemented during severe droughts (such as Iowa experienced in the 1930's, 1950's and 1970's), or in local areas due to shortage. Such a structured system would only be applied as warranted under those conditions defined in the next section which would serve as a triggering mechanism.

The allocation structure, from highest to lowest priority, is as follows.

1. Self-supplied domestic.
2. Domestic fraction of municipal and rural water systems.
3. Livestock production.
4. Power generation.
5. Industrial.
6. Non-Traditional irrigation.
7. Other irrigation.
8. Recreation and leisure.
9. Out of state exports.

Implementation of the priority scheme would result in the halting or restricting of withdrawals by those users at the bottom of the

list, with additional groups higher on the list added as necessary.

#### Definition of Shortages and Priority System Triggers

During most times and in most places in Iowa there is adequate water available for all users. However, during shortages it may be necessary to implement the priority system outlined above.

In order to set the framework for action during these instances, the Commission recommends several conditions or actions which would trigger the potential implementation of the priority system. Such a triggering mechanism would be a two step process. It would first identify under what conditions and who would initiate the system, and second it would require an investigation prior to the application of the priority system.

Specific conditions that would trigger the investigation and possible implementation include:

1. Local petition
  - 25 or more individuals
  - County or municipality
2. Drought
  - Governor's declaration
  - Drought index
3. Disaster
  - Governor's declaration
  - Agency emergency response

#### Improving Daily Administration of Water Rights

Several recommendations are made to, a) afford a clearer definition of the rights and responsibilities of both the Department and water users, and b) allow better management of the state's waters. These include:



1. "Grandfathered" Users Eliminated. Some large users exempted from obtaining a permit under the original 1957 law would be required to obtain a permit so the Department can track water use, improve daily management and include users in the allocation system.
2. Interstate Users Regulated. Present withdrawals of interstate waters are not regulated, and thus weaken the state's position in interstate decisions.
3. Prior Use Considered. Existing users are to be considered in the issuance or renewal of permits.
4. Contracts Recognized. Existing contracts between the state and certain users are to remain.
5. Protected Sources Recognized. The Department should be allowed to prevent or deny withdrawals from some sources when it is necessary to protect human health and welfare.

#### Well Interference and Compensation

It is recommended that non-regulated users (less than 25,000 gpd) be provided with greater statutory protection from the possible effects of well interference caused by regulated withdrawals. Protection would be given to non-regulated groundwater users in such a way that some avenue for compensation would be available to assure continued use of the water. The proposed statute requires both parties to first attempt to negotiate a settlement without the direct involvement of the Department, and as an alternative to immediate litigation.

This statute is modeled after a similar measure adopted and suc-

cessfully implemented by Minnesota several years ago.

#### Groundwater Protection Strategy

In preparing the Water Plan the Department and Commission encountered a high degree of concern regarding the continued availability of high quality groundwater. Because the present mandate relates primarily to availability and use, no statutory or management program relating to groundwater quality is being proposed. However, in view of the high utilization of groundwater and the potential for degradation of quality, the Commission is asking for a legislative mandate for the Department to prepare a Comprehensive Groundwater Protection Strategy. This strategy would be used to guide development of future groundwater programs.



## 1.0 Introduction

### 1.1 The Mandate

This Water Plan was prepared in direct response to a mandate from the 1982 General Assembly.

The mandate is stated in Iowa Code Sections 455B.262 and 455B.263.

It is the policy of the state to correlate and vest the powers of the state in a single agency, the department, with the duty and authority to assess the water needs of all water users at five-year intervals for the twenty years beginning January 1, 1985, and ending December 31, 2004...and prepare a general plan of water allocation in this state considering the quantity and quality of water resources available in this state designed to meet the specific needs of the water users.

The Water, Air and Waste Management Commission was instructed to present the results of this planning effort by Section 455B.263(1)a of the Iowa Code.

Not later than January 15, 1985, the commission shall deliver to the secretary of the senate and the chief clerk of the house identical bills enacting a general plan of water allocation priorities for this state, considering the types of water resources available in the state and the water needs of all types of water users in this state, with a recommendation on the most effective means of implementation of the plan.

### 1.2 Objectives

The goal of the planning effort is to present a water plan and proposed legislation to the Legislature in January 1985 as directed by the above mandate.

Several specific objectives are encompassed by this goal.

1. Describe and delineate the overall availability and quality of surface water and groundwater in Iowa.
2. Identify and estimate present and projected water use by individual user groups (Estimated water use by county for the year 2005 is shown in Figure 1).
3. Prepare a water allocation plan which considers availability, use, and projected need.
4. Propose a plan of implementation.

These short-term goals should be satisfied with the delivery of this State Water Plan and proposed legislation to the 1985 General Assembly.

Long-term goals are not clearly stated by the 1982 legislative mandate, but Chapter 455B does instruct the Department that, "the orderly development, wise use, protection, and conservation of the water resources...is of paramount importance." Consequently, several longer term objectives relating to

## Projected Total Water Use in 2005

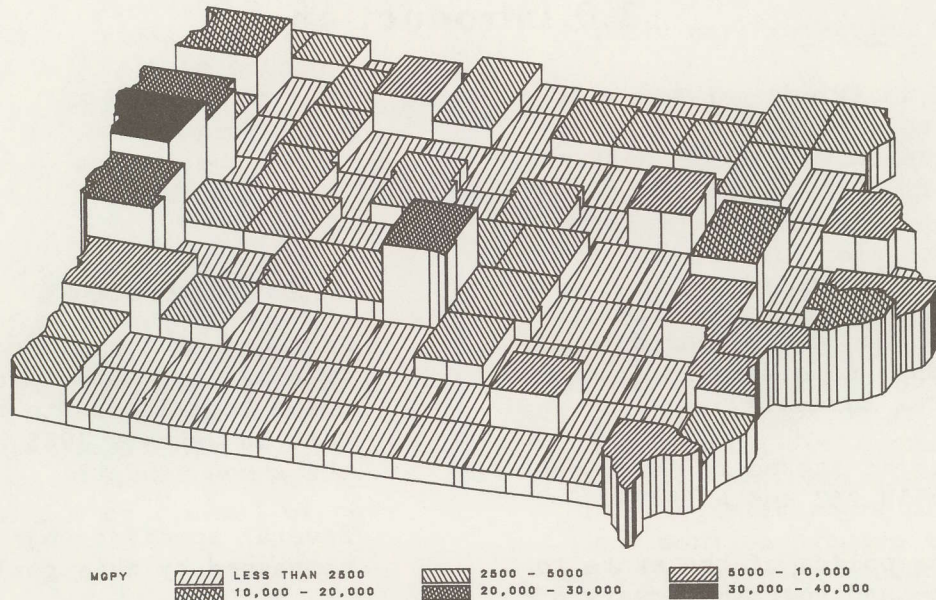


Figure 1. Projected Water Use by County in the Year 2005.

managing the waters of the state are also recognized.

1. Implementation of the water allocation system or other statutory changes adopted by the 1985 Legislature.
2. Further investigations and recommendations for action to respond to issues raised by this planning effort but not taken forward for legislative action at this time.

3. Updating projections of need and use by each group and region of the state on that schedule indicated in Section 455B.262 of the Code.
4. Continued research and recommendations for coping with quality changes in both surface water and groundwater.
5. Investigating regional problems of water availability and quality, with recommendations for state action or assistance.



## 2.0 Approach of the Planning Effort

### 2.1 Coordination

The Department and Commission have sought input from the public, other agencies, and user and interest groups during the preparation of the Water Plan. Specific actions have included the following.

1. Public Meetings. Nine public meetings were conducted across the state to solicit input on the Water Plan and the Water Resource Issues in Iowa report released in October 1984. After considering this input, another public meeting to obtain comment on these proposals was conducted in Des Moines. The location and schedule of these meetings are listed on Table 1.
2. Technical Advisory Committee. In early 1983 a 15-member Water Plan Technical Advisory Committee was formed (See Table 2). Composed of several user and interest groups, the Committee's goal was to inform these groups and their constituents of the Department's approach and actions in developing the Water Plan, and to actively solicit their input. Public meetings occurred bi-monthly in 1983 and monthly in 1984 as announced in the Department's newsletter.
3. Commission Presentations. Status reports have been provided to the Water, Air and Waste Management Commission

during each of its monthly meetings since September 1983. The Commission has been actively involved in reviewing, preparing and deciding on the content and approach of the Plan.

4. Newsletter and Press Releases. Publicity about the plan has been released through a variety of newsletter articles and press releases.
5. Presentations and Meetings. Department staff have made formal and informal presentations on the Water Plan to numerous groups throughout the planning effort.
6. Media. Numerous newspaper articles, and radio and television interviews have been presented with the cooperation of the Department. Additionally, a 30-minute film was prepared and aired by ISU Extension on the Water Plan as part of its "LifeForce" series.

### 2.2 Quantitative Analysis

The primary focus of the legislative mandate was the quantitative aspects of the state's water resources. Plan development was directed to, "consider(ing) the types of water resources available and

Table 1. Location and Date of Formal Public Meetings to Obtain Input on the Water Plan.

---

Des Moines	October 31, 1984
Spencer	November 1
Sioux City	November 2
Council Bluffs	November 5
Mason City	November 7
Cedar Rapids	November 8
West Union	November 9
Muscatine	November 14
Centerville	November 15
Des Moines	December 3*

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\*Meeting was conducted to receive comment on draft proposals adopted by Water, Air and Waste Management Commission on November 20, 1984.

Table 2. The Fifteen Members of the Water Plan Technical Advisory Committee.

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American Water Works Association	Leon Lamer
Association of Business and Industry	Jack Soener
Iowa Association of Municipal Utilities	Dean Johnson
Iowa Cattleman's Association	Maynard Jayne
Iowa Development Commission	Jim Chupp
Iowa Farm Bureau	Ted Yanecek
Iowa Fertilizer and Chemical Association	Winton Etchen
Iowa Irrigation Association	Robert McFarland
Iowa Pork Producers	James Meyer
Iowa Rural Water Association	Gary Williams
Iowa Utility Association	Jack Clark
Iowa Water Well Association	Larry Shilhanek
Izaak Walton League	Roy Overton, M.D.
League of Iowa Municipalities	Robert Harpster
Sierra Club	Dennis Downing

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the water needs of all types of water users." Additionally, the priority allocation system should be based on the findings of this quantitative analysis. Therefore, the Department expended considerable effort in identifying and assessing the resource in terms of both availability and use.

The assessment of water availability identified the amount, quality and long-term dependability of both surface and groundwaters. In conducting this assessment the Department relied upon, and was assisted by, other state and federal natural resource agencies. Principal among these were the Iowa Geological Survey (IGS) and the U.S. Geological Survey (USGS). Previously collected data and analyses from these research and investigative agencies formed the core of the availability assessment.

The water availability assessment examined several specific topics.

1. The location, watershed characteristics, average and extreme flows, and reliability of the state's rivers and streams.
2. Availability of water from standing water bodies, including both natural lakes and impoundments, the latter ranging from farm ponds to the large federal reservoirs.
3. The effect of precipitation, and especially extended droughts, upon water reliability.
4. The potential for increasing surface water reliability, or supplementing the amount available, through the construction of impoundments.
5. The location and productivity of major groundwater aquifer

systems, ranging from near-surface sand and gravel glacial and alluvial deposits to deeper sandstone and limestone bedrock layers.

6. The quality of water available from groundwater sources, including natural characteristics, as well as potential for contamination by human activities.
7. Long-term trends in groundwater levels due to historic use, and the potential to support continued use at existing or higher rates of withdrawal.
8. The interconnection and relationship of surface and groundwaters, especially along river systems and near bedrock outcrops.
9. Regional and local differences in availability and quality.
10. Existing and projected levels of utilization.

The water availability assessment analyzed specific aspects of the resource rather than being a presentation of data and figures from previous reports.

Water use in Iowa was examined both in terms of present use and projected needs. Water use in the state was divided into several broad user groups.

1. Municipal
2. Regional rural water systems
3. Private self-supplied systems
4. Livestock
5. Irrigation
6. Industry
7. Power generation

Data on historic and existing water use were collected for each of these classes. Data were obtained



from Department files and permits and many of the user groups. Where direct use data did not exist, demographic, revenue or production data were used to estimate water demand. Projections of future use were developed using current information, then considering a variety of factors. Such water use predictions were often made with the assistance of other groups such as Iowa State University and the Office for Planning and Programming.

Water use projections were made for each of the above groups for the next twenty years, or to the year 2005 (see Figure 2). Actual data were presented on a county-by-county basis (see Figure 3). Projections were done on five year increments.

Water use and availability were examined together in order to identify if any area of the state or type of use was having more of an effect on one source than another. This analysis was used in part as a basis for developing the priority allocation system.

## 2.3 Issue Identification and Analysis

Concurrent with the quantitative analyses of water availability and use were actions to identify issues related to the mandate given by the Legislature.

The primary focus of this process was towards the development of a priority allocation system as specifically identified in Sections 455B.262 and 263 of the Code. However, input from staff, the Commission, the Technical Advisory Committee, and the public indicated

that such a water planning effort also needed to at least identify (if not seek resolution of) other existing problems or emerging issues. While staff played the key role in identifying such topics, these were only carried forward in the planning effort after consultation, input or approval from the Committee or Commission. Several such topics were included in the planning effort up to the point of including them in the Water Resource Issues in Iowa report for public discussion. This was done knowing that final resolution or action would not immediately occur as a result of this examination or discussion.

The primary issues carried forward at this time are those quantitative issues relating to availability, use, and allocation, particularly in times of shortage (droughts) or competition (see Figure 4). These are discussed in more detail and with recommendations for action in Chapter 5. However, other measures relating to the continued use and reliability of the water resources of the state are also addressed in more detail at this time. These include conservation, improving daily management, and actions to protect quality.

All of the issues identified and examined in this process are presented in Chapter 4. These are categorized into three broad groups; quantity, quality, and interstate issues.



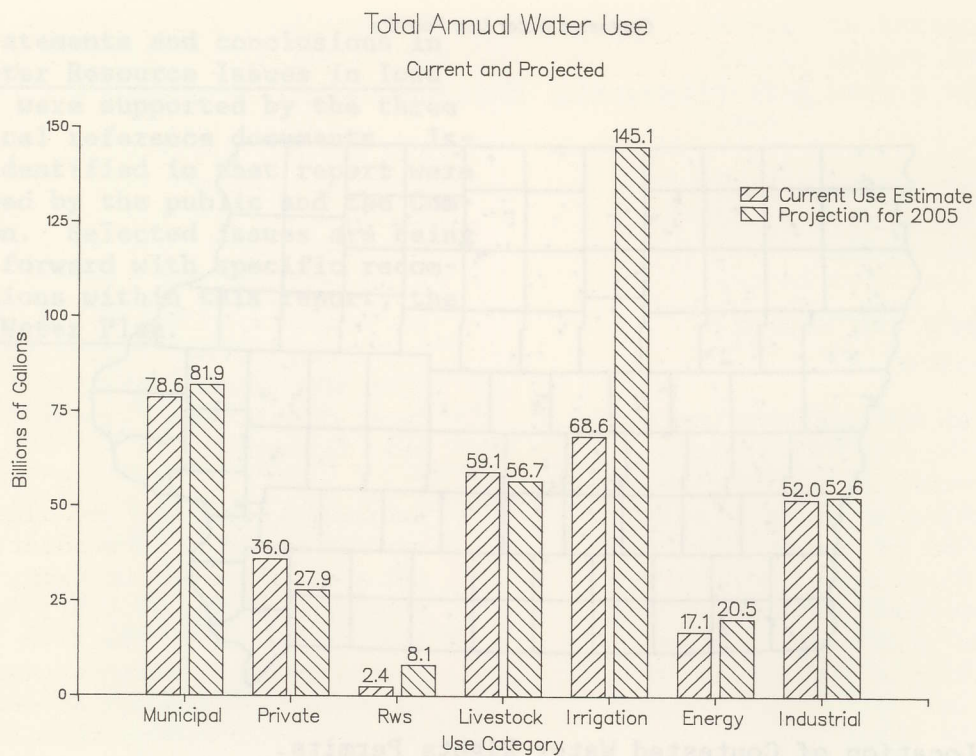


Figure 2. Estimated Water Use by the Seven User Groups in 1980 and 2005.

### Growth of Total Water Use Between 1980 and 2005

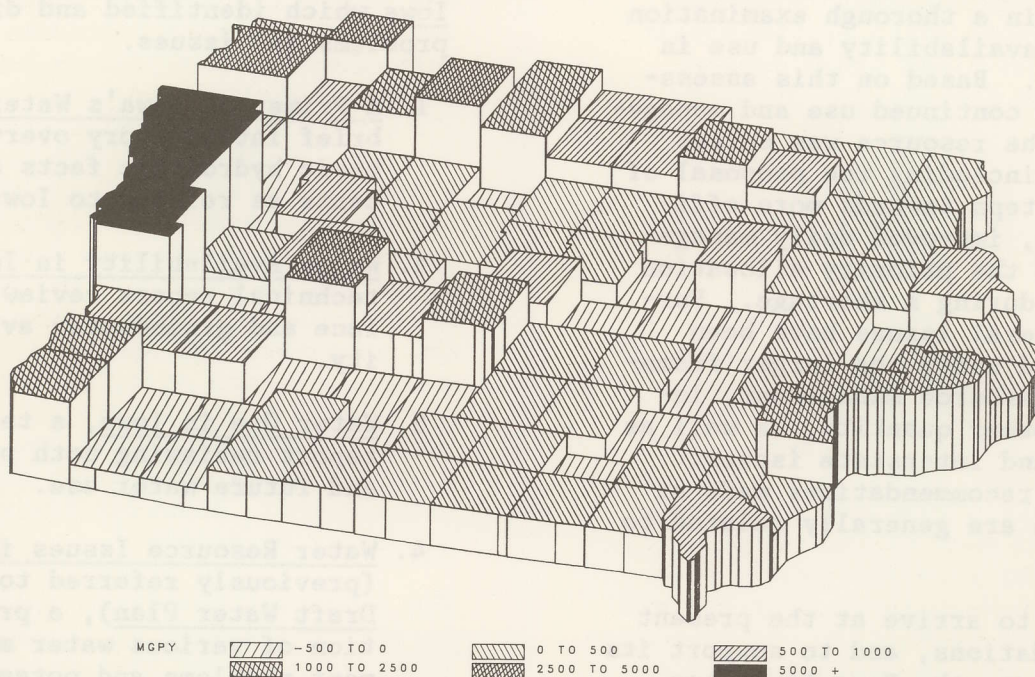


Figure 3. Projected Change in Total Water Use by County Between 1980 and 2005.

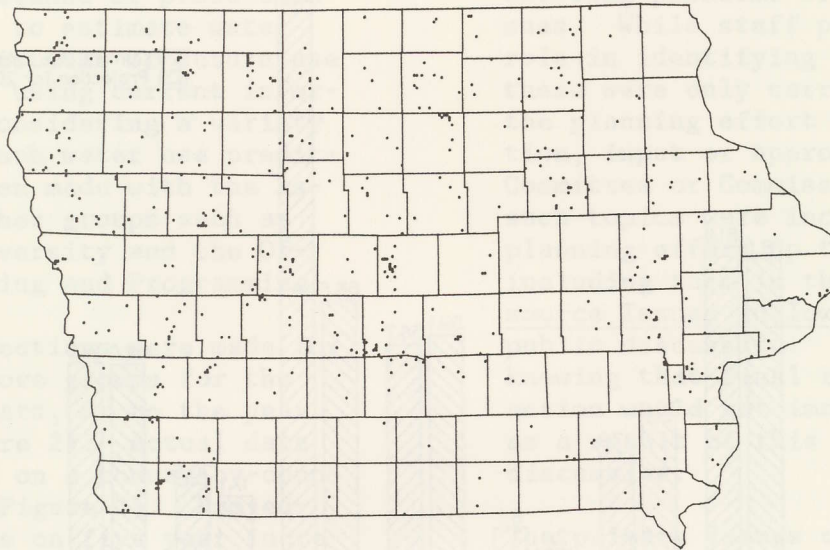


Figure 4. Location of Contested Water Rights Permits.

## 2.4 Results

The mandate from the Legislature resulted in a thorough examination of water availability and use in the state. Based on this assessment, the continued use and management of the resource was better defined, including the proposal of various steps towards more efficient use, improved daily management, and the priority allocation of water during a shortage. Further, several issues have been identified under the larger framework of resource management, including other quantity, as well as quality and interstate issues. Specific recommendations made at this time are generally related to quantity.

In order to arrive at the present recommendations, and to support its conclusions, the Department has prepared other reports prior to the

State Water Plan. These have included three technical reference documents, as well as the report entitled Water Resource Issues in Iowa which identified and discussed problems and issues.

1. A Primer on Iowa's Water, a brief introductory overview of basic hydrologic facts and concepts as related to Iowa.
2. Water Availability in Iowa, a technical report reviewing surface and groundwater availability.
3. Water Use in Iowa, a technical report reviewing both present and future water use.
4. Water Resource Issues in Iowa (previously referred to as The Draft Water Plan), a presentation of various water management problems and potential alternatives for future action.



The statements and conclusions in the Water Resource Issues in Iowa report were supported by the three technical reference documents. Issues identified in that report were reviewed by the public and the Commission. Selected issues are being taken forward with specific recommendations within this report, the State Water Plan.

## 3.0 Historic Background

### 3.1 History of Water Law in Iowa

Iowa's present water resources management (or regulatory) program does not so much reflect a high degree of planning as it does a conservative level of reaction to circumstance. Planning of and by itself has been rare. The resulting programs have generally been well implemented within the limits of the law and the ability to respond to federal and other legislative actions over the years.

The present water rights program is a reflection of actions taken in response to climatic events. Vagaries of weather have been the major impetus for most decisions and resulting actions. Flooding has been accompanied by subsequent decisions on flood plain management, flood control and drainage projects. Droughts have elicited action to either initiate or increase the level of regulation controlling water withdrawals, diversions, and storage.

On the average Iowa is fortunate to receive sufficient precipitation to produce bountiful crops, sustain streamflows, and adequately recharge groundwater aquifers. However, averages rarely exist and it has been the deviations which have resulted in most of the water availability problems in the past. The present regulatory programs are not designed to protect the average condition, but to provide for minimum acceptable conditions during droughts. (This may change in the future because increased demand,

decreased availability due to quality changes, and resulting competition may cause availability problems at a greater frequency than past droughts.)

Decisions on water availability and use in the past have been predicated on a recent drought. The droughts of the 1930's resulted in the formation of the Iowa State Planning Board which recommended in 1935 that, "It would seem wise to provide regulatory legislation which would give domestic supplies precedence over industrial and air conditioning utilization." However, no legislative action was taken.

The Iowa Natural Resources Council was formed in 1949 in response to extensive flooding problems. No authority was provided regarding water withdrawal and use.

Droughts in 1955 and 1956 were the third and fifth driest years in the state's history. The Legislature responded by forming an Iowa Study Committee on Water Rights and Drainage Laws. Among other items, the committee was directed to make a comprehensive study of "underground and surface waters...the present and prospective use of irrigation in farming operations, water rights, existing legislation and court decisions."

The committee submitted its report to the Legislature in December 1956. The report contained a summary description of Iowa's water resources and water problems, and proposed the establishment of a



permit system for allocating water. The legislation became law on May 16, 1957.

The 1957 legislation was the start of Iowa's water resource management program, and the 1957 legislation has stood as the cornerstone for all withdrawal and use regulatory actions since then. The 1957 legislation, often referred to as the Iowa Water Law, was pointed towards the control and regulation of large water users. At the time it was a bold move, and not without controversy, yet the bill passed the Legislature without a dissenting vote.

Major actions and concepts embodied in the bill included the following.

1. Waters in Iowa were declared the wealth of the people of the state. Chapter 455B reads, "Water occurring in any basin or any watercourse, or other natural body of water of the

state, is hereby declared to be public waters and public wealth of the people of the state of Iowa."

2. Permit system established. New users wishing to use more than 5,000 gallons per day were required to obtain a permit from the Natural Resources Council (see Figure 5).
3. Some uses nonregulated. Ordinary domestic and livestock, some municipal, industrial and border river users were not regulated by the statute.
4. Established protected stream flows. The statute provided that minimum stream flows be established to protect fish and wildlife, recreation, water quality, and other users. Iowa was a pioneering state in this respect and recognition of these needs continues to be a

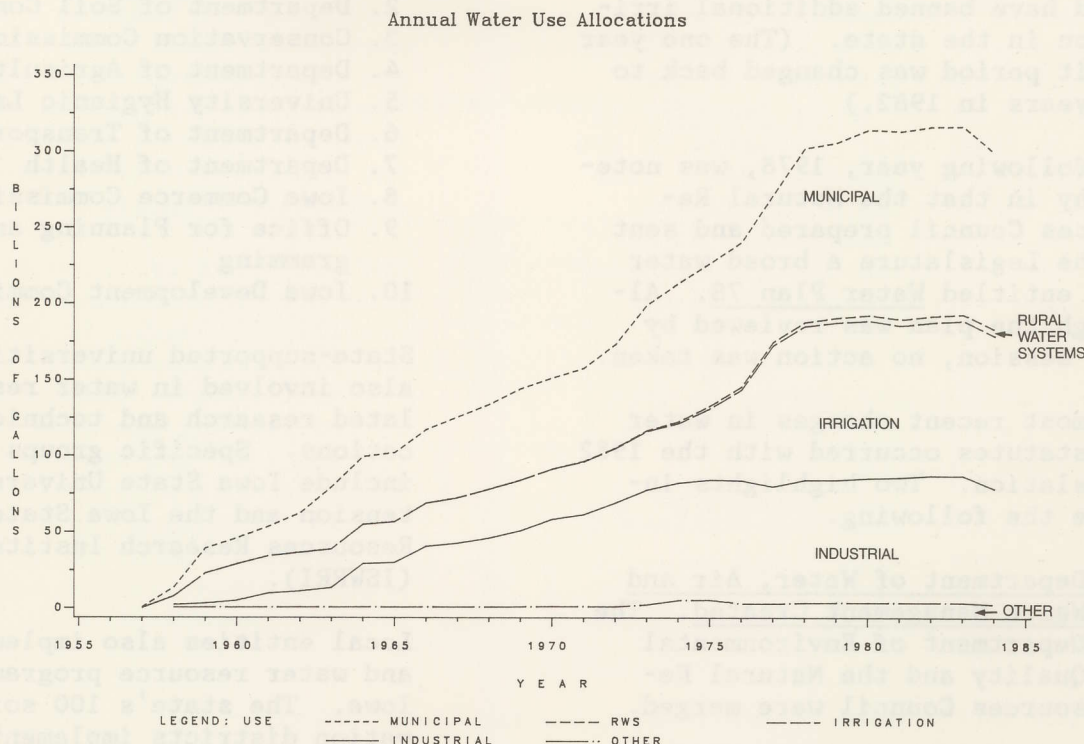


Figure 5. Growth in the Amount of Water Allocated by the Permit System from 1957 to the Present (Totals are Cumulative).



distinguishing mark of the Iowa Water Law.

5. Declared principles and policies of beneficial use. The Council was given the mandate to protect the public interest by applying the test of beneficial use to any new request for water. This was a more rigorous requirement than the previous riparian law requiring "reasonableness" of use.

No significant changes in the Iowa Water Law occurred until 1977, and then only in response to events surrounding a severe drought. Several minor amendments were made to the statute, most of which were directed towards streamlining the permit review process. The most significant amendment was one limiting new irrigation permits to one year rather than ten years like all other permits. This action was probably the result of legislation introduced that same year which would have banned additional irrigation in the state. (The one year permit period was changed back to ten years in 1982.)

The following year, 1978, was noteworthy in that the Natural Resources Council prepared and sent to the Legislature a broad water plan entitled Water Plan 78. Although the plan was reviewed by that session, no action was taken.

The most recent changes in water use statutes occurred with the 1982 legislation. Two highlights include the following.

1. Department of Water, Air and Waste Management Created. The Department of Environmental Quality and the Natural Resources Council were merged.
2. Water Plan Mandate. The present water plan was mandated in the statute as described above.

## 3.2 Present Programs

Water resources management is presently centered at the state level within the Department of Water, Air and Waste Management. Three broad areas are related to water resources.

1. Water rights
2. Water quality
3. Flood plain management

Iowa Code Chapter 455B provides both the authority and direction to the agency. Under this statute the Department has promulgated specific rules within the Iowa Administrative Code (Part 900) to guide the agency and public on a daily basis.

Several other state agencies are also involved with water resource decisions and information.

1. Iowa Geological Survey
2. Department of Soil Conservation
3. Conservation Commission
4. Department of Agriculture
5. University Hygienic Laboratory
6. Department of Transportation
7. Department of Health
8. Iowa Commerce Commission
9. Office for Planning and Programming
10. Iowa Development Commission

State-supported universities are also involved in water resource-related research and technical applications. Specific groups of note include Iowa State University Extension and the Iowa State Water Resources Research Institute (ISWRRI).

Local entities also implement soil and water resource programs in Iowa. The state's 100 soil conservation districts implement programs that have soil conservation as their primary objective, but also provide benefits to water quality.



At the river basin level resource management programs are being developed for implementation by the six conservancy districts of the state. Both of these groups receive technical and financial support from the state Department of Soil Conservation.

Federal level water resource activities in Iowa are centered in four agencies.

1. Army Corps of Engineers
2. USDI--Geological Survey
3. USDA--Soil Conservation Service
4. Environmental Protection Agency

## 4.0 Issues and Alternatives Examined

Input from the Commission, Technical Advisory Committee, the public and staff identified several water resource problems or issues. They addressed both the Legislature's assigned issue of priority allocation, as well as other existing problems or emerging issues that may need to be resolved in the future. All of these topics were divided into three broad areas; quantity, quality, and interstate.

In examining these problems and issues, the Department further identified potential alternatives for future consideration and action. These alternatives were neither all inclusive nor mutually exclusive. More than one alternative may be feasible (or necessary) to adequately cope with a problem. Both the issues and alternatives were presented in the Water Resource Issues in Iowa report released by the Commission in October, 1984. This report was the basis for further discussion with the public and interested groups at the nine public meetings conducted in November, 1984.

The Water Resource Issues in Iowa report serves several objectives, including:

1. Identifies existing problems or emerging issues
2. Proposes potential alternative actions
3. Stimulated discussion by public, staff and Commission
4. Serves as the technical and

policy basis for the State Water Plan report.

5. Can serve as a guide for future actions by the Department.

Based on public discussion and the input received from all parties, the staff and Commission determined what issues were to be further addressed and taken forward to the Legislature during the 1985 session. Chief among these topics was a priority allocation system; however, several other related items are also being carried forward as specific proposals. Most proposals being presented for action relate to water quantity--allocation, compensation for interference, conservation, etc. There are other proposals that deal with interstate and quality issues, including the requirement for permits for border river withdrawals and a proposal for development of a groundwater protection strategy.

The following sections briefly outline the major issues addressed in the Water Resource Issues in Iowa and alternatives presented for public discussion. The selected alternatives and specific proposals for adoption and implementation at this time are presented in Chapter 5. (Alternatives which are totally or partially embodied by the proposed legislation are marked with an asterisk (\*).)



## 4.1 Quantity Problems and Issues

### Priority Allocation

The major quantity issue presented in the Water Resource Issues in Iowa report was that of priority allocation. That earlier report presented several alternatives, ranging from a very structured system that would be implemented on a daily basis for all users (both regulated and non-regulated) to that of an unstructured system not prioritizing users. Several structured priority systems were presented, placing various user groups at different levels in the priority list. Additionally, other modifications of these two extremes were suggested, including charging for water (or increasing permit fees) to a priority allocation system only implemented during severe shortages. The latter alternative is that one proposed in Chapter 5.

### Groundwater Availability

A large percentage of the water withdrawn and used in Iowa originates from groundwater sources (see Figure 6). Its continued availability in the face of increasing demands and declining water levels was examined both in terms of statewide management strategies, as well as how to cope with local or regional changes in availability.

Alternatives suggested for a statewide management approach included:

1. Maintain the level of management at the status quo.
2. Expand research and monitoring.
3. Develop an overall groundwater policy.\*
4. Develop and implement local management programs.

Municipal Systems using Ground Water

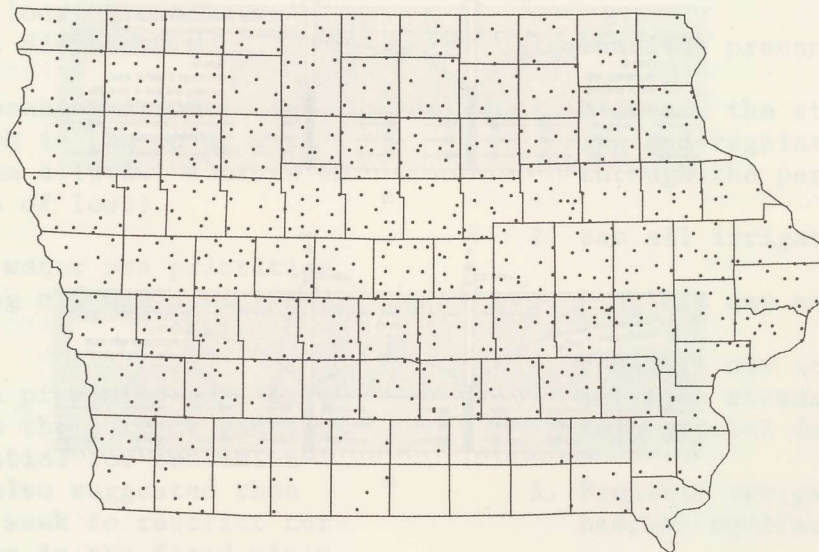


Figure 6. Location of Municipal Water Supplies Utilizing Groundwater Sources.

Options for ensuring continued local or regional availability from a specific groundwater source included the following.

1. Maintain the status quo with respect to control of use.\*
2. Establish "safe yield" levels and limit depletion.
3. Establish "safe yield" levels and prohibit depletion.

#### Groundwater Competition

Competition for groundwater was examined from two aspects; steps to prevent interference between two wells drawing from the same source, and the need for compensation when one user loses access due to interference (see Figure 7).

Alternatives examined to prevent or minimize the potential for interference included:

1. Maintain the status quo, including the present permit review program.\*
2. Prohibit new withdrawals in areas where interference is expected.
3. Require more detailed investigations by new large applications for withdrawals.
4. Condition new and existing permits to a certain withdrawal rate.
5. Set local groundwater depletion limits.

Alternatives for action when interference does occur included the following.

1. No action, maintain the status quo with no statutory provision for compensation.

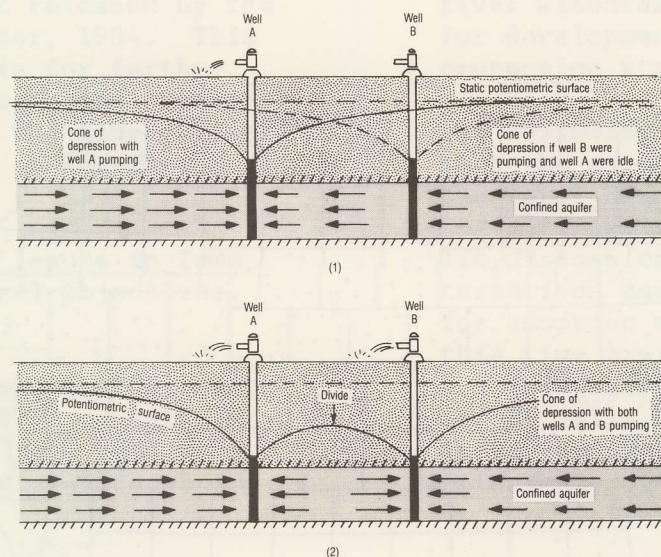


Figure 7. The Additive Effect of Two Wells Drawing Water From the Same Source, and the Potential for Well Interference as Water Levels Decline.



2. Provide complete compensation.
3. Provide for partial compensation.\*

#### Alluvial Water Management

A significant portion of the groundwater utilized in Iowa is withdrawn from alluvial aquifers. These are the shallow sand and gravel deposits along the state's rivers and streams. Because of the widespread use of this type of source and relationship with surface stream flow, management of this specific groundwater source was examined separately.

Alternatives for future management actions relating to alluvial aquifers included the following.

1. Maintain the level of management at the status quo.
2. Re-examine and adjust protected streamflow levels for adjacent streams.
3. Restrict or reduce water allocation from alluvial sources.
4. Establish local groundwater management districts.
5. Increase management of irrigation (which is the major withdrawal from alluvial sources in many parts of Iowa).
6. Establish water use priorities for cutting off use during a drought.\*

Because of the proximity of alluvial aquifers to the surface and thus the high potential for contamination, it was also suggested that the state may seek to restrict certain activities in the flood plain that may cause contamination of an alluvial aquifer.

#### Surface Water Availability

Surface water availability problems usually arise due to the variability of discharge in surface streams. The objective of many programs is to increase or maintain a certain flow in surface streams. The alternatives presented in the Water Resource Issues in Iowa report included:

1. Maintain the status quo, with resulting natural variations in streamflow, including flooding and cessation of flow.
2. Adjust protected flow levels.
3. Develop storage impoundments.

#### Irrigation

Irrigation has been the source of much discussion and is often the source of controversy and competition locally when it is introduced as a new large withdrawal among other existing uses. Therefore, close attention was given to possible alternative actions that may need to be taken at some future time to more closely manage irrigation in Iowa (see Figure 8).

Alternatives presented included:

1. Maintain the status quo, allowing and regulating irrigation through the permit process.\*
2. Ban all irrigation.
3. Prohibit any new irrigation.
4. Prohibit new irrigation along interior streams or from certain glacial deposits.
5. Prohibit irrigation from deep bedrock aquifers.
6. Encourage or require more efficient irrigation.\*

## Water & Acreage Allocated to Irrigation in Iowa

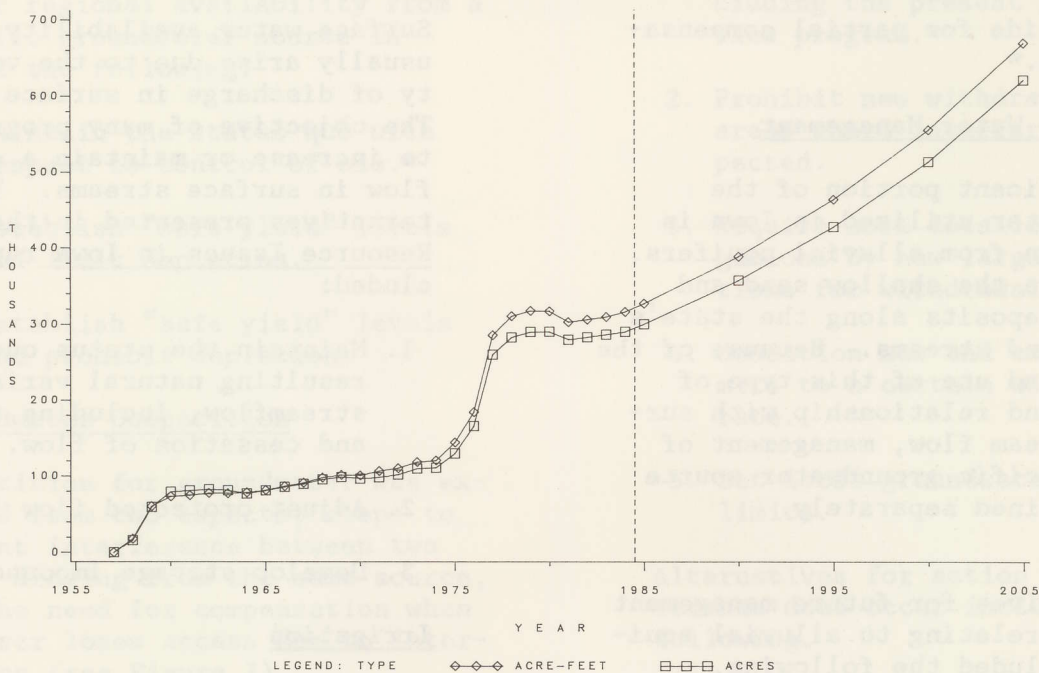


Figure 8. Amount of Water and Acreage Allocated to Irrigation, Historical and Projected.

7. Give preference to irrigation of non-traditional crops.\*

8. Establish local or regional management districts.

### Rural Water Systems

Regional rural water systems which have developed since 1970 serve an increasing number of rural Iowans. Water Resource Issues in Iowa examined the expansion of these systems and suggested two items for further consideration by the state.

1. Examine appropriate construction and operation standards.
2. Conduct more detailed studies of expansion and possible water sources, and potential conflicts with other withdrawals.

Rural water system funding was also described noting several funding options suggested by others.

### Water Conservation

While conservation was not presented as a single source solution to problems of competition and shortage, it was identified as a necessary feature in any overall management scheme. Specific options presented for discussion included:

1. Maintain the status quo.
2. Information and education programs.
3. Require conservation in new construction.
4. Require retrofitting with water conservation devices.
5. Change water rates or the rate structure.
6. Charge for water allocation permits based on amount of



water allocated.

7. Increase priority due to conservation.
8. Allow "gray water" systems.
9. Adopt state surcharge or tax on all regulated water use.

#### Drought Contingency Planning

The state's most serious and widespread water problems occur during periodic severe droughts. In an effort to either plan for or attempt to mitigate the effects of these droughts, several options were presented.

1. Maintain the status quo.
2. Prepare statewide emergency response for severe droughts.
3. Prepare a state-coordinated emergency response for local droughts or loss of supply.
4. Adopt a regulatory framework for allocating water during droughts.\*
5. Long-term planning and prevention measures.
6. Financial assistance to communities and others plagued by problems.

#### Hydropower

Hydropower was once a major provider of mechanical and electrical power in the state. Although its importance has decreased, recent interest may result in the addition of several small generating facilities at existing impoundments or low-head dams.

Many of the alternatives presented dealt with either updating or

streamlining the regulatory process, and included the following.

1. Maintain the present statutes and programs.
2. Eliminate all state permits.
3. Eliminate Chapter 469 of the Iowa Code.
4. Eliminate Chapter 109 of the Iowa Code.
5. Combine Chapters 469, 109 and 111 into 445B.
6. Change priority where water is stored.

#### Water Resources Research and Data Management

Many needs have been identified by the water planning effort that relate to what is known about the quantity and quality of the state's water resources. Additionally, other needs were identified that related to how the state collects, stores and utilizes the information that is available.

Specific information and research needs identified include:

1. Develop a better understanding of groundwater and surface water relationships.
2. Locate new sources of water.
3. Improve overall knowledge and ability to manage groundwater.
4. Collect more comprehensive water use data.
5. Additional groundwater level, hydraulic and quality data.
6. Determine impact of contaminants.

7. Identify extent of contaminant sources and magnitude of problem.

8. Determine factors affecting contaminant movement.

9. Determine alternative methods for managing contaminants.

Data management needs identified include:

1. Centralize water resources data and computer support.

2. Increase water resources data interface with federal agencies.

3. Increase universities' roles.

2. Sinkholes

- Reduce surface runoff into sinkholes

- Reduce level of contaminants in runoff entering sinkholes

- Information and education

3. Agricultural drainage wells (ADW)

- Prohibit ADW restoration

- Prohibit surface runoff into ADW's

- Seal all ADW's

4. Land disposal of wastes

- More restrictive control

- Seek reduction in amount of waste to be disposed

- Locate old disposal sites and seek remedial actions

5. Product storage

- Develop design or operational standards

6. Well construction and abandonment

- Stricter enforcement of non-public well standards

- Certification of well drillers\*

- Require permits for all new wells

- Register all existing wells

## 4.2 Quality Problems and Issues

### Groundwater Protection Issues

Groundwater quality protection was addressed in terms of several potential sources of contamination that occur in the state. These sources are listed below along with selected alternative actions that were proposed in the Water Resource Issues in Iowa report.

1. Leaching of nitrates and pesticides

- More efficient use of agricultural fertilizers and chemicals

- Limiting fertilizer application rates and prohibiting most soluble pesticides

- Continued and intensified research

### Surface Water Quality

Many existing programs managed by the Department, the Department of Soil Conservation and other groups



address surface water quality. The Water Resource Issues in Iowa report examined these programs in four areas and suggested alternatives for possible action. These four areas and selected alternatives are listed below.

1. Municipal point source discharges

- Extend federal construction grants program
- Provide additional state assistance
- Allow alternative treatment methods

2. Industrial point source discharges

- Require recycling
- Prohibit discharge of synthetic toxic compounds
- Charge industries based on the pollutants discharged

3. Agricultural point source discharges

- Develop alternative programs for small operators
- Require licensing and inspection of large operations

4. Agricultural nonpoint discharges

- Target specific geographic areas for treatment
- Provide incentives for cross-compliance
- Establish runoff limits
- Increase funding for present programs

## 4.3 Interstate Issues

Bordered by the Mississippi and Missouri Rivers, Iowa enjoys a favorable geographic and economic position by having access to these major water resources. These rivers serve the state for water supply, transportation, recreation, and fish and wildlife purposes.

The Water Resource Issues in Iowa report examined the two rivers separately, and identified several issues and potential alternative actions.

### Mississippi River

1. Master Plan implementation

2. Water supply and use

- Intrastate protection strategy\*
- Interstate compact

3. Navigation

4. Barge fleetings

5. Fish and wildlife, recreation

### Missouri River

1. Water availability and use, interstate competition

- Litigation
- Equitable apportionment by the Supreme Court
- Congressional action

- Interstate compacts

2. Navigation

3. Fish and wildlife, recreation

- Mitigate habitat loss

## 5.0 Recommendations and Proposed Implementation

### 5.1 Overview

In response to the legislative mandate the Department and Commission have prepared the Water Plan embodying the characteristics as described in the Iowa Code, Chapter 455B. This plan has examined the waters of the state as a resource having certain economic, social, and aesthetic values necessary for the continued well-being of the state. A primary objective of the present plan has been to examine how the state's water shall continue to be used by both regulated (i.e., large users withdrawing more than 25,000 gpd) and non-regulated users on a daily basis, as well as during times, or in places of shortage (i.e., drought or local competition). The primary question to be answered has been, "How do we share the water during a shortage, or who should have priority?"

A necessary part of the planning effort has been to examine other issues associated with the management of the state's waters. The key issue in this regard is that of water quality, including its present condition, and what steps may need to be taken to offset any degradation or other changes that may be occurring either as a result of water use or other actions. Interstate issues have also been examined. Both of these are ultimately related to, and can affect, availability.

As a result of this planning effort the Commission is proposing several specific actions by the Legislature

to ensure not only the continued availability of the water resources of the state, but also wise daily management. These proposals are not based solely on technical data or the need to expand administrative duties, but include and consider the input of the public as represented by individuals and user groups representing broad constituencies.

Specific proposals include the following.

1. The need and requirement for water conservation.
2. A priority allocation scheme to be implemented in times of shortage or in areas of competition.
3. A mechanism for defining shortage and competition, and thus a trigger for implementing the allocation scheme.
4. A requirement that small groundwater users be compensated if their access to water is lost due to large withdrawals.
5. Changes in the definition of beneficial use and the daily administration of water rights law.
6. The development of a groundwater protection strategy.

#### Overall Policy

The proposals presented above (and explained in later sections) embody



a basic policy of the Department and Commission. This policy is defined by the following statements.

1. Waters of the state are to be used for the greatest benefit to the most people, but also wisely used, with quality preserved and protected for future generations as codified in Section 455B.262.
2. Before any individual or group should have to go without use of water, all other users should be required to conserve.
3. Water for domestic use and for the direct protection of public health and welfare shall always receive the highest priority.
4. Any scheme of priority allocation should be equitably developed, and implemented only when and where necessary.
5. Existing beneficial uses of water should be recognized.
6. Any contracts entered into by the state should remain unchanged.
7. All large withdrawals of water should be included in the water rights and permit program.
8. Small non-regulated groundwater users should be provided a higher degree of protection than what presently exists in the event of well interference.
9. Utilization of some water sources may have to be restricted to protect the public health and welfare.
10. The state should continue to seek and protect minimum streamflow levels for fish and wildlife, recreation, downstream users and to maintain

water quality.

11. The state should take steps now to preserve and protect Iowa's groundwater resources.

## 5.2 Recommendations for Managing Availability

### 5.2.1 Conservation

In preparing the Water Plan, a common theme was expressed in the question, "How do we share the water during a shortage, or who has priority?" More simply stated, this question raised the issue that we really have two options in such situations: We can either share the shortage, or someone will go without. The approach being proposed now is that we embrace the former action through conservation in an attempt to avoid the latter. However, it is also realistic to expect that during extreme situations one or more types of users may need to have their use curtailed.

As a result of public input and discussion, the following points were made regarding conservation and the implementation of any priority allocation scheme.

1. Before any one user or group of users is required to halt the withdrawal and use of water, all other users should be required to take all reasonable and proper steps to reduce the use and consumption of water.
2. No water priority allocation scheme should be adopted without also authorizing the

Department to require water users to adopt water conservation measures as an on-going part of the users' withdrawal and use of water.

3. If allowed the authority to require conservation steps, the Department should implement a priority allocation plan (which may halt water use by one or more users) only after requiring all other conservation measures to be employed by all types of users.

Therefore, it is recommended that the Department be authorized and required to have water users employ water conservation practices in order to avoid having any group go without water. Thus, water conservation would be used in an effort to delay and possibly avoid implementation of a priority allocation plan.

Conservation can be employed both on a daily basis during normal water availability situations, as well as on an emergency basis due to drought or competition for a supply. This is illustrated in Table 3, and explained in more detail below.

1. Daily Conservation. New or renewed permits for water withdrawal would be required to state what ordinary water conservation measures are or can be taken by the user in an effort to more efficiently utilize the water. For many users this is already occurring due to other reasons, one of which is economics. It would be expected that one or more of these stated conservation measures would be implemented over the life of the permit.
2. Emergency Conservation. During an impending drought, extreme

Table 3. Level of Water Shortage Related to Conservation Measures and the Priority Allocation System.

Hydrologic Condition	Public Action	Department Action	User Action
1. Normal conditions No shortage or competition	---	Follow principles and policies of beneficial use	Routine conservation
2. Impending shortage	Local petition by 25 or more people, city or county	Investigations to determine scope of problem Require emergency conservation measures as necessary	Initiate emergency conservation
3. Severe shortage or (Emergency conservation not sufficient to avoid shortfalls)	a. Governor's declaration or Department's determination b. Office of Disaster Services action	Conduct investigation, require emergency conservation, and implement priority allocation system as necessary	Emergency conservation Stop use of water by some users as per the allocation plan
4. Easing of severe shortage	---	Review continued need of priority system being implemented, possibly require emergency conservation only	Resume some uses earlier restricted



competition or other water shortage situation, regulated users would be required to implement emergency water conservation measures. Such measures would also be stated on any new or renewed permits.

The greatest emphasis on conservation would be on consumptive uses. These are uses that withdraw the water from a source without returning it to the source or otherwise making it available for further use. Consumptive uses include irrigation, lawn watering, evaporative cooling, and industrial processes in which water is lost as part of the product.

Ordinary daily conservation measures would not attempt to restrict commerce or other beneficial non-wasteful uses of water (see Section 455B.261). Generally, emergency conservation measures would give users full access to water at the level necessary to maintain minimum operations or service. Emergency conservation would not require closing of industrial facilities, power plants or halting of irrigation, but it may require ceasing certain non-vital water-consuming operations of such facilities.

#### Proposed Statutory Changes

All proposed statutory changes indicated here and in following sections are limited to Chapter 455B of the Iowa Code.

Several changes are proposed which would require conservation and employ it as a means to avoid the implementation of the priority allocation scheme. These are outlined below.

1. Iowa Code section 455B.262(2). Add language that would ensure conservation rather than encouraging it as is the present

reading.

2. Iowa Code section 455B.262(3). Same as 455B.262(2).
3. Iowa Code section 455B.265. Amend the section to include that conservation is ensured within the review and granting of new and renewed permits. Additionally, require that the same permits contain provisions outlining what conservation steps would be taken in an emergency to avoid implementation of the priority scheme.
4. Iowa Code section 455B.266. Amend the section to include the use of emergency conservation before the priority allocation scheme is used.
5. Iowa Code section 455B.271(2). Add language authorizing the Department to require conservation measures.

### **5.2.2 Priority Allocation System**

In developing the Water Plan the Commission considered a wide range of priority allocation systems. From a broad sense these ranged from a strictly structured allocation system which would be implemented on a day-to-day basis in permitting new or existing regulated users, to that of a clearer definition of beneficial use than what now appears in the statute. Input in developing the proposed priority allocation scheme and means of implementation was received from staff, existing users, the public, the Commission's Water Plan committee, and the Water Plan Technical Advisory Committee.



As a result of all efforts and input received to date, the Commission recommends the adoption of a priority allocation plan that would clearly define user groups, and that such a plan only be implemented when and where needed rather than as part of the daily on-going operations of the Department. Such a priority allocation system would probably only be implemented during extreme or severe droughts (similar to those Iowa experienced in the 1930's, late 1950's or late 1970's), or in local areas due to high utilization and competition for water. The principles and policies of beneficial use as now defined in the statute should continue to be applied on a daily basis during those times of sufficient water availability.

Such a structured system would only be applied and implemented as warranted under those conditions defined in the next section which would serve as a triggering mechanism. Further, water conservation by all users (as noted above) should first be sought in an attempt to delay the time at which the priority allocation system is applied.

The recommended priority allocation system is as follows, with the highest priority being listed first.

1. Self-Supplied Domestic. Highest priority would be given to those small, generally non-regulated self-supplied withdrawals (usually serving rural residences and farmsteads). These have a limited ability to seek other water sources due to geographic and economic constraints. Therefore, these users should be provided the highest priority in the event that withdrawals by any group would be curtailed or re-

stricted.

2. Domestic Fraction of Regional Rural Water and Municipal Systems. Domestic use of water for the preservation of human life and welfare is recognized as a high priority, and should be established as such as a fraction of that total water distributed by public water systems. This would include water used for human consumption and sanitation, and for the maintenance of public safety (e.g., fire protection).
3. Livestock. Water for livestock is established as the next priority after domestic use in recognition of the need to preserve life for both humane and economic reasons.
4. Power. Water used incidental to the generation of electrical power, either for process water (e.g., boiler makeup, wastewater treatment) or for cooling purposes.
5. Industrial. Water used by commercial and industrial facilities incidental to providing a product or service. This includes both self-supplied as well as those users obtaining water from public supplies.
6. Non-Traditional Irrigation. Use of water for irrigation has been split into two classes. Water used for those non-traditional crops (i.e., fruit, vegetables and other recently introduced crops) are assigned a higher priority than crops traditionally grown in Iowa. This has been done in an effort to, a) support the Governor's Agricultural Diversification Task Force efforts at seeking new crops for Iowa, and b) to recognize the higher water



requirements of many of those crops which may be grown other than corn and soybeans.

7. Irrigation of Traditional Iowa Crops. These include beans, corn, alfalfa and other crops which have traditionally been raised by Iowa farmers.
8. Recreation and Leisure. This would include that water often used but not necessary for the preservation of life, the general welfare or the state's economic base. These include such uses as lawn and golf course watering, car washing, and other incidental or frivolous uses of water that can easily be curtailed.
9. Out of State Export. Waters are recognized as an item of interstate commerce and the state will not halt such movement. However, intrastate uses are recognized as being superior uses of water above those which would result in the movement of water out of Iowa.

Implementation of the above priority allocation scheme would result in the halting of withdrawals by those users at the bottom of the list. As conditions warranted, additional user groups higher on the list would also be restricted. The mechanism which would be used to decide whether or not to implement the priority system is described in the following section.

#### Proposed Statutory Changes

Iowa Code section 455B.266 would be re-written to embody the above priority allocation system. As noted above (see Water Conservation), section 455B.265 would also be re-written, thus striking that language referring to "property owners with prior or superior rights".

### **5.2.3 Definition of Shortages and Triggering Mechanism**

During most times and in most places in Iowa there is adequate water available for all users. Problems generally only occur during extreme or severe droughts or in local situations due to a high level of development of the available water supply by several users. Therefore, any priority allocation scheme may be most practical when implemented and applied only when or where necessary to deal with a specific problem. A statutory change to alter the daily application of existing water rights law may not be necessary in this regard. This is exemplified by the minimal amount of case law related to the present statute, and the relatively infrequent conflicts in the absence of drought or local intense development.

Based on the above findings, application of the priority allocation scheme may be best employed as part of a drought contingency plan or as other local situations warrant. Therefore, it is recommended that while a priority allocation scheme be developed and adopted, that the statute also embody a triggering mechanism for implementation of the plan. Such a mechanism would define under what conditions implementation of the priority system might be considered, and require expeditious investigations by the Department to determine the necessity of implementing the system.

The triggering mechanism would be a two-step process. It would first identify under what conditions and who would initiate consideration of



the priority scheme. Second, it would require that a review of the available facts pertaining to the shortage be conducted prior to actual application of the priority scheme. Application of the scheme would involve contacting all affected parties either directly or through the public media. The triggering mechanism would not allow use of the priority system until all routine and emergency conservation measures had been employed.

The situations and mechanisms for initiating the implementation of the priority allocation scheme identified above would be as follows and as described in Table 3.

#### 1. Local Petition

- a. Individuals. A group of 25 or more individuals could petition the Department to implement the priority allocation system on a local basis due to increasing levels of water utilization and potential competition, conflict and well interference.
- b. County or Municipality. These governmental bodies could, similar to a group of individuals, petition the Department to implement the priority allocation system on a local basis for the same reasons as cited above.

It should be noted that this triggering mechanism for implementing the allocation scheme locally as a result of petition would probably be the result of increasing utilization of a limited or locally significant water source. During the investigation phase and prior to using the allocation scheme if deemed necessary, notice would

be provided, thus allowing the opportunity for public hearings and formal comment. Once in place as a result of petition, it would be expected that the allocation scheme remain in effect for a period of time as determined by the Department, the thought being that water use (and hence competition) will not immediately decline.

#### 2. Drought

- a. Governor's Declaration. The Governor can declare by Executive Order a state of emergency (such as during a severe drought) implementing the priority allocation scheme on a temporary basis. This could be applied statewide (as in 1977) or within a region of the state severely affected by a drought. Such a declaration may not require an initial investigation by the Department as to the applicability of implementing the priority allocation scheme.
- b. Drought Index. Even in the absence of, or prior to a Governor's declaration, the Department could implement the priority allocation scheme based on a drought index. The drought severity indices (crop and hydrological) developed by NOAA and computed weekly by NOAA during the crop season, and the crop moisture availability computed in the top five feet of soil (developed at Iowa State University) or the Palmer index, could be used by the Department in deciding whether or not to implement (or recommend implementation) of the priority system. (Note: These indices could also be used



as a means for encouraging or requiring either daily or emergency conservation, respectively, by irrigation. Such irrigation scheduling is routinely done in Nebraska and other states.)

### 3. Disaster

#### a. Governor's Declaration.

Similar to #2 above, the Governor could declare a local and short-term emergency due to disaster, locally severe drought, or loss of water supply.

#### b. Agency Emergency Response.

The Department, working in conjunction with the Office of Disaster Services, could implement the priority allocation scheme in response to a local crisis.

It is anticipated that in the situation of a disaster the Department may not go through a lengthy and detailed investigatory phase before implementing the priority scheme. Further, the emergency conservation phase may also be precluded during such events. Disaster events which may fall into this category would include the failure of a municipal treatment system, failure of a water supply impoundment, or freeze up of a surface water intake.

Once the priority allocation system is in effect within the state or specific locality, it is not expected to remain in place indefinitely. In the situation of a drought or local disaster (#2 and #3 above) it is expected that as soon as climatological or other conditions warrant, the priority allocation scheme would be lifted. However, in areas of local competition (#1 above) the scheme may be

in place a much longer period. In all instances when and where it is applied, the Department would review at least on a quarterly basis the continued justification of the system.

Although the priority allocation scheme may be in effect, curtailment of water use for the top three categories (self-supplied, public domestic and livestock) and water stored by contract with the state would only occur with an emergency proclamation by the governor.

### Proposed Statutory Changes

The following changes in the statute are proposed.

#### 1. Iowa Code section 455B.266.

Amend to embody the basic mechanisms delineated above whereby the priority allocation system could be applied due to petition, drought or disaster.

#### 2. Iowa Code section 455B.271(3).

Amend to account for the possible implementation of the priority allocation system.

## 5.2.4 Better Defining Beneficial Use

In preparing the Water Plan and in examining alternatives for responding to the mandate to develop a priority allocation system, the Department's on-going water rights regulatory and permitting programs were closely examined. One of the options to a structured priority system would have been to better define the principles and policies of beneficial use. The premise of this type of action is that it would, a) afford a clearer defini-



tion of the rights and responsibilities of both the Department and the permittee (or applicant), and b) allow better overall management of the waters in the state.

Beneficial use is presently broadly defined in the statute. On a daily basis as part of the water use permit program, an applicant must, a) prove that adequate water is available, and b) that the water will be put to a beneficial use. Beneficial use is defined as any reasonable and non-wasteful use that provides some economic, social or other benefit to Iowa.

The recommendation with regard to a priority allocation system is to only have the system implemented during times of drought or in places of competition. Such an allocation system would not be implemented on a day-to-day basis by the Department, and hence not affect how "beneficial use" as now defined is implemented. Therefore, it is recommended that certain concepts of better defining the principles and policies beneficial use be adopted by statute in an attempt to facilitate better daily management of water rights by the Department. Specific recommendations are listed below.

#### "Grandfathered" Users Eliminated.

The original 1957 Iowa Water Law required all new users greater than 5,000 gpd to obtain a permit. In 1982 this threshold level was raised to 25,000 gpd. Since 1957 the law has exempted from regulation (and the need for a permit) certain municipal and industrial self-supplied users until such time as they establish new withdrawal points or increase their use by three percent. As the Department does not presently have knowledge of these uses, no mechanism is available to know if in fact such

uses have increased since the 1957 level. However, historical use trends of permitted users show use increasing more than three percent during the period.

Presently less than one-half of the state's 800+ incorporated municipalities have a water withdrawal permit. An unknown number of self-supplied industrial users do not have a permit. Because of this lack of knowledge, implementation of ordinary or emergency conservation measures, or even the priority allocation system, would be difficult.

Therefore, it is recommended that all users withdrawing more than 25,000 gpd would be required to obtain a permit from the Department. Except in very unusual cases where another user is directly affected by the present "grandfathered" use, these existing large (> 25,000 gpd) users would be granted a permit without condition.

#### Proposed Statutory Changes

The following changes in the statute are proposed.

1. Iowa Code section 455B.261(8).  
Amend to delete certain self-supplied industrial and municipal users.
2. Iowa Code section 455B.268(1).  
Amend to delete reference to exempted municipal or other uses.

#### Regulate Interstate Withdrawals

Iowa does not presently regulate (or require permits for) the withdrawal of water from border rivers. In the absence of such regulation and knowledge of the amount of water withdrawn, the state has minimal authority to determine or define the level of such withdrawals



in the event of any interstate compact, equitable apportionment, or competition.

This lack of knowledge and management on the part of Iowa was recently illustrated by Iowa's challenging South Dakota's proposed sale of Missouri River water to Energy Transportation Systems, Inc. (ETSI). Because Iowa did not actively manage (i.e., permit) Missouri River withdrawals the state had a more difficult task to determine the level of use or prove the level of benefit the state derived from such use. Iowa would be in a better position to negotiate the terms of an interstate compact with other basin states if the present and projected levels of Missouri River use could be more accurately stated.

Therefore, it is recommended that the state require present non-regulated large users (>25,000 gpd) withdrawing water from border rivers to obtain a permit from the Department. This regulation would strengthen the state's position in managing these waters in the face of increasing interstate competition.

#### Proposed Statutory Changes

The following changes in the statute are proposed.

1. Iowa Code section 455B.261(8).  
Amend to delete reference to border river withdrawals.
2. Iowa Code section 455B.268(1).  
Amend to delete reference to other exempted uses.

#### Prior Use Considered

One of the strong concerns expressed by the Technical Advisory Committee, the public and several groups was the potential that ex-

isting permitted users might not have permits renewed in favor of new competing users. Permits are now issued for a period of ten years, with renewal required upon expiration. The statute presently does not assign any special rights to existing large users in this regard. Iowa does not follow the Western water law tenet of "first in time, first in right", which assigns ownership of water rights to the first user of the water. Adoption of this concept into law would be contrary to the basis of the Iowa Water Law which assigns ownership of the water to all the people.

However, existing users of water, both regulated and non-regulated, should be assigned some degree of priority over new competing users. This is especially important as utilization of a locally significant source increases towards a level of maximum safe development. Consideration of this prior use should be embraced by the daily implementation of the water rights law, and thus recognized in the statute.

Therefore, it is recommended that prior use should be given reasonable consideration, in both new permits and renewals, as to the private and public economic investment and return afforded by continued use of the water, and the benefits provided to society.

#### Proposed Statutory Changes

Iowa Code section 455B.264(2) should be amended to include wording that would give recognition to prior users of water in the review and granting of permits on a routine basis.

#### Existing Contracts Recognized

The state, and more specifically



the Commission, has entered into contracts with both federal agencies (Corps of Engineers) and private parties to assure the storage, release or continued supply of water to certain users. This authority is assigned to the Commission in Iowa Code section 455B.263.

To date specific contracts have been made to assign a certain amount of water storage in Saylorville Lake, a federal reservoir, to be held and released during low flow conditions to the City of Des Moines and Iowa Southern Utilities. Other similar contracts may be developed as necessary in the future with other parties.

There has been concern expressed regarding any changes in the present statute that would either modify or void such contracts. Specific concerns have been with regard to the priority allocation scheme described earlier. The priority allocation scheme does not necessarily apply to waters stored in accordance with contracts entered into pursuant to section 455B.263 unless these contracts provide to the contrary.

To avoid any potential conflict, change or abrogation of these contracts, the Commission recommends that additional language be added to the statute recognizing any existing contracts entered into by the Commission. This is done in view of the previous action of the Department wherein water users were encouraged to seek alternate, non-traditional water supplies for use in times of drought. This resulted in the above contracts. Therefore, it is recommended that the commitments made through these contracts be maintained and that language be added to the statute to this effect.

## Proposed Statutory Changes

Iowa Code section 455B.264(2) should have language added that ensures that existing or new contracts are maintained in the daily implementation of the statute. Additionally, section 455B.266 should only allow restrictions of such contracted water in the event of an emergency proclamation by the governor.

## Protected Sources Recognized

The Commission recognizes that in certain times and places a new or continued withdrawal of water from a source may not be in the best interests of the state as defined by the policies and principles of beneficial use. Situations may arise wherein such a withdrawal may pose a direct threat to public health and welfare. This may include the immediate or future availability of the source in terms of both quantity and quality. In such cases the Department should have the authority to either deny, prevent or otherwise condition withdrawals from such a source to protect the public welfare.

Instances where such an authority would be required, and as presently not clearly defined by the statute, include the following.

### 1. Water Quality

- a. Where groundwaters (and any related surface waters) may be threatened by the further movement of a contaminant introduced by a spill, land-fill, or improper waste disposal.
- b. Where surface water quality cannot be maintained within a stream segment, or other surface water, and where further withdrawals may pose



a potential health or other hazard to public welfare.

## 2. Water Availability

- a. Where further withdrawals from a groundwater source will result in depletion of an aquifer consequently reducing future availability either in terms of acceptable water levels or total water available.
- b. Where additional or continued surface withdrawals will restrict availability to other downstream withdrawals that are necessary to maintain public health and welfare.

It should be noted that this concept of protecting specific sources should not be confused with protected streamflow levels. The former relates solely to the maintenance of public health and welfare, while the latter has been earlier established to maintain a specific level of discharge in selected streams for instream uses such as fish and wildlife, recreation, or other beneficial uses.

### Proposed Statutory Changes

The following statutory changes are proposed.

1. Iowa Code section 455B.262(3). Language should be added which allows the protection of sources as described above.
2. Iowa Code section 455B.267(4). A new subsection should be added to allow the protection of sources to ensure the public health and welfare.

No changes are proposed in those sections of the statute that address protected streamflow levels (discharges).

## 5.2.5 Well Interference and Compensation

The effect of groundwater withdrawal upon groundwater levels and other users cannot always be accurately predicted or necessarily avoided. This is due to the following.

1. The complexity of groundwater systems (especially on the local level) makes prediction of withdrawal effects difficult.
2. Many existing wells, particularly older private wells, may only tap the uppermost section of the groundwater layer, or may be poorly maintained and subject to occasional depletion even in the absence of other withdrawals.
3. An attempt to totally assure the continuation of water accessibility to one user at the expense of not providing any water to another new large user may not necessarily meet the goal of beneficial use for the benefit of the greatest number of people.

Consequently, there have been instances in the past wherein one user has lost access to water due to declining water levels created by another withdrawal. Most frequently the former user is a small non-regulated user, while the latter withdrawal is a large (and often new) regulated user. At the present time the user having lost access to the water has the alternatives of taking no action or seeking restitution through litigation.



Therefore, it is recommended that the state adopt by statute a well interference compensation provision which would seek to provide a greater degree of protection to the small non-regulated user. This statute would be modeled after a similar law successfully implemented in Minnesota, although modified as appropriate given the actual experiences in that state.

The basic tenets of such a statute would be as follows.

1. Protection would be given to small non-regulated groundwater users such that in the event of loss of access to water by a larger regulated user (well interference), some means of compensation to assure continued use of the water would be provided.
2. No similar protection would be afforded large regulated users from other regulated users.
3. The Department and Commission would seek to minimize the need for use of the statutory provisions by continuing the present permit review and public hearing process.
4. When well interference is predicted (as in the case of a new application) or does occur (where a regulated use presently occurs), both the regulated user (or applicant) and the affected user (complainant) would be afforded certain rights as to the review of all relevant facts and given necessary time to file complaints or seek review.
5. The well compensation statute would not seek total compensation in cases where the existing non-regulated well was routinely subject to failure,

poorly maintained or constructed, provided contaminated water, or otherwise did not meet recognized minimum levels of availability.

6. The statute would require both parties to first attempt to negotiate a settlement between themselves without the direct involvement of the Commission or the Executive Director.
7. The Commission or Executive Director would only become involved in administering the statute if the two parties failed to negotiate a settlement. If this were to become necessary the Commission or Director would review the merits of the case and previous negotiations between the parties and decide;
  - a. The permittee or applicant had made a reasonable compensation offer and thus approve the permit or allow continued withdrawal, or
  - b. The permittee or applicant had not made a reasonable offer, and thus the permit could be denied, or cancelled.

#### Proposed Statutory Changes

A new section should be added to the Iowa Code, section 455B.281, which embodies the basic protection and mechanisms for allowing the compensation of small non-regulated users in the event of well interference which results in the loss of reasonable access to groundwater.



### 5.3 Recommendations for Protecting Quality

In preparing the Water Plan the Department and Commission have sought to examine water quality as it relates to allocation and the water rights permit system. This has included an examination of water quality and the various potential pollution sources, present programs of the Department and other state and federal agencies, and the need for additional actions where programs do not exist.

The most complex issue relating to continued availability of quality water to Iowans is that of groundwater quality. This fact was borne out by the numerous meetings conducted with various groups and the public during preparation of the plan, and particularly during the nine public meetings conducted in November 1984. Quality was more often the topic of discussion than quantity, and most of the concern was related to groundwater quality. While quality issues were given less attention in the Water Resource Issues in Iowa report (previously called the Draft Water Plan) than quantity issues in response to the legislative mandate, water quality is in fact more often the perceived, if not real problem than is quantity.

Public opinion is supported by data gathered by the Department and other agencies. Groundwater quality, particularly in shallow groundwater sources, is being degraded. Elevated concentrations of many compounds, including some that may pose a potential health risk, have been detected in both public and private water supplies throughout the state.

At the national level, both Con-

gress and the Environmental Protection Agency (EPA) have sought more action in the area of groundwater protection. Congress directed the General Accounting Office to examine state and federal efforts in this regard, and legislation has been introduced to form a National Groundwater Commission. Earlier in 1984 the EPA issued its groundwater protection strategy. One of the four components of this strategy is a requirement to strengthen state groundwater programs. The overall thrust of the EPA strategy is to have the states take the lead role in this area.

Therefore, it is recommended that a Comprehensive Groundwater Protection Strategy be developed and implemented. Seeking public and professional input, this effort would address several complex issues relating to Iowa's groundwater.

1. Infiltration of fertilizers and pesticides
2. Underground storage of materials
3. Drainage wells
4. Karst topography and sinkholes
5. Synthetic organic chemicals
6. Landfills and waste disposal
7. Well construction and abandonment
8. Product storage and handling

While the overall goal is to develop a strategy and implementation plan, several specific objectives and actions would be encompassed by this effort.

1. Review extent of existing or emerging groundwater problems.

2. Identify problems, causes, relationships, impacts, etc. Identify specific problem regions or types of local conditions.
3. Examine existing federal, state and local programs, and specifically determine;
  - approach
  - inconsistencies
  - effectiveness.
4. Define present level of state-federal-local interface, and recommend changes necessary to better align actions at all levels.
5. Examine need or benefits of classifying groundwaters in accordance to EPA proposed guidelines.
6. Create an overall policy framework for guiding all state agencies and programs in protection of groundwater quality.
7. Identify and make any necessary recommendations for the following;
  - changes in statutes, regulatory or management programs
  - additional research to define problems or cause and effect relationships
  - incentives for compliance.

The Commission could take the lead role in developing the strategy, working with all appropriate state and federal agencies, and seeking assistance and input from all affected or involved parties. A suggested schedule would be to develop the Comprehensive Groundwater Protection Strategy and submit it for approval by January 1987 (a sched-

ule that may possibly be required by the EPA). The Commission and other agencies could continue to work on actual implementation after that date, making all necessary modifications as required, and report the status and progress of any actions biennially to the Legislature.

#### Proposed Statutory Changes

Iowa Code section 455B.263(1) should be re-written to provide a legislative mandate for the Commission to prepare a Comprehensive Groundwater Protection Strategy in the manner described above.



Passed Senate, Date \_\_\_\_\_

Passed House, Date \_\_\_\_\_

Vote: Ayes \_\_\_\_\_ Nays \_\_\_\_\_

Vote: Ayes \_\_\_\_\_ Nays \_\_\_\_\_

Approved \_\_\_\_\_

A BILL FOR

1 An act relating to the authority of the Department of Water, Air and Waste  
2 Management to regulate water use and embodying a general plan of water allo-  
3 cation priorities for this state.

4 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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1     Sec. 1. Iowa Code section 455B.261, subsection 8, is amended to read as  
2 follows:

3     8. "Nonregulated use" means ~~the use of water for ordinary household pur-~~  
4 ~~poses, use of water for poultry, livestock, and domestic animals, and any~~  
5 ~~beneficial use of surface flow from rivers bordering this state, any exist-~~  
6 ~~ing beneficial uses of water within the territorial boundaries of municipal~~  
7 ~~corporations on May 16, 1957, and any other beneficial use of water by any~~  
8 ~~person of less than twenty-five thousand gallons per day. However, indus-~~  
9 ~~trial users of water, having their own water supply, within the territorial~~  
10 ~~boundaries of municipal operations, shall be regulated when their water use~~  
11 ~~exceeds three percent more than the highest per day beneficial use prior to~~  
12 ~~May 16, 1957.~~

13     Sec. 2. Iowa Code section 455B.262, subsections 2 and 3, is amended to  
14 read as follows:

15     2. The general welfare of the people of the state requires that the water  
16 resources of the state be put to beneficial use ~~to the fullest extent pos-~~  
17 ~~sible, and~~ which includes ensuring that the waste or unreasonable use, or  
18 unreasonable methods of use of water be prevented, and that the conservation  
19 and protection of water resources be ~~encouraged~~ required with the view to  
20 their reasonable and beneficial use in the interest of the people, and that  
21 the public and private funds for the promotion and expansion of the benefi-  
22 cial use of water resources be invested to the end that the best interests  
23 and welfare of the people are served.

24     3. Water occurring in a basin or watercourse, or other ~~natural~~ body of  
25 water of the state, is public water and public wealth of the people of the  
26 state and subject to use in accordance with this chapter, and the control  
27 and development and use of water for all beneficial purposes is vested in  
28 the state which shall take measures to ~~encourage full utilization~~ ensure the  
29 conservation and protection of the water resources of the state. These mea-  
30 sures shall include the protection of specific surface and groundwater  
31 sources as necessary to ensure long-term availability in terms of quantity  
32 and quality to preserve the public health and welfare.

33     Sec. 3. Strike Iowa Code section 455B.263, subsection 1, and replace it  
34 with a new subsection 1 as follows:

35     1. The commission shall deliver to the general assembly by January 15,



1 1987, a plan embodying a general groundwater protection strategy for this  
2 state, considering the impacts on groundwater quality of potential sources  
3 of groundwater contamination. The plan shall evaluate the ability of exist-  
4 ing laws and programs to protect groundwater quality and shall recommend ad-  
5 ditional or alternative laws and programs if necessary. The plan shall be  
6 developed by the department with assistance and in consultation with repre-  
7 sentatives of agriculture, industry, the public and other interests. The  
8 commission shall report to the general assembly on the status and implemen-  
9 tation of the plan on a biennial basis. This section shall not preclude the  
10 implementation of existing or new laws or programs which may protect ground-  
11 water quality.

12 Sec. 4. Iowa Code section 455B.264, subsection 2, is amended to read as  
13 follows:

14 2. Upon application by any person for permission to divert, pump, or  
15 otherwise take waters from any watercourse, underground basin or water-  
16 course, drainage ditch, or settling basin within this state for any purpose  
17 other than a nonregulated use, the executive director shall investigate the  
18 effect of the use upon the natural flow of the watercourse, the effect of  
19 the use upon the owners of any land which might be affected by the use, the  
20 effect upon prior users of the water source and contracts entered pursuant  
21 to 455B.263, and whether the use is consistent with the plan of water allo-  
22 cation priorities for this state principles and policies of beneficial use.

23 Sec. 5. Section 455B.265 is amended by striking the section and inserting  
24 in lieu thereof the following:

25 455B.265 PERMITS FOR DIVERSION, STORAGE AND WITHDRAWAL.

26 1. In consideration of applications for permits, priority in processing  
27 shall be given to persons in the order that the applications are received,  
28 except where the application of this processing priority system prevents the  
29 prompt approval of routine applications or where the public health, safety  
30 or welfare will be threatened by delay. If the department determines after  
31 investigation that the diversion, storage or withdrawal is consistent with  
32 the principles and policies of beneficial use and ensuring conservation, the  
33 department shall grant a permit. Regardless of the request in the applica-  
34 tion, the executive director or the commission on appeal may determine the  
35 duration and frequency of withdrawal and the quantity of water to be



1 diverted, stored or withdrawn pursuant to the permit. Each permit granted  
2 after July 1, 1986, shall include conditions requiring routine conservation  
3 practices, and requiring implementation of emergency conservation measures  
4 after notification by the department.

5 2. A permit shall be granted for the continuation of a beneficial use of  
6 water that was nonregulated prior to July 1, 1985, but now requires a permit  
7 pursuant to section 455B.268 if an application is received by July 1, 1986.  
8 However, the permit is subject to conditions requiring routine and emergency  
9 conservation measures and to modification or cancellation under section  
10 455B.271. Applications for such uses received after July 1, 1986, shall be  
11 determined pursuant to subsection 1 of this section.

12 3. Permits shall be granted for a period of ten years except permits for  
13 withdrawal of water which may be granted for less than ten years if geologi-  
14 cal data on the capacity of the aquifer and the rate of its recharge are  
15 indeterminate and permits for the storage of water which may be granted for  
16 the life of the structure unless revoked by the commission. A permit  
17 granted shall remain as an appurtenance of the land described in the permit  
18 through the date specified in the permit and any extension of the permit or  
19 until an earlier date when the permit or any extension of the permit is can-  
20 celed under section 455B.271. Upon application for a permit prior to the  
21 termination date specified in the permit, a permit may be renewed by the de-  
22 partment for a period of ten years.

23 Sec. 6. Section 455B.266 is amended by striking the section and inserting  
24 in lieu thereof the following:

25 455B.266 PRIORITY ALLOCATION.

26 1. After any event described in paragraphs "a" through "d" of this sub-  
27 section has occurred, the department shall investigate and if appropriate  
28 may implement the priority allocation plan provided in subsection 2. The  
29 department shall require existing permittees to implement appropriate emer-  
30 gency conservation measures as a part of such implementation. The pertinent  
31 public notice and hearing requirements of 455B.266(3), 455B.271, and  
32 455B.278 shall apply.

33 a. Receipt of a petition by twenty-five affected persons or a government-  
34 al subdivision requesting that the priority allocation plan be implemented  
35 due to a substantial local water shortage.



1     b. Receipt of information from state or federal natural resource, re-  
2     search or climatological agencies indicating that a drought of local or  
3     state magnitude is imminent.

4     c. Issuance by the governor of a proclamation of a disaster emergency due  
5     to a drought or other event affecting water resources of the state.

6     d. Determination by the department in conjunction with the Office of  
7     Disaster Services of a local crisis which affects availability of water.

8     2. Notwithstanding possession of a permit or status as a nonregulated  
9     use, the department may suspend or restrict usage of water by category of  
10    use on a local or statewide basis in the following order:

11    a. Water conveyed across state boundaries.

12    b. Uses of water primarily for recreational and aesthetic purposes.

13    c. Uses of water for the irrigation of hay, corn, soybeans, oats, grain  
14    sorghum and wheat.

15    d. Uses of water for the irrigation of crops other than hay, corn, soy-  
16    beans, oats, grain sorghum and wheat.

17    e. Uses of water for manufacturing or other industrial processes.

18    f. Uses of water for generation of electrical power for public consump-  
19    tion.

20    g. Uses of water for livestock production.

21    h. Uses of water for human consumption and sanitation supplied by rural  
22    water districts, municipal water systems, or other public water supplies as  
23    defined in 455B.171.

24    i. Uses of water for human consumption and sanitation supplied by a pri-  
25    vate water supply as defined in 455B.171.

26    3. Suspension of water use or further restrictions other than conserva-  
27    tion shall not be imposed in categories "g" through "i", or users of water  
28    pursuant to a contract with the state as specified in 455B.263(5) and (6),  
29    unless a proclamation of the governor pursuant to 455B.266(1) "c" has been  
30    issued.

31    4. Suspension or restrictions of water usage applicable to otherwise non-  
32    regulated water users shall be by emergency order of the executive director  
33    published in local newspapers of general circulation and broadcast by local  
34    media. The emergency order shall state an effective date appropriate to the  
35    situation which invoked the suspension or restriction and shall be immedi-



1 ately effective on such date unless stayed, modified or vacated at a hearing  
2 before the commission or by a court.

3 Sec. 7. Iowa Code section 455B.267 is amended by adding the following new  
4 subsection:

5 NEW SUBSECTION

6 4. A permit to divert, store or withdraw water shall not be issued or  
7 continued if it will unreasonably impair the long-term availability of water  
8 from a surface or groundwater source in terms of quantity or quality, or  
9 otherwise adversely affect the public health or welfare.

10 Sec. 8. Iowa Code section 455B.268, subsection 1, is amended by striking  
11 paragraphs "a" and "d", renumbering paragraphs "b" and "c" as "a" and "b"  
12 respectively, and further amending new paragraph "a" as follows:

13 a. Except for a nonregulated use, a person ~~using in excess of twenty-five~~  
14 ~~thousand gallons of water per day, diverting, storing, or withdrawing~~  
15 ~~water from any surface or groundwater source of supply except a municipal~~  
16 ~~water system or any source specifically exempted under this part.~~

17 Sec. 9. Iowa Code section 455B.271, subsection 2, paragraph "d", is  
18 amended to read as follows:

19 d. The department finds that modification or cancellation is necessary  
20 to protect the public health or safety, to protect the public interests in  
21 land or waters, to require conservation measures, or to prevent substantial  
22 injury to persons or property in any manner. Before the modification or  
23 cancellation is effective, the department shall give at least thirty days'  
24 written notice mailed to the permittee at the permittee's last known ad-  
25 dress, stating the grounds of the proposed modification or cancellation and  
26 giving the permittee an opportunity to be heard on the proposal.

27 Sec. 10. Iowa Code section 455B.271, subsection 3, is amended to read as  
28 follows:

29 3. By written emergency order to the permittee, the department may sus-  
30 pend or restrict operations under a permit if the executive director finds  
31 it necessary in an emergency to protect the public health, to protect the  
32 public interest in waters against imminent danger of substantial injury in  
33 any manner or to an extent not expressly authorized by the permit, to imple-  
34 ment the priority allocation system of 455B.266, or to protect persons or  
35 property against imminent danger. The department may require the permittee



1 to take measures necessary to prevent or remedy the injury, ~~but an order~~  
2 ~~shall not be in effect for more than thirty days from the date of issue~~  
3 ~~without giving the permittee at least ten days' written notice of the order~~  
4 ~~and an opportunity to be heard on the order.~~ The emergency order shall  
5 state an effective date appropriate to the situation which invoked the sus-  
6 pension or restriction and shall be immediately effective on such date  
7 unless stayed, modified, or vacated at a hearing before the commission or by  
8 a court.

9 Sec. 11. Adopt a new Iowa Code section 455B.281 as follows:

10 455B.281 COMPENSATION FOR WELL INTERFERENCE.

11 If an investigation by the department, using information provided by the  
12 applicant or permittee and the complainant, discloses that a proposed or ex-  
13 isting permitted use or combination of such uses is causing or will cause  
14 the delivery system to fail in a well which supplies water for a nonregu-  
15 lated use, the department may condition issuance or continuation of a permit  
16 upon payment by the permittee of compensation for all or a portion of the  
17 cost of a replacement water supply system or remedial measures necessitated  
18 by the interference. However, such condition may be imposed only after the  
19 parties demonstrate to the department that a good faith effort to negotiate  
20 a mutually agreeable compensation has been made and has failed.

21 Determination of the amount of compensation for the well interference  
22 shall be made a part of the determination of the department in accordance  
23 with section 455B.265 or 455B.271. The department may require the submis-  
24 sion of itemized estimates of the cost of remedial repairs or a replacement  
25 water supply system. In determining appropriate compensation, the depart-  
26 ment shall consider the age and condition of the affected well or pumping  
27 system and its reasonableness as a method of obtaining groundwater in light  
28 of the history of development of groundwater in the surrounding area. When  
29 compensation is required for all or part of the cost of construction of a  
30 replacement water supply system or reconstruction of an affected well, the  
31 construction or reconstruction must comply with applicable well construction  
32 standards. A permittee shall not be required to pay compensation before  
33 having an opportunity to do test pumping authorized by the department and  
34 supervised by the department or designee.

35 The determination of the department shall be subject to administrative and



1 judicial review and shall be the exclusive remedy for such interference.

2 EXPLANATION

3 This bill implements the recommendation of the State Water Plan, developed  
4 pursuant to Iowa Code Section 455B.263, subsection 1. Section 1 strikes  
5 certain exemptions from the class of nonregulated water users and simplifies  
6 the definition of "nonregulated use". Section 2 embodies the concepts of  
7 requiring conservation and protecting water sources for public health and  
8 welfare. Section 3 calls for the preparation of a general plan embodying a  
9 groundwater protection strategy. Section 4 emphasizes the consideration of  
10 prior use, contracts, and beneficial use in day-to-day permit issuance.  
11 Section 5 draws together the department's procedures and criteria for permit  
12 issuance, with additional provisions requiring conditions for conservation  
13 in permits and requiring issuance of permits to previously "grandfathered"  
14 or exempted facilities upon timely application. Section 6 is the priority  
15 allocation system for water shortage situations. Section 7 embodies the  
16 "protected source" concept in the water plan. Section 8 reflects the elimi-  
17 nation of certain "grandfathered" or exempted uses from the permit require-  
18 ment. Sections 9 and 10 add provisions for implementing conservation mea-  
19 sures and the priority allocation system as to existing permit holders.  
20 Section 11 authorizes an administrative mechanism for awarding compensation  
21 to nonregulated well users for interference from regulated activities.

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