



WASHINGTON'S WATER RESOURCES PROGRAM



Washington State Department of Ecology
Sixth Biennial Report to the Legislature
(1981 & 1982)

Department of Ecology
Donald W. Moos
Director

January 1983
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State of Washington
John Spellman
Governor

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Washington State Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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Honorable Members
48th Legislative Session
State Capitol
Olympia, WA 98504

Ladies and Gentlemen:

This is the sixth biennial report to the Washington State Legislature on the management of the state's water resources by the Washington State Department of Ecology (WDOE).

This report, in compliance with RCW 90.54.070 (the Water Resources Act of 1971) and RCW 90.03.247 (Minimum Flows and Levels), covers fiscal years 1981 and 1982. For continuity purposes, we are including activities through December 1982.

Since 1917, the state has been responsible for the planning, allocation, and management of its water resources. With timely guidance by the Legislature, we have kept pace with changing program priorities and have met the needs of our citizens.

Undoubtedly, our greatest challenge as we near the end of this century is the management of our natural resources. Water will prove to be one of the most precious of those finite resources we must properly manage.

This report provides an overview of the major accomplishments as well as the emerging issues and foreseeable problems. During the past biennium, these included:

Columbia River Instream Resources Protection Program

This regulation (adopted in June, 1980) established minimum instream flows and priorities to protect the fisheries resources. Recent regulation revisions (October, 1982) improved implementation procedures and the program's overall effectiveness.

Yakima River Basin Water Enhancement Project

A Phase I feasibility study was completed and Phase II begun. This comprehensive plan will result in a more secure water supply for irrigation purposes and enhance the basin's fisheries resource.

Northwest Power Planning Council's Fish and Wildlife Program

The department was actively involved in the formulation of this regionally significant plan for the protection and enhancement of the Columbia River Basin's fish and wildlife resources. We now look forward to becoming active in its implementation.

Yakima River Adjudication

This landmark adjudication effort to determine the validity of over 4,000 water rights claims continues as federal courts confirmed the state's right to proceed.

Small Hydro Projects

Applications for water rights on the state's rivers to develop small hydro projects continue to inundate WDOE.

Project Assessment & Financing

The Department of Ecology is continuing to evaluate the needs for water resources development funding and is providing financial assistance through Referendum 27, Referendum 38, the Emergency Agricultural Water Supply program, and the Reclamation Revolving Account.

Lake Osoyoos Dam

Through state legislation, WDOE was authorized to rebuild the Lake Osoyoos control structure near the United States/Canada border. The dam is badly in need of repair and negotiations are underway for a cost-sharing agreement between Canada and the State of Washington. The International Joint Commission approved the state's application to proceed with construction. The approval was granted in December, 1982.

Odessa Ground Water

Regulations were modified for the Odessa Ground Water Management Subarea. The amendments provide farmers in the area greater flexibility in their cropping patterns without harmful effects to the declining ground water table.

Ground Water Management

As competition for water increases, the number of deep wells being drilled is affecting the ground water supply in some areas. Protective measures are necessary and are being developed.

Drinking Water

There is a sense of urgency among major municipalities to reserve future water supplies to ensure adequate future domestic needs.

Dam Safety

A funding source is needed to carry out the dam safety and inspection program.

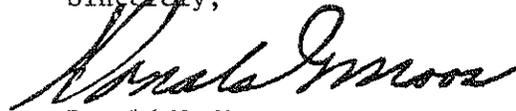
Budget and Staff Reductions

Many of the WDOE water resources planning and management activities were based upon federal grants. Funds from the federal Pacific Northwest River Basins Commission, the Pacific Northwest Regional Commission, and the U.S. Water Resources Council are no longer available. This has resulted in the loss of major state/federal coordinated planning and management efforts for water resources. This, combined with state budget reductions, has reduced the level of service we can provide to the public.

This report covers a period of continuous budgetary cutbacks, resulting in shifts of WDOE priorities and personnel. Economic constraints are understandable and we pledge to carry out the legislative mandates as you direct. However, as resource managers, we cannot afford to let short-term situations deter us from the long-range goals and needs of the people of the State of Washington.

I look forward to meeting with you during the 48th Legislative Session to discuss the water resource stewardship you have given us. The common responsibility we share is to make wise decisions for the generations yet unborn.

Sincerely,



Donald W. Moos
Director

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INTRODUCTION

To many people, Washington State appears to have an abundance of water. In the rain forests of the Olympic Peninsula and the lush green landscape of western Washington, visitors see a land with many lakes and streams, most of which flow year round. Even in eastern Washington, a river the size of the Columbia River does much to discourage thoughts of a water shortage. But things are not always what they seem.

Although most prevalent in eastern Washington, portions of the entire state actually experience water shortages and competition for the available water resources. As population has increased, so has the demand for water. This pressure on the resource has grown to the point where water uses on streams such as the Columbia River have resulted in serious conflicts and competition for the water. This increasing demand has made it even more critical that the Department of Ecology (WDOE) carry out the legislative mandate of RCW 90.54.040 to develop and implement a comprehensive state water resources program.

The purpose of this report is to provide an overview of the WDOE water resources program and to report on the progress of our Instream Resource Protection Program as required by RCW 90.03.247.

The primary goal of the water resources program is: to ensure that the waters of the state are properly allocated to achieve full utilization for the greatest benefit to the people of the state and to regulate uses in accordance with established rights.

The primary objectives of the program are:

To manage the state water resources program consistent with state law to ensure that existing water rights are determined and protected through adjudication and enforcement.

To assure full utilization of the state's water resources through issuance of permits and the assessment and funding of economically feasible and environmentally sound water resources projects.

To protect and preserve instream values through the definition and establishment of minimum/base flows.

To preserve the integrity of the state's water resource policies through representation of the state's interests before federal and interstate agencies.

To provide for expeditious processing of water right applications through technical investigations, data collection and development of program policies.

To preserve and protect adequate supplies of water to satisfy domestic needs through reservations of water, water right permit conditions, or otherwise.

To assure public safety through a dam safety program.

To promote proper water well drilling and construction through the administration of water well drilling examinations to water well contractors.

This Biennial Report describes WDOE's efforts to develop and implement the state water resources program. It reviews past activities, explains current programs, discusses problems that have been encountered, and provides a summary of the major accomplishments during the reporting period.

MAJOR WATER RESOURCES PROGRAM ELEMENTS

RCW 90.54.040 directs the WDOE to develop and implement a comprehensive state water resources program which will provide a process for making decisions on future water resource allocation and use. The purpose of the program is to ensure that the waters of the state are utilized for the best interests of the people.

Since the enactment of the Water Resources Act of 1971, the department's state water resources program has evolved into a functional planning and management tool. One of the best features of the program has been that it is not totally static. It has changed as the needs and priorities of the state have changed . . . and it continues to do so. However, in spite of the changes, there are a number of major program elements that have been developed which have remained fairly constant, although their relative priorities within the overall program have changed periodically.

The following discussion is a review of the major program elements which constitute the state water resources program. For each of these elements the discussion will include: a description of the element, the statutory authority requiring (or enabling) the activity and/or the background of the activity, major accomplishments during the reporting period, problems that have been encountered, and how WDOE is dealing with these problems.

The major program elements which form the state water resources program are:

- Basin/Instream Resources Management

- Columbia River Instream Resources Protection Program

- Representing the State's Interests

- Project Development and Rehabilitation Financing (including Yakima River Basin Water Enhancement Project)

- Water Resources Management Activities

 - Water Allocation Activities
 - Water Rights Information System
 - Adjudications of Water Rights
 - Ground Water Management
 - Well Drillers Licensing
 - Reservations of Water for Future Use
 - Relinquishment
 - Indian Water Rights
 - Federal Reserved Rights

- Public Safety

- Public Involvement

BASIN/INSTREAM RESOURCES MANAGEMENT

INSTREAM RESOURCES PROTECTION

Major Issue: Waters in the western states, including Washington, are allocated according to the appropriation doctrine. Historically, the state issued many water rights for beneficial offstream uses requiring the diversion of water from the stream to a point of use. Consequently, many streams, particularly in eastern Washington, are reduced in flow or appropriated to a dry stream bed due to extensive diversions of water for consumptive use. Irrigation is the predominant consumptive use in eastern Washington. Growing municipal, domestic, and industrial demands for surface water affect many western Washington streams.

While these offstream uses of water have grown, those values dependent on a flow instream, such as fish and wildlife and recreation, have suffered losses. These losses have been rather dramatic in some parts of the state such as the Yakima River Basin where a combination of problems, including chronic low flows, has resulted in an approximate one thousand fold decrease in the number of salmon and steelhead successfully returning to the Yakima system to spawn. Recognizing these losses, and the benefits to be derived from retaining a balance and diversity of water uses, the State of Washington began to protect instream values through the water rights process in the 1950s.

Authority/Background: In 1949, the Legislature declared it to be the policy of the state ". . . that a flow of water sufficient to support game fish and food fish populations be maintained at all times in the streams of this state." This legislation, codified as RCW 75.20.050, provided that the water rights administrator, upon the advice of the directors of the departments of Game and Fisheries, may refuse to issue a permit which might result in lowering the flow of water below that necessary to adequately support fish populations.

Under the provisions of this legislation, approximately 250 streams (nearly all very small) were closed to further appropriation, and low flow provisions have been applied to individual permits on approximately 250 other streams.

The Minimum Water Flows and Levels Act (Chapter 90.22 RCW) was enacted in 1969 to provide a formal process to protect instream flows. Under this act, WDOE may establish minimum streamflows and lake levels to protect fish, game, birds, or other wildlife resources or recreational or aesthetic values or to preserve water quality. The act sets forth hearing procedures for the establishment of minimum streamflows and lake levels, but does not define criteria for the determination of such flows or levels. The Department of Ecology utilized this authority in 1971 to adopt minimum flows for the Cedar River, a major source of water supply for the Central Puget Sound region.

The Water Resources Act of 1971 (Chapter 90.54 RCW) provides that, "Perennial streams and rivers shall be retained with base flows necessary to provide for the preservation of wildlife, fish, scenic, aesthetic, and other environmental values, and navigational values." The act further provided that lakes and ponds shall be retained substantially in their natural condition.

Anticipating the potential for conflict between instream and offstream water uses, the act states that, "Withdrawals of water which would conflict therewith (with the base flows) shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served." (RCW 90.54.020(3)(a)) (parenthetical material added).

WDOE is vested with exclusive authority to set instream flows and levels on state waters. (RCW 90.03.247) Under this authority, the department has established instream flows on approximately 75 major streams of the state and closed approximately 169 streams and lakes to further consumptive appropriation.

For planning and management purposes, the state is divided into 62 Water Resource Inventory Areas (WRIAs) (see Figure 1). Chapter 173-500 WAC, adopted by WDOE, provides for the formulation of a water resources management program for each WRIA or group of WRIAs. During the early 1970s, WDOE initiated a basin planning process to address basin specific water allocation policies including instream flows. Between 1974 and 1978, WDOE adopted eight basin management programs for some of the more serious water problem areas of the state. These programs addressed instream water needs and analyzed the level of existing demand in order to define the quantity of water remaining available for further appropriation.

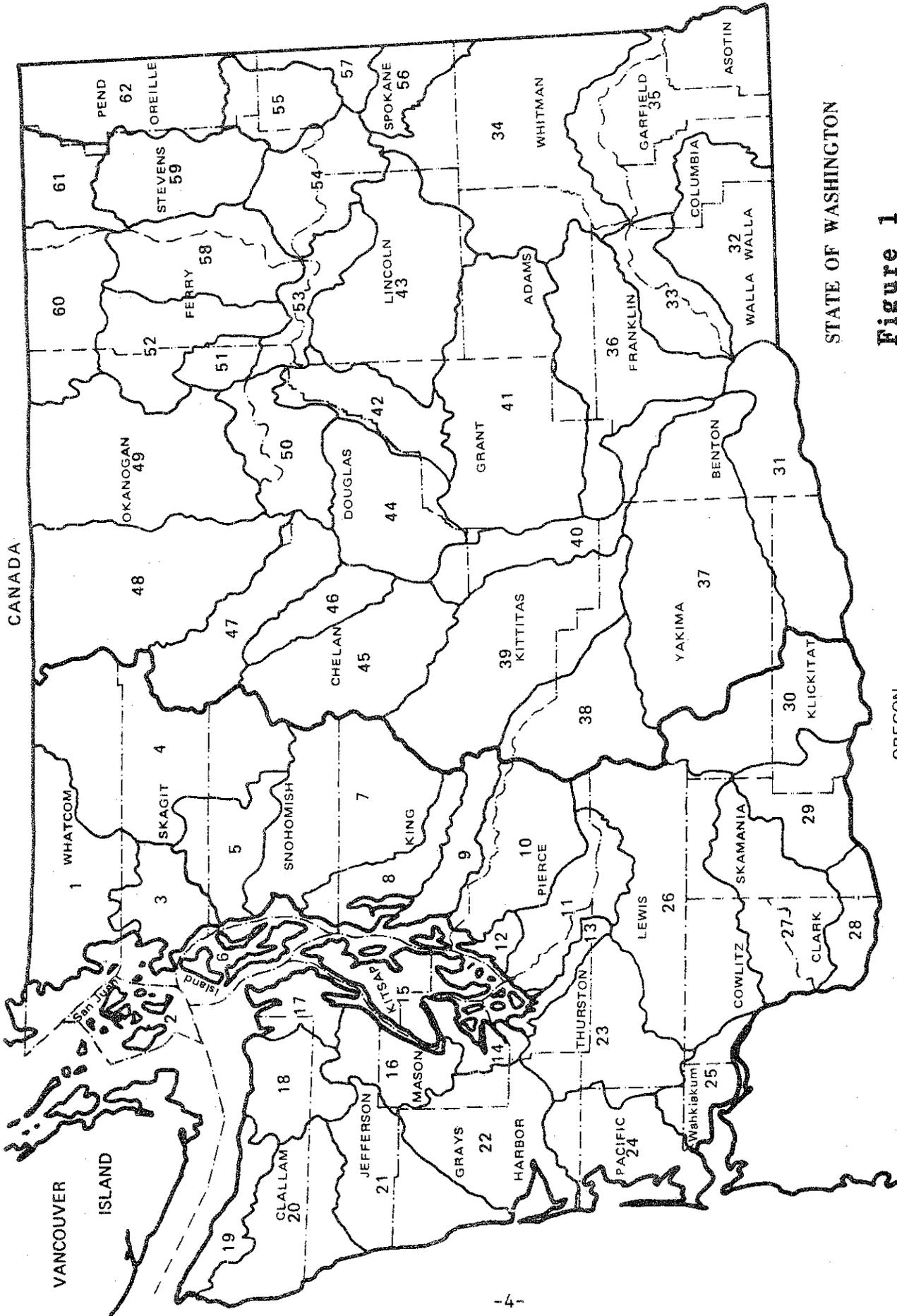
To meet changing priorities in 1979, the department began development of modified basin planning programs. This new effort, the Washington Instream Resource Protection Program, recognizes the high priority of protecting instream resources (primarily fish and wildlife) through the establishment of minimum instream flows. Because of their importance for fish and wildlife, Western Washington streams and the main stem of the Columbia River have been treated as high priority.

The WDOE published an overview of the program and an Environmental Impact Statement (EIS) in April 1979. Following public and agency review, the final program EIS was published in June 1979 and work began on individual basin programs.

The Washington Instream Resources Protection Program is a water resources planning effort that focuses specifically on the development and adoption in the Washington Administrative Code of measures designed to preserve and protect instream resource values. These measures include minimum instream flows and closure of streams and lakes to further consumptive water rights appropriation.

Instream flows protect streams from consumptive use appropriations approved after adoption of the flows. When the flow of the stream falls to or below a specified minimum instream flow, those water rights provisioned with those flows must cease or reduce diversion until the instream flow is exceeded.

When a stream is closed to further consumptive appropriation, no further consumptive use water rights will be issued for use during the period of closure. Closures are normally necessary only for the low flow period of the year. This is generally late summer and early fall in Washington streams.



STATE OF WASHINGTON

Figure 1
WATER RESOURCE INVENTORY AREAS

The department normally establishes instream flows on streams rather than closing them to future uses. However, where it is determined that the level of existing diversions seriously affects the welfare of instream uses, or where any new diversions from small streams would irreparably harm instream values, then the stream may be closed to further consumptive appropriation.

The WDOE works with a number of interested groups and agencies and the public in developing these instream protection measures which are tailored to the specific conditions and needs of the individual basins. Public workshops are held by WDOE prior to formulation of instream measures. Once proposed regulations are developed, public hearings are held. WDOE responds to all substantive public and agency comments and incorporates them into final proposals which are considered for adoption by the WDOE director at a final adoption hearing. The department's public involvement activities are discussed in more detail in the section of this report entitled "Public Involvement."

Because the establishment of minimum instream flows and levels and stream closures often significantly affects future water development opportunities, these measures can generate considerable controversy. Seldom are any single purpose entities or interest groups fully satisfied with the final adopted regulation but, to date, only one of the instream flow settings has been appealed. This involves the Tolt River in WRIA 7 with the appeal being filed by the city of Seattle.

Accomplishments: As of January 1, 1983, instream resource protection programs are completed for the:

- . Snohomish Basin (WRIA 7)
- . Cedar-Sammamish Basin (WRIA 8)
- . Green River Basin (WRIA 9)
- . Puyallup River Basin (WRIA 10)
- . Nisqually River Basin (WRIA 11) ^{new}
- . Chambers-Clover Creek Basin (WRIA 12)
- . Kitsap Peninsula stream systems (WRIA 15) ^{new}

Of the above, the Nisqually and Kitsap Basin programs were completed during 1981 and 1982.

The Nisqually River is heavily utilized for the production of hydroelectric power. The city of Tacoma owns two large power dams (Alder and LaGrande) and the city of Centralia operates a long diversion canal for power production purposes. As a consequence of these projects, summer flows in the Nisqually River are commonly reduced to levels less than satisfactory for fish. The river is a heavy producer of salmon and steelhead of great importance for commercial, Indian, and sports fisheries.

WDOE adopted minimum instream flows for the main stem Nisqually River and a number of tributaries in order to avoid further stream flow reductions by future developments.

In addition, McAllister Creek, an independent stream tributary to Puget Sound, was closed to further consumptive appropriation in order to protect existing water rights, significant fish runs, and a new Department

of Fisheries hatchery. The creek at its headwaters (McAllister Springs) is the major source of municipal water supply for the city of Olympia. The Nisqually Basin regulations are codified in Chapter 173-511 WAC.

The Kitsap area streams are small, but are large in number. These streams contribute significantly to the population of chum and coho salmon in Puget Sound. Because of their small size, these streams are particularly sensitive to withdrawals. WDOE adopted minimum instream flows for 21 major stream systems, and closed numerous streams for all or part of the year to protect anadromous fish habitat and aesthetic values. A large number of streams not supporting anadromous fish were not addressed in the program. The Kitsap regulations are codified in Chapter 173-515 WAC.

A similar program for the Wenatchee River Basin is scheduled for adoption in January 1983. This river is a major tributary stream of the Columbia River in Central Washington. It supports diverse and valuable instream and offstream water uses, including anadromous and native fisheries, wildlife, recreation, scenic and aesthetic values, irrigation, municipal and domestic supply, and industrial process water. A number of small hydroelectric power projects are proposed on Wenatchee River tributaries. In addition, some additional irrigation, municipal and domestic use demands are likely in the future.

Because the Wenatchee River is one of the critical habitat areas for upstream Columbia River salmon and steelhead, WDOE believes it was necessary to assign a high priority to the adoption of instream protection measures in this basin.

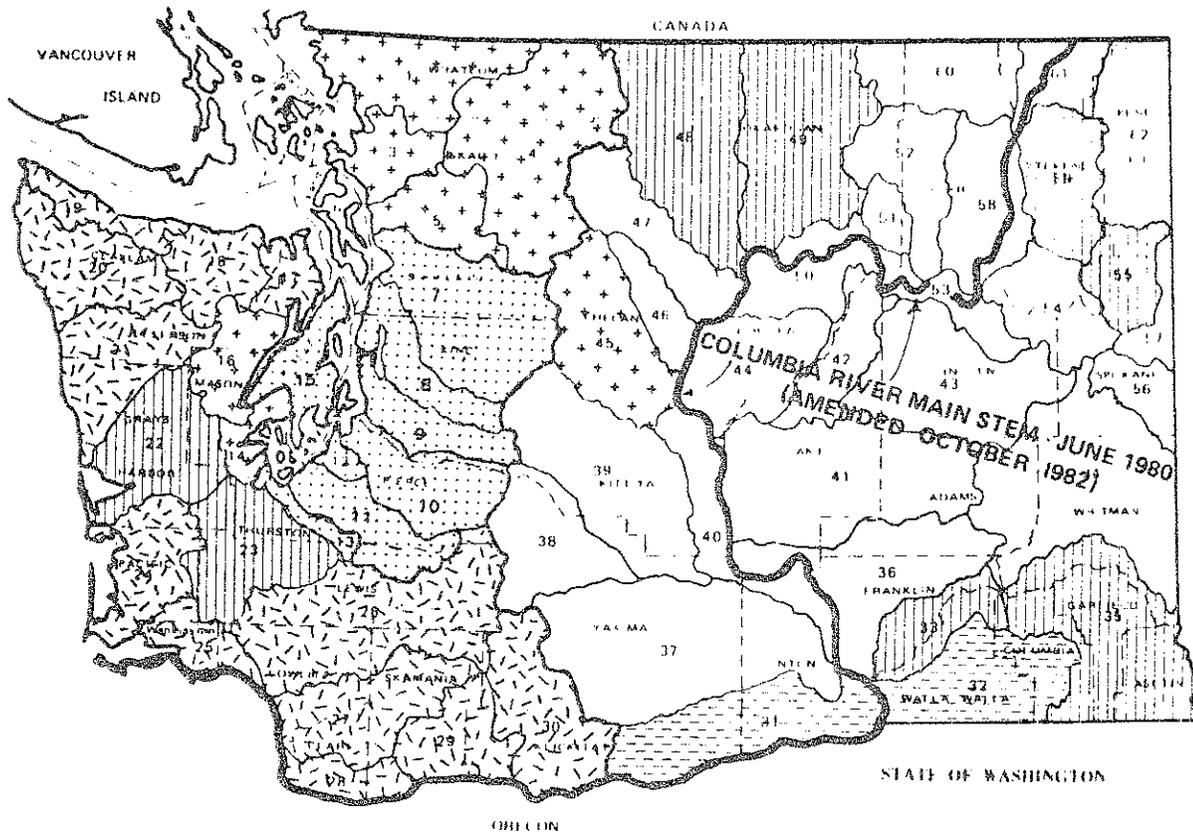
The WDOE program would establish instream flows for the main stem Wenatchee River, Icicle Creek and Mission Creek. Peshastin Creek, a stream that becomes nearly dry in the late summer due to irrigation diversions, would be closed to further consumptive appropriation during the low flow period. These measures would be codified in Chapter 173-545 WAC.

Basin instream programs are currently well in progress for the Stillaguamish Basin (WRIA 5) and Kennedy-Goldsborough Basin (WRIA 14) and are scheduled for completion in 1983.

Figure 2 shows the areas of the state where basin management programs have been developed and where the instream resources protection programs are established, in progress, or scheduled. A discussion of the Columbia River Instream Resource Protection Program (CRIRPP) follows this section (see page 12).

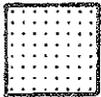
Problems Encountered: Not surprisingly, the biggest problem for WDOE's basin/instream planning program during the 1981-82 biennium was maintaining budgetary support and staffing for the effort. The Instream Resources Protection Program was launched in 1979 with both Federal and state resources. The program was greatly aided in its initial two years by grants from the Environmental Protection Agency and the U.S. Water Resources Council. These resources, coupled with state support, were adequate to permit the assignment of six to seven full-time equivalent positions (FTE) to this effort. Considerable progress was made in this period toward the goal of completing program development for Western Washington river basins.

Figure 2
 STATUS OF BASIN PLANNING--DECEMBER 31, 1982



LEGEND

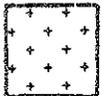
INSTREAM REGULATION ADOPTED



- WRIA - 7 - (Snohomish, Sept. 1979)
- WRIA - 8 - (Cedar - Sammamish, Sept. 1979)
- WRIA - 9 - (Green - Duwamish, June 1980)
- Columbia Main Stem, June 1980 (Amended, Oct. 1982)

- WRIA - 10 - (Puyallup - White, March 1980)
- WRIA - 11 - (Nisqually, February 1981)
- WRIA - 12 - (Chambers - Clover, Dec. 1979)
- WRIA - 13 - (Deschutes, June 1980)
- WRIA - 15 - (Kitsap, July 1981)

INSTREAM PROGRAM IN PROGRESS



- WRIA - 1 - (Nooksack)
- WRIA - 3 - (Skagit)
- WRIA - 4 - (Skagit)
- WRIA - 5 - (Stillaguamish)

- WRIA - 14 - (Kennedy - Goldsborough)
- WRIA - 16 - (Skokomish)
- WRIA - 45 - (Wenatchee) (Adoption Jan. 1983)

BASIN PROGRAM WITH INSTREAM FLOWS

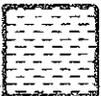


- WRIA - 22 (Chehalis, March 1976)
- WRIA - 23
- WRIA - 33
- WRIA - 35 (Lower Snake, 1974)

- WRIA - 48 - (Methow, Dec. 1976)
- WRIA - 49 - (Okanogan, July 1976) *
- WRIA - 55 - (Little Spokane, Dec. 1975)
- WRIA - 59 - (Colville, July 1977)

*Review in progress.

BASIN PROGRAM WITHOUT INSTREAM FLOWS



- WRIA - 31 - (John Day/McNary, June 1980)

- WRIA - 32 - (Walla Walla, Dec. 1977) (Amended Dec. 1982)

FUTURE INSTREAM PROGRAM



- WRIA - 17 - (Quilcene - Snow)
- WRIA - 18 - (Elwha - Dungeness)
- WRIA - 19 - (Lyre - Hoko)
- WRIA - 20 - (Soleduck - Hoh)
- WRIA - 21 - (Queets - Quinalt)
- WRIA - 24 - (Willapa)

- WRIA - 25 - (Grays - Elokoman)
- WRIA - 26 - (Cowlitz)
- WRIA - 27 - (Lewis)
- WRIA - 28 - (Salmon - Washougal)
- WRIA - 29 - (Wind - White Salmon)
- WRIA - 30 - (Klickitat)

Federal grants were totally eliminated in Federal fiscal year 1982 due to Federal budget reductions and reorganization. These sources had provided between 50 and 75 percent of the funds available for the program. State support has been difficult to maintain due to budget and staff reductions. The program is now fully state funded with a current staffing level of approximately 2.5 FTE. As a result of these reductions, progress has been markedly diminished.

Commitments to have instream resource programs in place in Western Washington by 1982-83 were made to the Legislature, the public (especially fish and wildlife interest groups), state and Federal fish and wildlife agencies and the state's Indian tribes. (In response to U.S. v. Washington - Phase II). At current levels of staffing, many important Western Washington streams will not be afforded the required and necessary minimum flows until the 1984-86 period while many others will have no minimum flows established well beyond this period.

The consequences of these long delays may be serious. Table 1 shows schedule delays attributable to staff reductions and potentially affected Indian tribes. Table 2 lists basin instream programs indefinitely postponed due to staff reductions. In addition, the commitment to review programs already adopted will be difficult to meet because of the budget and staff reductions.

Interdepartmental Relations: Relations in this program area between WDOE and the departments of Game (WDG) and Fisheries (WDF) have not always been totally harmonious during the recent biennium. Friction between Ecology and Game and Fisheries results partly from the distinction in their respective missions as provided in the statutes under which they operate. The instream programs commonly become the focal point for illumination of these differences.

As single purpose agencies, WDG and WDF tend to advocate and support only instream flows providing optimum or near optimum conditions for fish. Where hard data is lacking and unavailable, they tend toward conservative recommendations (i.e. higher flows). Often, their instream flow recommendations made to WDOE are in excess of the average flows provided by nature. These agencies believe that if less than optimum flows are protected, then existing or potential natural production of fish will be reduced.

WDOE is required by the Water Resources Act of 1971 to consider a broader range of water uses. WDOE is required by statute to protect and, where possible, enhance the quality of the natural environment by retaining rivers and streams of the state with base flows. (RCW 90.54.020(3)(a)). WDOE must also ensure that waters of the state are protected and fully utilized to the greatest benefit to the people of the state. (RCW 90.54.010). Allocation of waters among potential uses and users shall be based generally on the securing of maximum net benefits for the people of the state. (RCW 90.54.020(2)) Further, adequate and safe supplies of water shall be preserved and protected in potable condition to satisfy human domestic needs. (RCW 90.54.020(4)) These fundamental directives require that all of the potential uses of water be considered and allocated in the manner most beneficial to the people of the state. The

TABLE 1

Delays Attributable to Staff Reductions

Basin	WRIA	Initial Target Completion Date	Revised Completion Date Due to Staff Reductions	Indian Tribe Affected
Nooksack	1	June 1981	March 1984	Nooksack/ Lummi
Skagit	3,4	July 1981	January 1986	Sauk-Suiattle Snohomish-Upper Skagit
Stillaguamish	5	April 1981	October 1983	Stillaguamish- Snohomish
Kennedy/ Goldsborough	14	May 1981	May 1983	Squaxin Island
Skokomish	16	June 1981	January 1985	Skokomish
Wenatchee	45	March 1981	January 1983	

Table 2

Instream Resources Protection Programs
Indefinitely Postponed

<u>Basin</u>	<u>WRIA</u>	<u>Tribe Affected</u>
Quilcene-Snow	17	Clallam
Elwa-Dungeness	18	Clallam
Lyre-Hoko	19	Makah
Soleduck-Hoh	20	Quileute
Queets-Quinault	21	Quinault
Willapa	24	Quinault, Chinook, Chehalis
Grays-Elokoman	25	Chehalis
Cowlitz	26	--
Lewis	27	--
Salmon-Washougal	28	--
Wind-White Salmon	29	Yakima
Klickitat	30	Yakima

act also requires that other state agencies, as well as local government, carry out their powers in a manner consistent with these fundamentals, but this is understandably a difficult task for single purpose entities.

WDOE is concerned that, if it accepts the customarily high instream flow recommendations made by Game and Fisheries, then the availability of water for legitimate future offstream needs would be severely limited. On the other hand, setting flows at levels that provide less than optimum habitat means accepting some loss in the potential for production of fish.

WDOE intends to initiate procedures that should enhance communication among the agencies. Quarterly meetings to discuss the status of basin planning activities will be held. Also, WDOE will consider amendments to Chapter 173-500 WAC during the 1983-84 biennium that will better define terms and clarify interpretation of ambiguities in the statutes and provide better direction for the conduct of water resources basin planning. This is discussed in more detail later in this section.

Several WDOE actions have been appealed to the Pollution Control Hearings Board. In 1980, the Department of Ecology adopted minimum instream flows for the Green River. These flows generally met the approval of the state Game and Fisheries departments at that time although they would have preferred higher flows. Subsequently, WDOE proposed to issue a water right permit (conditioned to the adopted flows) to the city of Tacoma to divert up to 100 cubic feet per second of water from the Green River for the purpose of municipal water supply. This action was appealed by the Northwest Steelhead and Salmon Council to the state Pollution Control Hearings Board (PCHB). Although the state Game and Fisheries departments did not appeal the action, they subsequently joined the plaintiffs as intervenors in that suit, in opposition to WDOE and the city of Tacoma. Instream flow levels are one of the issues in the case. As of January 1983, the hearing phase of the case has not been completed.

As previously noted, the city of Seattle has challenged the instream flows adopted by WDOE for the Tolt River, a tributary of the Snohomish River. Testimony has not yet been heard although the suit was originally filed in 1979. Seattle has sponsored a series of fisheries studies for the Tolt River that could lead to a negotiated settlement.

The Point No Point Treaty Council (PNPTC), an umbrella organization representing the Indian tribes in the Hood Canal and eastern Strait of Juan de Fuca areas, has appealed to the PCHB a proposal by WDOE to issue a water right to Clallam County PUD for water from Morse Creek to meet future municipal supply needs. Although WDOE provisioned the proposed diversion to meet a previously established low flow condition of 25 cubic feet per second, the PNPTC felt strongly that either minimum flows should be formally established or, at a minimum, a study, using modern methods, was needed to determine proper instream flows for inclusion in future water rights issued for waters from Morse Creek.

A stipulated agreement was subsequently signed by the three parties to carry out such a study with WDOE as lead agency. The study was completed in a cooperative effort of the parties. The parties and the departments of Game and Fisheries are now evaluating the study results in order to make instream flow recommendations to be considered by WDOE.

A similar study is also being conducted by WDOE on Goldsborough Creek near Shelton, a source of industrial water supply, in order to avoid a probable legal challenge. The Squaxin Island Indian Tribe and the Simpson Timber Company, as well as the departments of Game and Fisheries, are cooperating with WDOE in this effort.

Note is made that the Morse Creek and Goldsborough Creek cases are, for the most part, nonadversary in nature and represent a desirable process for handling individual cases. Unfortunately, the costs are very high. It should also be emphasized that the Indian tribes in western Washington have been very supportive of the instream resources protection program.

Chapter 173-500 WAC was adopted by WDOE in 1976 to provide guidance to the department in the conduct of its basin planning programs. Since that time, program emphasis has changed, due to limited resources, from development of comprehensive basin management programs to more narrowly scoped instream resources protection programs. In addition, a number of issues have been brought to light regarding statutory language affecting this program area. Although these issues have been with us for some time, the draft report of the Governors Task Force on Water Resources published in August 1982 has helped bring them into sharper focus. The report recommends a number of possible amendments to the regulation. Briefly, possible amendments include the following:

1. Better define maximum net benefits and adopt a consistent procedure for determining maximum net benefits. The Water Resources Act of 1971 requires that "Allocation of waters among potential uses and users shall be based generally on the securing of maximum net benefits for the people of the state." (RCW 90.54.020(2))
2. Define overriding considerations of the public interest and adopt procedures and criteria for making such determinations. The Water Resources Act states that, "Withdrawals of water which would conflict therewith (with the base flow) shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served. (RCW 90.54.020(3)(a)) (parenthetical material added).
3. Better define the level of instream flow adequate to carry out the purposes of the authorizing statutes. This will permit WDOE to address the optimum flow vs. minimum flow issue generically. Standards for biological and hydrological information may also be addressed.
4. Determine whether certain minor consumptive water uses such as single domestic use and riparian stock watering should be exempt from instream flows and stream closures and under what conditions they may be exempted.
5. Clarify and define the terms base flow (Ch. 90.54 RCW) and minimum flow (Ch. 90.22 RCW).
6. Clarify that instream flow regulations can be adopted without developing comprehensive basin water management plans.

7. Provide general criteria for considering the interrelationship between surface and ground waters.
8. Specify procedures for public notices, public hearings, and other public involvement in the development and consideration of basin plans.
9. Specify the time period within which WDOE must review basin regulations and establish procedures for such review.

Revision of Chapter 173-500 WAC is expected to be a major effort requiring statewide notice and a number of public hearings.

A related activity is the review of those programs already adopted. WDOE has a policy of periodically reviewing its basin management and instream resources protection programs to ensure that the programs are working adequately and assess whether any modifications are needed. Work is currently underway on a reevaluation of the Okanogan and Walla Walla Basin Management programs.

COLUMBIA RIVER INSTREAM RESOURCES PROTECTION PROGRAM

Major Issue: There is a need to effectively manage the waters of the Columbia River and to represent the State of Washington's interests in federal, state, and Canadian activities.

Authority/Background: Chapter 90.54 RCW requires WDOE to develop and implement the state water resources program and allows WDOE to establish instream flows. Chapter 90.22 RCW allows WDOE to establish minimum flows. Chapter 90.03 RCW gives WDOE exclusive authority to establish minimum instream flows.

The Columbia River and its tributaries drain an area of approximately 259,000 square miles, including all or parts of seven states and British Columbia, Canada. Beginning at Columbia Lake in British Columbia, the river flows 1,200 miles to the Pacific Ocean on the Washington-Oregon border. Of the total drainage area, about 47,900 square miles or 20 percent are in the State of Washington.

The waters of the Columbia River are vital to a number of uses, including fish and wildlife; recreation; aesthetics; navigation; power; flood control; irrigation; waste assimilation; and rural domestic, municipal, and industrial water supply. Although this development has been of tremendous economic benefit to the region and the nation, the use of the Columbia River has grown to the point that there are serious conflicts between the various users.

WDOE has taken the position that the largest conflict between Columbia River water uses is between hydroelectric power and the requirements of the fishery resource. The populations of anadromous fisheries in the Columbia system have substantially declined over the last 50 years despite increased hatchery production.

Accomplishments: In June 1980, WDOE adopted Chapter 173-563 WAC -- the Columbia River Instream Resources Protection Program (CRIRPP) and began implementing the program. The regulation required that all water uses subject to the program be curtailed whenever flows in the river fall

below the required minimum flows as measured on an instantaneous basis. However, the actual river flow is subject to rapid and frequent fluctuation due to the operation of the hydropower system. The result is that water uses would have to be curtailed too often (e.g. several times a day) to comply with the regulation. To enforce the regulation, WDOE would have to notify water users every time they needed to curtail their water use or resume their water use. This would be very time consuming, expensive, and almost impossible to enforce. While the department was experiencing these implementation problems, irrigators were having difficulty in obtaining project financing because of the uncertainty of their water supply caused by the potential for the frequent curtailment of their water use and the inability to predict the frequency with which such curtailment could be required. As a result, WDOE decided to amend Ch. 173-563 WAC to alleviate the implementation problems.

In June 1982, WDOE published proposed amendments to CRIRPP and, in August, conducted three public workshops and hearings to solicit agency and public comments. Following the hearings, several additional changes to the program were made, and the regulation was amended on October 6, 1982.

As amended, the CRIRPP regulation: (items marked with * refer to new or recently amended sections).

1. Provides the Washington Department of Ecology (WDOE) the basic state policy relating to minimum flows and levels for the Columbia River for submission to various federal, interstate, and state agencies having jurisdiction over the river (e.g., FERC, the Northwest Power Planning Council, Corps of Engineers, etc.)
2. Does not affect existing water rights.
3. Applies to public surface waters of the mainstem Columbia River in Washington State and any ground water withdrawal determined to have a significant and direct impact on the river.
4. Does not apply to domestic/municipal water supplies.
- 5*. Does not apply to waters withdrawn by the United States for the second half of the Columbia Basin project.
- 6*. Establishes minimum average weekly flows and minimum instantaneous flows for instream uses at each of the mainstem projects.
- 7*. Establishes minimum average weekly flows for out-of-stream uses at each of the mainstem projects. (Does not establish minimum instantaneous flows for out-of-stream uses).
8. Allows for the reduction of up to 25 percent of the minimum instantaneous and average weekly flows during low water years when deemed to be in the public interest.
- 9*. Establishes conditions for the first 4,500 cfs of water rights issued for out-of-stream uses subject to the program. When the April-September runoff at The Dalles is equal to or greater than 88 million acre-feet (MAF), out-of-stream uses will not be curtailed, regardless

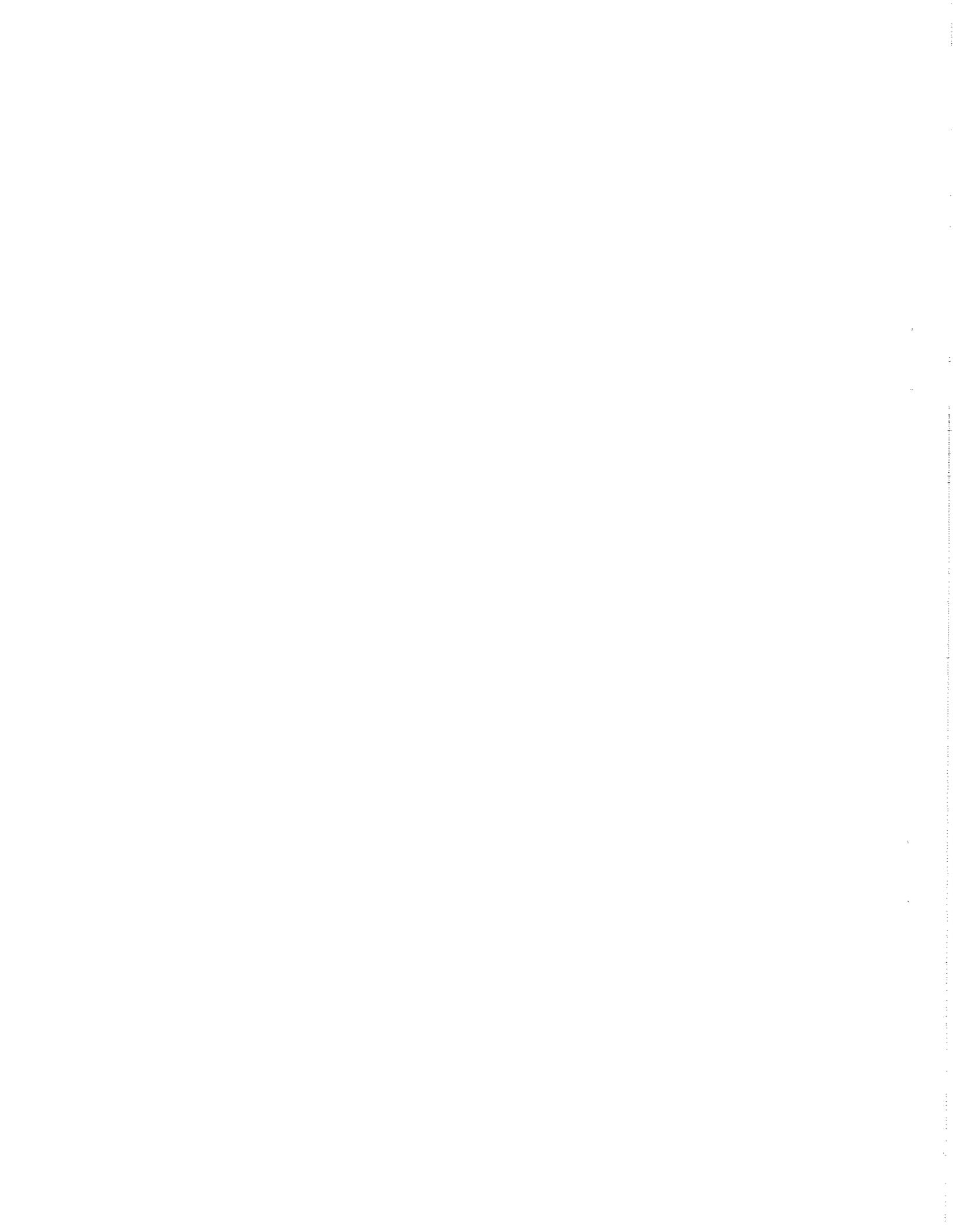
of the gaged flow. When the forecast is between 88 and 60 MAF, WDOE will notify diverters and encourage conservation. When the forecast is 60 MAF or less, out-of-stream diversions shall be curtailed when the BPA 30-day Power Operation Plan predicts periods of violations of the average weekly minimum flows required by the program.

- 10*. Establishes conditions for all water rights issued subsequent to the first 4,500 cfs for out-of-stream uses subject to the program. When the forecast is 88 MAF or more, no curtailment will occur. When it is less than 88 MAF, diversions shall be curtailed when the BPA plan predicts periods of violations of the minimum average weekly flows required by the program.
11. Establishes conservation and efficiency fundamentals requiring that water rights be issued only after assuring that the diversion is consistent with up-to-date water conservation practices and water delivery system efficiencies.
- 12*. Allows the WDOE director to authorize water uses conflicting with this chapter only when it is clear that overriding considerations of the public interest will be served. This decision shall be made in consultation with the directors of the departments of Fisheries, Game, Agriculture, and Natural Resources.

WDOE feels that the changes were required to enable the department to carry out meaningful enforcement of the program. Because of the change to average weekly flows, the frequent fluctuations in flow caused by power operations will not require curtailment of uses every time they occur. In addition, the frequency of years in which curtailment is possible (e.g. severe low flow years) can be calculated so that water users can predict the security of their water supply. The establishment of more severe restrictions on any water rights issued in excess of 4,500 cfs is consistent with the general resource management notion that, as the resource gets scarce, its use should become more and more restricted.

As of this writing, WDOE is in the process of developing a standard operating procedure for the Columbia River program and will soon begin processing the backlog of water right applications for waters from the Columbia River.

A discussion of how this program relates to the Northwest Power Planning Council's Fish and Wildlife Program and hydropower licenses issued by the Federal Energy Regulatory Commission is included in the following section entitled "Representing the State's Interests."



REPRESENTING THE STATE'S INTERESTS

Major Issue: Water resource concerns do not begin and end at the border of the state. Washington's water is affected by activities in neighboring states, the Province of British Columbia, and by the policies and actions of the federal government. With the passage of the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), a major new regional authority has been established which affects water resource management in Washington. The State of Washington must have its water resources policies and programs adequately represented before state, regional, federal, and international entities and must be a full partner in regional water resource decision making.

Authority/Background: Chapter 90.54 RCW requires that "The state shall vigorously represent its interest before water resource regulation, management, development, and use agencies of the United States, including among others the Federal Power Commission, Environmental Protection Agency, Army Corps of Engineers, Department of the Interior, Department of Agriculture, and the Atomic Energy Commission, and of interstate agencies with regard to planning, licensing, relicensing, permit proposals, and proposed construction, development, and utilization plans. Where federal or interstate agency plans, activities, or procedures conflict with state water policies, all reasonable steps available shall be taken by the state to preserve the integrity of this state's policies." (RCW 90.54.080) Additional authority is found in RCW 43.27A.090.

Accomplishments: Northwest Power Planning Council Activities. The Northwest Power Act of December 5, 1980 (Public Law 96-501) established a new regional body called the Northwest Power Planning Council (council). Officially formed on April 28, 1981, the council is composed of eight members, two from each of the four states of Idaho, Montana, Oregon, and Washington. A primary mandate of the council under the Northwest Power Act is to develop and adopt a long range regional conservation and electric power plan to ensure that energy supplies are adequate to meet anticipated future demand. A second major provision, Section 4(h) of the Northwest Power Act, directs that before the regional energy plan is developed, the council must develop a program "to protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, on the Columbia River and its tributaries." This fish and wildlife program, designed to compensate for losses to fish and wildlife caused by the Columbia River hydroelectric system, was formally adopted by the council on November 15, 1982.

Because of the close relationship of the fish and wildlife program to water resource management in the Columbia River Basin, WDOE has taken an active role in representing the state's water resource interests throughout development of the program. In November 1981, WDOE submitted formal recommendations for measures to be included in the program. These recommendations were based upon the department's Columbia River Instream Resources Protection Program (CRIRPP) (see page 12) and called on the council to adopt a consistent region-wide framework for minimum flows in the main stem Columbia and Snake rivers.

In March 1982, WDOE submitted written comments to the council regarding the many recommendations that had been submitted by other entities in November 1981. The department also met with the council and staff during 1982 to (1) seek compatibility between the council's emerging program and WDOE's CRIRPP program amendments; (2) advise the council of the potential significance of future out-of-stream diversions to the success of the fish and wildlife program, and to explain the paramount role of the states in regulating such diversions; and (3) urge the council to work through the state water agency in recommending specific water management measures, such as minimum flows, in tributaries to the Columbia and Snake rivers.

WDOE submitted detailed comments to the council in October 1982 in response to the draft fish and wildlife program. In this testimony, WDOE made suggestions for improvements in several areas. The final program addresses WDOE's concerns by more clearly specifying that existing water rights will not be affected, and by requiring consultation with WDOE in carrying out program elements potentially affecting water allocation and minimum flows.

Key elements of the adopted program affecting Washington include (1) the "water budget," (2) improved fish passage facilities at main stem Columbia River and tributary dams, and (3) potential federal funding, through the Bonneville Power Administration, for fish enhancement measures in the Yakima River Basin. The "water budget" is a volume of water reserved for use by fisheries agencies (as opposed to hydroelectric dam operators) to increase spring streamflows each year and thereby speed the critical downstream migration of juvenile salmon and steelhead in the Columbia and Snake rivers.

The council's program now goes to the Bonneville Power Administration and other federal agencies (including the Army Corps of Engineers, Bureau of Reclamation, and National Marine Fisheries Service) for implementation. WDOE intends to continue to closely monitor the fish and wildlife program as activities shift from planning to implementing the program. WDOE will also closely monitor the power council's efforts toward adoption of the regional energy plan in 1983. Of particular interest are the water-related energy projects (that is, hydropower projects, cooling water for thermal projects, etc.) that may be recommended in the council's plan.

Testimony on Federal Water Policy Legislation: The 97th Congress has been active in considering possible legislation with far-reaching effects on administration and funding of water resource programs. Fundamental changes in the Water Resources Planning Act of 1965 as well as important changes to the Reclamation Act of 1902 and the Federal Power Act have been under consideration. Major issues under review include increasing the state role in authorizing, prioritizing, and financing water resource projects; revising federal/state cost-sharing rules; establishing block grants to states for water projects and programs; creating a national water policy board with a state advisory committee; and extending grants to states for water program planning. The Reagan Administration has also proposed repeal of the federal government's longstanding Principles and Standards for Water Project Planning and replacment of these rules with simplified "principles and guidelines."

In addition to working through various interstate organizations, WDOE has, on several occasions, provided direct testimony to congressional committees and executive agencies considering these changes to federal water policy. Such testimony generally describes the possible impacts of the proposal in Washington State and recommends policies that would be consistent with state statutes and other policies.

Hydropower Licensing by the Federal Energy Regulatory Commission: Section 9(b) of the Federal Power Act of 1920 requires each applicant to the Federal Energy Regulatory Commission (FERC) for a license to build a hydroelectric project to ". . . submit . . . satisfactory evidence that the applicant has complied with the requirements of the laws of the state or states within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes. . . ."

Although it would appear that this language would require a FERC license applicant to first obtain a water right permit from the state, the U.S. Supreme Court ruled otherwise in 1946 in the case of First Iowa Hydroelectric Cooperative v. Federal Power Commission (328 U.S. 152). Subsequent cases involving hydropower projects in Washington (i.e. Mayfield and Mossyrock Dams on the Cowlitz River) and other states have solidified the holding that FERC has authority to override state law under terms of the Federal Power Act. As new hydropower project development occurred slowly during the 1960s and 1970s, this issue was relatively unimportant. But with the recent overwhelming renewal of interest in developing hydropower, the threat has become more imminent that management of Washington State's streams and rivers will be determined by FERC. The authority recently granted to FERC to issue "exemptions" from the federal licensing requirements only complicates this situation.

WDOE has been active in this issue in five ways:

1. WDOE provided testimony in 1981 on proposals in Congress to both expand and limit FERC's licensing and exempting authority. None of these proposals has made significant progress in Congress to date.
2. WDOE has filed numerous petitions to intervene in the FERC licensing process for specific projects in order to adequately represent the state's interest. WDOE has also explored other, less cumbersome ways of being automatically recognized in FERC actions in Washington State. Although the federal Fish and Wildlife Coordination Act provides automatic recognition to federal and state fish and wildlife agencies, no such automatic enfranchisement in the FERC licensing process is afforded state water management agencies.
3. WDOE met with officials from FERC in 1981. As a result of this meeting, FERC agreed to require applicants to at least "consult" with WDOE in regard to water rights and minimum instream flows, and to ensure that WDOE is notified of all applications for preliminary permits, licenses, and exemptions.

4. WDOE is presently working with the Western States Water Council in developing new legislation to amend the Federal Power Act to give the states greater authority to regulate hydropower projects within their borders.
5. WDOE has commented on various regulations proposed by FERC that would tend to further impair state water agency authority over hydropower.

The result of these activities has been positive. Although FERC continues to formally protect its legal authority to override state law, in practice it is grateful for the state's efforts to resolve problems prior to licensing and will generally accept recommendations regarding water rights and minimum flows. Within the limits of staff availability, WDOE will continue to present its case to FERC on significant hydropower projects.

Coordination with other federal agencies: WDOE deals extensively with federal agencies involved in water related projects and programs. Principal among these agencies are the Bureau of Reclamation (USBR) and the Army Corps of Engineers. Among the projects in which WDOE is involved with the USBR is the Yakima Basin Water Enhancement Project feasibility study. This is described more fully on page 30.

WDOE has been active in dealing with the Corps of Engineers on several projects:

1. WDOE provided extensive comments to the Corps in 1980 and 1981 on the Corps' National Hydropower Study. WDOE is now monitoring the follow-up studies of four specific project proposals in Washington that emerged from the national study. (See the discussion relating to specific Corps of Engineers Water Resources Projects on page 19)
2. WDOE participated in the activities of the Corps' to model the impacts of various instream flow alternatives for the Columbia River Basin. The information developed by this study group was used by the Northwest Power Planning Council in developing the Fish and Wildlife Program for the Columbia River Basin.
3. WDOE has held discussions with the Corps on the authority of the Corps to place minimum flow conditions on permits issued under Section 10 of the River and Harbor Act of 1899 and Section 404 of the federal Clean Water Act. Irrigation pumping plants located on the banks of navigable rivers often require these federal permits. In 1978, the U.S. Fish and Wildlife Service began requesting the Corps to include minimum flow provisions for several proposed irrigation projects diverting water from the Columbia and Snake rivers. Ultimately, the Corps elected to defer to the state whenever there were state-established minimum flows and they issued the permits on the Columbia River without minimum flow provisions in recognition of WDOE's Columbia River minimum flows adopted in June 1980. However, there remains concern that the Corps may still elect to impose minimum flows through Section 10 and 404 permits on tributary rivers and streams notwithstanding the water allocation authority of the

state. WDOE has worked with the Corps in seeking an administrative solution and with the Western States Water Council in seeking a legislative clarification that the Corps must defer to state water allocation authority.

4. In an issue dating back to a severe flood in 1959, WDOE has been active in the Corps' feasibility study of the Snohomish River Basin Mediated Agreement. This four-year study was completed in late 1982, and found that the flood control dam proposed as part of the 1974 Mediated Agreement is economically and geologically infeasible. As overall local sponsor for this Corps study, WDOE chaired a technical advisory committee made up of interested local governments and provided limited funding to support the Snohomish Basin Coordinating Council, a group of local citizens and elected officials charged with overseeing this controversial issue. Flooding in the Snohomish Basin remains a serious problem and efforts are continuing to find an acceptable and feasible solution. Efforts are now focusing on an alternate site for a multipurpose dam and on "nonstructural" flood damage reduction measures.

Corps of Engineers Water Resources Projects: The Corps of Engineers has traditionally been involved in development and operation of federal water projects for flood control, water supply, and conservation purposes. The Corps built and operates five hydroelectric and navigation dams on the mainstem Columbia River and four dams for the same purposes on the lower Snake River in Washington. In western Washington, the Corps owns and operates Howard A. Hanson Dam on the Green River and Mud Mountain Dam on the Puyallup. The Corps has also constructed navigation improvements and flood control works on many streams in the state.

The following is a list of current Corps activities involving either existing or new dams:

1. Storage of additional water for conservation and water supply purposes is proposed for study at Howard A. Hanson Dam and reservoir on the Green River. WDOE has worked closely with the Corps in developing the scope of studies. Retrofitting hydroelectric generation at the dam is also being explored by the Corps.
2. Retrofitting hydroelectric generation facilities and construction of a large salmon and steelhead hatchery at Wynoochee Dam in Grays Harbor County have been studied and are now formally proposed by the Seattle District of the Corps of Engineers. WDOE has discussed maintenance of a minimum flow below the project with the Corps. Detailed studies will be carried out after authorization of the project by Congress. The State of Washington is the local sponsor for development of the fish hatchery. Full federal funding is proposed for the hydropower facilities with power to be marketed by the Bonneville Power Administration.
3. The city of Bellevue has requested that the Corps study a proposed multipurpose project involving a dam and reservoir on the North Fork Snoqualmie River. This would be a federally constructed and operated project. Bellevue is the local sponsor for hydroelectric power generation and municipal water supply. Flood control, low flow augmentation, and recreation are also potential project purposes.

4. Flood control potential is being studied by the Corps in conjunction with a proposed hydroelectric power project proposed by Mason County PUD No. 3 on the south fork of the Skokomish River. The PUD proposes a large dam and a 100,000 acre-foot, nine-mile long reservoir twelve miles northwest of Shelton.
5. Feasibility studies are being initiated by the Corps in partnership with the city of Leavenworth for a hydroelectric generation project on Icicle Creek, a tributary of the Wenatchee River near Leavenworth. As presently conceived, this would be a single purpose project that would not involve storage of water, but a low dam and a five-mile diversion pipe to a downstream powerhouse.
6. Okanogan PUD No. 1 and the Oroville and Tonasket Irrigation District are sponsoring reconnaissance and feasibility studies being conducted by the Corps of a multipurpose project on the Similkameen River. Potential project purposes include hydroelectric power, flood control, irrigation, recreation, and fisheries enhancement. A 100 to 200 foot high dam is being evaluated capable of storing from 30,000 to 100,000 acre-feet of water. A ten to fourteen mile long reservoir would be created.
7. Expansion of generating capacity of several large Columbia River projects was accomplished during the past biennium. Modifications to the Chief Joseph Project include adding eleven additional generating units and raising the normal pool level (Lake Rufus Woods) an additional ten feet. A second powerhouse at Bonneville Dam is now being completed. Ten new generating units are being brought on line.

Representation on Regional and Interstate Organizations: A number of organizations provide communication and coordination between federal and state governments and among states in water resource matters. Membership in these organizations greatly facilitates the state's efforts to solve mutual problems and to represent its interests with respect to the federal government.

WDOE is an active member of the Western State Water Council, a 12-state organization that has been highly effective in facilitating the exchange of information on water problems of interest to western states, and in representing the state's interests. WDOE is also a member of the Columbia River Water Management Group, an informal organization of federal and state agencies involved with operation of the Columbia River dams.

WDOE also participates in the activities of the Interstate Conference on Water Problems, the Association of Western State Engineers, the Western Governor's Policy Office, and the National Governor's Association - Water Management Subcommittee.

The preceding biennium has seen the termination of two interstate organizations that had been active in water resource matters in the region. The Pacific Northwest Regional Commission (PNRC), consisting of the Governors of Idaho, Oregon, Washington and a federal co-chairman, was terminated in August 1981. Originally created in 1972, the PNRC provided funding for several water resource studies.

The Pacific Northwest River Basins Commission was terminated on September 30, 1981 in accordance with President Reagan's Executive Order 12319. The commission, established by President Johnson in 1965 under Title II of the Water Resources Planning Act of 1965, consisted of the five north-west states, representatives of ten federal departments, and a chairman appointed by the President. The commission's nonbinding planning authority was largely superseded by the Northwest Power Planning Council's mandate to develop a fish and wildlife program for the Columbia River Basin. As described in Section A above, this program is binding on federal agencies. See the Public Involvement section of this report for a discussion of the commission's library. (See page 56).

Relationship with Canada: The fact that nearly 25 percent of the surface water available in Washington originates in Canada provides some measure of the significance of our relationships with our northern neighbor. The foundation for these relationships is provided by the Boundary Waters Treaty of 1909. Among other features, this treaty established the International Joint Commission (IJC) with jurisdiction over certain questions involving use, obstruction, and diversion of boundary waters.

In 1961, the United States and Canada signed a treaty relating to the development and management of the Columbia River system. Under the provisions of this treaty, dams have been constructed in Canada at Arrow Lake, Duncan Lake, and Mica Creek and in Montana at Libby.

A major step toward resolution of a water management issue involving Canada took place on December 8, 1982, when the IJC issued an Order of Approval to Washington State for construction of a new control structure for the international waters of Osoyoos Lake. Osoyoos Lake straddles the border between British Columbia and Washington in Okanogan County and its level is presently controlled by the deteriorating Zosel Dam, built in 1927. The recent order reflects extensive discussions and compromise of differences between the state and the province. Once the order is formally accepted by Washington State, plans call for British Columbia and Washington State to share equally in the design, construction, and operation of the new control works.

NEW HYDROELECTRIC DEVELOPMENT

Major issue: Over the past fifty years, development of the state's hydroelectric power potential has benefited the citizens of the state immensely. But this development has not come without some substantial damage to fish, wildlife, and other resources dependent upon free-flowing rivers. In some cases, efforts to compensate for these damages are only now being undertaken. Recently, there has been an overwhelming resurgence in interest in new hydroelectric development. The issue is how to achieve such development with minimum environmental impact, and how to efficiently carry out regulatory responsibilities in view of a vastly increased workload and reduced resources.

Authority/Background: As the state's primary water planning, allocation, and management agency, WDOE is charged with administration of several laws which place permit requirements on hydro project development. Under the surface water code (Chapter 90.03 RCW), such permit requirements include the permit to appropriate public waters (water right), reservoir permit, and dam safety approval. Under RCW 90.03.247, WDOE is charged with exclusive authority to determine minimum instream flows as conditions on new water rights. Moreover, state law also sets forth the following powers and duties of the department:

"To prepare the views and recommendations of the state . . . on any project . . . relating to the . . . development . . . of any waters located in or affecting the state . . . , including any federal permit or license proposal. . . ." (RCW 43.27A.090, see also RCW 43.21A.060).

Because nearly all new hydroelectric projects require a permit and/or license from the Federal Energy Regulatory Commission, this is a significant responsibility.

Interest in new hydroelectric development has been stimulated by various Federal tax and regulatory incentives enacted beginning in 1978. Although pending court decisions, regulatory decisions and market (economic conditions) may diminish these incentives and slacken the feverish pace of activity to some degree, development activity is still likely to be far beyond that which occurred during the 1960's and 1970's. As of June 1, 1982, WDOE was aware of about 500 proposals for hydro development in Washington. As further evidence of the renewed interest in hydro development, many of the proposals involve potential developers competing for the same site.

The various proposals range in size from "back yard" systems of a few kilowatts to additions to major existing dams of several hundred megawatts. Some proposals restore power to abandoned systems; others add power to existing nonpower dams. Still others involve entirely new facilities. Each presents a unique combination of technical, economic, environmental, and social considerations.

The establishment of minimum instream flows play a decisive role in new hydroelectric development. On the one hand, an "excessive" minimum flow requirement can easily render a project economically infeasible but, on

the other hand, an "adequate" instream flow is necessary to avoid potentially severe environmental effects resulting from a project. The majority of the recent proposals are based upon a diversion design, rather than impoundment, and therefore the environmental effects of creating large new reservoirs are replaced by the need to protect fish and wildlife habitat, recreation and aesthetic values, and other instream values in the stream reach bypassed by the diversion.

Generally, these diversion projects have the capacity to completely dry up lengthy reaches (i.e. one to five miles) of streambed, or to cause large flow fluctuations that could jeopardize public safety. Most of the hydropower proposals are located on smaller streams where minimum flows are not generally adopted as part of instream resource protection programs (see page 2). Thus, minimum flows must be determined on a case-by-case basis.

After consulting with the departments of Fisheries and Game, WDOE has exclusive authority and responsibility to issue water appropriation permits including minimum flow requirements. As a multi-objective agency, WDOE is charged with allocating such rights in the overall public interest, considering instream values, out-of-stream use values (such as hydropower), as well as public safety, flood damage reduction, and other considerations. WDOE must, therefore, seek a balance such that resources are adequately protected while environmentally sound hydropower projects are allowed to proceed without unnecessary delay.

Accomplishments: WDOE's accomplishments during the past biennium generally fall into two categories:

1. Project review, evaluation, coordination, permit issuance, and;
2. Preparation of a hydropower licensing guidebook.

Other activities related to Federal hydropower licensing are discussed under "Representing the State's Interests" (see page 15).

Project Review: Through June 1982, WDOE took a lead role in coordinating the various Federal, state, and local regulatory requirements of hydropower development. WDOE's goal has been to seek early identification and resolution of potential problems with proposed hydro projects. Experience has shown that inexpensive design changes can often be made at the early stages of project planning that avoid unnecessary environmental impacts and vastly simplify the licensing process. Among the activities that WDOE carried out through June 1982 are the following:

- maintained inventory of proposed projects
- met with prospective developers to seek early identification and resolution of problems
- provided information on permit requirements
- maintained liaison with Federal Energy Regulatory Commission and other Federal and state agencies; integrated state and Federal requirements whenever possible

- prepared EIS's for projects involving significant new reservoirs
- reviewed biological and hydrologic data and established minimum flows
- expedited permits under the Environmental Coordination Procedures Act (ECPA)
- issued water right permits
- approved plans for dam safety
- ensured compliance with flood control plans
- ensured maintenance of water quality

Beginning in July 1982, staff reductions have required elimination of all but the mandatory statutory activities of processing of water right applications and preparing environmental impact statements when WDOE is the designated lead agency under the State Environmental Policy Act. Staff availability to investigate instream flow requirements has been nearly eliminated, requiring WDOE to accept, in most cases, whatever flow recommendations may be set forth by state and Federal fisheries agencies.

Licensing Guidebook: In recognition of the complexity of the hydropower licensing process, WDOE produced a guidebook to aid prospective developers in understanding the licensing process and the key areas of environmental concern that must be considered in project design. Titled Developing Hydropower in Washington State - A Guide to Permits, Licenses, and Incentives, (WDOE 81-1) this guide proved to be very popular. Funding for publishing the guidebook was provided by the U.S. Department of Energy, through the Washington State Energy Office, and 2,000 copies of the guide were printed and distributed. With recent changes in the Federal licensing procedure, the guidebook would require revisions before it is reprinted and sent to those who have requested it. This revision has been deferred pending availability of staff to complete this work.

PROJECT ASSESSMENT AND FINANCING

Major Issue: The Department of Ecology is continuing to evaluate the needs for water resources development and alternative methods of financing. The lack of Federal and local funds for cost-sharing continues to hold back or delay, to a certain degree, projects which have been planned for several years. The state's constitutional debt ceiling is rapidly being approached and may curtail further issuance of state general obligation bonds. With the Federal water resources funding programs being fragmented and reduced, the importance of state financing has increased. The need to develop new storage and/or conserve water and the need for a greater proportion of state financing to secure Federal funds for water projects have created an urgent need for the development of alternative methods of financing. The state must take the lead in this activity to ensure that our waters are beneficially used and conserved for the people of the state and to maintain and enhance the state's economic condition.

Authority/Background: "The Department of Ecology shall as a matter of high priority evaluate the needs for water resource development projects and the alternative methods of financing of the same by public and private agencies, including financing by federal, state, and local governments and combinations thereof." --Water Resources Act of 1971, RCW 90.54.100.

The State of Washington currently has four separate funding sources for financing water resources project development and rehabilitation. The two primary sources for the past ten years have been Referendum 27 and the Emergency Water Supply Program. The third primary source of immediate and future interest is Referendum 38. The fourth source, the Reclamation Revolving Account, was established in 1919 by the Legislature and was the only source of funding prior to 1972. Activity in the Reclamation Revolving Account has been at a virtual standstill since the voters passed the Washington Future Program in 1972.

Referendum 27 was part of the Washington Future bond package approved by the voters. Chapter 43.83B RCW authorized the issuance of \$75 million in general obligation bonds for planning, acquisition, construction, and improvement of water supply facilities in Washington.

During the 1977 session of the Legislature, the Emergency Water Supply Bond Issue was authorized and became part of Chapter 43.83B RCW. The bill authorized \$18,000,000 of general obligation bonds for planning, acquisition, and improvement of water supply facilities to alleviate unsatisfactory water supply conditions arising from the 1977 drought. The Emergency Water Supply Laws of 1977 were amended in 1979 to allow the use of these funds to lessen the unsatisfactory condition of the continuing water shortage in many areas of the state.

Referendum 38 is the \$125 million water supply bond issue approved by the voters in 1980. Chapter 43.99E RCW authorized \$50 million of the bond issue for agricultural water supply alone or in combination with fishery, recreational, or other beneficial uses. The funds can be used for planning, design, acquisition, and construction of new or improvement of existing water supply facilities for these uses.

The Reclamation Revolving Account was created in 1919. The State Reclamation Act (Chapter 89.16 RCW) provides long-term, low-cost financing for irrigation/reclamation districts through loans and purchase of district bonds to promote reclamation and development of agricultural lands. The account also finances rehabilitation of existing projects.

Accomplishments: A summary of each program including the dollars expended and the projects or irrigation/reclamation districts benefited follows:

1. Referendum 27

Out of the \$75 million Referendum 27 bond issue, \$25 million was designated for agricultural water supply. Bonds are sold based upon the estimated needs and deposited into the State and Local Improvement Revolving Account. Legislative appropriations are made to the Department of Ecology from this account for grants and loans to irrigation districts or for direct expenditures. Thirteen projects have been financed through cost-sharing grants and/or loans with irrigation districts and/or the Federal government. These contracts total \$18,483,892 (\$17,251,842 in grants and \$1,232,050 in loans). Fourteen irrigation districts are benefited affecting approximately 237,535 acres (see Table 3).

2. Emergency Water Supply

Under the Emergency Water Supply Program, bonds are sold and deposited in the State Emergency Water Project Revolving Account. Eighteen million dollars were authorized for emergency water supply projects. Legislative appropriations are made to the Department of Ecology from the emergency revolving account for grants and loans to irrigation districts or for direct expenditures.

Approximately \$2.5 million was expended on 14 projects to alleviate the effects of the 1977 drought. Five irrigation districts benefited, affecting approximately 3,763 acres.

Contracts totaling \$13,097,000 (\$6,673,500 in grants, \$6,126,000 in loans and \$297,500 by direct expenditures) have been executed as of December 31, 1982 following the 1979 legislative change in the law. Eight projects have been financed in total or through cost-sharing with irrigation districts and/or the Federal government benefiting five irrigation districts and affecting approximately 40,400 acres (see Table 4).

3. Referendum 38

Out of the \$125 million bond issue, \$50 million was designated for agricultural water supply alone or in combination with fishery, recreational, or other beneficial uses. Bonds are sold based upon estimated needs and deposited in the State and Local Improvement Revolving Account. Legislative appropriations are made to the Department of Ecology from the account for grants and loans to irrigation districts or for direct expenditures.

Table 3
 AGRICULTURAL WATER SUPPLY PROJECTS FINANCED
 WITH REFERENDUM 27 BOND PROCEEDS

Name of Agency and Project	Purpose of Project	Total Project Cost (Approx)	State Assistance		Status of Project	Acres Affected
			Grant	Loan		
1. Second Bacon Siphon and Tunnel with main conveyance facilities, U.S. Bureau of Reclamation, East Columbia Basin Irrigation District and Quincy Irrigation District.	Second Main Siphon and Tunnel for conveyance of water to supplement Columbia Basin project and develop East High area.	\$117,000,000	\$15,000,000	----	Complete	136,000-200,000
2. Snipes Mountain Irrigation District.	Replace mainline Penstock to pumping plant and mainline discharge and parts of pressure distribution system. Construct and install pumping plant and pressure distribution pipe.	550,000	192,500	----	Complete	2,000
3. South Columbia Basin Irrigation District Local Improvement District No. 2.	Rehabilitate and replace pressure distribution system. Construct stabilization reservoir.	686,428	102,965	\$240,250	Complete	2,000
4. Wenatchee Heights Reclamation District.	Replace pumping plant on Okanogan River. Replace and rehabilitate mainline from pump and pressure pipeline laterals. Construct and install main concrete division box.	1,437,000	493,500	----	Complete	660
5. Okanogan Irrigation System.	Replace portion of main canal with pipe.	2,275,000	525,000	----	Complete	5,040
6. Agnew Irrigation District.	Replace 3 wood flumes on main canal with 3 concrete pipe siphons.	168,434	55,677	----	Complete	7,198
7. Selah and Moxee Irrigation District.	Horse Heaven Hills reconnaissance study.	225,000	33,750	78,750	Complete	4,600
8. Benton County PUD.	Replace 2 wood flumes with steel and timber flumes. Replace segments of mainline wood stave pipe.	30,000	15,000	----	Complete	----
9. Wenatchee Reclamation District.	Replace lateral flume.	2,250,000	337,500	787,500	Complete	12,459
10. Icicle Irrigation District.	Replace diversion dam.	527,500	47,500	95,000	Complete	600
11. Peshastin Irrigation District.	Feasibility study	64,000	9,500	22,500	Complete	2,365
12. Granger Irrigation District	District Rehabilitation	24,000	3,950	8,050	Complete	----
13. Outlook Irrigation District		2,900,000	435,000	----	Design 5% complete	4,613
SUBTOTAL		\$17,251,842	\$1,232,050			237,535 acres
TOTAL			\$18,483,892			AV/WE27(A17-20)

Table 4
EMERGENCY AGRICULTURAL WATER SUPPLY PROJECTS FINANCED
WITH GENERAL OBLIGATION BOND PROCEEDS

1. 1977 Drought Alleviation	Name of Agency and Project	Purpose of Project	State Assistance		Total Project Cost	Direct Department Construction	Acres Affected
			Grant	Loan			
	1. Steamit Irrigation District.	Emergency drought alleviation.	\$ 17,950.53	\$ 289,400.00	\$ 307,350.53	----	300
	2. Wenatchee Heights Reclamation District.	Emergency drought alleviation.	25,065.94	167,132.00	192,197.94	----	660
	3. Lower Steamit Irrigation District.	Emergency drought alleviation.	28,342.00	160,602.62	188,944.62	----	400
	4. Roza Irrigation District LID Well Construction.	Emergency drought alleviation.					
	a. Able Oil LID		22,800.00	136,000.00	158,800.00	----	153
	b. Stout LID		31,590.80	168,078.86	199,669.66	----	492
	c. Kerahaw LID		28,933.69	169,624.27	198,557.96	----	132
	d. Johnson LID		34,656.63	196,387.59	231,044.22	----	225
	e. Charren LID		18,979.77	107,522.00	126,501.77	----	268
	f. White LID		21,411.04	124,127.89	145,538.93	----	126
	g. Hanrahan LID		13,939.08	78,801.81	92,740.89	----	162
	5. Naches-Seiah Irrigation District.	Emergency drought alleviation.	17,825.39	101,010.58	118,835.97	----	325
	6. WSU and DWE Well Prosser Experiment Station	Emergency drought alleviation.	----	----	----	\$241,528.00	520
	7. Test Well #16, Kittitas County	Emergency drought alleviation.	----	----	----	141,321.00	---
	8. Test Well #17, Douglas County	Emergency drought alleviation.	----	----	----	146,442.00	---
	TOTAL		\$261,494.87	\$1,698,687.62*	\$1,960,182.49	\$529,291.00	3,763 acres

*\$1,147,704.42 paid pack leaving \$550,983.20 outstanding in loans.

AV/M27 (421-22)

Table 4 (Continued)

II. Alleviate Unsatisfactory Water Supply Conditions 1979 through 1982

Name of Agency	Purpose of Project	State Assistance		Total Project Cost (Approx.)	Status of Project	Direct Department Construction	Acres Affected
		Grant	Loan				
1. Wenas Irrigation District	Rehabilitation and enlargement of dam and reservoir.	\$ 500,000	\$ 500,000	\$2,000,000	Construction 99% complete		2,500
2. Icicle Irrigation District	Replace lateral flume and rehabilitate lateral system.	212,500	165,000	527,500	Completed		600
3. U.S. Bureau of Reclamation	Yakima enhancement feasibility study.	500,000	----	500,000	Phase I complete	----	----
4. Agnew Irrigation District	Replace siphon.	100,000	100,000	200,000	Construction 90% complete	----	4,800
5. Sunnyside Valley Irrigation District	Replace 4 siphons.	1,223,000	1,223,000	2,446,000	Construction 85% complete	----	7,000
6. Yakima Tieton Irrigation District	Construct dam and reregulation reservoir and replace open channel with pressurized system.	4,138,000	4,138,000	62,133,000	Design 25% complete	----	25,500
7. Department of Ecology	Klickitat County Test Well No. 18.				Complete	196,000	----
8. Department of Ecology	Benton County Test Well No. 15				Complete	101,500	----
	SUBTOTAL	\$6,673,500	\$6,126,000			\$297,500	40,400 acres
	TOTAL	\$13,097,000					

AV/W27 (A23-25)

This program is just beginning to produce the anticipated accomplishments. Many projects of major importance to the state are expected to be funded from Referendum 38. Thus far, six projects have been financed in total or through cost-sharing with irrigation districts and/or the Federal government. Contracts totaling \$2,769,900 (\$1,028,900 in grants and \$1,741,000 in loans) have been executed by December 31, 1982 benefiting five irrigation districts and affecting approximately 6,846 acres (see Table 5).

4. Reclamation Revolving Account

This account was the only source of state financing for irrigation development and rehabilitation for 53 years. Financing was available to irrigation districts through loans and purchase of district bonds. The amount of money available in the account varies from paybacks, bond redemptions and power license fees collected. There is now approximately \$750,000 in the account available for loans and bond purchases.

Since Referendum 27 and 38 and the Emergency Water Supply Programs have been available, very little financing from this account has occurred. Prior to 1972, approximately 68 projects were completed with funds from the Reclamation Revolving Account. None are presently pending or under construction under this account.

The original dollar amount for the bond investment projects was \$2,813,500 benefiting 20 irrigation districts. The present bond indebtedness is \$1,365,200 (see Table 6).

The original dollar amount for the advances (loans) was \$140,500 benefiting four irrigation districts. The present loan balance is \$82,819.92 (see Table 7).

Yakima River Basin Water Enhancement Project

The first phase of the Yakima River Basin Water Enhancement Project (YRBWEP) feasibility study was completed in August 1982. The YRBWEP is a study authorized by Congress in Public Law 96-162 on December 23, 1979. The study was initiated in April 1981. The State of Washington supports the study and has provided \$500,000 to help fund the investigation (Substitute Senate Bill 2504, Chapter 263, Laws of 1979, 1st Extraordinary Session). The study team conducting the work is comprised of U.S. Bureau of Reclamation and Department of Ecology personnel. The purposes of the study are to (1) provide firm water supplies to presently irrigated lands; (2) provide water supplies for irrigation of new lands on the Yakima Indian Reservation; (3) provide adequate minimum streamflows for fisheries, game, and recreation; and (4) develop a comprehensive plan for the basin to enable efficient management of existing water supplies.

Table 5
 AGRICULTURAL WATER SUPPLY PROJECTS FINANCED
 WITH REFERENDUM 38 BOND PROCEEDS

Name of Agency and Project	Purpose of Project	Total Project Cost (Approx)	State Assistance		Status of Project	Acres Affected
			Grant	Loan		
1. Wenas Irrigation District	Rehabilitation and enlargement of dam and reservoir.	\$2,000,000	\$ 150,000	\$850,000	Complete	2,500
2. Columbia Irrigation District	Replace 42" siphon.	200,000	30,000	----	Complete	3,900
3. Brays Landing Irrigation District	Feasibility study for irrigation of "new" lands.	16,400	2,400	14,000	Complete	----
4. Brays Landing Irrigation District	Construct new irrigation system.	1,000,000	3,500	20,500	Construction 5% complete	446
5. Steallt Irrigation District	Feasibility study for proposed rehabilitation.	10,000	1,500	8,500	Complete	----
6. U.S. Geological Survey study of the occurrence of dissolved sodium in the ground waters of eastern Washington basalt	Define those aquifers and ground water flow systems where dissolved sodium presents irrigation problems.	845,000	165,825	----	10% complete	----
SUBTOTAL			\$1,028,900	\$1,741,000		6,846 acres
TOTAL			\$2,769,900			

AV/W27(A26-28)

Table 6

STATUS OF RECLAMATION REVOLVING ACCOUNT BOND INVESTMENTS
June 30, 1982

District	Original Amount	Issue Date	Maturity	Interest Rate(%)	Indebtedness
Aeneas Lake Irrigation District	\$ 220,500.00	1/1/71	1/1/76-1/1/10	5	\$ 200,500.00
Cascade Irrigation District	185,000.00	1/1/71	1/1/73-1/1/11	5	27,000.00
Chelan River Irrigation District	52,000.00	1/1/76	7/1/77-7/1/00	4	46,000.00
Columbia Irrigation District	125,000.00	1/1/69	1/1/70-1/1/09	4	59,000.00
Entiat Irrigation District	210,000.00	1/1/73	1/1/74-1/1/13	5	191,000.00
Gardena Farms Irrigation District	200,000.00	7/1/56	1/7/57-7/1/96	3	102,000.00
Lower Stemilt Irrigation District	207,000.00	7/1/80	1/1/84-1/1/11	6-1/4	207,000.00
Lower Squilchuck Irrigation District	70,000.00	1/1/76	1/1/80-1/1/10	4	60,000.00
Methow-Okanogan Reclamation District	45,000.00	7/1/66	1/1/70-1/1/87	3	7,500.00
Methow Valley Irrigation District	58,000.00	7/1/48	1/1/53-1/1/87	1	10,000.00
Moab Irrigation District	160,000.00	1/1/69	7/1/72-1/1/09	4	143,500.00
Moab Irrigation District	21,000.00	1/1/71	7/1/80-7/1/10	4	20,600.00
Naches-Selah Irrigation District	480,000.00	1/1/57	1/1/62-1/1/90	3	177,000.00
North Dallas Irrigation District	50,000.00	1/1/62	1/1/62-1/1/02	3	30,000.00
Palisades Irrigation District	60,000.00	1/1/54	1/1/58-1/1/84	3	4,000.00
Pateros Irrigation District	15,000.00	1/1/54	1/1/55-1/1/85	3	2,100.00
Spokane Valley Irrigation District #10	212,000.00	7/1/48	7/1/49-7/1/78	2	15,000.00
Spokane Valley Irrigation District #15	238,000.00	7/1/48	7/1/49-7/1/78	2	10,000.00
White Salmon Irrigation District	50,000.00	1/1/62	1/1/63-1/1/02	7	30,000.00
Whitestone Reclamation District	25,000.00	1/1/49	1/1/54-1/1/88	2	5,750.00
Whitestone Reclamation District	40,000.00	1/1/48	1/1/53-1/1/87	2	6,250.00
Wolf Creek Reclamation District	60,000.00	1/1/48	1/1/49-1/1/88	1	9,000.00
Wolf Creek Reclamation District	30,000.00	1/1/54	1/1/55-1/1/84	3	2,000.00
Total	\$2,813,500.00				\$1,365,200.00

AV/W27(A29-30)

Table 7

ACTIVE RECLAMATION REVOLVING ACCOUNT ADVANCES TO DISTRICT
June 30, 1982

District	Original Amount	Contract Date	Interest Rate (%)	Current Balance
Chelan River Irrigation District	\$ 23,000.00	12/3/73	5	\$ 4,219.64
Selah and Moxee Irrigation District	42,500.00	12/10/78	5-1/2	35,716.69
Snohomish Drainage District #6	25,000.00	7/22/64	3	37,883.59
Stemilt Irrigation District	50,000.00	10/19/72	4	5,000.00
Total	\$140,500.00			\$82,819.92

On August 6, 1982, the Study team submitted its report on Phase 1 of the study to L. W. Lloyd, Regional Director, Bureau of Reclamation, and Donald Moos, Director, Department of Ecology. The directors reviewed the information contained in the Phase 1 report, solicited public review and comment, and, in a letter of October 21, 1982, gave directions to the study team. Generally, the directors asked the study team to proceed with Phase 2 of the study, take actions necessary to pursue early implementation items identified in the Phase 1 study report, and undertake some specific study items early in Phase 2. Early action items include 1) funding of the East Selah Reregulating Reservoir, 2) funding of fish passage and protective measures, and 3) investigation of the viability of waterbanking. Specific study items to be undertaken in Phase 2 are to 1) define irrigation water requirements, water shortage criterion, and adequacy of present water supply; 2) proceed with investigation of reservoir sites at Satus, Simco, and Tampico on the Yakima Indian Reservation; 3) address water conservation opportunities; and 4) complete the next level of reservoir site evaluations on Bumping Lake Enlargement, Cle Elum Lake Enlargement, Forks (Teaway River), Horsetail (Little Naches River), Wymer (Squaw Creek), Devils Table (Rattlesnake Creek), and Rimrock Lake Enlargement sites so that the enhancement plan can be identified by July 1983; and 5) define instream flow requirements by January 1984.

Osoyoos Lake

On April 28, 1982, the International Joint Commission (IJC) issued an order of Approval to Washington State for construction and operation of a new control structure for Osoyoos Lake on the Okanogan River. The state had some concerns on specific provisions in the order and the IJC has allowed time for the state and British Columbia to reconcile any differences and refine the order into one that is accepted by all parties. It is expected that an acceptable order will be obtained in December 1982.

A line item appropriation was made to the Department of Ecology from Referendum 27 for up to \$3 million to cost-share the replacement of the Lake Control Structure on Lake Osoyoos. Language in the appropriation calls for 50 percent matching funds by British Columbia. The IJC approved the state's application to proceed with construction. The approval was granted in December, 1982.

Problems Encountered: In many instances, the preliminary planning elements for projects (especially those rehabilitation and improvement projects where Federal loans are being sought for cost-sharing) have taken many months to finalize and obtain Federal approval. Delays have been caused by the need for clarification of water rights. Longer delays are noted where Federal loan applications are being processed for approval. These delays have been caused by changes in Federal policies concerning the local irrigation districts' ability to pay back loans and establishing proper "charge accounts" for those irrigation districts with small tracts of noncommercial agricultural land.

In addition, Federal loan funds have not been available in the amount required to move projects where the planning phase is completed. This is due to Federal policies regarding the relative priority and funding of water supply projects.

To assure that the irrigated agriculture economic climate in the state remains intact, continual efforts must be made to develop the state's water resources and rehabilitate those facilities where needed. State financing is the key to this effort.

Project planning and assistance continues to the extent possible and limited technical assistance is provided to help irrigation districts apply not only for state funds but for Federal funds. Other guidance provided to prospective local irrigation districts, when possible, includes financial analysis and engineering reviews for cost-effectiveness. All assistance provided is intended to relieve the districts' financial burdens and to reduce their costs through new and improved facilities.

The issue of where obligations and expenditures stand with respect to the state's constitutional debt ceiling forced funding activities to be curtailed in FY 82 until the Office of Financial Management (OFM) ascertained that projected expenditures would stay within the debt limit. WDOE is keeping complete records since it is assumed that the state will be faced with this situation again in the near future.

As the state's portion of project funding is increasing, completion of the Columbia Basin Project (East High) and the securing of new storage in the Yakima Basin will most likely depend on state participation and contribution of funds. For example, the state's share of the Yakima Project is expected to be approximately 10 percent of the total costs. This project is discussed in more detail above. Coordination and input to the Western State's Water Council and the state's Congressional Delegation have been underway for some time in order to keep the state's cost-sharing proportion within reason and in line with the current fiscal plight. Other mechanisms discussed as possible state alternative funding sources include debt financing, user fees, and bond banks.

The present status (as of December 31, 1982) of the obligations of the agricultural water supply funds is summarized in Table 8.

Table 8
STATUS OF OBLIGATIONS OF AGRICULTURAL WATER SUPPLY FUNDS
(as of December 31, 1982)

	Referendum 27	Emergency Agricultural Water Supply	Referendum 38
Total Bond Proceeds	\$25,000,000	\$18,000,000	\$50,000,000
Total Obligations	18,483,892	14,438,769	1,246,225

FY 81-83 Biennium Data			
Original FY 81-83 Appropriation	7,284,000	7,358,000	18,070,213
FY 81-83 Appropriation Reduction	359,520	221,000	543,480
New FY 81-83 Appropriation	6,924,480	7,137,000	17,526,733
FY 81-83 Obligations	684,292	6,489,786	2,383,614
FY 81-83 Appropriation Balance	6,240,188	647,214	15,143,119
Total estimated cost of potential projects	5,300,000 ¹ (est)	2,000,000 (est.)	22,635,000 ² (est)

1/See Table 9. These projects may or may not be funded in the FY 81-83 biennium.
2/See Table 10.

TABLE 9
PROJECT LIST
REFERENDUM 27, AGRICULTURAL WATER SUPPLY
(FY 82 and FY 83)

<u>APPLICANT - PROJECT</u>	<u>ESTIMATED REFERENDUM 27 COST</u>
Department of Ecology-Replace Osoyoos Lake Control Structure	\$3,000,000
Granger Irrigation District Irrigation Water Supply Facilities	200,000
Okanogan Irrigation District Irrigation Water Supply Facilities	2,000,000
Roza Irrigation District Irrigation Water Supply Facilities	100,000
Estimated Total	<u>\$5,300,000</u>

TABLE 10

PROJECT LIST

REFERENDUM 38, AGRICULTURAL WATER SUPPLY
(FY 82 and FY 83)

<u>APPLICANT - PROJECT</u>	<u>ESTIMATED REFERENDUM 38 COSTS</u>
Columbia Irrigation District - Irrigation Water Supply Facilities	\$ 900,000
Isenhart Irrigation District - Irrigation Water Supply Facilities	200,000
Greater Wenatchee Irrigation District - Irrigation Water Supply Facilities	1,200,000
U.S. Bureau of Reclamation, Yakima Basin Irrigation Districts, Yakima Indian Nation, Yakima River Reregulatory Reservoir and Fishery Facilities	18,000,000
Chelan Falls Irrigation District - Irrigation Water Supply Facilities	260,000
Kiona Irrigation District - Irrigation Water Supply Facilities	175,000
Grandview Irrigation District - Irrigation Water Supply Facilities	500,000
Stemilt Irrigation District - Irrigation Water Supply Facilities	1,200,000
Benton Irrigation District - Irrigation Water Supply Facilities	<u>200,000</u>
Estimated Total	\$22,635,000

The problems of limited local and Federal funds are difficult to overcome. In light of the present economy, the best approach has been to monitor the irrigation district's and the Bureau of Reclamation's planning and budget efforts in water resources development and rehabilitation projects. By working closely with the districts on proposed projects, WDOE has the opportunity to show where reductions in labor requirements, energy savings, water conservation and better all-around water management can result in lower costs. These incentives lead to better financial planning and close cooperation with the Bureau of Reclamation in looking for positive ways to spur Federal appropriations to help achieve the potential projects.

WATER RESOURCES MANAGEMENT ACTIVITIES

WATER ALLOCATION

Major Issue: The major issue is the problems associated with the appropriation of public surface and ground waters through the issuance of water rights and the management of the use of these appropriated waters. Within the major issue are various subissues relating to water availability determinations such as salt water intrusion, lowering of the water table, interference with existing water rights, artificially stored ground waters, ground water subareas, etc.

Authority/Background: The primary authority for this program element is the 1917 Surface Water Code (Chapter 90.03 RCW), and the 1945 Ground Water Code (Chapter 90.44 RCW). Other statutes and regulations are also used in the administration of this program.

Accomplishments: During fiscal year 1981, the department received 1,500 applications, issued 1,150 permits, and issued 900 certificates for the appropriation of water. During fiscal year 1982, 1,100 applications were received, 1,300 permits were issued, and 1,300 certificates were issued. For the first six months of FY 83, approximately 500 applications were received, 600 permits were issued, and 700 certificates were issued.

There were many other specific accomplishments in the water allocation program, which relate to other programs that are discussed elsewhere in this report. Many of these activities pertain to evaluation of surface water and ground water availability in specific areas of this state. When this information is compiled, it is used in the evaluation process prior to taking action on water right applications.

Problems Encountered: One of the continuing problems is the backlog which has developed in the processing of water rights. The backlog is a large number of water right applications which have been received and for which a decision has not been made regarding whether or not a permit should be issued.

During the two-year period from July 1, 1980 to June 30, 1982, the backlog remained essentially the same at approximately 3,000 applications on hand in the four regional offices. Approximately 2,300 of these are in the two regional offices in eastern Washington. The remaining 700 are in the two regional offices in western Washington. During the first six months of FY 83, the backlog was reduced by approximately 300 applications due to a reduction in the number of applications filed.

As stated in previous biennial reports, the major contributor to the buildup of this backlog was the great number of water right applications that were submitted as a result of the Water Rights Claims Registration Act which expired in June 1974. Approximately 5,500 water right applications were filed that year. Since that time, the number of permits issued has exceeded the number of applications received by approximately 2,000. This is a significant reduction in the backlog.

The major problem which results from a large backlog is the extended time involved before action can be taken on new applications for water rights. This delay may cause financial hardship for the individual applicant and for the state as a whole. This often results in inquiries and/or

complaints from applicants which compounds the delays in processing applications because of the staff time required to respond to these inquiries and/or complaints.

Not all of the backlog is a result of the large number of applications. Many of the applications considered in the backlog are being held for various reasons relating to water availability determinations, adjudications, instream flow considerations, Indian reservations, etc. Only when the reasons for these "holds" are removed can these applications be processed.

Budget and staff reductions during the last year have had some effect on the backlog already and, at best, the backlog can be expected to stay at the current level. These reductions have also necessitated closing the Colville office with a loss of direct public service to the citizens of that area.

WATER RIGHTS INFORMATION SYSTEM

Authority/Background: The department is required to maintain records of all water right transactions related to the appropriation, diversion, and use of all public waters in the state. In order to effectively conduct these activities, which currently involve more than 65,000 water right records, it was necessary to utilize computer capabilities for the timely extraction of information to meet various user needs.

Accomplishments: WDOE has had a working computerized water right information system for some time. The existing data base has been improved by the addition of river mile location and place of use data to the records. This improvement was made possible by a grant from the Pacific Northwest Regional Commission. River mile location data will make it possible to list rights in upstream order or to summarize quantities of water appropriated from specific stream reaches, basins, or subbasins. It will also be possible to provide similar ground water data for defined subareas. The improved computer system will provide a substantially enhanced research capability. For example, a data summary will provide the totals for water rights issued for irrigation, single domestic, commercial, municipal, and power use statewide or in any basin or stream segment.

In the near future, programs will be available to retrieve information from any portion of a drainage basin by indicating the river mile reaches required. Computer printouts will indicate which water rights, if any, apply to lands under consideration for development. Data may also be useful in studies conducted to determine the impact of proposed development on water users in specific geographical areas.

ADJUDICATIONS OF WATER RIGHTS

Major Issue: The need to determine existing rights to surface and ground waters through the conduct of general adjudications.

Authority/Background: The adjudication of water rights is a judicial determination of the nature and extent of existing water rights in a specific area. An adjudication proceeding is initiated by an administrative agency of the state government, presently the WDOE, through filing a quiet title action in the appropriate county superior court against all parties claiming water rights. Each right or claim of right, along with any supporting evidence, is reviewed by the superior court and a determination made as to its validity, priority, and quantity. Upon completion of the adjudication proceeding, those parties whose rights are confirmed will be issued a certificate of adjudicated water right.

Specific procedures for the general adjudication of surface water rights were first established by the Legislature in 1917 with the enactment of the Water Code (Chapter 90.03 RCW). The 1945 Ground Water Code (Chapter 90.44 RCW) provided that such procedures also be applied for the adjudication of rights to the use of the ground waters of the state.

Accomplishments: Adjudications have proceeded fairly slowly in the state of Washington. After a flurry of activity immediately following enactment of the Water Code, the number of adjudications fell off considerably from the 1940s to the mid-1970s. While 56 adjudications were completed prior to 1940, only 16 have been completed since.

In 1977, when drought conditions created statewide alarm about water availability, the need for increased adjudication activity again became apparent. Several petitions for adjudication were received by WDOE from water users on streams where shortages had occurred. WDOE's response to the demand was to intensify departmental adjudication efforts. The Legislature agreed, authorizing increased funding and staffing for a revitalized adjudication program.

During the current biennium, the Adjudication Section has initiated two new cases, completed three cases through hearings before a Referee, concluded the necessary field work on another case, and is continuing preparations to commence field work on the Yakima River Adjudication. In the Yakima River Adjudication, continued litigation and extensions of the time period for the filing of Statements of Claim have prevented the adjudication from proceeding as quickly as anticipated. All but one legal obstacle appears to be resolved and this issue is now before the State Supreme Court. With the exception of the Yakima River Adjudication, all of the adjudications listed as incomplete and active in Table 12 should be largely or totally completed within the upcoming biennium. (Also see Figure 4)

The current status of the eight active adjudications is summarized as follows:

1. Antoine Creek and tributaries (Chelan County): A supplemental hearing before the Referee, ordered by the Chelan County Superior Court, has been held and the supplemental Report of Referee is being prepared.
2. Chumstick Creek and tributaries (Chelan County): A supplemental Report of Referee has been completed and distributed and a final hearing before the Chelan County Superior Court scheduled on January 7, 1983.

3. Cow Creek, Sprague Lake and tributaries (Adams, Lincoln, Spokane, and Whitman counties): Field work has been completed and preparations are being made to hold a hearing before the Referee.
4. Deadman Creek and tributaries (Spokane County): The Report of Referee has been completed and distributed and a hearing on the report before the Spokane County Superior Court was held on December 13, 1982.
5. Little Klickitat River and tributaries (Klickitat County): The hearing before the Referee has been held and the Report of Referee is being prepared.
6. Nahahum Canyon and tributaries (Chelan County): The hearing before the Referee has been held and the Report of Referee is being prepared.
7. Wolf Creek and tributaries (Okanogan County): The Report of Referee is scheduled for completion during the current biennium.
8. Yakima River and tributaries (Benton, Kittitas, Klickitat and Yakima counties): The Statements of Claim filed with the Yakima County Superior Court have been reviewed and preparations for commencement of field work are being completed. The issue of whether all potential claimants have been properly served with summons is now before the State Supreme Court.

The six adjudications listed as incomplete and inactive in Table 12 are cases which, for varying reasons, have not been concluded and are not being actively pursued by WDOE. Two of the cases are being considered by the Federal courts, one involves an area which is included in the larger Yakima River Adjudication, and the remaining three are old adjudications which approached completion, but for which final decrees were never obtained.

Problems Encountered: Budgetary cutbacks and reductions in staff levels which occurred during the current biennium forced a corresponding reduction in the scope of the adjudications program. The size of the adjudications staff was reduced from a projected 17 to 11½ and one of these positions is yet to be filled. Also, cuts in the number of support staff, such as cartographics, word processing, and legal, have resulted in delays in the completion of current adjudications and will lengthen the time necessary to accomplish future endeavors.

The Adjudications Section has responded to the imposed reductions in two ways. The first way was simply to reduce the number of new adjudications to be undertaken. This option allowed for the completion of a more limited number of new adjudications within a reasonable period of time and without undue hardship to the claimants. Furthermore, available resources could be deployed to those adjudications already in progress. The drawbacks to this approach are that:

1. Departmental response to citizens' petitions for adjudication of streams will be slower;

2. Continuing and existing water use conflicts will not be addressed as promptly;
3. The work backlog for the Adjudications Section will be increased;
4. WDOE regional offices will experience continuing and increased difficulties in their regulation and resource management efforts.

The second approach taken was to streamline section procedures. WDOE evidence at adjudication hearings is now presented in the form of written reports rather than oral testimony. This has shortened the length of the hearings and greatly reduced court costs, a major expense. Increased use of computerized information processing (both in-house and at county courthouses) in reaching and identifying potential claimants and properties has accelerated the early phases of an adjudication and decreased the amount of post-hearing follow-up work necessary. Additional proposals are under consideration which could greatly reduce the amount of time required for specific phases of an adjudication.

GROUND WATER MANAGEMENT

Major Issue: Proper development, use, and regulation of our ground waters is perhaps the most important key to further economic growth and retention of a high quality of life for residents of many areas in Washington.

Authority/Background: Ground water use and development occurred slowly where surface water was more accessible and less expensive to develop. As a result, the Ground Water Code (Chapter 90.44 RCW) was not enacted until 1945, nearly 30 years after the enactment of the Surface Water Code.

The Ground Water Code provides a means for regulating, controlling, and managing ground water through the issuance of water rights. Ground water management is becoming a major issue as surface waters approach full appropriation. In many areas of our state, the only source of water for increased irrigation is ground water. Specific examples are the Walla Walla area, the Yakima River Basin, and the Eastern Columbia Basin. In many locations in our island counties, surface waters are not available, and limited ground waters provide the only alternative water source.

Washington's ground water reservoirs are capable of providing large additional freshwater supplies which become more important as undeveloped surface water supplies become fully appropriated. Withdrawals of freshwater from all surface and underground sources are increasing. Substantial increases in ground water withdrawal must continue if projected water demands are to be met.

Accomplishments: Comprehensive ground water resources management was initiated by predecessor agencies of WDOE with enactment of the 1945 Ground Water Code. The earliest work on ground water consisted of investigations of its availability, demands on the resource, and potential problems. Investigations under a cooperative program between WDOE and the U.S. Geological Survey (USGS) have resulted in water supply bulletins and other technical reports published by the USGS.

At present, ground water investigations under the cooperative program are being conducted in the Horse Heavens Hills area of South-Central Washington and Island County (Whidbey and Camano Islands). In the Horse Heavens Hills, the objectives are to determine the availability of ground water and develop a computer model as a management tool to determine the effects of alternative development schemes. In Island County, the objective is to determine if ground water supplies are adequate and to evaluate the potential for seawater intrusion problems.

Another ongoing, cooperative activity with the USGS is the observation well program. Observations at a network of wells monitor changes in ground water levels in many of the principal aquifers. Since the beginning of the program in 1938, the number of wells in the network has varied. Currently, there are 45 wells in the network. The recent reduction in the number of observation wells has resulted in part from budgetary problems, but the primary reason is that the network is being reevaluated and well measuring efforts have been transferred from the state network to specific project areas. Table 1 lists the number of observation wells in the state network by county.

Table 11. Observation Wells

County	1979-80	1981-82
Adams	30	4
Benton	5	4
Chelan	1	-
Douglas	5	4
Franklin	14	-
Grant	32	4
Grays Harbor	4	4
King	2	-
Kittitas	1	2
Klickitat	7	4
Lewis	4	-
Lincoln	23	15
Okanogan	2	-
Pierce	4	-
Snohomish	1	-
Spokane	11	-
Stevens	1	-
Thurston	1	-
Walla Walla	20	4
Whatcom	1	-
Whitman	12	-
Yakima	11	-
Totals	192	45

These investigations and observation well readings provide data on water levels. Steadily declining ground water levels indicate a need for more intensive management of the resource. The ground water code provides that WDOE may designate ground water areas and subareas and depth zones within these areas and regulate withdrawals to maintain a safe sustaining yield. WDOE has designated three such ground water areas by regulation:

the Quincy Subarea, the Odessa Subarea, and the Duck Lake Subarea. Ground water management regulations have been adopted for the Quincy Subarea and the Odessa Subarea. The Odessa subarea management regulation was revised/updated in 1982 and the Quincy regulation is currently under review for revisions. The latter regulation includes provisions for management of artificially stored ground water which occurs from seepage and percolation of Columbia Basin project irrigation waters.

The Odessa subarea regulations were amended in June and August of 1982. Through these amendments, the boundaries of the Odessa Subarea have been expanded (Chapter 173-128A WAC), as shown in Figure 3, and the management regulations modified (Chapter 173-130A WAC) in order to more clearly meet management objectives.

The Duck Lake subarea (Chapter 173-132 WAC) was established to develop a management program for artificially stored ground water. In a proposed order, the department has determined the amount of artificially stored ground water to which the Okanogan Irrigation District is entitled. The department will now evaluate water availability and use in the subarea to administer state water right applications.

The Aeneas Lake Irrigation District (ALID), pursuant to Chapter 90.44 RCW, petitioned the department to establish a ground water management subarea around Aeneas Lake. After review and study of the proposed subarea by the department, ALID agreed with WDOE that a subarea designation was not required to address their concerns at this time.

A ground water management program is a major element of the basin management program developed for the Walla Walla River Basin. This was the first basin management program to treat ground water management in detail and it applied the concept of a conjunctive use of surface water and ground water. As noted in the section entitled "Basin/Instream Management," this basin management program is under review and program amendments are scheduled for adoption on December 30, 1982. These amendments will extend the withdrawal of ground water use for other than municipal water supply in the Walla Walla-College Place area from February 1, 1983 to October 1, 1984. This will allow more time for studies to determine the best future use (allocation) of the ground water resource in this area.

Heavy demands on surface waters make it necessary to fully explore water use benefits available through conjunctive management of state waters. Using ground water in conjunction with surface water can greatly increase development possibilities.

Saltwater intrusion problems have not yet required a complex management scheme. To prepare for anticipated problems, WDOE has recently adopted a standard office procedure on coastal water wells. The U.S. Geological Survey has recently completed a study of saltwater intrusion problems in San Juan County and is conducting a similar study in Island County. WDOE has initiated test well drilling for the Island County study. The two counties hope to develop a computer model which will enable them to predict saltwater intrusion problems.

ODESSA GROUND-WATER SUBAREA

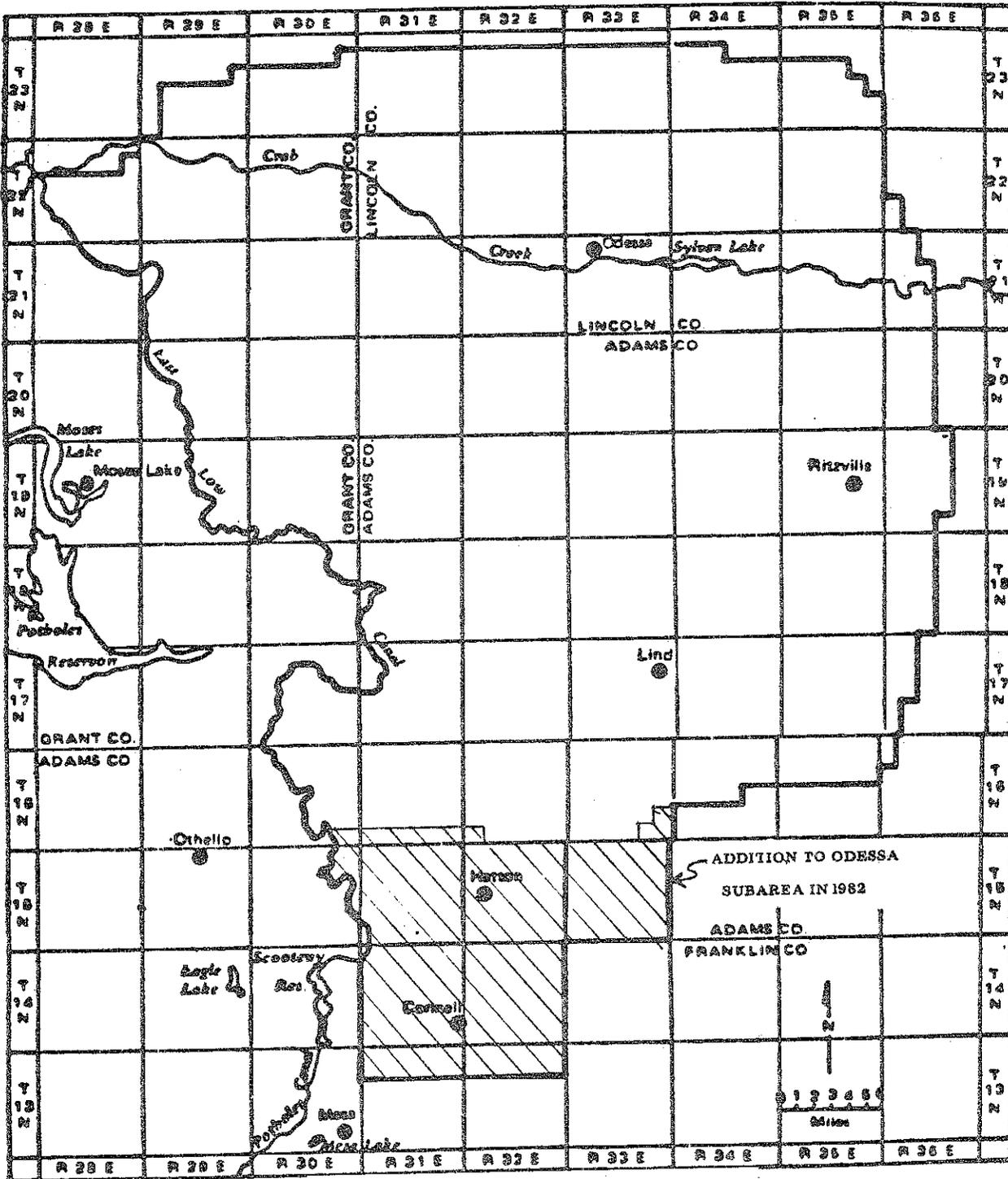


Figure 3
Odessa Subarea

WELL DRILLERS LICENSING

Authority/Background: The Water Well Construction Act of 1971 (Chapter 18.104 RCW) requires the licensing of well drillers and a report on each well constructed. Chapter 173-160 WAC establishes minimum standards for construction and maintenance of water wells. Chapter 173-162 WAC provides for the annual licensing of well drillers.

Accomplishments: In fiscal year 1982, 71 new licenses were issued. Currently, there is a total of 889 active licenses.

Problems Encountered: The position for administering the well drillers licensing activity has been abolished because of budget reductions. Currently, this activity has been assigned to existing staff and essential program administration receives minimal attention.

Effective ground water management requires investigations of the resource available for future use and the monitoring of existing use. Funding cuts have reduced the cooperative effort with the USGS in areas where intensive ground water management is expected to be needed in the future. Previous experiences have clearly shown that problems develop where ground water permits have continued to be issued without a thorough knowledge of the resource available.

Unless the Legislature can provide supplemental funding for ground water investigations, management of the ground water resources will lag behind the need for this activity and ground water problem areas will continue to develop and problems will become increasingly more difficult to resolve.

RESERVATIONS OF WATER FOR FUTURE USE

Major Issue: A fundamental concern expressed in the Water Resources Act of 1971 is that an adequate and safe supply of water be preserved and protected for human domestic needs.

Authority/Background: Under the present water appropriation system, the permittee is given specific time limits to complete his project and to put the water to full beneficial use. As a result, public water supply utilities have either been unable to ensure adequate future water supplies or have filed applications for permits with no intent to develop immediately. The department, in cooperation with the Department of Social and Health Services (DSHS), has adopted regulations which establish a process whereby any person may petition WDOE to reserve water for future public water supply (Chapter 173-590 WAC).

The department expects petitions for reservations of public water supply to be submitted from the following areas:

- | | |
|------------------|--|
| 1. Tri-Cities | 7. San Juan County |
| 2. Spokane | 8. King County |
| 3. Burbank | 9. Pierce County |
| 4. Grant County | 10. Clark County |
| 5. Skagit County | 11. Walla Walla |
| 6. Island County | 12. Other (Long Beach Peninsula,
Othello area, and the Bellingham area) |

Accomplishments: The department has received a petition from the Thurston County metropolitan area (Lacey, Olympia, and Tumwater), and is currently reviewing it for completeness and accuracy of data.

Problems Encountered: At current staffing levels, a considerable backlog of petitions may occur resulting in substantial delays in establishing public water supply reservations. As a result, the department is looking at alternatives to the implementation of Chapter 173-590 WAC.

RELINQUISHMENT

Major Issue: Relinquishment is a process whereby water rights or rights which have been granted, but are no longer used, revert to the state. Relinquishment of unused water rights has become increasingly important as more streams approach full appropriation, and will become critical as development and population increase and/or shift.

Authority/Background: Chapter 90.14 RCW (1967) provides procedures to formally record such relinquishments and defines how and when rights revert to the state. The relinquishment portion of the statute provides that if any person entitled to divert or withdraw waters voluntarily fails, without sufficient cause, to divert or withdraw water during any five or more successive years, he/she relinquishes all or part of the right. The right then reverts to the state, making those waters available for reappropriation in accordance with RCW 90.03.250.

Accomplishments: Due to other higher priority tasks, the department has pursued relinquishment only when such actions are incidental to other water right activities. Subsequent relinquishment activities will continue in the same way.

RESERVED RIGHTS

Authority/Background: The federal reserved water rights doctrine holds that when the federal government withdraws its lands from the public domain and reserves it for a federal purpose, the government, by implication, reserves appurtenant water then unappropriated to the extent needed to accomplish the primary purposes of the reservation. The doctrine applies to Indian reservations and other federal reservations, including military reservations. The priority date for federal reserved rights is the date the reservation was created, even if the rights go unexercised.

With approximately 15 million acres (or 35 percent of the state's total land area) of federal reservations in Washington, the existence of federal rights creates serious water allocation and management problems, whether they are exercised or remain unexercised. If such rights were fully exercised by the federal government, much of the state's water would be under federal jurisdiction and the state would have little, if any, control over the water within its borders. Long established water rights and priorities granted under state law could be terminated or otherwise impaired without compensation. Even if federal reserved rights remain unquantified and unexercised, the uncertainty about the quantity of water potentially affected by the reservation doctrine impedes effective, coordinated state water resource planning and management. The state cannot prepare long-term plans without knowing when or if the federal government will preempt water resources on federally reserved lands.

Recent Developments: The reserved rights doctrine, which is based on a long series of U.S. Supreme Court decisions beginning in 1908, may have been significantly modified by two supreme court cases decided in 1978. In the case of United States v. New Mexico, the court distinguished between the principal and secondary purposes of a national forest land withdrawal and held that a reserved right existed only for the principal purposes. Thus, the court ruled that the Gila National Forest in New Mexico held reserved rights as necessary to preserve timber and to secure favorable water flows, but not for such secondary purposes as aesthetic, recreational, or stock watering uses. In the case of California v. United States, the court disavowed certain language in previous cases and held that the Federal Reclamation Act allows a state to impose any condition regarding the control, appropriation, use, or distribution of water at a federal reclamation project so long as the condition is not inconsistent with the clear congressional directives for the project. Although the full meaning of these two decisions is still being debated, it seems clear that the extent of reserved rights that can be claimed by the United States has been significantly reduced, while the power of the states to control water resources in federal reclamation projects is strengthened.

However, in connection with President Carter's water policy initiatives of 1978, the Solicitor of the Interior Department in 1979 released an opinion which described a new species of federally-created water right called a federal "nonreserved" right. According to this opinion, federal agencies have the power to appropriate otherwise unappropriated water regardless of the substantive provisions of state law for any congressionally mandated purpose. These nonreserved rights do not arise by implication from the reservation of land for particular purposes, but instead from actual use of unappropriated water by the United States to carry out congressionally authorized management objectives on federal lands.

The solicitor's opinion created considerable controversy in the western states. Following widespread criticism of the opinion, the Interior Solicitor for the Reagan administration issued an opinion in September 1981 concluding that there is no sound legal basis for "nonreserved" water rights. Because the Interior solicitor's opinion did not apply to federal agencies outside of the Department of Interior (such as the Forest Service), Attorney General William French Smith requested the Justice Department to rule on the question. In June 1972, Attorney General Smith issued the opinion which apparently confirmed the 1981 repudiation of nonreserved rights. Yet the latest opinion expanded on the 1981 opinion and in doing so created uncertainty as to whether it was actually reasserting the nonreserved rights theory in a slightly different form. This is likely to be debated for some time. Notwithstanding the legal issues involved, Interior Secretary James Watt has declared it to be the Reagan Administration's policy "to recognize state primacy in water resources and to abide by state law and state procedure in all aspects of water management unless otherwise expressly directed by the Congress."

Accomplishments: The Department of Ecology and the Attorney General's Office have been active in developing proposed federal legislation to resolve the friction between the United States and the states over the management and regulation of water resources. The thrust of this legislation as it relates to non-Indian federal reserved water rights is to

(1) require binding quantification, (2) terminate unexercised reserved rights, (3) expand mechanisms and provide funding to states for adjudicating federal reserved rights, primarily in state courts, (4) integrate all federal reserved rights under the regulatory programs of the states, (5) pay compensation, in certain cases, to water right holders whose rights are impaired by a reserved water right, and (6) establish a detailed procedural mechanism for creating new reserved rights.

While developing and promoting its proposed legislative solution to the reserved right issue, WDOE has also actively participated in the activities of several interstate organizations (particularly the Western States Water Council) in seeking resolution of the problem.

The department will continue to seek resolution of the federal reserved right issue through steps such as those specified in the proposed federal legislation (see above). An inventory and binding quantification of federal reserved claims would eliminate fears and uncertainties about federal reserved water rights, promote more effective water resource planning, and promote more equitable treatment of holders of water rights granted under state law.

In order to expedite quantification of federal water claims, as well as clarification of water rights generally, it is recommended that funding for general adjudications be maintained at a satisfactory level. The adjudication process is the only mechanism under existing state law which results in quantification of all rights in a basin, including federal reserved rights. (See the Adjudications section of this report, page 38)

Washington will continue to participate in the activities of interstate organizations such as the Western States Water Council, Interstate Conference on Water Problems, Association of Western State Engineers, National Governors Association, and the Council of State Governments. Such organizations can be extremely effective in disseminating information and in representing unified state positions on issues such as federal reserved water rights.

In addition, in 1982 the Department of Ecology was involved in a wide range of water resource issues which related to various types of claims by Indians or the United States' claims for Indians.

In United States v. Anderson, District Court No. 3643 (E.D. Wash.), the United States District Court upheld the contention of the State of Washington that state water right laws may be applied, in terms of issuance of water right permits, to excess waters flowing in streams within an Indian reservation that have their origin outside the reservation's boundaries. The district court also upheld a claim of the United States and the Spokane Indian Tribe of water rights for instream uses, including fishery uses, based on the federal reserved water rights doctrine. Both the United States and the Spokane Indian Tribe appealed the district court decision to the United States Court of Appeals in San Francisco.

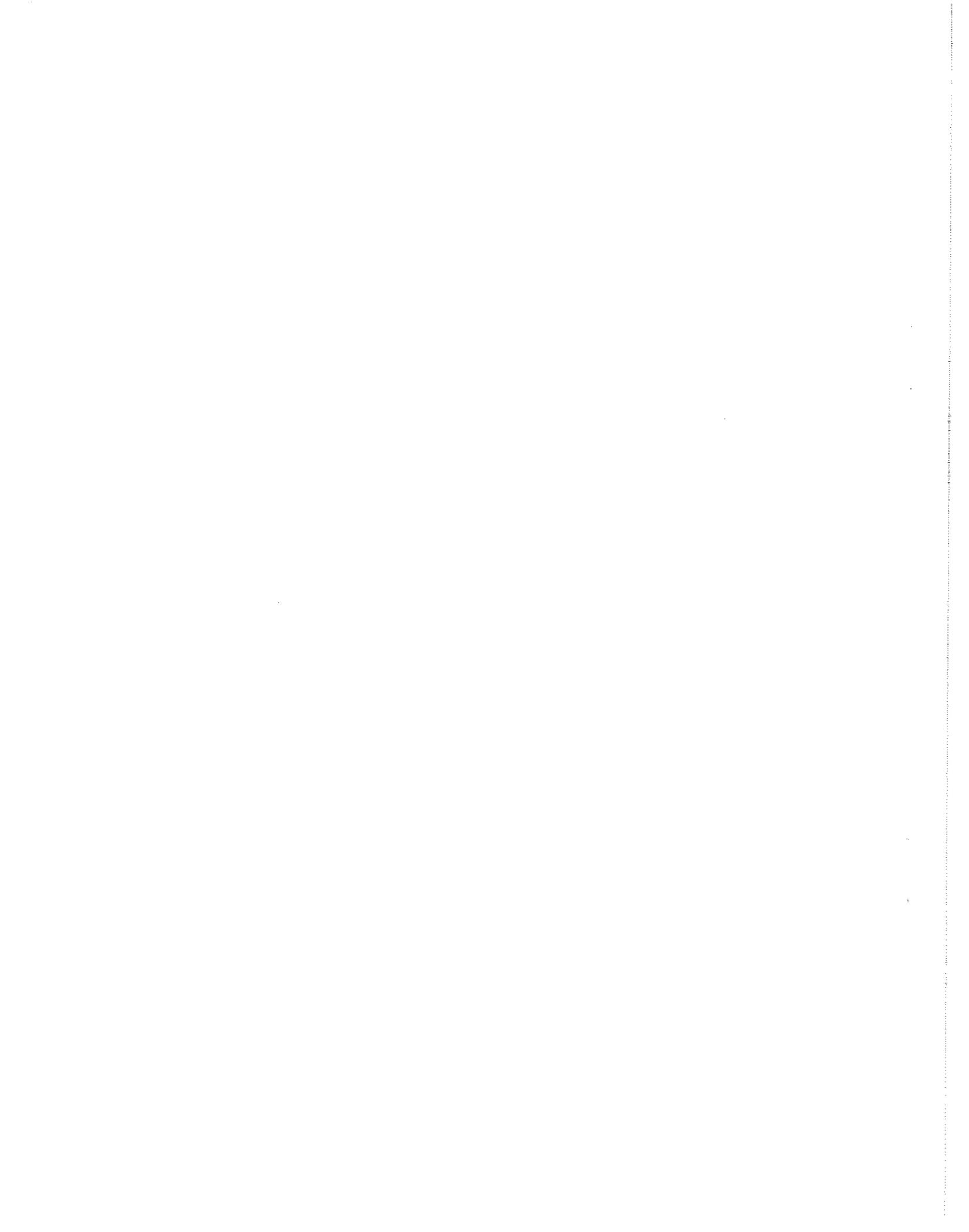
A second case in federal district court in Spokane, Colville Confederated Tribe v. Walton and State of Washington, District Court Nos. 3421 and 3831 (E.D. Wash.), is presently being heard on a remand from the United

States Court of Appeals for the Ninth Circuit. The issue involved on remand is whether, under the specific facts of the case, a non-Indian purchaser of an allotment within an Indian reservation (Walton) acquired the reserved rights held by the Indian allottee.

State of Washington, Department of Ecology v. Acquavella et al., Yakima County Superior Court No. 77-2-01484-5, is the most important general adjudication of water right proceedings now being processed in Washington's courts. During 1982, the Yakima County Superior Court denied a motion by the United States for lack of state jurisdiction based on the "disclaimer clause" in Washington's Constitution. (That clause provides, in part, that "the people inhabiting this state do agree . . . that they forever disclaim all rights and titles to . . . lands lying within said limits owned or held by any Indian or Indian tribes . . . and said Indian lands shall remain under the absolute jurisdiction and control of the congress of the United States. . . . (Article XXVI).) That ruling is now being reviewed by the Washington State Supreme Court. (The same disclaimer issue is presently pending for resolution before the United States Supreme Court in Arizona, et al. v. San Carlos Apache Tribe, et al., United States Supreme Court Nos. 81-2147 and 81-2188. The State of Washington filed an amicus curiae brief in this proceeding.)

In Kittitas Reclamation District v. Sunnyside Valley Irrigation District, U.S.C.A. (9th Cir.) Nos. 80-3505, 81-3002, 81-3068, 81-3069, the United States Court of Appeals in San Francisco upheld a federal district court decision, relating to waters within a federal reclamation project reservoir, which directed the Bureau of Reclamation to release stored waters to protect Indian fishery interests in the Yakima River Basin. The Court of Appeals relied upon a federal district court opinion in the "Boldt case (Phase II)" which was currently on appeal to (but undecided by) the same federal court of appeals. The State of Washington filed an amicus curiae brief urging rehearing of the court of appeals' opinion rendered in the Kittitas Reclamation District v. Sunnyside Valley Irrigation District case. (In the case of State of Nevada v. United States of America, et al., United States Supreme Court Nos. 81-2245, 81-2246 and 82-38, the State of Washington filed an amicus curiae brief dealing with the application of the doctrine of res judicata in state general adjudication proceedings where the United States is involved as a claimant of Indian reserved rights. A similar res judicata issue is involved in Kittitas Reclamation District.)

Finally, in United States v. State of Washington (Phase II) U.S.C.A. (9th Cir.) No. 81-3111 -- the Boldt case -- the United States Court of Appeals reversed a federal district court holding that a right to take fish, arising from a United States treaty with an Indian tribe, implied a right to have treaty fish protected from environmental degradation. The appellate court's opinion is now the subject of a request for reconsideration filed by the various Washington Indian tribes that are parties to the case.



PUBLIC SAFETY

DAM SAFETY

Major Issue: There is a continuing need for a comprehensive state dam safety program to assure safety to life and property. To implement such a program there is a need:

1. For adequate funding and staff capability to inspect all dams (that are not being inspected under federal authorities), both during construction and periodically thereafter for proper maintenance; to thoroughly review, analyze, and approve plans and specifications for dam construction; and to take appropriate emergency or enforcement action, where necessary.
2. To develop and establish appropriate state guidelines and standards for dam construction, operation, and maintenance.
3. To refine, update, and maintain the state inventory of dams and add a data base to establish a work scheduling, progress, and tracking system.
4. To develop a program to assure the timely repair or removal of unsafe dams.

Authority/Background: RCW 43.21.130 - Provides the Department of Ecology with powers and duties, insofar as it may be necessary to assure safety to life and property, to inspect the construction of all dams and all other works related to the use of water and to require necessary changes in construction or maintenance to reasonably secure safety to life and property.

RCW 86.16.035 -- Control of Dams and Obstructions -- The Department of Ecology shall have supervision and control over all dams and obstructions in streams and may make regulations concerning the flow of water as necessary for the protection of life and property below these works from flood waters.

RCW 90.03.350 -- Plans and Specifications -- Anyone intending to construct or modify any dam or controlling works for the storage of 10 acre-feet or more of water shall submit plans and specifications to the Department of Ecology for approval as to safety. Any dam not constructed according to plans and specifications or not maintained as may be ordered shall be presumed to be a public nuisance and may be abated. It shall be the duty of the county prosecuting attorney to institute abatement proceedings against the owner when so requested by the Department of Ecology.

RCW 90.03.470 (8), (9) -- Fees for Inspection and Plan Approval -- Requires the collection of fees for dam inspections, based on the cost of the inspection, and fees for dam plan approvals, based on a minimum of ten dollars or the actual cost.

Accomplishments: During FY 1981-82, the Dam Safety Section of the Department of Ecology continued efforts to correct deficiencies in 100 high hazard non-Federal dams that were inspected by the Seattle District of the Corps of Engineers under the National Dam Inspection Program (P.L. 92-367). As of December 1982, the Dam Safety Section has contacted the owners of approximately 75 dams and studies or corrective actions have been initiated on about 50 projects.

In addition, plans have been reviewed and approved during the 1981-82 period for several new major hydroelectric facilities including the Stage II hydroelectric development of the Sultan River Project by the City of Everett and the Snohomish County Public Utility District No. 1, and the Summer Falls project of the Columbia Basin irrigation districts. In total, about 70 plans for new dam construction or rehabilitation were reviewed during the biennial period.

Work on the enlargement and safety improvement of the Wenas Irrigation District Dam near Selah, Washington was essentially completed in the spring of 1982. A few remaining items, including an Ogee spillway weir, are to be finalized during the fall and winter of 1982-83.

Through fiscal year 1982, a total of about 930 projects had been documented in the inventory of dams for the state. This inventory includes dams that can store 10 or more acre-feet of water or that can impound water to a depth of 10 feet or more. Of the total, about 485 meet the size requirements specified for the National Dam Inspection Program (i.e. dam is 25 feet high and impounds at least 15 acre-feet of water, or reservoir contains a volume of 50 acre-feet and has an impounding structure at least 6 feet high).

Problems Encountered: The primary problem encountered during the past biennial period has been the inability to retain a staff of qualified personnel to develop and maintain an adequate state dam safety program. The Dam Safety Section started the biennium with a staff of five positions. Because of the termination of federal support from the Corps of Engineers and state general fund reductions, the staffing has been reduced to two persons.

Reflecting these setbacks, activity in the dam safety program has necessarily diminished somewhat in recent months. Current operations essentially have been limited to plan reviews and approvals for the increasing number of newly emerging dam construction projects. Currently, there is a surge in the development of flood and sewage detention dams, particularly in the more populated areas of the state, while construction of new and upgrading of old hydroelectric power facilities continues at a strong pace. Inspections are occasionally possible during project construction, however, it has not been possible to establish a comprehensive periodic safety inspection effort at current levels of staffing. Some progress continues on the development of improved design and construction standards for dams in Washington, particularly in the area of spillway size requirements.

Since the national inspection effort was only funded to inspect dams rated as "high" hazard, and since the state program capability has been severely limited, most existing "significant" and "low" hazard dams have

received little or no inspection attention. In view of this gap in the program, it is noteworthy that a sizeable "significant" hazard dam failed without warning during a storm on December 3, 1982. The structure, located near Bremerton and built around 1935, was overtopped and breached because of inadequate spillway capacity and resulted in extensive flooding in the community of Gorst. Fortunately, no lives were lost, but two homes were partially inundated. Damage to property in the area was estimated to be in excess of \$200,000.

A second major problem has resulted directly from the previously referenced National Dam Inspection Program (P.L. 92-367). The federal program identified the problems, but the state is responsible for the corrective measure. Although most owners of dams that were inspected and found to have deficiencies under the National Program (P.L. 92-367) have been contacted by the state to initiate corrective action, very few projects have actually experienced any significant progress or physical modification as of December 1982. Where it has become necessary to issue regulatory orders to get action started in certain more critical cases, the orders have typically been appealed to the Pollution Control Hearings Board. Here, because of a large case-load backlog, resolution of the problem is often delayed for many months. The reluctance of dam owners to act is almost always a result of the costly nature of the needed repairs or modifications, and in most cases the owners find it difficult or nearly impossible to raise the funds needed for rehabilitative work. As a result of these circumstances, many dams, some with significant deficiencies, will remain in an unsafe condition, possibly for many years, until the problem of dam safety receives adequate attention and support at both the state and Federal levels.

MOUNT ST. HELENS

Major Issues: There is a need to prevent further loss of life or damage to property due to potentially catastrophic flooding in the Cowlitz and Toutle rivers as an aftermath to the May 1980 eruption of Mount St. Helens.

Authority/Background: The WDOE presently has limited authority in this area because of Substitute Senate Bill 4510 which was passed during the 1982 legislative session (relating to Mount St. Helens). This new law essentially preempted any existing regulatory authority because of the emergency situation and it continues in effect until June 30, 1984.

Accomplishments: The Department of Emergency Services has been designated by the Governor to be the lead agency for the state for all Mount St. Helens related activities, but WDOE has been heavily involved in many of the activities. Examples of accomplishments during the reporting period are as follows:

- Participation in the various task forces and legislative committees that have been set up to deal with all issues related to Mount St. Helens.
- Location of dredge spoil areas.

- Location and the proposed construction of a new water source for communities adjacent to the Cowlitz River whose water sources were affected by the mudflow.
- Preparation of a cooperative agreement with the U.S. Geological Survey using monies from the Governor's emergency fund for construction and operation of monitoring equipment for water levels in the North Fork Toutle River basin to provide an early flood warning system.
- Installation of a pump system on barges in Spirit Lake to prevent early overflow of Spirit Lake.

Problems Encountered: WDOE has been involved only from a peripheral standpoint because of the lead role of the Department of Emergency Services, so the major problems are being dealt with by other agencies.

The primary problem to WDOE is the workload impact to the staff caused by the need to participate on task forces and committees to keep abreast of the latest activities.

PUBLIC INVOLVEMENT

Major Issue: There is a need to adequately involve the public in water resource program development and implementation.

Authority/Background: RCW 90.54.060(1) and (2) state that: "(1) The department shall make reasonable efforts to inform the people of the state about the state's water and related resources and their management. The department . . . shall not only invite but actively encourage participation by all persons and private groups and entities showing an interest in water resources programs. . . ."

(2) The department shall similarly invite and encourage participation by all agencies of federal, state and local government, . . . having interests or responsibilities relating to water resources. . . ."

The department has attempted to conform to this mandate in several ways. In recent years, WDOE published a newsletter entitled WATERLINE which was printed every two months to provide information to approximately 1,500 recipients. In response to budget reductions, this newsletter was consolidated with several others into a new bi-monthly publication entitled BASELINE. This newsletter is distributed to approximately 2,000 readers and provides information on upcoming events such as meetings and public hearings as well as accomplishments such as the completion of a major project or adoption of a regulation under the Washington Administrative Code.

With the exception of the newsletter, WDOE's emphasis on water resources public participation is through the individual programs. Typically, this process begins with the compilation of a mailing list of interested individuals and agency representatives. These people are then sent information on the proposed program and invited to public meetings, workshops, and/or hearings to discuss the issues and are invited to provide both informal comments and testimony. In addition, all administrative rules proposed for adoption under the Washington Administrative Code are published in the Washington State Register in accordance with the Administrative Procedures Act (Ch. 34.04 RCW). Legal notices are also printed in newspapers in accordance with Chapter 90.22 RCW.

The department has found these procedures to be quite effective in obtaining review and comment by interested people while, at the same time, keeping the costs of such activities to a minimum.

In a related matter, the Legislature, in RCW 90.54.030, directed WDOE to establish and maintain a "'water resources archive'" to ensure that WDOE become informed with regard to all phases of water and related resources of the state. In so doing, WDOE has, for several years, maintained a contract with the Washington State Library for a full-time librarian to manage the Water Resources information System. This person performed technical reference work for WDOE staff as well as for the public and other agencies and played an important part in keeping the department and others informed about water resource related issues. Unfortunately, budget reductions necessitated the elimination of this contract for FY 83.

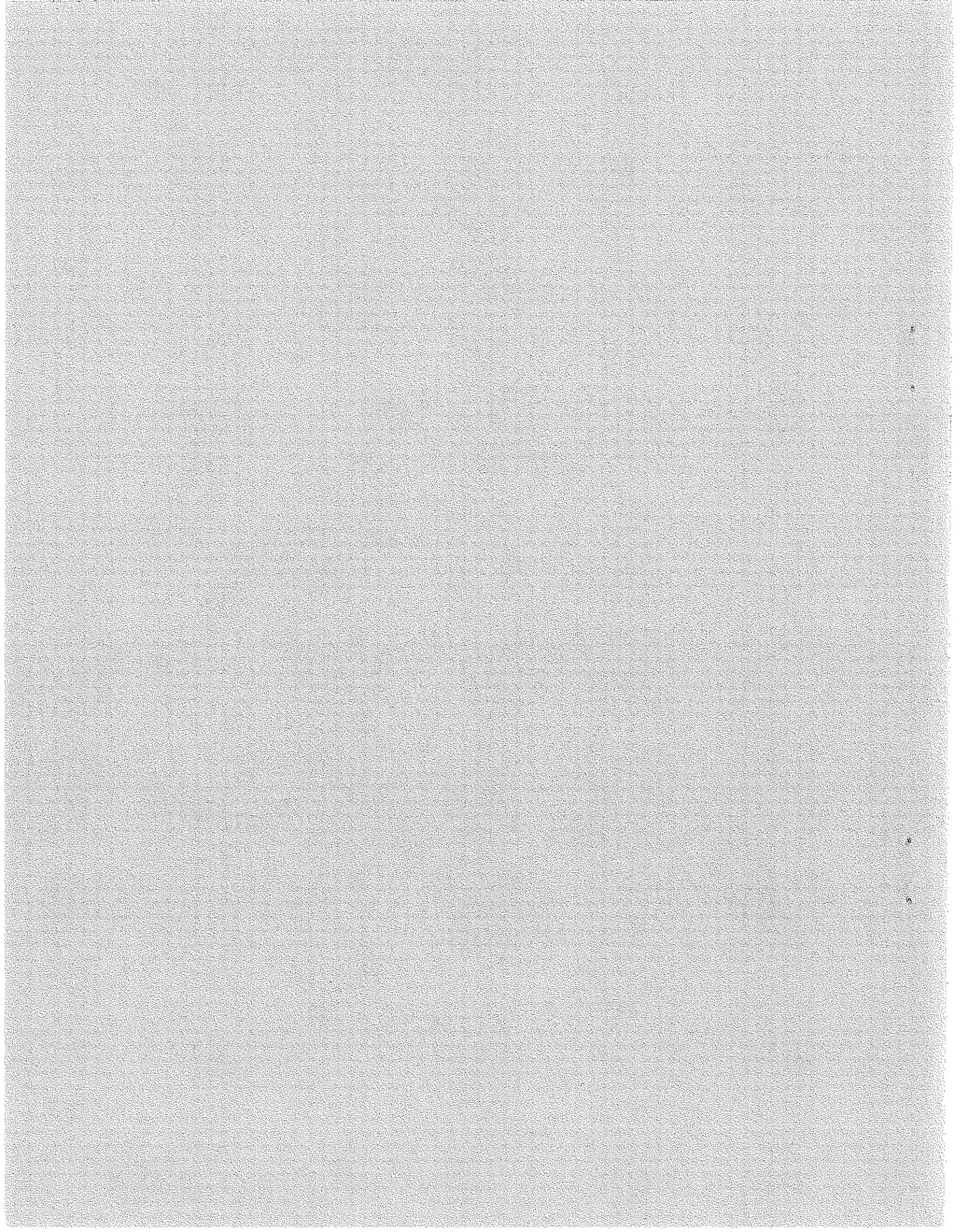
On September 30, 1981, the U.S. Water Resources Council terminated funding to the Pacific Northwest River Basins Commission (PNRBC) under the Water Resources Planning Act (P.L. 89-80) which resulted in the elimination of the Commission. As one of the member states, Washington State requested and was approved as the recipient of the entire PNRBC library. In August, 1982, WDOE moved the library from Vancouver to Lacey, Washington where it is currently located. Although present funding has not allowed any staffing of the library, the material is catalogued and is accessible by contacting the WDOE Water Resources Management Division.

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BUDGET AND STAFF REDUCTIONS

Like virtually all levels of state government, the WDOE has experienced serious budget reductions in both federal and state funds. In December, 1980, the Water Resources Program had 92 FTEs. It now has 74. These reductions are due to the loss of funding from both federal and state sources.

From FY 1967 through FY 1981, the department received funding from the U.S. Water Resources Council (Council) for a portion of its water resources planning and management activities. This funding was provided as matching grants under Title III of the Water Resources Planning Act (P.L. 89-80) to assist the states in developing and participating in the formulation of comprehensive water and related resources plans. The funding ranged from a low of \$25,000 in FY 1967 to \$208,500 in FY 1980. The average annual funding received during this period was \$132,395. However, in FY 1982, the Title III program of the Council was not funded. As a result, WDOE received no federal financial assistance for its water resources program for FY 82 or FY 83.

This has resulted in staff reductions in the instream resources protection program which was funded, in part, by Title III funds. It has also resulted in a loss to the agency of the indirect portion of these funds which were used to help fund the agency's overhead costs.

In addition, the state general fund budget has also been reduced. During the FY 81-83 biennium, the WDOE's water resources state general fund budget was reduced by approximately \$815,000 and the staff was reduced by 11 FTEs as a result of the loss of state funds.

The discussion above illustrates clearly that WDOE has not been unscathed. While a number of specific program reductions are discussed throughout this report, the following is a brief summary of the impacts of these cuts:

Curtailed Services

Permit issuance (water rights & flood control) (p. 37)
Complaint response (p. 37)
Well inspections (p. 43, 47)
Regulation of water rights (p. 37)
Data Collection (p. 44)
Dam inspections (p. 52)
Investigation and resolution of public water supply problems (p. 47)
Adjudications (p. 38)
Reduction of basins to be adjudicated from 3 to 2. This will result in continued difficulty in regulating between water users to protect prior water right holders, a potential decrease in property

Eliminated Services

Library contract for Water Resources Information System librarian (p. 56)
Closure of Colville Office (p. 38)
Loss of direct public service for the Colville area.

values and sales due to the uncertainty of related water rights, and an inability to properly allocate and plan for future water uses.

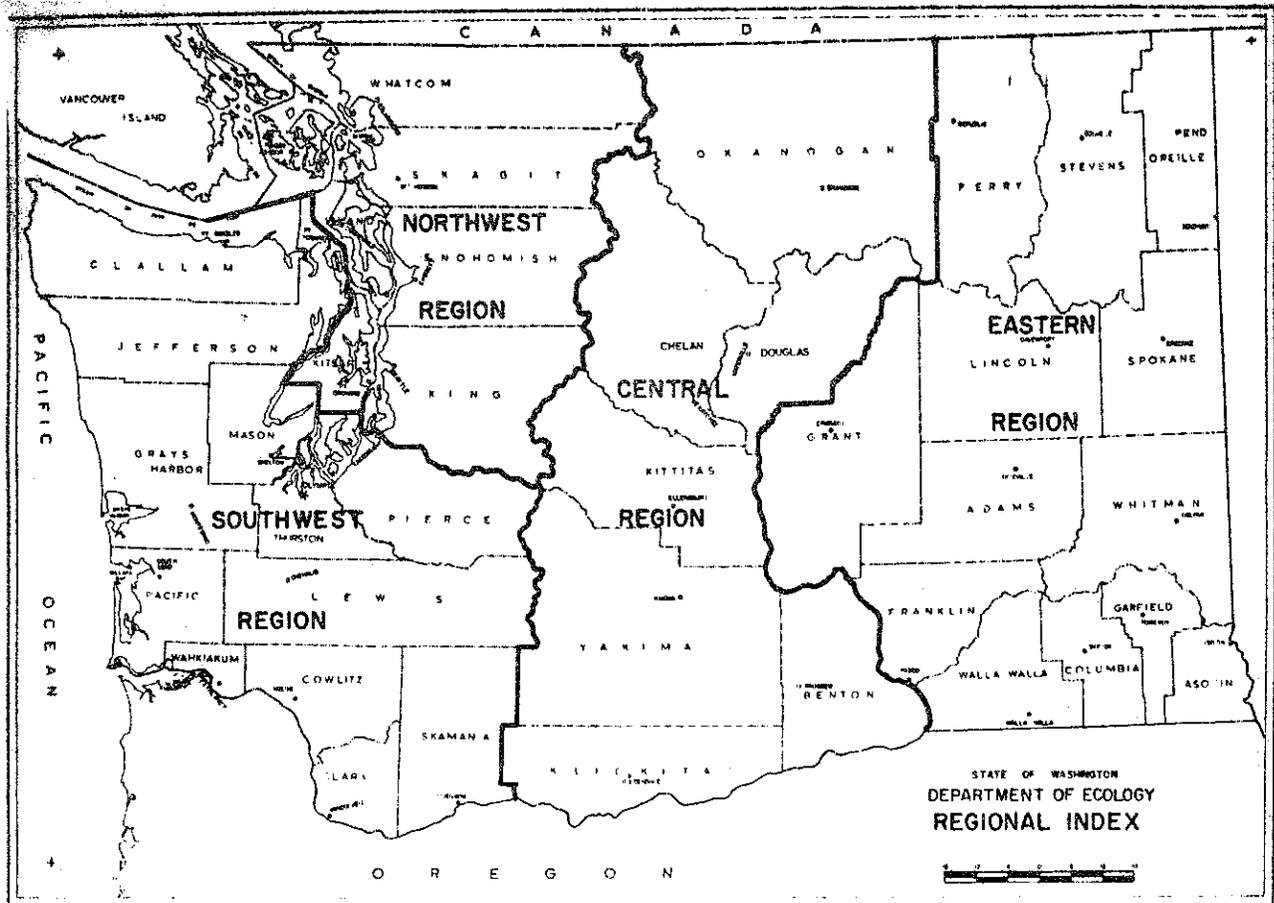
Instream Resource Protection Program (p. 2)

Reduction results in less protection of instream values on streams where water rights would be issued without flow restrictions. Programs for several basins have been generally delayed and those for other basins have been delayed indefinitely.

The result of these reductions has been (and will continue to be) that WDOE is still involved in most of the same activities and is still providing the public services expected of it, but it is doing so at a reduced level of effort. This means greater waiting periods for services such as water rights processing, development of instream resources protection programs, safety inspections of dams, and the completion of adjudications. Although WDOE is committed to maintaining a high level of public service, there is no doubt that the level of service has been decreased because of the loss of funding that has occurred at both the federal and state levels.

Also, it must be recognized that there are long-term adverse impacts to the general public associated with the budget and staff reductions. The reduced level of well and dam inspections, data collection, investigations, and elimination of the technical librarian will seriously impair the ability of WDOE to make sound water resource decisions in the future.

Figure 5



Northwest Regional Office

4350 - 150th Avenue N.E.
Redmond, WA 98052
(206) 885-1900 SCAN 241-2610
Regional Manager - Bob McCormick
Water Resources Supervisor -
Herman Huggins

Southwest Regional Office

7272 Cleanwater Lane
Olympia, WA 98504
(206) 753-2353 SCAN 234-2353
Regional Manager - Norm Glenn
Water Resources Supervisor -
Jerry Louthain (206) 459-6044

Central Regional Office

3601 W. Washington
Yakima, WA 98903
(509) 575-2490 SCAN 558-2491
Regional Manager - Russ Taylor
Water Resources Supervisor -
Doug Clausing

Eastern Regional Office

East 103 Indiana
Spokane, WA 99207
(509) 456-2926 SCAN 545-2926
Regional Manager - John Arnquist
Water Resources Supervisor -
Ted Olson

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