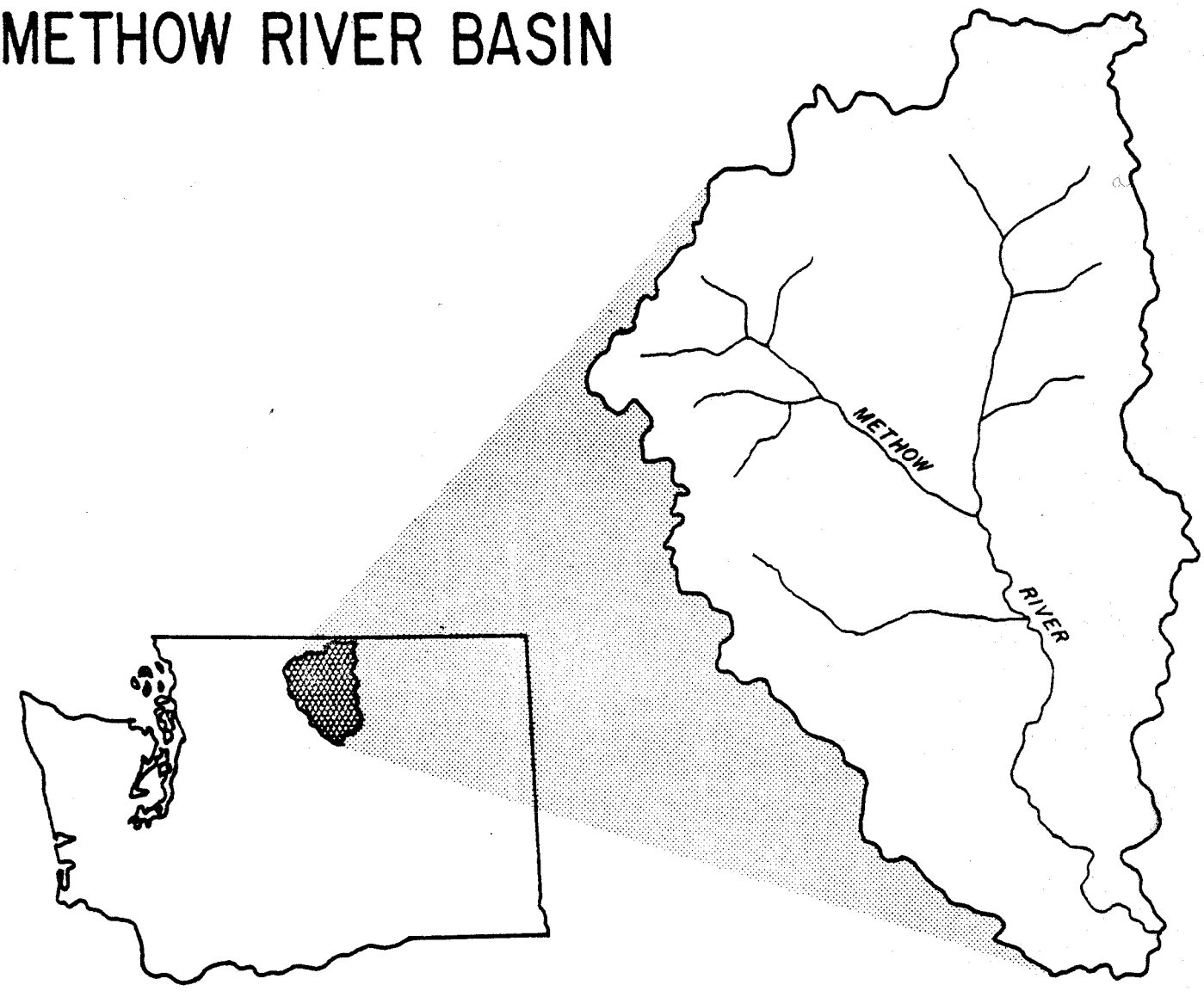
State of Washington
Department of Ecology

WATER RESOURCES MANAGEMENT PROGRAM

WASHINGTON STATE WATER PROGRAM

BASIN PROGRAM SERIES 4

METHOW RIVER BASIN



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RIVER BASIN PROGRAM SERIES, NO. 4

WATER RESOURCES MANAGEMENT PROGRAM

METHOW RIVER BASIN

(WATER RESOURCES INVENTORY AREA NO. 48)

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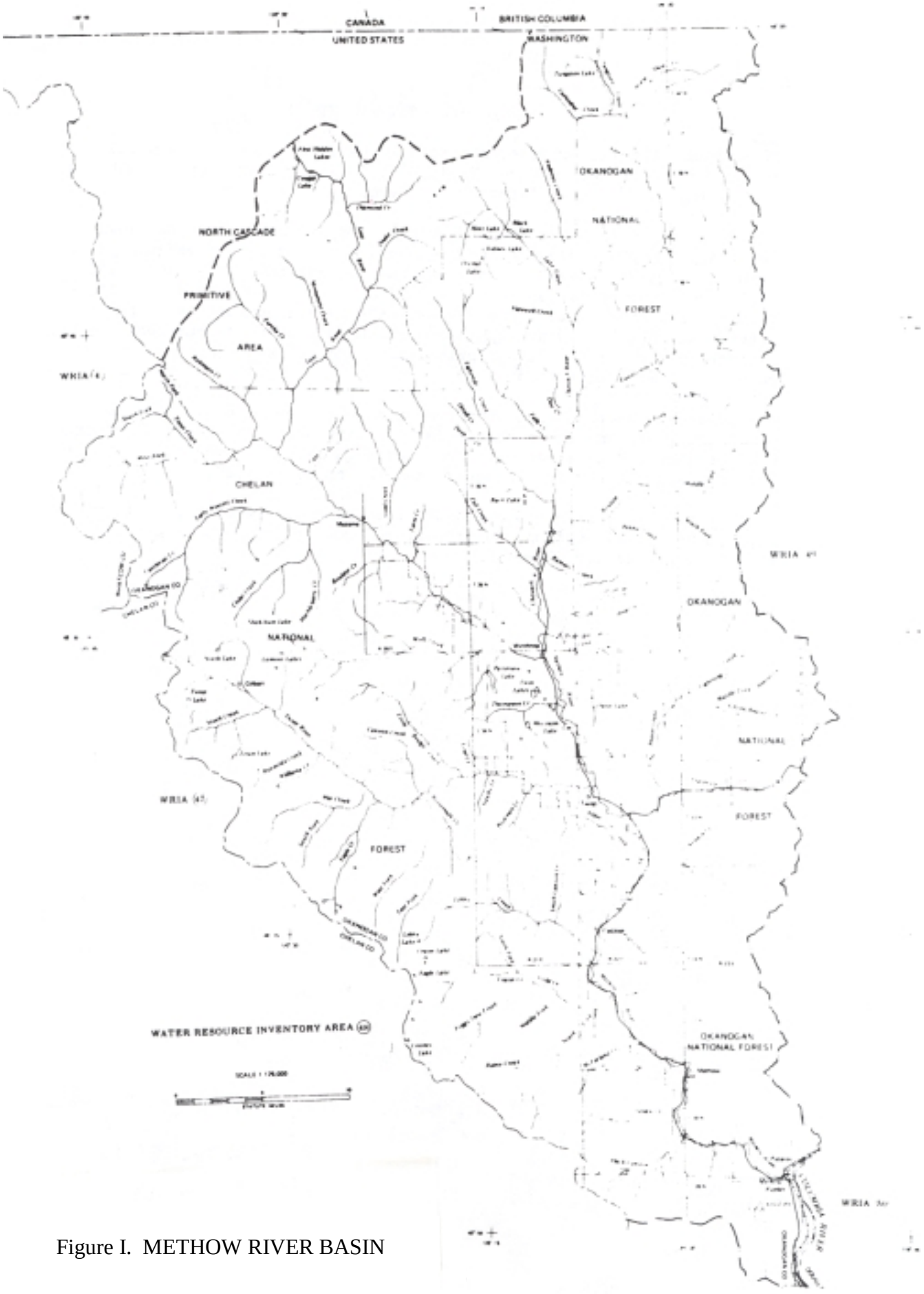

Figure I. METHOW RIVER BASIN

ABSTRACT

This document sets forth certain State management policies on water resources in the Methow River Basin. It is intended to provide a basis for making decisions on future water resource allocation and use.

The program (a) protects existing rights, (b) sets forth "base flows" necessary for preserving instream values, (c) establishes beneficial use priorities, (d) "closes" certain streams and natural lakes in the basin to further consumptive appropriation with certain exceptions for single domestic and stock-watering uses, (e) establishes quantities of public water available for future appropriation by stream management unit, subject to the beneficial use priorities, and (f) sets forth water resources administrative procedures.

The Reference section lists sources of information on basin hydrologic conditions, stream flow characteristics, ground-water resources, recorded water rights and their actual uses, water quality information and related long-range, multi-objective water resource opportunities.

Key Words: Methow River Basin water resources management; base flow; appropriation; allocation; public waters; public interest; closure; reservation; water rights.

INTRODUCTION

The policies recommended here result from the direction of the Water Resources Act of 1971, Chapter 90.54 RCW, which directs the Department of Ecology to formulate a management and use program for the waters of the State of Washington. The policies recommended relate to the Methow Basin's hydrologic conditions with the current level of development and provide for future development with appropriate protection of instream needs.

Credit is due the Methow Basin Citizen's Advisory Committee, which has reviewed information and formulated basin goals which provided direction to this program, in addition to the Methow "Level B" Water Resource Plan and the Sewage Drainage Basin Plan for the Methow Basin. The Advisory Committee consisted of Edna Creveling, Douglas Zahn, Vernon LaMotte, William R. Hottell, Don Ziegler, Mary Gaylord, Lowell Dubbels, Dana Visalli, and Herb Rosenberg.

Particular appreciation goes to Jim Bucknell, Jim Thornton, and Dick Thayer who have worked in association with the Department of Ecology on this and other water resource planning activities.

Doug Clausing of the Department's Yakima office has provided valuable review comments and will be directly involved with the implementation of the Methow River Basin Water Resources Management Program.

SUMMARY

During the past three years a group of Methow Valley residents has been periodically meeting to discuss the basin's water resources. In these meetings, the residents expressed their problems and concerns about water and related resources and how water should be utilized in the future.

In an effort to expand the base of opinion, a questionnaire concerning water allocation and future planning was mailed to all mailing addresses in the basin.

Along with efforts to poll the general public, regular contact was maintained with local government and State agencies. Technical assistance and guidance, when needed, was provided by the staff of the Department of Ecology and other agencies.

A group of Methow Valley citizens known as the Methow River Basin Steering Committee culminated their water resource use and planning effort by issuing a series of basin policy statements. These statements are reproduced in the Appendix.

The Department of Ecology, as directed by the Washington State Legislature, prepared the water resource management program for the Methow River Basin. The management program is intended to provide a basis for making decisions on future water resource allocation and use. The department utilized the citizen committee policy statements and the results of the basin-wide questionnaire in the formulation of the management program.

In an effort to develop a responsible yet flexible water program, the department has established the following priorities of beneficial use, has allocated waters to each use, and has implemented administrative procedures.

Priority I	Existing Rights
Priority II	Single Domestic and Stock Use
Priority III	Base Flows
Priority IV	Public Water Supply, Irrigation, and Other Uses

Quantities of water identified with Priorities II through IV relate specifically to remaining public waters available for future appropriation, both instream and out-of-stream.

In areas where there is clear hydraulic continuity between surface and ground water, the department intends to treat surface and ground water identically. However, when no such relationship exists, ground water development will not be subject to the same criteria as surface water development.

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DOMESTIC AND MUNICIPAL USES

Public Concerns

A secure supply of high quality water for existing and future single domestic and stock water uses is the highest priority water use in the Methow Basin. There is concern that the increasing development that is occurring in the area will result in both water supply and water quality problems. l/ In addition, the recreational use of the area has increased considerably since the opening of the North Cascades Highway.

The citizens are concerned that increasing development of the ground water will affect the availability of surface water in the basin.

The Okanogan County Planning Department is encouraging cluster development in the existing built-up areas in an attempt to preserve the agricultural land in the basin.

Factual Findings

All current municipal supplies are obtained from ground water in the Methow Basin. Some of the municipal wells are near streams and may draw part of their water indirectly from those streams. However, the municipal supplies of Winthrop and Twisp are very small compared to even the low flows of the streams. 2/ It is likely that future municipal supplies will continue to use ground water. There is evidence that there is an adequate supply of ground water for the anticipated level of development. A discussion of the relationship between surface and ground water is included on pages 5-7.

There are only three known significant industrial dischargers in the Methow Basin. In addition, the municipal treatment facilities of Twisp provides secondary treatment and discharges treated effluent into the Methow River system. 3/ A more detailed discussion of water quality is included on pages 7 and 8.

IRRIGATION

Public Concerns

The residents of the Methow Basin feel strongly that the rural and agricultural character of the area should be maintained. There is also strong local support for an expansion of irrigated acreage and additional associated agricultural uses.

Basin residents are concerned that the existing late summer low flows in some stream reaches may be insufficient to meet current needs and that future development might further endanger these existing uses.

The Methow Basin's economy is becoming increasingly recreation oriented and there is concern that recreational subdivisions and related activities will severely encroach upon the amount of land and water available for future irrigation/agriculture.

IRRIGATION - Public Concerns (Continued)

There is concern that irrigation water is not being used at maximum efficiency in the Methow Basin and that excessive leakage occurs in many of the distribution systems. While residents are generally agreed that such leakage should be reduced, there is fear that a complete elimination of leakage would result in an adverse effect on the recharge of the ground-water aquifer. This condition is more thoroughly discussed in the Methow River Basin Level B Study.

Factual Findings

The irrigation of 14,000 acres in the Methow Basin presently requires approximately 100,000 acre-feet of water per year. There are 20,000 acre-feet per year taken directly from sources at the farms while approximately 80,000 acre-feet are diverted and transported through a system of canals and ditches. Of this latter type of diversion, 36,000 acre-feet (45%) does not reach the crops because of leakage from the unlined earth canals and ditches. 4/ This leakage may have some effect on the ground water aquifers.

Approximately 1,000 acres of the 14,000 irrigated acres in the Methow River Basin are irrigated from ground water. This accounts for about 47 percent of the total ground water pumpage or approximately 4,000 acre- feet per year. Because of the unreliability of the surface water canals and ditches in some areas, it is occasionally more desirable to develop ground water sources.

There are currently four irrigation districts providing irrigation water in the Methow Basin. 5/ These districts serve approximately 3,500 acres (25%) of the 14,000 acres currently being irrigated.

The rapid pace of subdivision in the Methow Basin is threatening a decrease in the acreage of land being farmed. Of the 1,150,000 acres in the Methow Basin, approximately 200,000 are in private ownership. While 14,000 acres are currently irrigated, an additional 14,000 acres are considered to be irrigable although a significant increase in irrigated acres is not likely at the present time.

United States Forest Service lands account for approximately 75 percent of the area of the Methow River Basin. The quantity of waters reserved by the United States has not been established and the question of the jurisdiction of the State over waters on United States' lands has not been resolved. The United States' right to use the waters of the Methow River Basin under the Federal Reservation Doctrine may not be quantified with any degree of certainty at this time.

FISH AND WILDLIFE

Public Concerns

There is concern that existing low flows, and those that are likely to accompany increased development in the area, will be inadequate to protect the local salmon and sport fishery. Fish and wildlife have traditionally represented a major economic impact on the basin and

residents generally regard this as one of the area's most important resources. Many of the citizens of the basin are dissatisfied with current fish and wildlife management practices. Most of the residents seem to have accepted the inevitability of increased recreational use of the area and are in favor of managing access as a means of preserving the resource. The preservation of fish and wildlife habitat is important but the residents do not seem to be in agreement as to how best to accomplish such a goal.

Factual Findings

The fishery resources of the Methow Basin have declined in the past due to the presence of unscreened irrigation diversions, downstream dams on the Columbia, and the diversion or damming of tributaries to the Methow. However, many of these problems have been alleviated and the Methow system has excellent potential for the development of a larger fishery resource. The fishery potential is only partially realized because of physical and management difficulties. An enhancement of the resource could contribute to the Columbia River fishery as well as to the recreational appeal of the Methow Basin.

According to the Washington Department of Fisheries, all spring-run chinook passing Wells Dam are destined for the Methow River, and annual counts of adult fish at Wells Dam from 1968 through 1974 averaged 2,940. An estimated 2,369 adult summer chinook passed Wells Dam annually that were destined for the Methow River. A small number of coho salmon also enter the Methow River yearly. The average Wells count was 211. The fisheries values within the Methow Basin are preserved under the base flows set forth in this document. However, existing water rights are not subject to the base flow. Base flows provide for retention of water to support stream bank vegetation and wildlife water needs. Shoreline habitat is protected only as much as base flow will contribute to the entire shoreline ecosystem. Chapter 90.54 RCW specifies that base flows shall be retained in perennial streams of the State of Washington.

RECREATION

Public Concerns

As previously discussed, the increasing subdivision of land in the Methow River Basin is generally the result of an increase in the demand for recreational property. As recreational use of the basin increases, greater demands will be placed on the resources of the area. The residents of the basin are concerned that the water use related to such land use might result in a decrease in the amount of water available for irrigation and other agricultural uses. The residents of the basin feel that any tract developments that occur in the basin should be strictly regulated to minimize the adverse effects and that the developers should be required to provide many of the related services.

RECREATION - Public Concerns (Continued)

The Early Winters Land and Cattle Company has proposed a major ski area and recreational complex at Sandy Butte. The residents of the basin are divided between those who are opposed to the development and those who favor the development if it is well planned and designed to minimize any adverse effects on the Methow Basin. There is concern that the increased use of the basin accompanying such a development would result in a severe degradation of the agricultural and rural qualities of the area.

As discussed previously, the fishery resource is currently below potential levels and Methow Basin residents are concerned that the management of fish and wildlife resources is not adequate.

The majority of the residents of the area feel that increased public access to the rivers should not be provided in an attempt to discourage recreational use of the basin.

A major contributor to the recreational use of the area has been the North Cascades Highway. The majority of the residents feel that the present policy of closing the road in the fall and opening it to travel in the spring is the best policy.

Factual Findings

As discussed previously, the subdivision of the private land in the Methow Basin is a major concern. This is largely due to the increased demand for recreational experiences in the area. Between 1909 and 1975, 54 plats in the Upper Methow Valley were filed with the County Auditor. The recorded subdivisions account for approximately 4,260 acres which have been divided into 1,700 lots. Eighty-six percent of these plats are North of Township 32. 6/ Total lot sales of 3,600 lots below about two acres in size have been projected by 1990. It has been further estimated that this may result in the construction of 905 second homes by 1990. 7/

The establishment of base flows as set forth in this document will serve to preserve the quality of the riparian ecosystem and, as such, will enhance the quality of the water-based recreation experience. It should be noted, however, that other water uses such as current and potential agricultural water demands were also considered in the determination of base flows for the Methow Basin.

INDUSTRIAL DEVELOPMENT

Public Concerns

The citizens of the basin are generally opposed to increased industrial activity in the area as it is felt that it would degrade the character of the valley. Those that favor industrialization generally favor the encouragement of small nonpolluting industries. The population increase that would accompany such development would lead to a decline in the amount of agricultural land and open space and to environmental degradation. There is concern that existing water rights not be affected regardless of the nature of future development.

INDUSTRIAL DEVELOPMENT (Continued)

Factual Findings

The potential development of an open pit copper mine and related facilities are dealt with below.

The potential for nonpolluting industrial activities exists in the area. Such light industries as forest-product processing, fruit and agricultural production and other nonindustrial activities such as outdoor recreation and tourism each have the potential to provide economic benefits to the area if properly managed to minimize adverse effects. If not properly managed, each of these activities could seriously affect the character and environment of the valley. 8/

MINING

Public Concerns

Public concern is split between those residents opposed to open pit copper mine development and those who would support such a proposal if the environment were adequately protected. The degradation of the quality of the water and the aesthetic impact that accompany such developments are major concerns. The accompanying population increase, while adding to the tax base, would result in a continuation of the existing trend away from the rural and agricultural character of the basin. Because of the relatively low grade ore found in the basin, underground mining is not considered to be economically feasible at the present time.

Factual Findings

Should a mining operation involving a production rate of 30,000 tons/day for a period of 30 years be developed, a maximum estimated work force of 650 would be required. 9/ The influx of such a population would have an impact on the local economy and would tend to support the allocation of water for domestic uses.

While such development might be undertaken in such a way as to minimize adverse environmental effects, "... The Mazama project would create significant environmental impacts." 10/ Based on a 30,000 ton/day operation, the water use is estimated to be approximately 28 cfs with 25 percent being freshwater input. The remaining 75 percent would consist of recycled water. 11/ The possibility of using storage to augment the mining operation's water supply is being considered.

GROUND WATER

Public Concerns

The principal concern of the residents of the Methow River Basin regarding ground water is the relationship between surface and ground water. The residents are seeking a clear indication of the effect of ground water development on surface water and anyone using surface water. A need for an indication of those areas where there is hydraulic continuity between surface and ground water has been expressed.

GROUND WATER - Public Concerns (Continued)

A related concern is the quantity of ground water available for appropriation. The citizens are eager to insure that the ground water source is not depleted.

The quality of ground water is also an important issue because of the shallow water table and the general unsuitability of many areas for septic tank disposal systems.

Factual Findings

Unconsolidated glacial and alluvial deposits are the principal water-bearing materials of the basin.

Although these water-bearing deposits underlie only about 4 percent of the total area of the Basin, they are of great economic importance because they occur beneath the populated parts of the basin where the ground water is most needed for domestic and irrigation use. 12/

The lower reach of the Methow River Valley (downstream from Carlton) is narrow, the terraces that flank it are discontinuous, and bedrock is exposed at many places both on the valley floor and in the valley walls. Many shallow-dug wells are used for domestic supplies and water levels fluctuate with river stage. Ditches to supply irrigation water have not been constructed here and, although much land is irrigated by direct pumpage from the river, many irrigation wells are in use.

In the valleys of streams tributary to the lower reaches of the Methow River, alluvial deposits are thin and domestic water supplies are obtained from shallow-dug wells and springs. However, ground water tends to be unavailable in quantities sufficient for irrigation.

The present development of ground water in the central part of the Methow River Basin (between Winthrop and Carlton) is about the same as in the southern part of the basin. Ground water is used to a considerable extent to supplement surface water for irrigation and for domestic use. In this area, the valley of the Methow River is wider than in the areas to the north or south, and unconsolidated deposits are thicker. Also, two major tributaries (Twisp River and Beaver Creek), part of whose valleys may contain appreciable ground water, enter the Methow River in this area.

Ground water development in the northern part of the Methow River Basin (north and west of Winthrop) is chiefly along the floor of the Methow River Valley, although a few wells have been drilled in the Chewack River Valley and in the Early Winters Creek Valley. Most wells here were constructed merely as sources of domestic supply and, therefore, meaningful data on the maximum yields obtainable are not available. In the Upper Methow Valley, few wells penetrate more than a depth of 90 feet. In a study conducted in 1975 by the Department of Natural Resources, water levels were found to range from 6 feet or less to 85 feet in the unconsolidated materials. 13/

GROUND WATER - Factual Findings (Continued)

Supplies of ground water will generally continue to be adequate for presently projected use in the Methow River Basin for many years to come. The basin contains many perennial streams that empty into the Methow River and the broader, more populated parts of the valley floors are underlain in most places by unconsolidated sand and gravel formations which will yield ground water in quantity sufficient for projected domestic uses and supplemental or standby irrigation use.

The Department of Ecology's existing policy is to treat ground water, in measurable continuity with surface water, as being subject to the same criteria as surface water allocations. The proposed Methow River Basin Water Resources Management Program would not change this policy.

WATER QUALITY

Public Concerns

The citizens are concerned about the potential of proposed residential and recreational developments adversely impacting the basin's ground and surface water quality. The principal concern is the possibility that major recreational developments, such as the one being proposed by Early Winters Land and Cattle Company, would have a negative impact on water quality.

Other concerns are the problems associated with the increasing subdivisions and real estate development in the valley. It is feared that the associated septic tank development may contribute significantly to nonpoint pollution.

The citizens question the adequacy of past and present water quality monitoring systems. They feel that an extensive monitoring system should be initiated covering the drainage basin by management reach to facilitate enforcement of the water quality standards as set forth in WAC 173-201.

Factual Findings

The Methow River system is characterized by high quality water. Water quality standards, as set forth in WAC 173-201, classify the Methow River as Class A from the mouth to the Okanogan National Forest Boundary and Class AA within the National Forest, although the department is considering reclassifying the river as Class AA upstream of the confluence of the Chewack River. Class AA water quality can be generally characterized as waters markedly and uniformly exceeding the requirements for all or substantially all uses.

The Methow River and its tributaries have been tentatively identified by the Department of Ecology as water quality limiting nonpoint source waters. This classification, in essence, requires that municipal and industrial point dischargers achieve best practicable treatment.

WATER QUALITY - Factual Findings (Continued)

Best practicable treatment has been defined as secondary treatment for municipal waste dischargers. The definition of secondary treatment is specified by Federal Regulation, 40 CFR Part 133, which was last published in the Federal Register on July 26, 1976.

In addition to treatment levels required by Federal Regulation, Chapter 173-201-040(b) WAC Water Quality Standards, states that ". . . except where the director determines that overriding considerations of the public interest will be served, wherever receiving waters of a classified area are of a higher quality than the criterion assigned for said area, the existing water quality shall constitute water quality criteria." Under this State regulation, the Department of Ecology requires, in certain instances, treatment in addition to best practicable.

The City of Winthrop presently operates and maintains a sewage lagoon system consisting of two shallow oxidation ponds. At the present time, the primary and secondary lagoons are functioning as nonoverflow storage lagoons.

The City of Twisp has recently constructed and placed in operation a mechanical municipal wastewater treatment facility which was designed to provide a minimum of secondary treatment. The treated effluent is discharged to the Methow River.

Monitoring programs were evaluated and summarized in the "Okanogan County Sewage Drainage Basin Plan" developed by the consulting firm of R. W. Beck and Associates, dated March, 1975. Total coliform organisms with a mean value of 310 and a peak value of over 1000 colonies per 100 milliliters was the only water quality violations noted. Fecal coliform counts have remained consistently between 20 and 40 counts per 100 milliliters.

In October of 1975, the Department of Ecology began an ambient water quality program of monitoring at five stations in the basin on a bi-weekly basis. The water quality samples were taken at Chewack River near Winthrop, below Gate Creek, at the Weeman Bridge, near Twisp, and at the historical station near Pateros. This program confirmed the high quality of the basin's waters with median values for all parameters (for the year of record) being well within the water quality standards. A report of this monitoring program is scheduled to be published by the U.S. Geological Service by July 1977.

II. WATER RESOURCES MANAGEMENT POLICY

INTRODUCTION

> "The legislature finds that proper utilization of the water resources of this state is necessary to the promotion of public health and the economic well being of the state and the preservation of its natural resources and aesthetic values." (RCW 90.54.010 Water Resources Act of 1971.)

This management policy section provides for the protection of existing rights; allows for further irrigation; establishes base flows at flow control stations along the Methow River system; and indicates preference among uses. Moat future water rights will be subject to base flow levels.

This management policy also sets forth closures and other restrictions relating to the appropriation of surface water with exceptions for domestic and livestock uses as appropriate. In areas where there is hydraulic continuity between surface and ground water sources, these restrictions will also apply to ground-water appropriations. However, in areas where no such continuity exists, ground water development will not be subject to the surface water restrictions established in this program.

All appropriation permits acted upon after implementation of this program shall be subject to this Methow Basin water resources management program. EXISTING WATER RIGHTS WILL NOT BE AFFECTED BY THE MANAGEMENT POLICIES.

DECLARATION OF BENEFICIAL USE AND USE PREFERENCES

The State Water Resources Act of 1971 declares the following uses of water to be beneficial: domestic, stock watering, industrial, commercial, agricultural, irrigation, hydroelectric power production, mining, fish and wildlife maintenance and enhancement, recreational, and thermal power production purposes, and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state (RCW 90.54.020(l)).

Among these beneficial uses, the public views and current departmental investigations have led to the conclusion that actual demand for water may be segregated into general use categories with certain categories having a higher priority.

Based on those conclusions, the management of the surface water resources of the Methow River will be in accordance with the following beneficial use preferences:

Priority I — Existing rights. Nothing in this management policy will lessen, enlarge, or modify the existing water rights acquired by appropriation, or otherwise. Existing rights is a category consisting of all legal rights to the use of public waters, as of the adoption date of a management regulation. Maximum quantification of

existing rights is well documented for those rights established through the administrative process provided in chapter 90.03 RCW effective June 6, 1917 and chapter 90.44 RCW (1945) or under court decree. Quantification of existing rights relating to claims registered under RCW 90.14.050 is much less certain because not all claims represent valid water rights nor in many cases do the claims accurately reflect the actual extent of the claimed right. Until such time as all rights on a particular stream are confirmed through the general adjudication process, it is extremely difficult to regulate, either for or against, rights associated with claims.

Priority II — Single Domestic and Stock Use includes water used by a single household and includes irrigation of lawn and garden not to exceed one-half acre, and livestock use excluding feed lot operations. Water rights perfected for single domestic and stock watering use will not be subject to base flow.

However, such rights will be subject to prior rights and, in designated watersheds, there may not be water available for additional rights for domestic and stock water use because of existing appropriations.

Priority III — Base Flows. For preservation of wildlife, fish, scenic, aesthetic, and other environmental values including recreation, instream flows shall be protected. Appropriation of future water rights to Priority IV shall be limited so as not to impair maintenance of base flows in the stream. The base flows proposed herein recognize both the flow and use characteristics of the Methow River and its tributaries in their derivation.

Priority IV — Irrigation, Public Water Supply, and Other Uses which are not specified in the preceeding priorities are grouped in Priority IV.

DISCUSSION

A. Existing Rights: Existing rights are those certified rights to use water under the administrative process provided in Chapter 90.03 RCW (effective June 6, 1917) and Chapter 90.44 RCW (effective June 6, 1945) or under court decree (adjudication) under RCW 90.03.200 and 90.03.240. Other existing rights may be vested in nature and would be represented by a claim registered under RCW 90.14.050: These, however, may not be regulated, either for or against, unless confirmed under due process of an adjudication. As a matter of policy, some claimed uses may be regulated against if, in the opinion of the department, there is conflict with other uses and there is no apparent substance to the claim.

B. Establishment of Base Flows: It is a fundamental policy of this state that "perennial rivers and streams be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic, and other environmental values, and navigational values." (Chapter 90.54 RCW) Further, lakes and ponds are to be retained substantially in their natural condition.

In consonance with the above fundamental policy of the state, base flows for the Methow River and its tributaries are hereby established as an element of this management program.

No further appropriation of surface water shall be made from the Methow River and its tributaries, which would conflict with the base flow levels established through this policy, except as expressly allowed. Enforcement and maintenance of base flows will be in accordance with the administrative procedures established as part of this program (described on page 17) and with existing laws.

In order to manage the waters of the Methow Basin, it has been determined that the basin must first be divided into stream management units. The units are hereby designated according to existing U.S. Geological Survey gaging stations.

The six principal gaging stations (Nos. 12.4499.50, 12.4495.00, 12.4489.98, 12.4473.89, 12.4475.00, and 12.4473.83) near Pateros, Twisp, Winthrop, Boulder Creek, and Mazama are the control points for the stream management reaches. These stations monitor the Lower Methow, the Middle Methow, the Twisp River, the Upper Methow, the Chewack River, and the Methow Headwaters, respectively. Early Winters Creek has also been designated as a management reach although no gage exists at the present time. Snow survey data provided by the U.S. Soil Conservation Service will allow early prediction of problem years.

The base flows will be monitored and maintained at the control stations for the stream reaches specified in Tables 6-14, pages 33-41. Base flows for the lst and 15th day of April through October are presented in Table 1, page 14. Base flows for the remainder of the year may be found in Tables 6-14.

Base flows for any specific day not identified in the table can be obtained from Figure I, pages 29 and 30. These base flow hydrographs are drawn on a semilogarizhmic daily record sheet.

C. Status of Streams and Lakes for Further Consumptive Appropriation: As a result of an investigation of water availability, certain tributary streams listed in Table 15, page 42, Principal Tributary Streams (Current and Proposed Status), will be closed to further consumptive appropriation during the period specified. It is further declared to be prejudicial to the public interest to allow further consumptive appropriations from certain streams listed in this table. Certain exceptions may be granted for domestic and normal stock watering uses, excluding feed lot operations, during the period from May 1 through October 31, or as otherwise noted. The remaining public waters in those streams are necessary to maintain instream values.

Average monthly flow data for tributary streams are presented in Table 16, pages 43-47.

The proposed status of streams presented in Table 15 resulted from an analysis of the information presented in Table 16 for the critical period of the year. The relationship between stream flow and use is examined. If adequate water supplies for future allocation are not available, the stream will be closed to further consumptive use during all or part of the year, as appropriate. In cases where there exists a major excess of flow over use during the spring and a potential storage site is available, the exception for waters developed solely from an increased storage capacity within the Basin is included.

In order to retain lakes substantially in their natural condition, no rights to appropriate water from the lakes and ponds in this Basin (excluding lakes listed in Tables 4 and 5) will be granted for any consumptive use except for single domestic and stock watering purposes.

Any diversion of surface water which would conflict with the closures in this management policy shall be authorized only on an individual case basis in situations where it is clear that overriding consideration of the public interest will be served (RCW 90.54.020(3)(a).

D. Allocation of Unappropriated Surface Waters: Unappropriated surface waters in the Methow River Basin are allocated and managed in the following specific stream management units:

Lower Methow:	Methow from mouth at Wells Pool to confluence with Twisp River. (RM 0-RM 40.0)
Middle Methow:	Methow from confluence with Twisp River to confluence with Chewack River. (RM 40.0 - RM 50.2)
Upper Methow:	Methow from confluence with Chewack River to confluence with Little Boulder Creek. (RM 50.2 - RM 67.3)
Methow Headwaters:	Methow from confluence with Little Boulder Creek to Headwaters. (RM 67.3 - headwaters)
Early Winters Creek:	Early Winters Creek from confluence with Methow to headwaters.
Chewack River:	Chewack River from confluence with Methow to Headwaters. (RM 0 - headwaters)
Twisp River:	Twisp River from confluence with Methow to headwaters. (RM 0 - headwaters)

Public waters of all management units that are presently unappropriated are allocated to the following beneficial use categories under this management program:

- Single domestic use and livestock watering.
- Base flow for instream uses up to the amount specified.
- Consumptive uses, except for single domestic and indicated livestock use, nonconsumptive uses which require more than the amount provided as base flow.

The unappropriated public surface waters available for future allocation are determined by subtracting the amount necessary to satisfy base flows and the estimated actual diversion impacts of existing rights from the appropriation limit established in this management program. It should be noted that the allocation of ground waters having continuity with surface waters will be subject to the procedures for surface water allocation set forth in this document and the management regulation.

Allocation quantities are presented in Table 2, pages 15 and 16, with further information in Tables 6 through 14, pages 33-41.

Table 1

SELECTED BASE FLOWS FOR APRIL THROUGH OCTOBER ONLY
(Methow River Basin)
[All figures in cubic feet per second)

CONTROL STATION	DESCRIPTION	MONTHS AND DATES													
Station Name and No. Location (River Mile)	Stream Management Unit	APR 1	APR 15	MAY 1	MAY 15	JUN 1	JUN 15	JUL 1	JUL 15	AUG 1	AUG 15	SEP 1	SEP 15	OCT 1	OCT 15
Lower Methow Methow River nr. Pateros 12.4499.5 (RM 6.7)	Wells Pool to confluence with Twisp River	590	860	1.300	1,940	2,220	2,220	2,150	800	480	300	300	300	360	425
Middle Methow Methow River nr. Twisp 12.4495.00 (RM 40.0)	Confluence with Twisp River to confluence with Chewack River	430	650	1,000	1,500	1.500	l,500	1,500	500	325	220	220	220	260	320
Upper Methow Methow River nr. Winthrop 12.4473.89 (RM 50.2)	Confluence with Chewack River to confluence with Little Boulder Creek	199	300	480	690	790	790	694	240	153	100	100	100	122	150
Methow Headwaters Methow River nr. Mazama 12.4473.83 (RM 65.3)	Confluence with Little Boulder Creek to headwaters	64	90	130	430	1,160	1,160	500	180	75	32	32	32	45	60
Early Winters Creek	Confluence with Methow River to headwaters	14	23	32	108	290	290	125	45	20	8.0	8.0	8.0	12.0	15.0
Chewack River Chewack River nr. Boulder Creek 12.4475.00 (RM 8.7)	Confluence with Methow River to headwaters	90	140	215	290	320	320	292	110	70	47	47	47	56	68
Twisp River Twisp River nr. Twisp 12.4489.98 (RM 0.3)	Confluence with Methow River to headwaters	60	100	170	300	440	440	390	130	58	27	27	27	35	45

Table 2

FUTURE ALLOCATION OF SURFACE WATERS BY USE PRIORITY
(WITHOUT STORAGE)
April through September
(Units in cubic feet per second)

Use Priority	Use Description	APR	MAY	JUN	JUL	AUG	SEP
	Lower Methow						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	860	1,940	2,220	800	300	300
IV	Irrigation, Public Water Supply and Other Uses*	563	2,920	3,114	963	212	60
	Middle Methow						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	650	1,500	1,500	500	220	220
IV	Irrigation, Public Water Supply and Other Uses*	588	2,925	2,851	875	190	53
	Upper Methow						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	300	690	790	240	100	100
IV	Irrigation, Public Water Supply and Other Uses*	271	782	1,015	581	201	74
	Methow Headquarters						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	90	430	1,160	180	32	32
IV	Irrigation, Public Water Supply and Other Uses*	334	410	1,247	606	107	31
	Early Winters Creek						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	23.0	108.0	290.0	45.0	8.0	8.0
IV	Irrigation, Public Water Supply and Other Uses*	33.0	401	292	187	92	44

Table 2 - Continued

FUTURE ALLOCATION OF SURFACE WATERS BY USE PRIORITY
(WITHOUT STORAGE)
April through September
(Units in cubic feet per second)

Use Priority	Use Description	APR	MAY	JUN	JUL	AUG	SEP
	Twisp River						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	100	300	440	130	27	27
IV	Irrigation, Public Water Supply and Other Uses*	146	701	888	296	68	24
	Chewack River						
II	Single Domestic and Stock Uses	2.0	2.0	2.0	2.0	2.0	2.0
III	Instream Use Under Base Flow	140	290	320	110	47	47
IV	Irrigation, Public Water Supply and Other Uses*	116	807	1,290	306	68	21

*Priority IV Irrigation, Public Water Supply, and Other Uses, is the aggregate of water available up to the appropriation limit. The appropriation limit is as defined in number 4 below.

The above table is developed by assessing other information in this document and drawing the following conclusions:

1. Future rights for single domestic and stock water uses are not subject to base flows and 2.0 cfs is a reasonable maximum potential future use from each river reach noted.

2. Instream uses are adequately protected by the base flows which are set forth in representative terms.

3. Future rights for agricultural uses can be represented by either the reasonable maximum limit of available irrigable land or water.

   a. Available future lands used:

      i. Lower Methow 6,980 acres
      ii. Middle Methow 1,600 acres
      iii. Upper Methow 1,500 acre*
      iv. Methow Headwaters 140 acres
      v. Twisp River 1,120 acres
      vi. Chewack River 2,700 acres
      vii. Early Winter Creek

   b. Available water is represented by figures in Tables 6-14, pages 38-46.

4. Waters available in excess of those protected under existing rights and use priorities II through IV of this table shall be limited by the appropriation limit defined generally as the one in two year reach discharge on a monthly basis.

This table is representative of the more critical part of the year.

III. ADMINISTRATIVE PROCEDURES

Protection of Existing Rights

Nothing shall be done to infringe upon existing rights which are being used and which are not subject to the provisions of Chapter 90.14 RCW (Relinquishment).

REGULATION OF BASE FLOW

All future consumptive water rights, except single domestic and stock water supply (excluding commercial feedlots), will be subject to base flows at the designated control station. Therefore, each permit and certificate issued by the Department of Ecology will carry a provision that the holder shall cease diverting from the stream when the flow falls below the level necessary to maintain the base flow.

Early prediction of summer flow is required for adequate management. The prediction will be guided by the stream flow forecasts provided by the U.S. Soil Conservation Service, which are published as "Water Supply Outlook, Washington." The forecasts are based principally on measurements of the water-equivalent of snowpack. Snow surveys are made monthly or bimonthly from January 1 to June 1.

When a drought water year is anticipated, based on these forecasts, monitoring will be initiated by no later than May 15 of the year.

Administration of base flow will include the following procedures:

A. Inform water right holders with base flow provisos of potential regulation. This may be done by letter, personal conversation and/or public meeting and should generally be initiated by early June.

B. Monitor Methow River system at control stations Nos. 12.4499.5, 12.4495.00, 12.4489.98, 12.4473.89, 12.4473.83, and 12.4475.00 (see Figures II and III, pages 52 and 53).

C. Prepare letters and notify the water users by certified mail as to required regulation.

D. Assess compliance as required.

E. Issue violators an administrative order to cease and desist from diversion, or post the diversion depending on the situation.

   If, after the stages outlined above, the violators do not comply with the department's policy, the state may initiate legal action against the violator and seek judgment through Superior Court action.

   NOTE: The Water Code - 1917 Act, Sections 90.03.400 and 90.03.410, stipulates that unauthorized use of water and wrongful use of water is a misdemeanor.

If it is determined that development of a well affects surface water, any withdrawal of water therefrom will be subject to those existing surface water rights and base flow.

FUTURE WATER RIGHTS AND ACCOUNTING ACTIONS

A system of accounting and recording to keep track of water appropriation versus availability is an essential part of this management program.

All consumptive water rights will be deducted from the amount specified for each month in order to determine the amount of water remaining available for further appropriation.

As the amount of water appropriated approaches the specified amount available for appropriation, the department will review the operation and implementation of the management program to assess the need for revision of the program or the management policy.

Unappropriated surface waters have been allocated to specific stream management units and to specific use priorities within the unit. The principle of "first-in-time first-in-right," will be applied on a basin-wide basis within the amount allocated to each stream management unit by priorities.

Allocations to use priorities II (single domestic and stock water uses) are defacto "reservations." Water rights from use priority IV (irrigation, public water supply, other uses) allocation will be subject to the flow level necessary to maintain all higher priority uses.

After adoption of this management program and any subsequent management regulation, the approximately 45 applications for water right permits on "hold" will be processed in accordance with the procedures established in this management program.

Changes in purpose of use, point of diversion, and place of use may be executed as provided under chapter 90.03 RCW.

APPROPRIATION OF WATER FOR SINGLE DOMESTIC SUPPLY

Issuance of water rights for single domestic supply purposes will be guided by the following standard operating procedure:

A. Refinement of the water right application is appropriate when the applicable facts are available. For example, if the applicant intends only to water his lawn and garden, the use should be designated "domestic supply lawn and garden watering only."

B. On water sources where the availability of water is marginal, such as a stream that has been administratively closed to further appropriation for other than domestic supply or stock watering purposes, the following criteria will be used:

    1. If water is available from another source, the application for permit may be denied on the basis of highest feasible use of the remaining waters. This logic would prevail even for household water, since denial would not be endangering health or welfare - rather, it would require the applicant to use as an alternate a more reliable source.

If water is not available from another source, the application may be approved for in-house domestic supply only. The department's policy is that people are entitled not only to household water, but also to sufficient water to maintain a pleasant yard surrounding over and above instream needs except that "on water sources where the cumulative effect of numerous diversions for domestic supply would seriously impair either the aesthetic or fisheries resource values of the water source for riparian owners and the public in general, all applications for domestic supply shall be denied as being detrimental to the public, except to the extent that such waters are needed for household supply."

On water sources where the availability of water is critical (i.e., the taking of additional water will, in fact, adversely affect existing rights to use the waters in question), all applications for "domestic supply" shall be denied.

C. In any general adjudication, the expressed terms of the decree shall govern.

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GLOSSARY

ACRE-FOOT: A unit for measuring the volume of water or sediment. It is equal to the amount of water needed to cover one acre of land with water one foot deep. This is 43,560 cubic feet, or 325,851 gallons.

ALLOCATION: The process of legally encumbering specific amounts of the water resource for application to beneficial uses through instruments called water rights.

APPROPRIATION: The administrative or physical process of obtaining water.

APPROPRIATION LIMIT: The level beyond which appropriation permits will not be granted.

BASE FLOW: As defined in the Water Resources Act of 1971, base flows are the flows administratively established "necessary to provide for the preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values."

CLOSURE: Administrative measure to keep water resources from further appropriation to consumptive uses. Generally, domestic household use and normal stock watering are exempted when there is no practicable alternate source of supply.

CONFLUENCE: A place of meeting of two or more streams; the point where a tributary joins the main stream; a fork.

CONJUNCTIVE USE: The integrated use of ground and surface water in such a way as to increase the benefits of the use of all the waters of the basin.

CONSUMPTIVE USE: The amount of water used in such a way that it is no longer directly available. Includes water discharged into the air during industrial uses, or given off by plants as they grow (transpiration), or water which is retained in the plant tissues, or any use of water which prevents it from being directly available.

CONSUMPTIVE USE REQUIREMENT (crop): The amount of consumptive use for irrigation each year for a particular type of crop. Measured in acre-feet or feet per acre.

CONTROL STATION: Any streamflow measurement site at which a regulatory base flow has been established.

CUBIC FEET PER SECOND (cfs): A unit of measure for the rate of discharge of water. One cubic foot per second is the rate of flow of a stream with a cross section of one square foot which is flowing at one foot per second. It is equal to 448.8 gallons per minute.

DISCHARGE: In simplest form, discharge simply means outflow. The term can describe the flow of water from a faucet or from a drainage basin covering hundreds of square miles.

DIVERSION: The physical act of removing water from a stream or other body of surface water.

SINGLE DOMESTIC USE: Water used by a single household including up to one-half an acre lawn or garden irrigation.

DRAINAGE AREA: The area of land drained by a stream, measured in the horizontal plane. It is the area which is enclosed by a drainage divide.

DRAINAGE BASIN: A part of the surface of the earth that is occupied by a drainage system consisting or a surface stream or a permanent body of water together with all tributary streams and bodies of impounded water (lakes, ponds, reservoirs, etc.).

FLOOD: Any relatively high streamflow or an overflow that comes from a river or body of water and which causes or threatens damage.

GAGING STATION: A particular location on a stream, canal, lake, or reservoir where systematic measurements of the quantity of water flowing are made.

GROUND WATER: Water in the ground lying in the zone of saturation. Natural recharge includes water added by rainfall, flowing through pores or small openings in the soil into the water table.

HYDRAULIC CONTINUITY: A cause and effect relationship between water under the ground with water standing or flowing on the surface.

HYDROGRAPH: A graph showing varying streamflow (or stream discharge) with respect to time during a year as determined at a specific cross-sectional location in the stream.

INSTREAM VALUE: The attitude of society towards the instream use of water for aesthetic, fish and wildlife, recreation, hydroelectric, and general environmental purposes.

NONCONSUMPTIVE USE: Use of water in a manner which does not consume the resource. Fishery, aesthetic, and hydropower uses are examples of nonconsumptive use.

PERENNIAL STREAM: A stream, at any given location, is considered perennial if its natural flow is normally continuous.

PRECIPITATION: The discharge of water, as rain, snow, hail, etc., out of the atmosphere, generally onto land or water surfaces. This is the process which permits atmospheric water to become surface or subsurface water. The term precipitation is often used to describe the amount of water that is precipitated.

PRIORITY OF USES: A use category ranking which specifies an order of water uses to determine the method for regulating water uses. All rights within a lower priority use are subject to regulation before any rights in the next higher priority. Rights within a defined water use category are to be regulated on a first-in-time, first-in-right basis.

PUBLIC INTEREST: The sense of local, county, or state values at a given point in time.

PUBLIC WATERS: All waters not previously appropriated.

PUBLIC WATER SUPPLY: The system for the collection, treatment, storage, and distribution of potable water from the sources of supply to any community, collection or number of individuals, but excluding water supplies serving one single family dwelling.

RESERVATION: An approved priority claim to water for a future beneficial use.

RETURN FLOW (irrigation): Irrigation water which is not consumed in evaporation or plant growth, and which returns to a surface stream or ground water aquifer.

RELINQUISHMENT: Reversion to the state of a right to divert or with- draw water.

RIPARIAN: Pertaining to the banks of streams, lakes, or tidewater.

RIVER BASIN: The total area drained by a river and its tributaries; watershed; drainage basin.

RUNOFF: That part of precipitation that appears in surface streams. This is the streamflow before it is affected by artificial diversions, reservoirs, or other man-made changes in or on stream channels.

STORAGE: Water naturally or artificially impounded in surface or underground reservoirs.

STREAMFLOW: The discharge or water flow that occurs in a natural channel. The word discharge can be applied to a canal, but streamflow describes only the discharge in a surface stream course. Stream- flow applies to discharge whether or not it is affected by diversion or reservoirs.

STREAM MANAGEMENT UNIT: Stream segments, reaches, or tributaries, each containing a control station, which are identified as units for defining base flow levels.

WATER RIGHT: A legal right and property interest (subject to certain limitations) to obtain specific maximum quantities of water from specific sources for application to beneficial use.

WATERSHED: The area drained by a given stream; drainage basin.

WITHDRAW: The administrative procedure of closing a water supply source from further appropriation for an indefinite period of time. RCW 90.54.050(2). Also, the removal of ground water from its source.

APPENDIX A

METHOW RIVER BASIN CITIZEN ADVISORY COMMITTEE POLICY STATEMENT

AGRICULTURE FIRST PRIORITY

In recognition of the fact that the amount of arable land in the Methow Valley is limited -

WE RECOMMEND THAT PLANNING EFFORTS BE DIRECTED TOWARD PROTECTION OF AGRICULTURAL LANDS. WE FURTHER RECOMMEND THAT THE AGRICULTURAL INDUSTRY CONTINUE TO BE THE FIRST PRIORITY IN FUTURE MANAGEMENT OF WATER RESOURCES, REALIZING OF COURSE THAT CONSIDERATION MUST BE GIVEN TO EXISTING HUMAN CONSUMPTION FOR MAINTENANCE OF A REASONABLY HEALTHY LIFE STYLE.

FUTURE INDUSTRIAL AND URBAN EXPANSION SHOULD PROTECT AND PRESERVE THE LIMITED LAND AVAILABLE FOR AGRICULTURAL PURPOSES.

We need to look ahead to when the amount of land suited for agriculture will not meet the requirements of production.

WE FURTHER RECOGNIZE THAT THE PRESERVATION OF AGRICULTURAL LANDS WILL CONTINUE TO INSURE THE SCENIC AND RECREATIONAL VALUES THAT HAVE ALWAYS BEEN ASSOCIATED WITH THE METHOW VALLEY.

IRRIGATION USES

Irrigation of agricultural lands is essential to the maintenance of a beautiful scenic valley, and therefore should be preserved.

WE RECOMMEND THAT ALLOCATION OF ADDITIONAL WATER RIGHTS FOR IRRIGATION PURPOSES BE CONTINGENT UPON PROVISION OF ADEQUATE WATER TO MEET CURRENT NEEDS. IT BEING RECOGNIZED THAT PRESENT USES HAVE PRIORITY AND THAT ENCOURAGEMENT OF ADDITIONAL FUTURE USES BE DEPENDENT UPON ADEQUATE WATER BEING MADE AVAILABLE.

DEVELOPMENT OF LANDS

The Methow Valley has experienced, and will continue to experience, rapid subdivision of its rural lands. Looking into the future, if these subdivided lots are occupied and the occupants demand water, will there be an adequate supply? And more importantly, will this demand effect existing users? Water is not an unlimited resource and there must be a limit upon its demands for use.

WE RECOMMEND THAT THE DEPARTMENT OF ECOLOGY, UPON REQUEST FROM A RURAL SUBDIVISION DEVELOPER FOR A WATER RIGHT, INITIATE A THOROUGH AND COMPREHENSIVE INVESTIGATION AS TO THE ADVERSE EFFECTS ISSUANCE OF THAT WATER RIGHT WOULD HAVE ON OTHER USERS. IF IT CAN BE DETERMINED THAT SUCH ISSUANCE WOULD BE DETRIMENTAL, THEN SUCH WATER RIGHTS SHOULD BE DENIED. THE PURPOSE OF THIS RECOMMENDATION IS TO PREVENT “MINING” OF WATER AQUIFERS, AS WELL AS SURFACE RUNOFF.

Our committee fully appreciates the value of the Methow Valley for residential recreational development. We are fully aware of the responsibility to develop the area in a reasonable and comprehensive manner.

WE WOULD DISCOURAGE INDISCRIMINATE LOCATION OF RECREATIONAL SUBDIVISIONS WITHOUT ADEQUATE PROVISIONS FOR WATER AND CONCERN FOR EXISTING WATER RIGHTS. OUR RESPONSIBILITY MUST BE TO BOTH PRESENT WATER USERS AND TO FUTURE GENERATIONS.

WE FURTHER RECOMMEND THAT FUTURE GROWTH BE REGULATED IN A MANNER SO AS TO MINIMIZE THE DEMAND FOR WATER, THUS TO CONSERVE THE WATER RESOURCES OF THE BASIN.

FLOOD CONTROL

WE RECOMMEND THAT FUTURE CONSTRUCTION OF DIKES, RIP RAP, OR CHANNEL MODIFICATION BE CONSIDERED IN TERMS OF THEIR ECONOMIC CONSEQUENCES. WE FEEL IT MUST BE DETERMINED IN ADVANCE IF SUCH STRUCTURES ARE ECONOMICALLY FEASIBLE AND IF THE COST-BENEFIT RATIO WOULD BE OF SUFFICIENT BENEFIT TO WARRANT THEIR CONSIDERATION.

WATER RIGHTS

Because of the anticipated growth of the Methow Valley within the next few years and the demands that will be placed upon its water resources:

WE RECOMMEND THAT THE DEPARTMENT OF ECOLOGY COMPLETE AN EARLY DETERMINATION AS TO THE DEGREE OF APPROPRIATION OF ALL STREAMS IN THE METHOW BASIN. WE ALSO RECOMMEND AN ACTIVE AND IMMEDIATE PROGRAM OF STREAM ADJUDICATION TO DETERMINE EXISTING RIGHTS.

We recognize the availability of water in these small streams, as well as existing storage lakes, is almost nonexistent.

WE THEREFORE RECOMMEND THAT FUTURE APPROPRIATIONS BE WITHHELD BY THE STATE DEPARTMENT OF ECOLOGY IN ALL STREAMS THAT ARE FULLY APPROPRIATED, AND THAT FUTURE USES BE ALLOCATED ONLY AS WATER BECOMES AVAILABLE. OF PARTICULAR CONCERN ARE ALL STREAMS FLOWING INTO THE METHOW RIVER BELOW WINTHROP.

WATER QUALITY

The Methow currently enjoys a high standard of pure and clean water that adds measurably to its attraction to both residents and visitors. It is of vital importance that these high standards be maintained.

WE THEREFORE RECOMMEND THAT ANY EXISTING OR POTENTIAL CONCEN-TRATIONS OF RESIDENTS OR POLLUTANTS THAT WOULD CONTRIBUTE TO FURTHER DEGRADATION OF THE WATER QUALITY BE IDENTIFIED AND APPROPRIATE ACTION TAKEN TO ALLEVIATE SUCH SOURCES.

WE RECOMMEND THAT FUTURE INDUSTRIAL GROWTH BE OF SUCH A NATURE AS TO BE COMPATIBLE WITH THE AGRICULTURAL AND RURAL CHARACTER OF THE VALLEY AND INDUSTRIES THAT CREATE PROBLEMS OF WATER AND AIR POLLUTION BE DISCOURAGED TO LOCATE IN THIS BASIN.

CONSERVATION OF WATER

In recognition of the possibility of critical water shortages occurring, we deem it responsible and necessary to encourage all methods of water conservation of present and future uses.

WE RECOMMEND THAT CONSERVATION MEASURES BE ENCOURAGED TO BETTER UTILIZE WATER NOW BEING DIVERTED FOR IRRIGATION PURPOSES. SUCH CONSERVATION MEASURES COULD INCLUDE: PROPER APPLICATION TO IRRIGATED CROPS, LINING OF IRRIGATION DITCHES WHERE ECONOMICALLY FEASIBLE TO REDUCE PERCOLATION LOSSES, USE OF PIPE LINES WHERE APPROPRIATE, CONVERSION TO SPRINKLER IRRIGATION, AND OTHER ACCEPTED WATER CONSERVATION PRACTICES.

We further recognize the need to enhance the flow of water in the Methow Basin during the chronic low flow period of late summer.

WE THEREFORE RECOMMEND FURTHER STUDY BY THE APPROPRIATE AGENCIES AND INDIVIDUALS BE GIVEN TO VARIOUS METHODS TO IMPROVE WATERSHED MANAGEMENT.

SOIL EROSION

Preservation of our irreplaceable soil is imperative to our agricultural economy and to the enhancement of the natural beauty of the valley.

TO PRESERVE AND ENHANCE THE QUALITY OF THE WATER OF THE METHOW RIVER WE RECOMMEND THAT ACCEPTABLE METHODS OF SOIL EROSION CONTROL BE INITIATED BY GOVERNMENT AND INDIVIDUALS TO ENCOURAGE PRACTICES THAT WOULD PREVENT FURTHER EROSION AS WELL AS PROTECTION TO OUR CUT BANKS AND AREAS OF POTENTIAL SILT ALONG ALL STREAMS. SUCH PROTECTION WILL AID IN FLOOD CONTROL EFFORTS AND ENHANCE FISH AND WILDLIFE HABITAT.

WE RECOMMEND THAT ALL POSSIBLE EFFORTS BE MADE TO ENCOURAGE THE RETENTION AND ENHANCEMENT OF NATURAL GROWTH ALONG RIVER AND STREAM BANKS TO HELP PREVENT EROSION. SUCH BUFFER ZONES NOT ONLY PROVIDE PROTECTION FROM LOSS OF SOIL, BUT PROVIDE NATURAL HABITATS FOR FISH AND WILDLIFE.

FISH AND WILDLIFE

In recognition of the fact that both residents and visitors highly value the fish and wildlife resources of the area, and further realizing both their economic and aesthetic values as part of the natural beauty of the area---

WE THEREFORE RECOMMEND THAT IN ALL PLANNING AND DEVELOPMENT EFFORTS THESE VALUES BE PROTECTED AND ENHANCED.

WE RECOMMEND THAT THE STATE AND FEDERAL FISH AND GAME AGENCIES ACTIVELY PURSUE A POLICY OF MAINTAINING OPTIMAL SALMON AND LOCAL SPORT FISH POPULATIONS IN THE METHOW BASIN.

To help accomplish this we --

RECOMMEND THAT THE FEDERAL GOVERNMENT MAKE PROVISIONS TO FULLY UTILIZE THE FACILITIES OF THE WINTHROP FISH HATCHERY.

The Methow River is an important migratory river for salmon and local sport fishing. The salmon represents an important economic value to the people of the state. Portions of the river experience extremely low flows and future water demands will accentuate this problem. As a possible solution ---

WE RECOMMEND THAT THE STATE INSTALL PUMPING STATIONS TO PUMP IRRIGATION WATER FROM THE METHOW RIVER INTO THE TWISP AND CHEWACK RIVER IRRIGATION SYSTEMS THUS HAVING THE EFFECT OF REVERSING THE FLOW AND PROVIDING AN ADEQUATE WATER SUPPLY DURING LOW FLOW PERIODS FOR THESE TWO RIVERS. WE BELIEVE THIS WOULD BE A MORE SATISFACTORY AND ECONOMICAL SOLUTION THAN THE ALTERNATIVE OF HAVING THE STATE PURCHASE WATER RIGHTS FOR MAINTENANCE OF A FISHERIES VALUE.

Some public access to the Methow River is needed for both local residents and visitors, but a careful balance must be maintained so as not to deplete the fish resource.

WE RECOMMEND DEVELOPMENT OF A LIMITED AMOUNT OF ACCESS TO THE METHOW RIVER IN AREAS THAT WILL NOT UPSET THE AESTHETIC AND ENVIRONMENTAL QUALITY OF THE AREA AND ITS RESOURCE. CONCERN SHOULD BE GIVEN TO OVERUSE AND DEPLETION OF THE FISHERY RESOURCES, YET RECOGNITION MUST BE MADE OF THE BURDEN PLACED ON PRIVATE LANDOWNERS WITH INCREASED PUBLIC USE.

PRIORITIES FOR FUTURE WATER USES

Because demands for water uses in the future may exceed the supply, we deem it important to establish a priority for future uses. This priority listing reflects the opinions and values of Methow valley residents as taken from the results of a questionnaire mailed to them.

THEREFORE, WE RECOMMEND THAT THE FOLLOWING FUTURE WATER USE PRIORITIES BE ESTABLISHED AND RECOGNIZED BY ALL COUNTY, STATE, AND FEDERAL AGENCIES INVOLVED IN WATER RESOURCE PLANNING. PRIORITIES LISTED ARE IN ORDER OF IMPORTANCE AS REFLECTED BY RESIDENTS OF THE METHOW BASIN:

1. Domestic and municipal uses
2. Irrigation
3. Fish and wildlife
4. Water based recreation
5. Industrial development
6. Mining

FIGURE I

BASE FLOW HYDROGRAPHS FOR SELECTED STATIONS

Methow River Basin

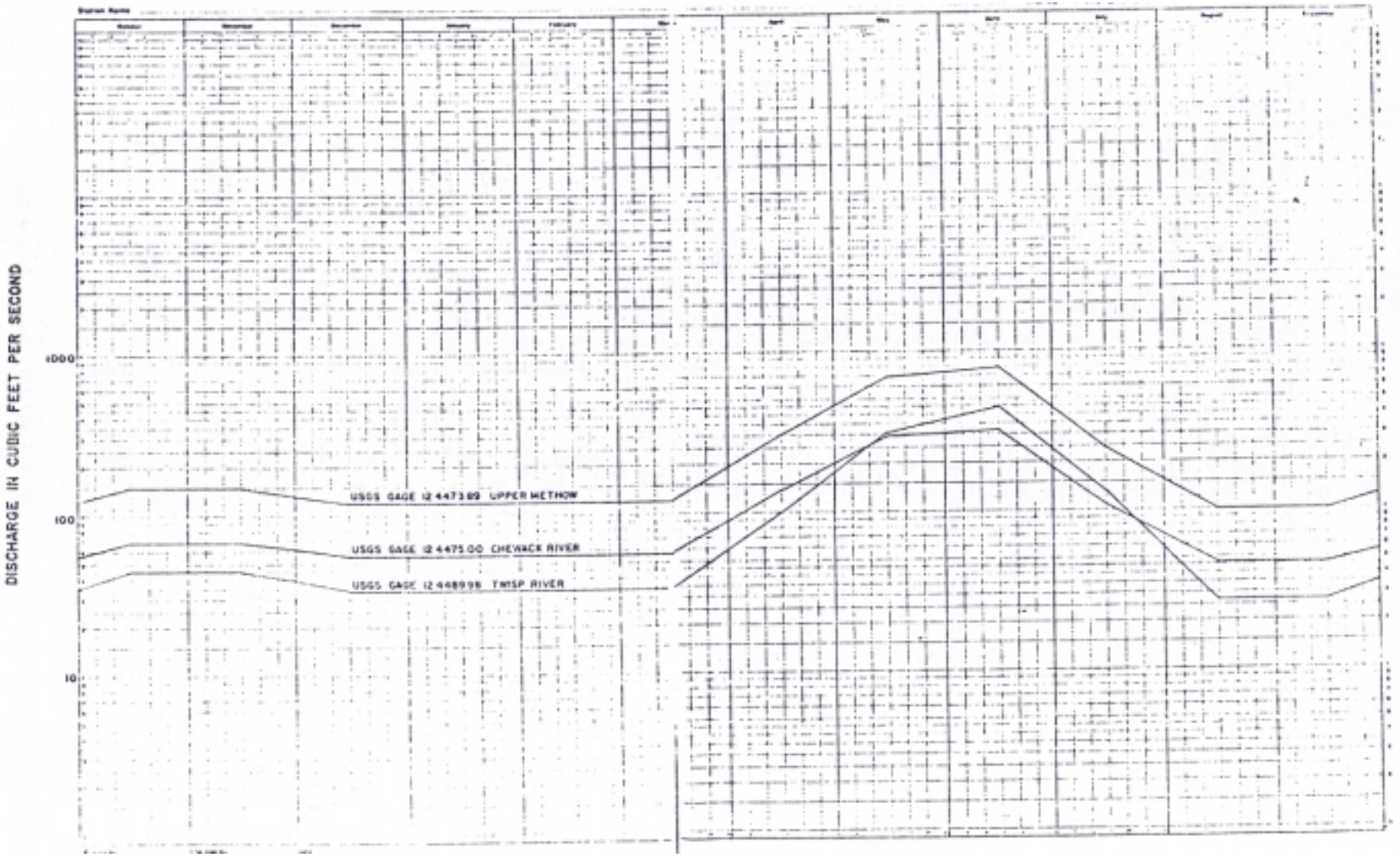

FIGURE I (CONT.)

BASE FLOW HYDROGRAPHS FOR SELECTED STATIONS

Methow River Basin

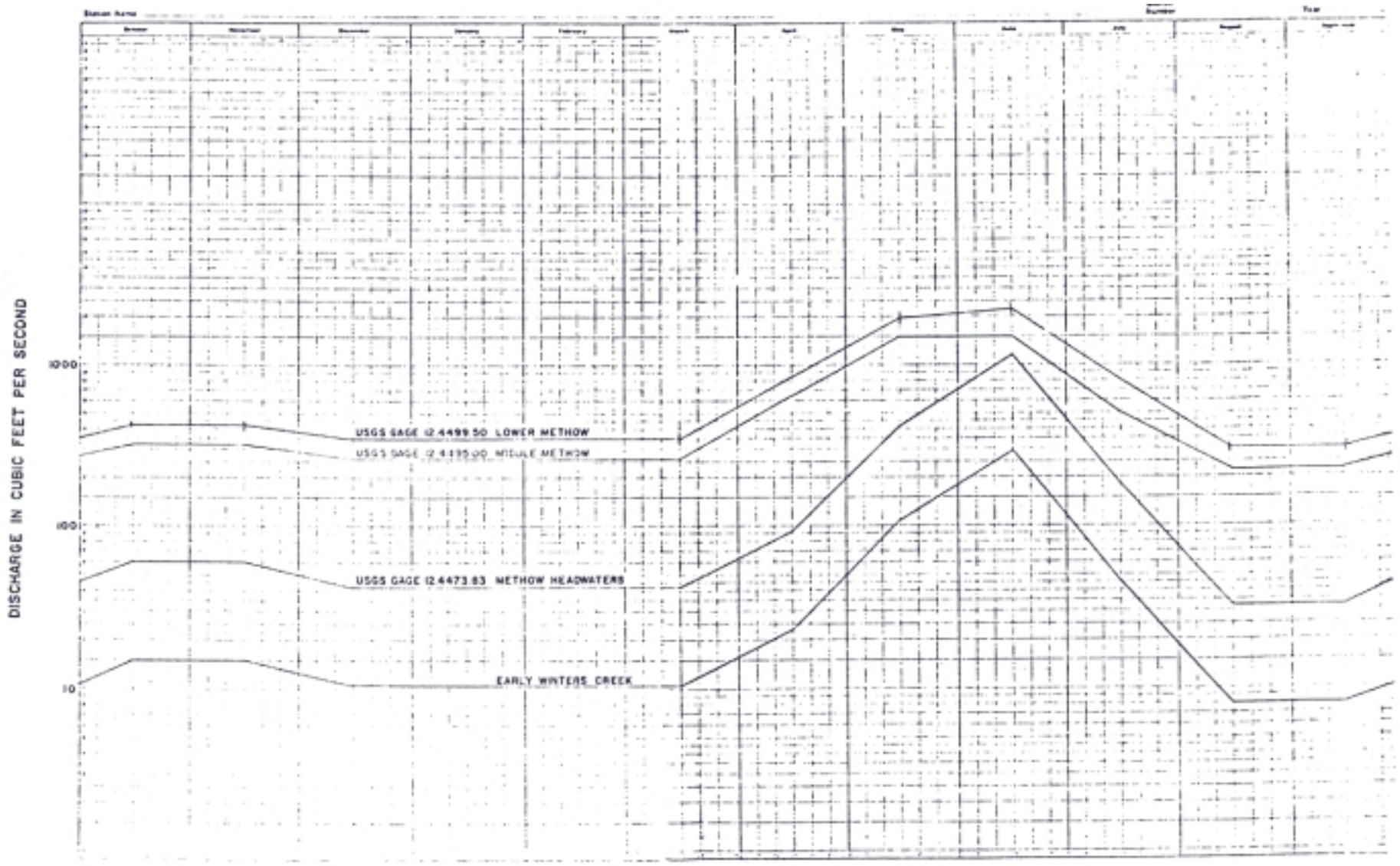

Table 3

LAND CLASSIFICATIONS 1/
(Methow River Basin)
(in acres)

Irrigated Lands							
Hay and Pasture		Orchard	Dry 2/ Crop	Range	Woodlands	Grazing Woodlands	Total
11,550		2,800	9,200	113,800	24,560	21,825	
TOTALS	14,350		9,200	113,800	24,560	21,825	173,735

1/ Based on revised data from the U.S. Soil Conservation Service, October 1976. Towns, parks, and commercial lands are not included in this chart. Additional information on the irrigated acreage in each of the 15 subbasins is presented in Table 15, page 64-68.

2/ Dry crop lands include total lands in crops and total idle crop lands.

3/ The figures in this table are rounded off to appropriate levels of accuracy.

Table 4

EXISTING RESERVOIRS
(Methow River Basin)

Reservoir Name	Stream Location	Storage (acre-ft)	Potential Storage	Surface Area (acres)	Data Source
Patterson	Little Wolf Creek	5,000	–	142.9	Lakes of Washington, Vol. II Eastern Washington
Pearrygin	Chewack River (diversions)	1,000	–	192.0	
Alta	None	Lake level maint.	–	187.4	
Davis Lake	Bear Creek Drainage	Approx. 200	–		

Table 5

POTENTIAL RESERVOIR SITES
(Methow River Basin)

Watershed Number and Name		Reservoir Name	Location (Sec., T., R.)	Dam Height (feet)	Annual Yield (acre-ft)	Storage Increment (acre-ft)	Surface Area (acres)	Drainage Area (acres)
8-1	Upper Chewack Creek	Black River	25 mi N. of Winthrop	55	3,050	5,200	144	2,435
8-3	Lower Chewack Creek	Pearrygin Lake	Sec. 26, T.35N., R. 21E	17	2,900	3,000	320	7,100
8-4	Middle Methow River	Patterson Lake	Sec. 8, T.34N., R.21E	18	17,300	2,250	175	20,750
8-7	Twisp River	Slate Lake	14 mi W. of Winthrop	40	480	1,100	44	384
8-7	Twisp River	Middle Oval Lake	16 mi W. of Carlton	30	1,330	1,500	78	1,070
8-7	Twisp River	West Oval Lake	16 mi. W. of Carlton	25	375	520	59	300
8-7	Twisp River	Black Pine Lake	9 mi SW of Twisp	10	96	100	25	115
8-7	Twisp River	Louis Lake	20 mi W. of Twisp	14	7,100	880	120	2,840
8-7	Twisp River	North Lake	20 mi W. of Winthrop	35	3,200	1,000	49	1,280
8-8	East Lower Methow	French Creek	Sec. 28, T.31N., R.23E.	50	1,700	1,725	115	14,282
8-9	West Lower Methow	Libby Lake	10 mi W. of Carlton	22	190	460	37	225
8-9	West Lower Methow	Upper Eagle Lake	12 mi W. of Carlton	15	460	570	58	550
8-9	West Lower Methow	Eagle Lake	11 mi W. of Carlton	35	1,140	1,020	44	1,370
8-9	West Lower Methow	Crater Lake	10 mi W. of Carlton	44	1,500	2,800	80	1,800
8-9	West Lower Methow	Sunrise Lake	16 mi W. of Methow	17	230	790	44	280

Table 6

FURTHER APPROPRIATION

DESCRIPTION: Methow River Above Bolder Creek (Methow Headwaters)

USGS GAGE: 12.4473.83
RIVER MILE: 65.3

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	75	66	59	50	51	80	426	1,842	2,409	788	141	65
Base flow (Q_b) [2]	60	60	42	42	42	42	90	430	1,160	180	32	32
$Q_2 - Q_b$ [3]	15	06	17	8	9	38	336	412	1,249	608	109	33

[1]Equivalent to natural monthly flows for the 1904-1919, 1961-1975 period of record.

[2]Base flow for the purpose of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]As a result of a negligible present consumptive use impact, the flow available for consumptive use for this reach is essentially the one in two year discharge minus base flow.

Table 7

FURTHER APPROPRIATION

DESCRIPTION: Methow River above Chewack River (Upper Methow)

USGS GAGE: 12.4473.89
RIVER MILE: 50.2

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	194	196	164	146	149	200	573	1474	1807	823	303	176
Base flow (Q_b) [2]	150	150	120	120	120	120	300	690	790	240	100	100
$Q_2 - Q_b$ [3]	44	46	44	26	29	80	273	784	1017	583	203	76

[1]Equivalent to natural monthly flows for the 1904-1919 period of record.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]As a result of a negligible present consumptive use impact, the flow available for consumptive use for this reach is essentially the one in two year discharge minus base flow.

Table 8

FURTHER APPROPRIATION

DESCRIPTION: Chewack River near Winthrop

USGS GAGE: 12.4475.00
RIVER MILE: 8.7

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	77	78	66	59	60	80	258	1099	1612	418	117	70
Base flow (Q_b) [2]	68	68	56	56	56	56	140	290	320	110	47	47
$Q_2 - Q_b$ [3]	9	9	10	3	4	24	118	809	1292	308	70	23

[1]Equivalent to natural monthly flows for the 1904-1919, 1961-1975 period of record.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]As a result of a negligible present consumptive use impact, the flow available for consumptive use for this reach is essentially the one in two year discharge minus base flow.

Table 9

FURTHER APPROPRIATION

DESCRIPTION: Methow River at Twisp (Middle Methow)

USGS GAGE: 12.4495.00
RIVER MILE: 40.0

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	355	413	357	296	297	369	1257	4497	4436	1455	483	321
Base flow (Q_b) [2]	320	320	260	260	260	260	650	1500	1500	500	220	220
$Q_2 - Q_b$ [3]	35	93	97	36	37	139	607	2997	2936	955	263	101
Estimate of present consumptive use impact[3]	-15	-8	-2	0	0	0	17	70	83	78	71	46
Flow available for consumptive use[4]	50	101	99	36	37	139	590	2927	2853	877	192	55

[1]Equivalent to natural monthly flows for the 1904-1919, 1961-1975 period of record.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow.

[3]From generated data. A negative consumptive use impact is an indication of return flows.

[4]Subject to base flow and existing rights.

Table 10

FIRM SUPPLY AVAILABLE[1]

DESCRIPTION: Methow River at Twisp (Middle Methow)

USGS GAGE: 12.4495.00

RIVER MILE: 40.0

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in ten year[2] Discharge ($Q_{1/10}$)	194	236	209	200	194	209	522	2549	2423	703	287	208
Base flow (Q_b) [3]	320	320	260	260	260	260	650	1500	1500	500	220	220
$Q_{1/10} - Q_b$	-126	-84	-51	-60	-66	-51	-128	1049	923	203	67	-12
Estimate of present consumptive use impact[4]	-15	-8	-2	0	0	0	17	70	83	78	71	46
Flow available for consumptive use[5]	0 (-111)	0 (-76)	0 (-49)	0 (-60)	0 (-66)	0 (-51)	0 (-145)	979	840	125	0 (-4)	0 (-58)

[1]Firm supply is a supply which will be available 100 percent of the time 9 years out of 10 years.

[2]The one in ten years low discharge is that flow which is exceeded 9 years out of 10, on the average, for the given month, based on the 1920-1962 period of record.

[3]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow.

[4]A negative consumptive use impact is an indication of return flows.

[5]Subject to base flow and existing rights.

Table 11

FURTHER APPROPRIATION

DESCRIPTION: Twisp River near Twisp

USGS GAGE: 12.4489.98
RIVER MILE: 0.3

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	59	60	49	43	44	62	248	1003	1330	428	97	53
Base flow (Q_b) [2]	45	45	34	34	34	34	100	300	440	130	27	27
$Q_2 - Q_b$ [3]	14	15	15	9	10	18	148	703	890	298	70	26

[1]Equivalent to natural flow based on 1904-1919, 1961-1975 period of record.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]As a result of a negligible present consumptive use impact, the flow available for consumptive use for this reach is essentially the one in two year discharge minus base flow.

Table 12

FURTHER APPROPRIATION

DESCRIPTION: Methow River near Pateros (Lower Methow)

USGS GAGE: 12.4499.50

RIVER MILE: 6.7

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	491	526	458	400	401	497	1448	4954	5443	1862	598	414
Base flow (Q_b) [2]	425	425	350	350	350	350	860	1940	2220	800	300	300
$Q_2 - Q_b$ [3]	66	101	108	50	51	147	588	3014	3223	1062	298	114
Estimate of present consumptive use impact[3]	-29	-15	-4	0	0	0	23	92	107	97	84	52
Flow available for consumptive use[4]	95	116	112	50	51	147	565	2922	3116	965	214	62

[1]Equivalent to natural flow based on 1904-1975 period of record.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]From data based on equivalent "natural" monthly flows. A negative consumptive use impact is an indication of return flows.

[4]Subject to base flow and existing rights.

Table 13

FIRM SUPPLY AVAILABLE[1]

DESCRIPTION: Methow River near Pateros (Lower Methow)

USGS GAGE: 12.4499.50

RIVER MILE: 6.7

DATE: 5/18/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in ten year[2] Discharge ($Q_{1/10}$)	316	336	301	292	282	296	648	2944	3038	910	352	278
Base flow (Q_b) [3]	425	425	350	350	350	350	860	1940	2220	800	300	300
$Q_{1/10} - Q_b$	-109	-89	-49	-58	-68	-54	-212	1004	821	110	52	-22
Estimate of present consumptive use impact[4]	-29	-15	-4	0	0	0	23	92	107	97	84	52
Flow available for consumptive use[5]	0 (-80)	0 (-74)	0 (-45)	0 (-58)	0 (-68)	0 (-54)	0 (-235)	912	711	13	0 (-32)	0 (-74)

[1]Firm supply is a supply which will be available 100 percent of the time 9 years out of 10 years.

[2]The one in ten years low discharge is that flow which is exceeded 9 years out of 10, on the average, for the given month, based on the 1904-1919; 1961-1975 period of record.

[3]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[4]A negative consumptive use impact is an indication of return flows.

[5]Subject to base flow and existing rights.

Table 14

FURTHER APPROPRIATION

DESCRIPTION: Early Winters Creek

USGS GAGE:
RIVER MILE:

DATE: 9/14/76

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
One in two year Discharge (Q_2) [1]	44	36	36	29	29	29	58	511	584	234	102	58
Base flow (Q_b) [2]	15	15	10	10	10	10	23	108	290	45	8	11
$Q_2 - Q_b$ [3]	29	21	26	19	19	19	35	403	294	189	94	47

[1]One in two year discharge data are not available.

[2]Base flow for the purposes of water availability is taken to be the mid-month (15^{th}) base flow. The figures are rounded off to appropriate levels of accuracy.

[3]As a result of a negligible present consumptive use impact, the flow available for consumptive use for this reach is essentially the one in two year discharge minus base flow.

Table 15

PRINCIPAL TRIBUTARY STREAMS[1]
(Current and Proposed Status)
Methow River Basin

Stream	Current Status	Proposed Status[1]	Remarks
Early Winters	Hold	Open all year	Early Winters Creek provides 28 percent of annual flow of Upper Methow River
Wolf Creek	Incomplete adjudication	Closed all year**	RCW 90.03.110 et.seq. RCW 90.03.290
Bear Creek (Davis Lake)	Adjudicated	Closed all year	RCW 90.03.110 et.seq. RCW 75.20.050 RCW 90.03.290
Thompson Creek	Incomplete adjudication	Closed all year**	RCW 90.03.110 et.seq. RCW 90.03.290
Beaver Creek	Adjudicated	Closed May 1 to October 1**	RCW 90.03.110 et.seq. RCW 90.03.290
Alder Creek		Closed all year	
Benson Creek	Pre-1917 Adjudication between parties (Closure)	Closed all year**	
Texas Creek		Closed all year*	
Libby Creek	Adjudicated	Closed May 1 to October 1**	RCW 90.03.110 et.seq. RCW 90.03.290
Cow Creek		Closed May 1 to October 1	
Gold Creek	Adjudicated	Closed May 1 to October 1*/**	RCW 90.03.110 et.seq. RCW 90.03.290
McFarland Creek	Adjudicated	Closed May 1 to October 1	RCW 90.03.110 et.seq. RCW 90.03.290
Squaw Creek		Closed May 1 to October 1	
Black Canyon Creek	Adjudicated	Closed May 1 to October 1	RCW 90.03.110 et.seq. RCW 90.03.290
French Creek		Closed May 1 to October 1*/**	

1 All future rights are subject to existing rights.

* Exception for single domestic and stock water.

** Exception for water developed solely from added storage capacity within the basin.

Table 16

ESTIMATED "NATURAL" MEAN MONTHLY FLOW, RIGHTS, AND USE IN CFS FOR 15 STREAMS
(Methow River Basin)

Name	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Early Winters Creek	44	36	36	29	29	29	58	511	584	234	102	58
Total Rights/Month 1/							0.23	0.23	0.23	0.23	0.23	0.23
Use Rights/Month 2/							0.05	0.19	0.23	0.22	0.20	0.13
Actual Use/Month 3/							0.28	1.11	1.32	1.24	1.14	0.73
Claims Registration							100.27	100.27	100.27	100.27	100.27	100.27
Probable Rights Under Claims							0.62	0.62	0.62	0.62	0.62	0.62
Acres Under Rights 5/							7.5	7.5	7.5	7.5	7.5	7.5
Wolf Creek	7.9	7.9	7.9	7.9	7.9	12	28	159	147	56	24	12
Total Rights/Month							60.45	60.45	60.45	60.45	60.45	60.45
Use Rights/Month							12.70	50.78	60.45	56.82	51.99	33.25
Actual Use/Month 3/							0.92	3.68	4.38	4.12	3.77	2.41
Claims Registration							23.01	23.01	23.01	23.01	23.01	23.01
Acres Under Rights							677.40	677.40	677.40	677.40	677.40	677.40
Bear Creek	0.8	0.8	0.8	0.8	1.2	2.5	6.2	17	11	4.1	2.0	1.2
Total Rights/Month							3.67	3.67	3.67	3.67	3.67	3.67
Use Rights/Month							0.77	3.08	3.67	3.45	3.16	2.02
Actual Use/Month 3/							0.27	1.08	1.28	1.20	1.10	0.70
Claims Registration							0.49	0.49	0.49	0.49	0.49	0.49
Acres Under Rights							182.20	182.20	182.20	182.20	182.20	182.20
Thompson Creek	1.4	1.6	1.9	2.2	2.7	5.9	17	19	7.0	3.2	1.6	1.1
Total Rights/Month							2.13	2.13	2.13	2.13	2.13	2.13
Use Rights/Month							0.45	1.79	2.13	2.00	1.83	1.17
Actual Use/Month 3/							2.26	9.02	10.74	10.10	9.24	5.91
Claims Registration							1.52	1.52	1.52	1.52	1.52	1.52
Acres Under Rights							275.0	275.0	275.0	275.0	275.0	275.0

Table 16 (Continued)

ESTIMATED "NATURAL" MEAN MONTHLY FLOW, RIGHTS, AND USE IN CFS FOR 15 STREAMS
(Methow River Basin)

Name	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Beaver Creek (including Frazer Creek)	10.7	10.7	10.4	10.9	12.3	19.8	51.8	120	83.5	27.2	12.6	9.4
Total Rights/Month							31.75	31.75	31.75	31.75	31.75	31.75
Use Rights/Month							6.67	26.67	31.75	29.85	27.31	17.46
Actual Use/Month 3/							3.01	12.05	14.34	13.48	12.33	7.89
Claims Registration							1.66	1.66	1.66	1.66	1.66	1.66
Acres Under Rights							1605.54	1605.54	1605.54	1605.54	1605.54	1605.54
Alder Creek	0.2	0.3	0.3	0.4	0.4	1.0	2.9	3.2	1.2	0.5	0.3	0.2
Total Rights/Month							0.40	0.40	0.40	0.40	0.40	0.40
Use Rights/Month							0.08	0.34	0.40	0.38	0.34	0.22
Actual Use/Month 3/							0	0	0	0	0	0
Claims Registration							6.23	6.23	6.23	6.23	6.23	6.23
Acres Under Rights							80.0	80.0	80.0	80.0	80.0	80.0
Benson Creek	0.6	0.8	0.9	1.0	1.3	2.9	8.3	9.1	3.4	1.6	0.8	0.5
Total Rights/Month							0	0	0	0	0	0
Use Rights/Month							–	–	–	–	–	–
Actual Use/Month 3/							0.50	1.98	2.36	2.22	2.03	1.30
Claims Registration							10.56	10.56	10.56	10.56	10.56	10.56
Acres Under Rights							0	0	0	0	0	0
Texas Creek	0.2	0.2	0.2	0.2	0.3	0.7	1.9	2.1	0.8	0.4	0.2	0.1
Total Rights/Month							2.92	2.92	2.92	2.92	2.92	2.92
Use Rights/Month							0.61	2.45	2.92	2.74	2.51	1.61
Actual Use/Month 3/							0.10	0.40	0.48	0.45	0.41	0.26
Claims Registration							0.14	0.14	0.14	0.14	0.14	0.14
Acres Under Rights							122.20	122.20	122.20	122.20	122.20	122.20

Table 16 (Continued)

ESTIMATED "NATURAL" MEAN MONTHLY FLOW, RIGHTS, AND USE IN CFS FOR 15 STREAMS
(Methow River Basin)

Name	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Libbey Creek	3.0	3.0	3.0	3.0	4.4	8.9	22	62	41	15	7.4	4.4
Total Rights/Month							17.37	17.37	17.37	17.37	17.37	17.37
Use Rights/Month							3.65	14.59	17.37	16.33	14.94	9.55
Actual Use/Month 3/							1.17	4.69	5.58	5.25	4.80	3.07
Claims Registration							0.85	0.85	0.85	0.85	0.85	0.85
Acres Under Rights							775.9	775.9	775.9	775.9	775.9	775.9
Cow Creek	0.1	0.1	0.1	0.2	0.2	0.4	1.3	1.4	0.5	0.2	0.1	0.1
Total Rights/Month							0.03	0.03	0.03	0.03	0.03	0.03
Use Rights/Month							0.01	0.03	0.03	0.03	0.03	0.02
Actual Use/Month 3/							0.01	0.05	0.06	0.06	0.05	0.03
Claims Registration							1.38	1.38	1.38	1.38	1.38	1.38
Acres Under Rights							3.0	3.0	3.0	3.0	3.0	3.0
Gold Creek	6.5	6.5	6.5	6.5	6.5	9.8	22.9	131	121	46	20	9.8
Total Rights/Month							18.17	18.17	18.17	18.17	18.17	18.17
Use Rights/Month							3.82	15.26	18.17	17.08	15.63	9.99
Actual Use/Month 3/							0.37	1.48	1.76	1.65	1.51	0.97
Claims Registration							4.87	4.87	4.87	4.87	4.87	4.87
Acres Under Rights							657.9	657.9	657.9	657.9	657.9	657.9
McFarland Creek	0.2	0.3	0.4	0.4	0.5	1.1	3.2	3.5	1.3	0.6	0.3	0.2
Total Rights/Month							6.02	6.02	6.02	6.02	6.02	6.02
Use Rights/Month							1.26	5.06	6.02	5.66	5.18	3.31
Actual Use/Month 3/							0.81	3.24	3.86	3.63	3.32	2.12
Claims Registration							0.94	0.94	0.94	0.94	0.94	0.94
Acres Under Rights							1085.64	1085.64	1085.64	1085.64	1085.64	1085.64

Table 16 (Continued)

ESTIMATED "NATURAL" MEAN MONTHLY FLOW, RIGHTS, AND USE IN CFS FOR 15 STREAMS
(Methow River Basin)

Name	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Squaw Creek	0.3	0.4	0.4	0.5	0.6	1.3	3.8	4.2	1.6	0.7	0.4	0.2
Total Rights/Month							0.127	0.127	0.127	0.127	0.127	0.127
Use Rights/Month							0.03	0.11	0.127	0.12	0.11	0.07
Actual Use/Month 3/							0.13	0.50	0.60	0.56	0.52	0.33
Claims Registration							84.11	84.11	84.11	84.11	84.11	84.11
Acres Under Rights							44.75	44.75	44.75	44.75	44.75	44.75
Black Canyon Creek	0.4	0.5	0.6	0.7	0.9	2.0	5.8	6.3	2.3	1.1	0.5	0.4
Total Rights/Month							2.07	2.07	2.07	2.07	2.07	2.07
Use Rights/Month							0.43	1.74	2.07	1.95	1.78	1.14
Actual Use/Month 3/							0	0	0	0	0	0
Claims Registration							0	0	0	0	0	0
Acres Under Rights							103.0	103.0	103.0	103.0	103.0	103.0
French Creek	0.4	0.5	0.6	0.7	0.9	2.0	5.8	6.3	2.3	1.1	0.5	0.4
Total Rights/Month							0.02	0.02	0.02	0.02	0.02	0.02
Use Rights/Month							0.004	0.02	0.02	0.02	0.02	0.01
Actual Use/Month 3/							0	0	0	0	0	0
Claims Registration							0.34	0.34	0.34	0.34	0.34	0.34
Acres Under Rights							0	0	0	0	0	0

Footnotes

1/ Total rights per month are principally the irrigation season rights.

2/ Use Rights/Month are determined by multiplying the total rights/month by the ratio of the estimated present consumptive use impact to the maximum consumptive use impact for each month. The values used were as follows: April, 0.21; May, 0.84; June, 1.0; July, 0.94; August, 0.86; and September, 0.55.

Footnotes (Continued)

3/ Actual Use/Month is determined by dividing the actual irrigated acreage data supplied by the Soil Conservation Service (October 1976) by 50 (assuming a water duty of 1 cfs for 50 acres) and multiplying the result by the ratios defined in 2/ above. The SCS acreage figure upon which the above calculations are based are presented below:

Early Winters Creek	66 acres
Wolf Creek	219 acres*
Bear Creek	64 acres**
Thompson Creek	537 acres***
Beaver Creek (including Frazer Creek)	717 acres
Alder Creek	0 acres (from aerial photography)
Benson Creek	118 acres
Texas Creek	24 acres
Libby Creek	279 acres
Cow Creek	3 acres
Gold Creek	88 acres
McFarland Creek	193 acres
Squaw Creek	30 acres
Black Canyon Creek	0 acres
French Creek	0 acres

*This includes 175 acres that are irrigated from the Wolf Creek Ditch but which lie in the Thompson Creek drainage basin.

**The 64 acres consist entirely of the Bear Creek Golf Course.

***The 537 acres does not include 175 acres within the basin that are irrigated from the Wolf Creek Ditch.

4/ Quantification of existing rights relating to claims registered under RCW 90.14.050 is uncertain because not all claims represent valid water rights nor in many cases do the claims accurately reflect the actual extent of right. (For additional comment, see pages 19 and 20 of this document.)

The figure under Probable Rights Under Claims was developed by George Maddox for the Early Winters Creek Subbasin. Mr. Maddox is a private consultant in the water resource field.

Table 17

INSTREAM FLOW COMPARISON
Methow River at Twisp
(Gage 12.4495.00)
(Units in cubic feet per second)

Month	Fish and Game*		Base Flows**	Recorded Flow***
	Sustaining Flow	Preferred Flow		
January	280	675	260	296
February	280	675	260	297
March	280	1,200	260	369
April	1,000	1,700	650	1,257
May	1,200	1,700	1,500	4,497
June	1,200	1,700	1,500	4,436
July	1,200	1,700	500	1,455
August	230	1,200	220	483
September	230	675	220	321
October	310	675	320	355
November	370	675	320	413
December	310	675	260	357

*From letter dated July 8, 1974, from the Department of Game.
**Taken at the mid-month point.
***One in two year discharge (from Table 9, page 57).

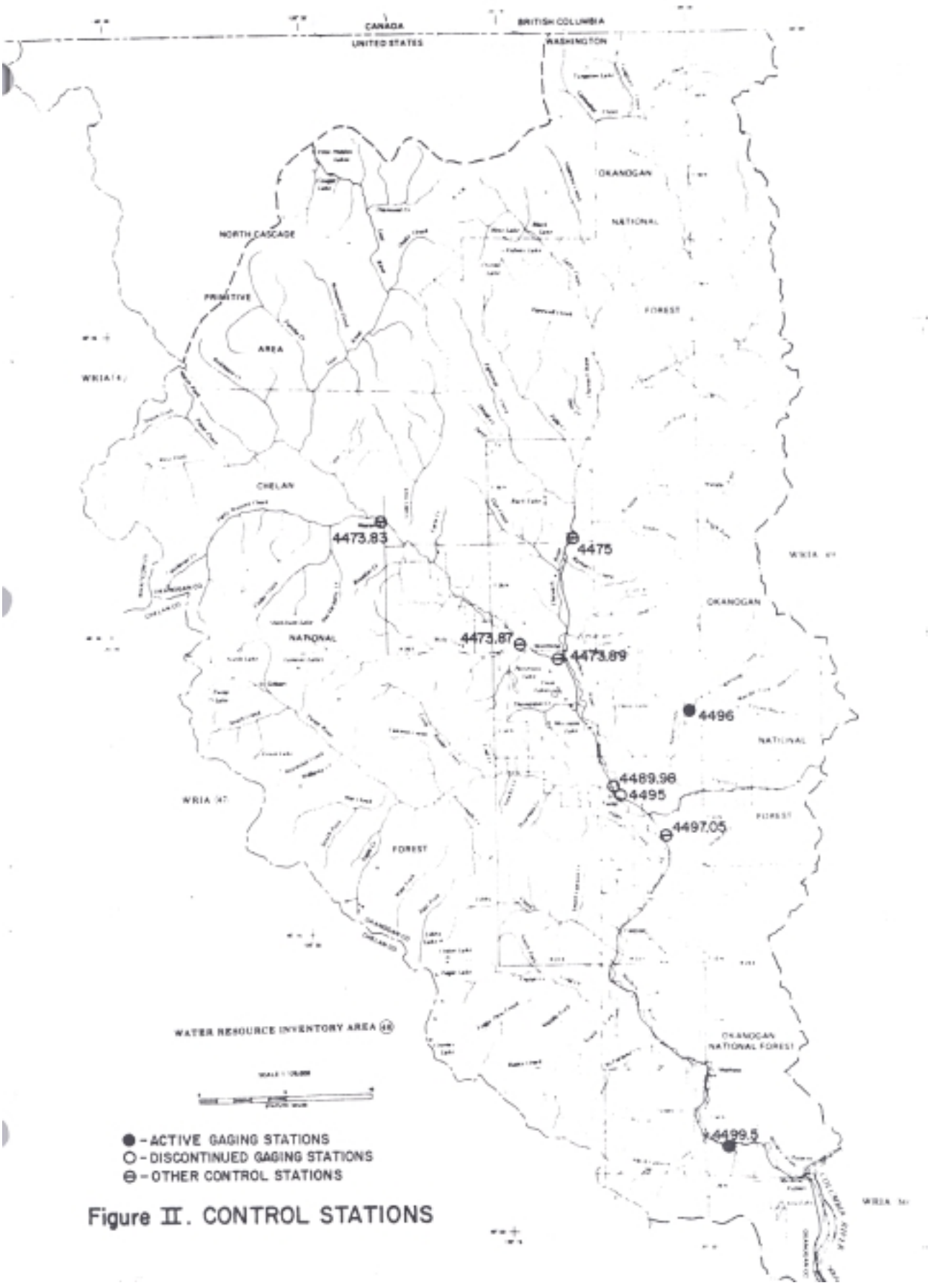

Figure II. CONTROL STATIONS

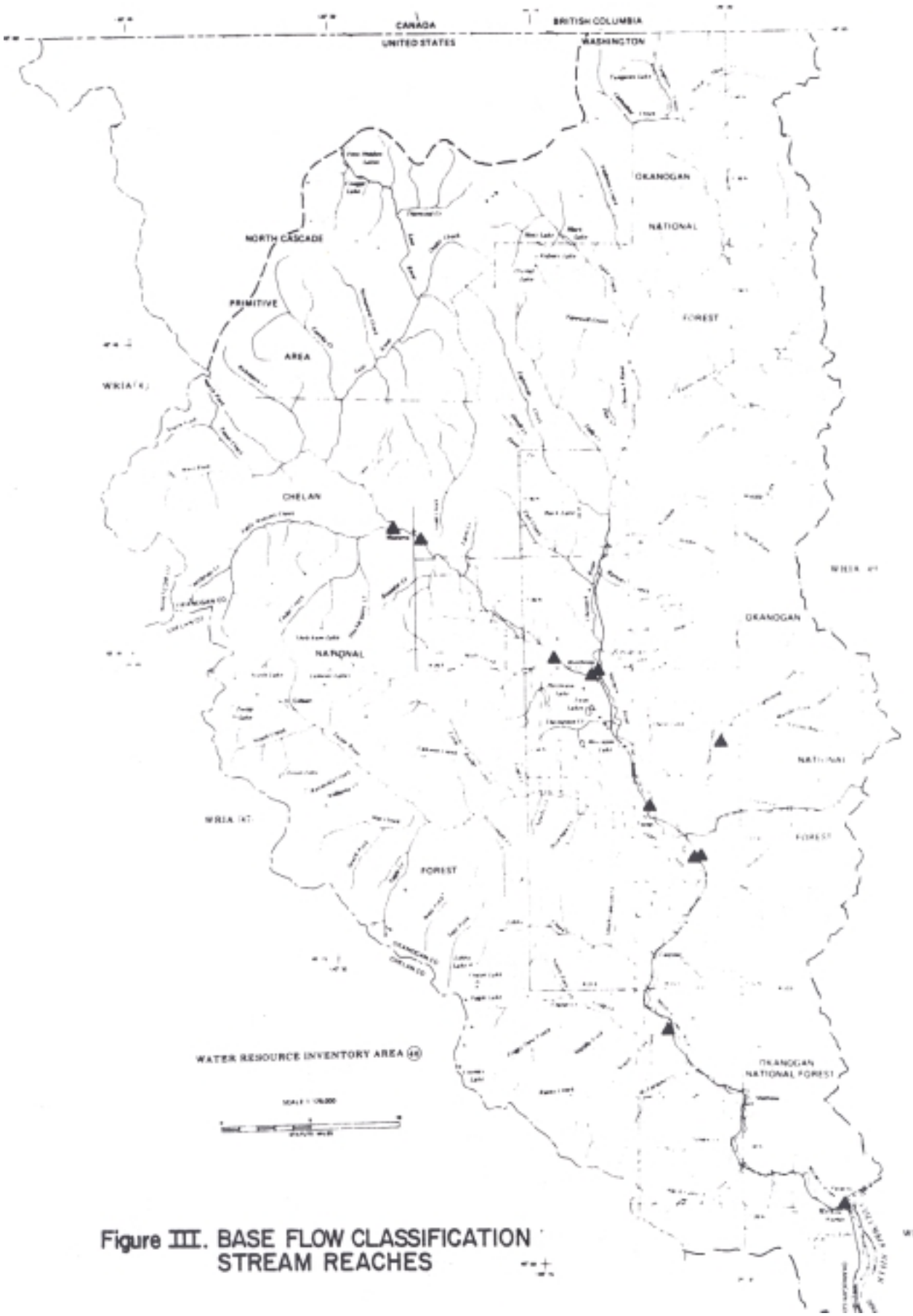

Figure III. BASE FLOW CLASSIFICATION STREAM REACHES

APPROPRIATION OF WATER FOR IRRIGATION PURPOSES

Appropriation of water for irrigation purposes will generally be guided by the criteria set forth in the following:

A. In the field investigation of an application the quantities of water allocated, as expressed in gallons per minute (gpm) or cubic feet per second (cfs) and acre-feet per year will be determined and specified in the report of findings.

B. To the extent possible, the intent of the applicant in the development of his irrigation program will be determined and be used as the basis for the water allocated by the permit.

C. The field examiner shall determine the maximum acreage to be irrigated under the proposed project, as well as the segregation of this acreage into different crops. If an annual rotation program is to be followed by the applicant, the field examiner shall determine the breakdown of crops and associated acreages. Where there is uncertainty as to the rotation program, the field examiner shall allocate for what, in his judgment, might be expected to be the maximum use of water.

D. Net irrigation water requirements for each crop shall be determined from the two-year frequency of occurrence table set forth in Station Circular 512 entitled "Irrigation Water Requirements Estimates for Washington," published by Washington Agricultural Experiment Station, College of Agriculture, Washington State University, November 1969. This frequency of occurrence is selected in recognition of the facts that the values reported (a) do not take into account those waters available to the crops at the commencement of the irrigation season as soil moisture storage and (b) are based upon maximum crop production where water is not the limiting factor.

E. Water shall be allocated for the net irrigation water requirement of the crops, as well as for reasonable delivery and application losses. The following irrigation efficiencies shall be used for computing total irrigation water needs:

   1. Sprinkler systems (pump at source of supply): 70 percent.

   2. Rill irrigation (at farm headgate): 65 percent.

F. The rate of diversion or withdrawal is generally a maximum of 10 gpm per acre. Each variance must be tenable and must be explained on the report of findings preliminary to permitting action.

G. The total annual allocation, as expressed in acre-feet per year, shall be calculated from the acreage to be irrigated and the type of each crop as adjusted (increased) by appropriate irrigation efficiency, taking into consideration subparagraph C and D of this section.

H. In all instances, the maximum number of acres to be irrigated in any calendar year will be the controlling consideration in the allocation of water for irrigation purposes. This acreage will be associated with a specific parcel of land described on the permit.

I. Pre- and post-irrigation will be considered to be beneficial irrigation uses. Water requirements for pre-irrigation purposes will be included in the net irrigation determination.

J. The use of water for irrigation is limited to the amount of water, within the terms of the right, which can be beneficially applied to the number of acres identified in the water right. Acreage cannot be enlarged without acquiring an additional water right therefore.

TRANSMITTAL OF RULES ADOPTED

FROM: DEPARTMENT OF ECOLOGY
(Name of Agency)

TO: CODE REVISER
LEGISLATIVE BLDG. (Southwest Corner, Ground Floor)
OLYMPIA 98504

The enclosed rules Permanent rules [xx] Emergency rules [ ] being Order No. DE 76-37

relating to (Name of rules or description of subject matter) a regulation for the management of the water resources of the Methow River Basin. It consists, among others, of elements pertaining to the establishment of base flows to protect instream values, restrictions or closure of certain tributary streams to further appropriation and allocation of water for future appropriation by use category; creating chapter 173-548 WAC.

(ALTERNATIVE A. Use only for adoption of permanent rules)

pursuant to Notice No. 7237 & 7323 (1) filed with the code reviser on 11/2/76 & 12/21/76 (2) were regularly adopted as permanent rules of St. Martin's College this agency at Lacey, Washington (place) on 12/28/76 (date) and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW. The effective date of such rules shall be _____. (3)

(ALTERNATIVE B. Use only for adoption of emergency rules)

pursuant to its finding in the attached administrative order, that the immediate adoption of these rules is necessary for the preservation of the public health, safety, or general welfare and that observance of the requirements of notice and opportunity to present views on the proposed action would be contrary to the public interest, were regularly adopted as emergency rules of this agency at _____ (place) on _____ (date) and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW.

The undersigned hereby certifies that the requirements of chapter 34.04 RCW and of the Open Public Meetings Act of 1971, chapter 42.30 RCW have been fulfilled.

Dated this 28th day of December 1976.

DEPARTMENT OF ECOLOGY
(AGENCY)

_____
By
John A. Biggs
Director

_____
Title

---

(1) Notice number as appears on the copy of notice returned to you by reviser's office (if proceedings were continued, use no. of last notice)

(2) Stamped date as appears on the copy of notice returned to you by reviser's office (if proceedings were continued, use date of last notice)

(3) Unless a later date is specified in this order or is prescribed in another statute, rules are effective 30 days after filing:
RCW 34.04.040. Leave this space blank except in such special cases. [Order 9, filed 9/25/74, eff. 10/25/74] [Form CR-2: Rev. 9/21/74]

Water Resources Program in

The Methow River Basin, WRIA-48

Creating Chapter 173-548 WAC

(Adopted 12-28-76)

WAC 173-548-010 GENERAL PROVISION. These rules, including any subsequent additions and amendments, apply to waters within and contributing to the Methow River Basin, WRIA 48 (See WAC 173-500-040). Chapter 173-500 WAC, the general rules of the Department of Ecology for the implementation of the comprehensive water resources program, applies to this chapter 173-548 WAC.

WAC 173-548-020 ESTABLISHMENT OF BASE FLOWS. (1) Base flows are established for stream management units with monitoring to take place at certain control points as follows:

Stream Management Unit Information

Stream Management Unit Name, Control Station Name and Number	Control Station Location by River Mile, Section, Township, Range	Affected Stream Reach (includes tributaries)
Lower Methow		
Methow R. nr. Pateros (12.4499.50)	6.7 20-30-23E	Methow River confluence with Wells Pool to confluence with Twisp River.
Middle Methow		
Methow R. nr. Twisp (12.4495.00)	40.0 17-33-22E	Methow River from confluence with Twisp River to confluence with Chewack River.
Upper Methow		
Methow R. nr. Winthrop (12.4473.89)	50.2 2-34-21E	Methow River from confluence with Chewack River to confluence with Little Boulder Creek and including Little Boulder Creek.
Methow Headwaters		
Methow R. at Little Boulder Cr. (12.4473.83)	65.3 25-36-19E	Methow River from confluence with Little Boulder Creek to headwaters.
Early Winters Creek		
Early Winters Cr. near Mazama	27-36-19E	Early Winters Creek from confluence with Methow River to headwaters.

Chewack River		
Chewack R. at Boulder Creek (12.4475.00)	8.7 35-36-21E	Chewack River confluence with Methow River to headwaters.
Twisp River		
Twisp R. nr. Twisp (12.4489.98)	0.3 7-33-22E	Twisp River from confluence with Methow River to headwaters.

(2) Base flows established for the stream management units in WAC 173-548-020(l) are as follows:

See following page for Table.

Base Flows in the Methow River
(All Figures in Cubic Feet Per second)

Month	Day	Lower Methow (12.4499.50)	Middle Methow (12.4495.00)	Upper Methow (12.4473.89)	Methow Headwaters (12.4473.83)	Early Winters Creek	Chewack River (12.4475.00)	Twisp River (12.4489.98)
Jan.	1	350	260	120	42	10	56	34
	15	350	260	120	42	10	56	34
Feb.	1	350	260	120	42	10	56	34
	15	350	260	120	42	10	56	34
Mar.	1	350	260	120	42	10	56	34
	15	350	260	120	42	10	56	34
Apr.	1	590	430	199	64	14	90	60
	15	860	650	300	90	23	140	100
May	1	1,300	1,000	480	130	32	215	170
	15	1,940	1,500	690	430	108	290	300
Jun.	1	2,220	1,500	790	1,160	290	320	440
	15	2,220	1,500	790	1,160	290	320	440
Jul.	1	2,150	1,500	694	500	125	292	390
	15	800	500	240	180	45	110	130
Aug.	1	480	325	153	75	20	70	58
	15	300	220	100	32	8	47	27
Sep.	1	300	220	100	32	8	47	27
	15	300	220	100	32	8	47	27
Oct.	1	360	260	122	45	11	56	35
	15	425	320	150	60	15	68	45
Nov.	1	425	320	150	60	15	68	45
	15	425	320	150	60	15	68	45
Dec.	1	390	290	135	51	12	62	39
	15	350	260	120	42	10	56	34

(3) Base flow hydroqraphs, as represented in Figure 1 in the document entitled "Water Resources Management Program, Methow River Basin" dated 1976, shall be used for definition of base flows on those days not specifically identified in WAC 173-548-020(2) and WAC 173-548-030.

(4) All rights hereafter established shall be subject to the base flows established in WAC 173-548-020(l) through (3), except as provided under WAC 173-548-030 herein.

(5) Future appropriations of water which would conflict with base flows shall be authorized, by the director, only in those situations when it is clear that overriding considerations of the public interest will be served.

WAC 173-548-030 FUTURE ALLOCATIONS--RESERVATION OF SURFACE WATER FOR BENEFICIAL USES. (1) The department determines that there are surface waters available for appropriation from the stream management units specified in the amount specified in cubic feet per second (cfs) during the time specified as follows:

(a) Maximum surface water available for future allocation from the indicated reach is as follows:

Month	Lower Methow	Middle Methow	Upper Methow	Methow Head-waters	Early Winters Creek	Chewack River	Twisp River
Oct.	95	50	44	15	29	09	14
Nov.	116	101	46	06	21	10	15
Dec.	112	99	44	17	26	10	15
Jan.	50	36	26	08	19	03	09
Feb.	51	37	29	09	19	04	10
Mar.	147	139	80	38	19	24	18
Apr.	565	590	273	336	35	118	148
May	2,922	2,927	784	412	403	809	703
Jun.	3,116	2,853	1,017	1,249	294	1,292	890
Jul.	965	877	583	608	189	308	298
Aug.	214	192	203	109	94	70	70
Sep.	62	55	76	33	47	23	26

All figures in cubic feet per second.

(b) The control station for each reach is defined in WAC 173-548-020.

(c) The appropriation limit is set forth to be an amount equal to the one in two year natural reach discharge on a monthly basis for all management reaches except Early Winters Creek. The appropriation limit for Early Winters Creek is set forth to be an amount equal to the estimated natural mean monthly streamflow for that stream.

(2) The amounts of water referred to in WAC 173-548- 030(l) above are allocated for beneficial uses in the future as follows:

(a) Allocation of surface waters by use category (April through September):

Use Description	Apr.	May	Jun.	Jul.	Aug.	Sep.
<u>Lower Methow</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	860	1,940	2,220	800	300	300
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Middle Methow</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	650	1,500	1,500	500	220	220
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Upper Methow</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	300	690	790	240	100	100
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Methow Headquarters</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	90	430	1,160	180	32	32
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Early Winters Creek</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	23	108	290	45	8.0	11.0
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					

Use Description	Apr.	May	Jun.	Jul.	Aug.	Sep.
Chewack River						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	140	290	320	110	47	47
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
Twisp River						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	100	300	440	130	27	27
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					

All figures in cubic feet per second

(b) Allocation of surface waters by use category (October through March):

Use Description	Apr.	May	Jun.	Jul.	Aug.	Sep.
Lower Methow						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	425	425	350	350	350	350
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
Middle Methow						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	320	320	260	260	260	260
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					

Use Description	Apr.	May	Jun.	Jul.	Aug.	Sep.
<u>Upper Methow</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	150	150	120	120	120	120
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Methow Headquarters</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	60	60	42	42	42	42
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Early Winters Creek</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	15	15	10	10	10	10
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Chewack River</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	68	68	56	56	56	56
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					
<u>Twisp River</u>						
Single Domestic and Stock Use	2.0	2.0	2.0	2.0	2.0	2.0
Base Flow	45	45	34	34	34	34
Public Water Supply, Irrigation, and Other Uses	Remaining waters up to the appropriation limit set forth in WAC 173-548-030 (l) (c)					

All figures in cubic feet per second.

(c) Allocations presented in this section do not limit the utilization of waters stored for later release, provided such storage does not infringe upon existing rights or base flow and is duly permitted under RCW 90.03.290 and 90.03.350.

(d) As the amount of water allocated for each category of use approaches the amount available for future allocation set forth in WAC 173-548-030(1) , the department shall review the program to determine whether there is a need for program revision.

WAC 173-548-040 PRIORITY OF FUTURE WATER RIGHTS DURING TIMES OF WATER SHORTAGE. (l) As between rights established in the future pertaining to waters allocated in WAC 173-548- 030 (2) (a) and (b), all rights subject to this program shall be regulated in descending order of use category priority regardless of the date of the priority of right.

(2) As between rights- established in the future within a single use category allocation of WAC 173-548-030, the date of priority shall control with an earlier dated right being superior to those rights with later dates.

WAC 173-548-050 STREAMS AND LAKES CLOSED TO FURTHER CONSUMPTIVE APPROPRIATIONS. The department, having determined there are no waters available for further appropriation through the establishment of rights to use water consumptively, closes the following streams and lakes to further consumptive appropriation for the periods indicated, with exceptions as noted:

(a) STREAM CLOSURES

Stream Name (Includes Tributaries)	Affected Reach	Period Closure
Wolf Creek	Mouth to Headwaters	Closed all year**
Bear Creek (Davis Lake)	"	Closed all year
Thompson Creek	"	Closed all year**
Beaver Creek	"	Closed May 1 to Oct. 1**
Alder Creek	"	Closed all year
Benson Creek	"	Closed all year**
Texas Creek	"	Closed all year
Libby Creek	"	Closed May 1 to Oct. 1**
Cow Creek	"	Closed May 1 to Oct. 1
Gold Creek	"	Closed May 1 to Oct. 1*/**
McFarland Creek	"	Closed May 1 to Oct. 1
Squaw Creek	"	Closed May 1 to Oct. 1
Black Canyon	"	Closed May 1 to Oct. 1
French Creek	"	Closed May 1 to Oct. 1*/**

* Exception for single domestic and stock water.

** Exception for water developed solely from added storage capacity within the basin.

(b) LAKE CLOSURES

All lakes not listed below are restricted to rights to divert water for single domestic and stock watering purposes only, as appropriate:

Name	Location
Alta Lake	3 mi. SW of Pateros
Black Lake	25 mi. N of Winthrop
Black Pine Lake	9 mi. SW of Twisp
Crater Lake	10 mi. W of Carlton
Davis Lake	Bear Creek Drainage
Eagle Lake	11 mi. SW of Carlton
French Creek	Sec. 28, T. 31 N., R. 23 E.
Libby Lake	10 mi. W of Carlton
Louise Lake	20 mi. W of Winthrop
Middle Oval Lake	16 mi. W of Carlton
North Lake	20 mi. W of Winthrop
Patterson Lake	Sec. 8, T. 34 N., R. 21 E.
Pearrygin Lake	Sec. 36, T. 35 N., R. 21 E.
Slate Lake	14 mi. W of Winthrop
Sunrise Lake	16 mi. W of Methow
Upper Eagle Lake	12 mi. W of Carlton
West Oval Lake	16 mi. W of Carlton

The development of future impoundments creating new lakes is provided for under Chapter 173-548-050 (a).

WAC 173-548-060 GROUND WATER. If it is determined that a future development of ground water measurably affects surface waters subject to the provisions of chapter 173-548 WAC, then rights to said ground water shall be subject to the same conditions as affected surface waters.

WAC 173-548-070 EFFECT ON PRIOR RIGHTS. Nothing in this chapter shall be construed to lessen, enlarge, or modify existing rights acquired by appropriation or otherwise, and legally vested prior to the effective date of this chapter.