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### Private Appropriation of Instream Flows in Alaska

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#### Citation Information

Harle, Mary Lu, "Private Appropriation of Instream Flows in Alaska" (1988). *Instream Flow Protection in the Western United States: A Practical Symposium (March 31-April 1)*.  
<https://scholar.law.colorado.edu/instream-flow-protection-in-western-united-states/5>

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Mary Lu Harle, *Private Appropriation of Instream Flows in Alaska*, in *INSTREAM FLOW PROTECTION IN THE WESTERN UNITED STATES: A PRACTICAL SYMPOSIUM* (Natural Res. Law Ctr., Univ. of Colo. Sch. of Law 1988).

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**PRIVATE APPROPRIATION OF INSTREAM FLOWS IN ALASKA**

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**INSTREAM FLOW PROTECTION IN THE WESTERN UNITED  
STATES: A PRACTICAL SYMPOSIUM**

**A Symposium Sponsored by the  
Natural Resources Law Center  
University of Colorado  
School of Law**

**March 31 - April 1, 1988**

**PRIVATE APPROPRIATION OF INSTREAM FLOWS  
IN ALASKA**

**MARY LU HARLE\***

**ABSTRACT:** Instream uses of water in Alaska have historically been important to support transportation, fishing, recreation, and tourism. Water rights for instream uses have their basis in the State's Constitution and are further defined in the Alaska Water Use Act. Alaska's Constitution, adopted when Alaska was admitted to the Union in 1959, established the prior appropriation doctrine in the state. The Constitution goes on to say that water is reserved to the people for common use, and except for public water supply, is subject to preferences among beneficial uses and to the general reservation of fish and wildlife. The Alaska Water Use Act was enacted in 1966, establishing procedures for adjudicating and obtaining diversionary water rights. In 1980, the Alaska Water Use Act was amended to include instream water uses as beneficial uses, and to establish

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adjudication procedures for reserving waters for instream use. Four instream purposes are recognized under Alaskan law: fish and wildlife, recreation and park purposes, navigation and transportation purposes, and sanitary and water quality purposes. Alaska's law is unique because private persons and organizations as well as local, state, and federal government agencies can apply for reservations for instream flows.

## INTRODUCTION

At first glance, Alaska appears to be a water rich state with its many rivers, lakes, snowfields, glaciers, and even muskeg and wet tundra areas. Alaska's water resources, both solid and liquid, are abundant and widespread. Glacial ice covers 17,000 square miles in Alaska or about 5 percent of the total area of the state. Seasonal snow covers most of the state for one-half to three-quarters of the year. The Yukon River ranks fifth in size in the United States, and six Alaskan rivers (Yukon, Copper, Stikine, Susitna, Kuskokwim, and Tanana) are among the 30 largest U.S. rivers. Alaskan lakes are so numerous that they are essentially uncounted. Alaska's largest lake, Lake Illiamna, has a surface area of 1,000 square miles.<sup>1/</sup> Although Alaska has abundant stream flow, it is not always distributed evenly in time and space.

Traditionally, instream uses of water have been important to support the state's people and economy. Alaskan natives have depended upon subsistence use of fish and wildlife for their livelihood. Larger rivers have been important transportation corridors for river boats, barges, and paddlewheel boats to move goods and people into the interior. More recently, float planes are an important mode of transportation using lakes and rivers to land and gain access to remote areas. Frozen rivers are important winter

transportation corridors. The state's many streams support numerous species of fish important to the state's commercial and recreational fishing industries. Recreation and tourism are big business in Alaska, for sport fishing and hunting, canoeing, kayaking, rafting, hiking, camping and sightseeing.

As with other states, however, increasing population and resource development is resulting in conflicts over water use. Water quantity and quality for placer mining operations compete and conflict with recreational boating, fishing, and community water supply systems. Hydroelectric development is sometimes incompatible with fishery needs. Public water supply needs can conflict with habitat needs for fish. The viability of the state's commercial, sport fishing, and aquaculture industries, petroleum and mining industries, recreation and tourism industries, hydroelectric power projects, and public and domestic water supplies are all dependent on the quality and quantity of the state's water resources.

#### ALASKA'S WATER LAW

The doctrine of prior appropriation, developed by the gold miners of California, spread throughout the West and

came to Alaska via Oregon, whose laws relating to real estate and water were made applicable to the District of Alaska (Revenue Mining Co. v. Balderston, 2 Alaska 363 [1905]). After Alaska became a territory in 1912, the territorial legislature in 1917 enacted a statute embracing an aspect of the riparian doctrine, which gave the locator of mining claims that included both banks of a stream the right to use as much water as necessary for working the claim. The doctrine of prior appropriation, the limited riparian right for miners, and absolute ownership of ground water were the legacy of water law left by the Territory of Alaska to the State of Alaska.<sup>2/</sup>

#### Alaska's Constitution

When Alaska was admitted to the Union in 1959 the importance of Alaska's water resources was not overlooked in the development of its constitutional and statutory law. Alaska's Constitution established that the state's resources are to be managed as a public trust, and that water will be allocated under the doctrine of prior appropriation.<sup>3/</sup> The Alaska Constitution, Article VIII, Section 3 states that "Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use". Section 13 expands the concept by reserving all surface and



subsurface waters to the people for common use, makes them subject to appropriation, and provides that prior appropriation gives prior right. Public water supply is the only preferred use. The Constitution, however, grants a general reservation to fish and wildlife. At a minimum, this enables the Alaska Legislature to enact a law to authorize reservation of water for fish and wildlife. At a maximum, this constitutional reservation is a mandate to reserve waters for fish and wildlife. At present, there has been no court determination as to whether the constitution requires or only enables the Alaska Legislature to reserve water for fish and wildlife.<sup>4/</sup>

Frank J. Trelease, Dean and Professor of Law, University of Wyoming College of Law, was hired in 1961 to write a comprehensive water code for Alaska. His code was completed in 1962; however only parts of the code relating to appropriation and use of water were enacted in 1966 as the Alaska Water Use Act, Alaska Statute 46.15. While the original code contained provisions to reserve minimum flows for instream uses, that portion of the code was not enacted.

#### Alaska's Water Use Act

The Alaska Water Use Act establishes procedures to

maintain existing rights and to obtain new rights to divert, impound, or withdraw surface and ground waters in the state. The Alaska Department of Natural Resources (DNR) is assigned the responsibility to determine and adjudicate water rights and to administer the act. The statutory procedure for obtaining water rights requires filing an application for water rights with DNR. After public notice, a permit to appropriate may be issued, giving the right to develop a water source and establish beneficial water use. Once water is being beneficially used and the permit conditions have been met, a certificate of appropriation is issued. Water rights may be sold, leased or transferred with the permission of DNR.

Even though specific provisions to reserve instream flows were not included, the Water Use Act as enacted in 1966 allowed limited protection for instream water uses. The act included sanitary, fish and wildlife, and recreational uses as beneficial uses. In evaluating applications, the commissioner has clearly defined criteria to follow when adjudicating a water rights which includes effects on fish and game resources, recreation, and public health:

Sec. 46.15.080. Criteria for issuance of permit.

(a) The commissioner shall issue a permit if he/she

finds that:

- (1) the rights of a prior appropriator will not be unduly affected;
- (2) the proposed means of diversion or construction are adequate;
- (3) the proposed use of water is beneficial; and
- (4) the proposed appropriation is in the public interest.

(b) In determining the public interest, the commissioner shall consider:

- (1) the benefit to the applicant resulting from the proposed appropriation;
- (2) the effect of the economic activity resulting from the proposed appropriation;
- (3) the effect on fish and game resources and on public recreational opportunities;
- (4) the effect on public health; (emphasis added)
- (5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;
- (6) harm to other persons resulting from the proposed appropriation;
- (7) the intent and ability of the applicant to complete the appropriation; and

(8) the effect upon access to navigable or public waters.

Further, AS 46.15.100 allows a permit to be issued subject to terms, conditions, restrictions and limitations necessary to protect the rights of others and the public interest.

Given this authority, DNR occasionally issued permits on a case-by-case basis conditioned to maintain stream flows for fish and wildlife. This was usually done at the request of the Alaska Department of Fish and Game (ADF&G) when supporting data were provided. While conditioning permits to maintain downstream minimum flows was a valuable management tool, there were limitations. This required DNR to repeat the flow release condition on every permit granted for a particular stream. Frequently, obtaining the basic stream flow and biological data to support a minimum flow was difficult and expensive.

In 1976, DNR contracted with Frank Trelease to evaluate Alaska's water resources planning and administration of water rights. One of his recommendations was that the Water Use Act be amended to authorize state departments and agencies to apply to DNR for reservations of flows for fish and wildlife and water quality purposes. His report also contained a

proposed bill to accomplish this. Dr. Trelease's bill was introduced in the Alaska Legislature in 1977.

#### Alaska's Instream Flow Law

After considerable debate, instream flow amendments to the Water Use Act were enacted in 1980. Three main issues were important to passage of these amendments:

- The State's need for a clear administrative process to adjudicate instream water rights that might be asserted by the federal government;
- The fishing industry and fishery management agencies' concern that there was no legal mechanism to establish water rights to maintain stream flows for fish habitat and production, other than by putting conditions on DNR water rights permits; and
- Concern that reduced stream flows might affect water quality conditions downstream from municipal treatment plants and mining operations.<sup>5/</sup>

The instream flow law amended the Water Use Act in three important ways. First, a reservation of water for instream

use was defined as an appropriation. Secondly, navigation, transportation and maintenance of water quality were added as beneficial uses. Finally a new section, AS 46.15.145, was added detailing the process of reserving water for instream uses.

The instream flow statute allows any local, state, or federal government agency, or any private person to apply for a reservation of water. A reservation of water is a water right to maintain a specified instream flow or level of water at a specific point or part of a stream or water body throughout the year for specified times. The Alaska instream flow statute is unique among states that have instream flow laws because it allows private citizens and organizations to apply for an instream or lake level reservation. The statute provides for quantification of instream water uses, establishment of a priority date, and issuance of a certificate of reservation under the state's existing water rights system. Four instream uses are recognized under Alaskan law:

- protection of fish and wildlife habitat, migration and propagation;
  
- recreation and park purposes, which by regulation includes contact and secondary recreation and park

purposes including scenic, natural, historic, or cultural values;

- navigation and transportation purposes, including by regulation boats or float planes, and tracked or wheeled vehicles during the winter; and
- sanitary and water quality purposes.

Regulations, 11 AAC 93.142, require that the following information be included in an application for reservation of water:

- the purpose of the proposed reservation;
- the name of the stream or water body in which water is proposed to be reserved and a map showing the location of the proposed reservation;
- an explanation of the need for the reservation and reasons why the reservation is being requested;
- the quantity of water requested for reservation;
- the time period during which the reservation is requested; and

- data substantiating the need for and the quantity of water requested for the proposed reservation.

A filing fee of \$50 is also required. The date and time that a complete application is accepted by DNR establishes the priority date for the application.

When a complete application has been accepted, public notice must be given once in a newspaper of general distribution in the vicinity of the proposed reservation of water. Individual notice is served on:

- prior appropriators who may be affected by the proposed reservation of water;
- the Alaska Departments of Fish and Game and Environmental Conservation;
- any local government in whose jurisdiction the proposed reservation of water would occur; and
- any other interested parties on file requesting notice.

Hearings on a proposed reservation of water may be held



if determined necessary. The commissioner must issue a certificate of reservation if four criteria are met. These include: (1) that the rights of prior appropriators will not be affected by the reservation; (2) the applicant demonstrates a need for the reservation of water; (3) there is unappropriated water in the stream or water body sufficient for the reservation; and (4) the proposed reservation is in the public interest. The public interest criteria in AS 46.15.080 for diversionary water uses is also used to evaluate instream uses of water. The decision by DNR to grant, conditionally grant, or deny an application for reservation of water must be in writing.

Certificates of reservation are, by regulation, issued to the applicant, and may be subject to conditions. The applicant is responsible for compliance with the conditions. Regulations specify that two conditions must be included on certificates of reservation. First, the certificate of reservation may not be abandoned, conveyed, transferred, assigned, or converted to another use without the approval of DNR. Second, the certificate holder may not restrict access to, on, or through the reserved water or prohibit the use of the reserved water from other compatible instream uses. Once a reservation of water is granted, the water is withdrawn from diversionary appropriation.

Unlike diversionary water rights granted under the Alaska Water Use Act, reservations of water for instream uses must be reviewed at least once every 10 years, but can be reviewed any time within the 10 year period if necessary. The review determines if:

- the purpose and need for the reservation still apply;
- the reservation affects prior appropriators or the public interest;
- a new beneficial use of water has been proposed;
- new information is available about the reservation;
- the quantity or level of water reserved is adequate for the purposes of the reservation;
- the time periods still apply; and
- if additional data collection or analysis is required to review the reservation.

Notice of the review is given to gather information that may assist in the review. At the conclusion of the review, findings are written and the certificate of reservation is

continued, amended, or revoked.

#### PRIVATE APPROPRIATION OF INSTREAM WATER RIGHTS

Alaska Statute 46.15.145 provides that the state, a political subdivision of the state, an agency of the United States, or a person may apply for a reservation of water for instream use. The statute at AS 46.15.260(8) defines person to include individuals, partnerships, associations, and public or private corporations. Alaska's law therefore allows direct private sector participation to select, apply for, and maintain instream flows.

Private sector reservation of instream flows was not originally envisioned when the instream flow law was written. Dr. Trelease first recommended an instream flow law for Alaska in his 1962 Water Code for Alaska and in 1977 drafted an instream flow bill for the State. This bill allowed only the state and its political subdivisions to apply to reserve instream flows. The state introduced an instream flow bill in 1977. This and subsequent versions allowed the state, its political subdivisions and agencies of the United States to apply for instream flows. Agencies of the United States were included to allow the federal government to file for instream water rights under either the state system or to claim a federal reserved water right. During legislative hearings,

the placer mining industry lobbied to allow private individuals and companies to apply to reserve instream flows to dilute effluent from placer mining operations. The instream flow legislation enacted in 1980 did include the provision to allow private persons to reserve instream flows.<sup>6/</sup>

Upon passage of the bill, the Attorney General's Office prepared a bill analysis for the Governor which raised the question of to whom the certificate of reservation should be issued. While the bill allowed private parties to apply for reservations of water, it did not address the question of who will receive and be responsible for the reservation if the application is granted. Presumably because of public trust concerns, the Attorney General concluded that the certificate reserving flows should be issued to that government agency which DNR determines is the most appropriate trustee for each reservation.<sup>7/</sup>

When DNR began drafting regulations, it determined that all certificates of reservation should be granted to DNR, as trustee for the public. However, during public review, this concept was questioned and DNR considered a variety of options, including:

- ° Granting reservations to DNR as trustee for the

public;

- Granting reservations to DNR as trustee for the public, then assigning them to an appropriate state agency;
- Granting reservations to appropriate state agencies as trustee for the public;
- Granting certificates to the applicant as trustee for the public;
- Granting certificates jointly to the applicant and DNR as trustee for the public; and
- Introducing legislative amendments to limit application and granting of reservations solely to government agencies.

A number of practical questions were raised when these options were considered. The person or agency granted the reservation might potentially bear fiscal burdens to monitor and comply with certificate conditions and to conduct additional field work and analysis when determined necessary at the certificate review stage. Granting reservations to DNR, or divisions within DNR (such as the Division of Parks and Outdoor Recreation), might raise conflict of interest concerns. State agencies might not want to be responsible for reservations filed for by private groups or persons.

In the end, because the statutory and legislative intent

was clearly to allow private parties to apply for reservations for instream flows, the state adopted a regulation (11 AAC 93.146(b)) granting the reservation of water to the applicant, even if the applicant is a private person or organization.

Since adoption of the instream flow regulations in September, 1983, twelve applications have been filed. Table one summarizes these applications. Two were filed by the Anchorage Audubon Society for instream flows in two Anchorage streams, Rabbit Creek and Little Rabbit Creek. These first two were denied because regulations had not yet been adopted. These applications were again filed by the Anchorage Audubon Society after regulations were adopted, but they were denied by DNR because of poor documentation of the requested flows. As a result however, local and state agencies cooperatively installed stream gages on these streams and in 1987 the Alaska Department of Fish and Game (ADF&G) filed applications for these two streams using a modified Tennent Method to quantify the requested flows.<sup>8/</sup> One instream flow application was filed by an individual to protect the water quality of the creek that was his domestic water supply. Another application was filed by an individual to maintain a lake level for boating and to protect property values. Both of these applications were denied because they failed to request a specific flow or lake

level. The ADF&G has filed six applications for fisheries purposes. Four have been granted and the others will be adjudicated soon.

DNR encourages public agencies as well as private persons or organizations to apply for instream water rights. The "State of Alaska Instream Flow Handbook - A Guide to Reserving Water for Instream Use" was published to explain the program, methods that could be used to quantify instream flows, and how to apply. Private recreational organizations have inquired about protecting flows for canoeing and kayaking. In July, 1986, the ADF & G established an instream flow program and filed applications for six stream reaches during fiscal year 1987 and plans to file for a minimum of six more reservations during fiscal year 1988.<sup>2/</sup>

There are a number of reasons that are believed to contribute to the low number of applications filed for instream flows under Alaska's law, by both the public and private sectors. First, and most importantly, is the lack of basic hydrologic data in Alaska. Presently there is only one stream gage for every 6,000 square miles in Alaska, as compared to one gage for every 500 square miles for the rest of the United States.<sup>10/</sup> Synthetic methods (regression equations) to estimate mean monthly flows have been developed only for Southeastern Alaska and for the Cook Inlet Region.

Regression equations for estimating only mean annual flows have been developed for the rest of Alaska. All of these equations are associated with large standard errors, and instream flow reservations based on one of these, without field data and verification, may be insufficient or in excess of what is actually needed for particular instream uses.<sup>11/</sup>

In addition to the lack of basic hydrologic data, there is a lack of fisheries data for many regions of Alaska. Specific data on water depth, velocity, discharge, and substrate for the various life stages of fish species is needed for the more complex, site specific instream flow models.

Most of Alaska's streams and water bodies are not over-appropriated and have not yet experienced water use competition, as in other western states. Interest in expending the time and resources to quantify instream reservations has not been often expressed.

In Alaska, the burden of proof is on the applicant to provide hydrologic data necessary to support an instream flow application. The use of a specific method to quantify a requested instream flow is not required by either Alaska's instream flow law or regulations. Uncertainty in choosing a particular methodology, then the time and expense to collect



and analyze the data are also likely contributing factors to the paucity of instream flow applications that have been submitted.

Finally, concern has been expressed about the establishment of the priority date under the present administrative procedures for adjudicating reservations for instream flows. The law provides that the priority date is established when a complete application is accepted. Regulations presently require that the requested instream flow be fully quantified at the time the application is filed. There is concern that this gives a diversionary water use applicant an unfair advantage in establishing a priority date. The diversionary applicant must only detail his plans, estimate, and justify the requested water use in order to establish a priority date and obtain a permit to develop and begin beneficial water use. This justification is much easier because information exists for water requirements for specific uses. Presently, the instream flow applicant must fully quantify a requested flow before filing an application. The Alaska Department of Natural Resources is presently revising the instream flow regulations to correct this inequity by allowing an applicant time to complete quantification of the requested reservation after the application has been filed.

Table 1  
Summary of Instream Flow Applications, 1983 - 1987

<u>Applicant</u>	<u>Use</u>	<u>Water Body</u>	<u>Status</u>
Anchorage Audubon Society	Fish Habitat	Rabbit Creek (Anchorage)	Denied - no regulations
Anchorage Audubon Society	Fish Habitat	Little Rabbit Creek (Anchorage)	Denied - no regulations
Anchorage Audubon Society	Fish Habitat	Rabbit Creek (Anchorage)	Denied - lack of documentation to quantify
Anchorage Audubon Society	Fish Habitat	Little Rabbit Creek (Anchorage)	Denied - lack of documentation to quantify
Private Person	Water Quality	Unnamed Creek (Kenai Peninsula)	Denied - no data provided to quantify
Private Person	Transportation	Mackey Lake (Kenai Peninsula)	Denied - lake level not specified
ADF&G	Fish Habitat	Terror River (Kodiak Island)	Granted
ADF&G	Fish Habitat	Rabbit Creek (Anchorage)	Granted
ADF&G	Fish Habitat	Little Rabbit Creek (Anchorage)	Granted
ADF&G	Fish Habitat	Little Survival Creek (Anchorage)	Granted
ADF&G	Fish Habitat	Willow Creek (Southcentral Alaska)	Pending adjudication
ADF&G	Fish Habitat	Little Susitna River, Upper Reach (Southcentral Alaska)	Pending adjudication

## CONCLUSION

Alaska's law to reserve water for instream uses is a forward looking law. It is unique in that it allows private persons and organizations to participate in the process of reserving flows and lake levels. While the law has been used infrequently, it is a valuable management tool in Alaska. As the hydrologic and biological data base continue to grow and competition for water use increases, the law will be more frequently used. In the present, increasing the hydrologic data base and fine tuning the regulations will enhance the management of Alaska's surface water resources and the uses dependent upon stream flows and lake levels.

## FOOTNOTES

1/ Alaska Department of Natural Resources and U.S. Geological Survey, Alaska Water Resources Evaluation 5 - Year Plan, 1985 - 1989 (Anchorage, 1985) p.4.

2/ Harold J. Curran and Linda Perry Dwight, Analysis of Alaska's Water Use Act and Its Interaction with Federal Reserved Water Rights (Fairbanks: Institute of Water Resources, University of Alaska, 1979) p.2.

3/ Gordon S. Harrison, A Citizen's Guide to the Constitution of the State of Alaska (Anchorage: Institute of Social and Economic Research, University of Alaska, 1982) p.68.

4/ Curran and Dwight, Analysis of Alaska's Water Use Act, p.22.

5/ Alaska Department of Natural Resources, State of Alaska Instream Flow Handbook - A Guide to Reserving Water for Instream Use, (Anchorage, 1985) p.6.

6/ Brent N. Petrie, Personal Communication (Anchorage: Alaska Power Authority, January 13, 1988).

7/ Wilson L. Condon, Memorandum to Governor Jay S. Hammond (Juneau: Alaska Department of Law, Attorney General's Office, June 16, 1980).

8/ Christopher C. Estes, Instream Flow (Anchorage: Alaska Department of Fish and Game, Division of Sport Fish, 1987) p.6.

9/ Christopher C. Estes, Personal Communication (Anchorage: Alaska Department of Fish and Game, Sport Fish Division, July 3, 1986).

10/ Philip A. Emery, Personal Communication (Anchorage: U.S. Geological Survey, Water Resources Division, February 24, 1988).

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