Review of Government and Other Publications

Alaska's Instream Flow Program

Annual Summary of Alaska Department of Fish and Game Instream Flow Reservation Applications. By Christopher C. Estes. Fishery Data Series No. 95-39. Anchorage, AK: Department of Fish and Game, 1995. 63 pages.

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This Alaska Department of Fish and Game (ADF&G) Fishery Data Series report summarizes research completed to identify instream flow needs from 1 July 1994 to 30 June 1995 and discusses the current status of instream flow protection in Alaska. Fishery Data Series publications are edited, peer-reviewed project reports established in 1987 and are intended for fishery and other technical professionals. This is the ninth report in the series addressing the Alaska instream flow program.

The report describes the acquisition of instream flow water rights (called reservations) in Alaska as being authorized by amendments to the Alaska Water Use Act in 1980 (Alaska Statute 46.15) following a recognition by the legislature that instream flows were important to the social and economic well-being of Alaska citizens. The amendments (AS 46.15.030 and AS 46.15.145) allow private individuals and local, state, and federal agencies to acquire "water reservations" for instream flow purposes for (1) protection of fish and wildlife habitat, migration, and propagation; (2) recreation and parks; (3) navigation and transportation; and (4) sanitation and water quality. An instream flow reservation is defined as the rate of flow in a river; the volume of water in a lake; or as a related physical attribute, such as water depth. Instream flow reservations can only be acquired by application to, and approval from, the Alaska Department of Natural Resources (DNR), Division of Mining and Water Management. Although authority for acquiring instream flows was received in 1980, administrative regulations and forms to implement the instream flow program were not adopted by the DNR until fall 1983.

Upon receiving supplemental funding, the ADF&G's Division of Sport Fish began its instream flow program in 1986 under its authority to "manage, protect, maintain, improve and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state" (Alaska Fish and Game Act, AS 16.05.020).

Estes points out that the DNR has received 83 applications since passage of the 1980 instream flow statute–62 submitted by ADF&G, 13 by federal agencies and 8 by private individuals and groups. Six of the eight applications by private individuals and groups were filed before 1983 and were rejected by the DNR because application regulations and forms were not available or the applications were incomplete. The other two private applications and all of the applications submitted to date by the ADF&G and other agencies have been accepted by the DNR. However, only 10 of the ADF&G applications and one federal agency application had been granted when the report was prepared. The remainder are pending adjudication.

In addition to providing a summary of research conducted to identify streamflow needs for six river reaches, the report provides a detailed discussion of the status of, and problems with, instream flow protection in Alaska. It has a standard technical report format, including abstract, introduction, methods, results, discussion, recommendations, acknowledgments, and literature cited. It also contains an extensive appendix, most of which is devoted to the six river reaches.

Previous annual reports also summarized research conducted to determine instream flow needs on selected rivers in the state, discussed the overall status of instream flow protection, and provided recommendations to enhance the program. In that context, the structure of this report differs little from the earlier reports. The main difference lies in the author's cumulative frustration with the program's lack of progress and his concern for its future. Many of the recommendations are the same as those published earlier, implying that the recommendations—considered to be important to the success of the instream flow program—have not yet been implemented.

The basis for the author's concerns about the status of Alaska's instream flows are the (1) huge size of the state (586,000 square miles); (2) great number of water bodies having fishery values (over 15,000 formally identified); (3) lack of U.S. Geological Survey gauging stations to provide flow data for hydrologic analyses (1 gauge per 7,400 square mi compared to 1 gauge per 400 square mi in the "lower 48"); (4) increasing significance and value of the sport fisheries (46% increase in fisherman days since 1984) and, therefore, the need to protect them with instream flows; and (5) slowness of the administrative process at the DNR to "adjudicate" (approve) instream flow reservation requests. The author also notes an increase in applications to develop hydropower projects and discusses a unique new competitor for instream flows—the export of fresh water from Alaska to other states and countries. Finally, the report describes a recent, significant threat to instream flow protection in Alaska—the DNR is considering eliminating the section of the department that approves instream flow reservation requests.

Persons with experience implementing state instream flow programs know the frustrations of dealing with legislative and administrative processes that allow instream flows to be acquired. The Alaska instream flow statute and program are based somewhat on the 1973 Montana Water Use Act (Title 85, Chapter 2, MCA) that allows instream flows to be acquired through a formal administrative process. Both processes are administered by an agency that is not the fish and wildlife agency. Therefore, the priority and interest given to instream flows is often not as high as it is with the fish and wildlife agency. Estes discusses the difficulty of getting timely processing of instream flow applications by the DNR and the concern that the longer the adjudication takes, the more likely the instream requests will compete in priority with out-of-stream water allocations. He states: "Experiences gained by other states indicate that protection of instream flow and other reservation of water uses is often judged to be less important than allocating water to competing out-of-stream water uses when competition for water allocation is keen."

The Introduction, Discussion, and Recommendations sections are the meat of the

report. In discussing his concerns about the status and future of Alaska's instream flow program, the author raises three basic questions: (1) Why have only 82 streams and 1 lake been targeted for instream flow protection during the past 10 years (out of more than 15,000 water bodies), (2) Why does it take so long for the applications filed and accepted by the DNR to be adjudicated, and (3) Why have so few been approved? In answering these questions and addressing other issues, Estes discusses the following points:

1. Lack of hydrologic data. Alaska has 40% of the nation's fresh surface water, yet it has a poor stream gauging network that limits the ability to define instream flows and other water uses. The history of stream gauging, the small number of gauges in operation, and their short periods of record are discussed;

2. Limited financial resources of the ADF&G. The ADF&G uses a modified Tennant Method and other cost-effective procedures to recommend instream flows due to a lack of hydrologic data, the state's large geographic area, and the inability of the ADF&G to acquire funds to use more sophisticated methods. Exceptions occur when competition for water (water development projects) allows additional funds to be obtained from developers. Monitoring to evaluate the effectiveness of instream flows that have been granted is also hindered by funding;

3. Slow administrative processes to adjudicate instream flow reservations. There have been no instream flow adjudications completed since 1991 and the DNR has no fixed timetable to process applications. The DNR has a sizable backlog of 800 water right and instream flow reservation applications and another 1,500 water use related permits and certificates that require action. Also, lengthy delays may increase the likelihood that out-of-stream allocations will reduce the availability of water for instream uses;

4. Assignment of priority dates for instream flow reservation applications. The Alaska Constitution and administrative regulations state that the priority date is the date the application is filed with the DNR. However, a 14 September 1995 letter from the DNR (included in the report's appendix) to an instream flow applicant implies that the priority date will now be the date that the DNR grants the application, which, considering the slowness of the current adjudication process, would provide a much later priority date that must compete with diversionary water rights;

5. Periodic review of instream reservations. Instream reservations must, by statute, be reviewed once every 10 years to determine if they should be retained, revoked, or modified. This requirement provides uncertainty to the longevity and security of approved instream reservations. Such a review is not required for out-of-stream water rights issued (Montana also has a 10-year review requirement that applies only to instream reservations);

6. Application fees. Fees charged instream flow applicants to file a reservation application are discouragingly high ($500 per application), especially for private applicants. This fee is high compared to fees for other types of water rights applications in Alaska. (Ironically, no fees are charged state applicants who are probably better able to pay than private applicants.) (In Montana, all applicants pay a $100 application fee and a single application can request instream flows on an unlimited number of streams and lakes. However, private individuals and entities cannot reserve water for instream flows.) The DNR also adopted an additional "regulatory fee" to cover costs of staff time not covered by the application fee;

7. Water exports. In 1992, the Alaska legislature enacted House Bill 596 that created opportunities to export fresh water from Alaska to other states and countries. Water has been purchased from the Municipality of Anchorage for export to such far away places as Saudi Arabia, and water from the same source has already been shipped by industrial ocean tanker to Japan. A number of other water bodies in southeast Alaska are targeted for future water exports;

8. New hydropower development. An increase in applications to develop small and medium hydropower adds to the increased competition for water needed in streams and lakes for fish production;

9. Inadequate documentation of water right allocations. The ADF&G has authority to

request the DNR to condition or deny requests for new out-of-stream allocations. However, the DNR is not required to document these decisions as they are for instream flow allocations. According to the author, this lack of record-keeping ". . . may result in future DNR adjudicators inadvertently interpreting that the remaining unallocated water in a water body remains subject to allocation when, in fact, a public-interest decision has been previously made for purposes of instream protection," and

10. Elimination of the DNR's Water Resources Section in the Division of Mining and Water Management. This section is responsible for adjudicating water rights and instream reservations, and the author believes that its elimination could negatively affect the ADF&G's entire instream flow program.

The *Annual Summary* will be of interest to professionals working with state instream flow programs. Those with active programs as well as those initiating new programs should benefit from learning about Alaska's instream flow administrative process and methods for determining instream flows. Although it is apparent that the report is primarily directed toward Alaskan decision makers responsible for protecting instream flows, it provides abundant information—including an extensive bibliography—that should be useful for anyone interested in streamflow issues.

The abundance of information, however, and the format of the report make the text difficult to follow. There are several references to statutes that are not fully explained and there are no subheadings to separate the various topics. The author could more effectively communicate his message, and potentially help his program, by better organizing the material and expanding the discussions in the Introduction, Discussion, and Recommendations sections, thus producing a more reader-friendly document.

Another suggestion is that the author produce a comprehensive report summarizing the state's 10-year history of instream flow activity.

The current report does contain a somewhat bright note. In 1993, the Alaska legislature authorized funding for a study to evaluate the state's stream gauging network, and, in 1995, the legislature, as a result of the study, authorized funding for eight new gauging sites.

Alaska is in a unique position in its ability to acquire adequate instream flows because out-of stream water uses are currently at a level where they were in the lower 48 states over 100 years ago. Because of its huge size, isolated nature, and small population (550,000), most of Alaska's streams and lakes have few, it any, out-of-stream appropriations, unlike the situation in many lower states. Thus, Alaska has the unique opportunity to protect the valuable fisheries in its waters with instream flow reservations before development interests get the water first (which has occurred in the lower 48 states, particularly in the West, beginning in the mid-1800's). The efforts of fish and wildlife agencies in most prior appropriation states today are directed toward obtaining some of what is left of any unappropriated water in streams and lakes as well as in trying to restore flows in dewatered streams for fish, wildlife, and recreation.

Unappropriated waters allocated to instream flows in the West have late priority dates that only protect the "status quo" of instream flows for fisheries. Earlier priority water rights for out-of-stream uses can still remove most or all of the water in low flow periods, often creating harsh aquatic environments that decrease fish populations. And, because "first-in-time is first-in-right" in most western states, the only means to improve flows and fisheries is to put some of the diverted water back where it came from—in the stream. One way to do this is to lease those early diversionary rights and transfer them to instream use. Montana initiated a leasing program in 1989 and has implemented several leases. So far, the program has been limited to leasing on small spawning tributaries to larger rivers, which, we believe, is the best use of the program at the present time. However, because leasing water is voluntary and a slow and costly process, it will be a long time before flows can be restored in the many streams that suffer from dewatering.

Thus, given the history of water use in many of the lower 48 states and the impacts that diversionary uses have had on fisheries, one can appreciate the frustrations of the author and understand why he feels the urgency to acquire adequate instream flows in

"The Last Frontier" while there is still time. Whereas other states are limited to "maintenance and restoration" of many already degraded fisheries, Alaska still has the opportunity to prevent overappropriation and "preserve" nearly all of its fisheries at acceptable levels through adequate instream flow allocations.

The *Annual Summary* does not include counter arguments by the DNR or give the positions of the other entities that can reserve water for instream flows. However, the author is well-qualified to discuss the issues. He initiated, and has been with, the ADF&G program since its inception and, with this background, presents the issues in a well-documented manner. Although previous annual reports described some of the same problems, this report seems to speak with a new urgency. The instream flow acquisition program has been hindered by the past and is threatened by the future. The report provides 19 recommendations for its resusitation.

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