

## Water Resources

**A. Water Intake Structures.** When issuing water rights for waters providing fish habitat, DNR will require installation of practical water intake structures that do not result in entrainment or impingement of fish. The simplest and most cost-effective technology that accomplishes the goal may be used to implement this guideline.

Water intake structures should be screened, and intake velocities will be limited to prevent entrapment, entrainment, or injury to fish. Structures must not impede migration. The structures supporting intakes should be designed to prevent fish from being led into the intake. Other effective techniques may also be used to achieve the intent of this guideline. Screen size, water velocity, and intake design will be determined in consultation with ADFG.

**B. Alteration of the Riverine Hydrologic System.** To the extent feasible and prudent, channelization, diversion, or damming that will have a significant adverse impact on important riverine habitat will be avoided.

**C. Hydroelectric Potential.** To prevent diminishing hydroelectric potential, DNR will consider placing conditions on permits to appropriate water from streams with locally significant hydroelectric potential, including streams suitable for microhydro development.

**D. Commercial Glacier Ice Harvest.** Commercial harvest of glacier ice in mapped seal haulout or pupping areas will not be allowed during the period of use by seals. Applicants for commercial glacier ice harvest activities near seal haulout or pupping areas should consult with the National Marine Fisheries Service.

Conflicts with other users will be taken into consideration when reviewing applications for commercial glacier ice harvest. Timing, seasonal, or other restrictions may be used to minimize conflicts.

### INSTREAM FLOW

**E. Instream Flow Reservations.** DNR should consider streams and other waterbodies for instream flow reservations when there is an identified threat to the water supply needed to support significant public uses, when there is significant public use, or when the resource values of the stream are exceptional. Individuals, political subdivisions of the state, and federal agencies, as well as state agencies may apply for instream flow reservations.

Under DNR's statutes, reservation of instream flow is possible for four types of purposes:

1. protection of fish and wildlife habitat, migration, and propagation,
2. recreation and park purposes,
3. navigation and transportation purposes, or
4. sanitary and water quality purposes.

DNR should consider streams and other waterbodies for instream flow reservations when the waterbody's value to a significant identified pre-

sent or future public benefit is not protected by the ownership or classification of the surrounding and underlying land.

DNR should consider protecting significant public instream flow reservations by placing minimum streamflow conditions in water rights permits for out-of-stream water uses.

**F. Process for Determining Reservations.** The process for determining instream flow reservations will include the following steps for each stream or other waterbody:

1. Identify the management objectives.
2. Estimate the quantity of water seasonally available by direct measurement (hydrograph), predictive methods (regional hydrographic models), or other appropriate methods.
3. Determine the quantities of water already appropriated.
4. In consultation with appropriate agencies and landowners, use site-specific studies or other information to determine the instream flow requirements for the resources and uses to be protected. For habitat resources this will require cooperative work and consultation with ADFG to identify necessary conditions for rearing, staging, reproduction, spawning, overwintering, and migration of valuable fish and wildlife resources.

