

# **STREAM CORRIDORS AND INSTREAM FLOW**

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## **Goals**

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**Recreation.** Provide opportunities for a variety of recreational activities within publicly owned stream corridors, including both wilderness and developed recreational activities.

**Habitat.** Protect riparian fish and wildlife habitats and harvest.

**Private Ownership of Land.** Provide opportunities for private ownership of land near streams.

**Water Quality.** Protect water quality to support domestic uses, fish and wildlife production, and recreational activities.

**Forest Products.** Where consistent with the management objectives of a stream corridor, provide for the harvest of timber from riparian forests.

## **Management Guidelines for Stream Corridors**

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**A. Priority of Public Uses in Stream Corridors.** As a general rule, DNR will set a higher priority on protecting public use values in stream corridors than providing opportunities for private ownership of land. However, DNR recognizes the strong demand for property along streams and will provide land for private purchase in some stream corridors. Before lands in a stream corridor are disposed of, DNR in consultation with other affected agencies and the public, will assess existing and projected public use needs associated with the stream corridor. Disposals near streams with important recreation value will be designed to protect access to, across, and along the stream for fishing, hiking, camping, and other recreational activities.

## **B. Retention of Publicly Owned Buffers as a Management Tool in Stream Corridors.**

1. When the management intent for land adjacent to a stream is to permit uses such as public roads, fishing, picnicking, hunting, timber harvest, building fires, camping, or other similar active uses, public ownership of stream buffers should be used rather than easements on private property.

2. In state subdivisions or agricultural sales, when it has been determined that stream buffers should be kept in public ownership (see B-1 above), the buffers will either be retained in state ownership or dedicated to a local government. If streams in subdivisions or agricultural sales have recreation, public use, or habitat values of regional or statewide importance, buffers should be retained in state ownership.

3. Publicly owned buffers adjacent to a stream may be retained along the full length of the stream or on the segments determined to have high current or future public use and habitat values.

## **C. Retention of Access Easements as a Management Tool in Stream Corridors.**

1. When the primary management intent is to protect the public's right to travel along or across a stream bank rather than to establish a public use area, an easement should be used to protect this right. The public rights reserved in an easement shall be explicitly defined and normally will include only the right of ingress and egress, inclusive of the right to pause briefly to observe wildlife, take photographs, or rest. On an individual basis, the state may reserve other rights (for example, the right to fish or picnic) as necessary to protect the public interest. The public use rights protected by previously established easements are not affected by this policy.

2. Easements along or across streams should establish the right to travel by foot, dogsled, horseback, and snowmobile (unless the use of snowmobiles is prohibited in a given area). On an individual basis, the right to travel by all-terrain vehicles and wheeled vehicles may be reserved, where doing so is in the public interest. Easements should be reserved for roads or railroads only if they are likely to be built in the foreseeable future.

3. Easements and publicly owned buffers may be used in combination on a stream to provide opportunities for private ownership near the stream and still protect public use, access to public waters, or habitat values on other portions of the stream. Therefore, although easements should not be used where significant public use will be encouraged, they may be used on portions of a stream with important public recreation and habitat values when most portions of the stream are retained for public use.

#### **D. Establishing Widths of Publicly Owned Buffers, Easements, and Setbacks Along Streams.**

1. Widths of easements, setbacks, and publicly owned buffers along streams will vary according to the management intent for the stream and adjacent uplands. In addition, the buffer, easement, or setback width for any given stream may vary along the stream course depending on topography, vegetation, and land ownership. Establishing buffer, easement, or setback widths for particular streams will be based, at a minimum, on specific objectives: recreational activities to be accommodated, habitat protection and management, noise abatement, visual quality, water quality, prevention of river bank erosion (in which case the buffer widths should be increased to compensate), and land disposals.

2. Although buffer and easement widths may vary among streams, a basic level of consistency is needed to avoid confusion about the widths of public use and access areas along the state's many streams; also, fieldwork and site analysis to establish separate widths for each stream corridor would be prohibitively expensive. The following guidelines are intended to

establish a reasonable degree of consistency in buffer, easement, and setback widths used by the department when disposing of an interest in state land.

-When it is determined that a publicly owned buffer is appropriate, a standard minimum buffer width (for example a staking setback) of 100 feet should generally be established landward from the ordinary high water mark on each bank. This width may be reduced in individual cases when consistent with the management intent of the unit or when land adjacent to the stream is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In some cases stream buffers may need to be reduced to allow for an adequate publicly owned buffer or setback on a nearby, more valuable wetland or lake.

-As a general standard, publicly owned buffers of at least 1/4 mile landward from the ordinary high water mark on each bank should be retained on streams recommended for legislative designation. Exceptions to this policy may be made where land ownership, topography, or the nature of anticipated public uses in a proposed legislative designation warrant.

-When it is determined that a public access easement will be reserved along a stream, a minimum easement of 50 feet will be reserved landward from the ordinary high water mark on each bank.

#### **E. Separation Between Waterbodies and Potential, Conflicting Uses**

-Where feasible and prudent, there should be setbacks between commercial and industrial uses, transportation facilities and pipelines, and adjacent water bodies unless these uses are water dependent. The width of this setback may vary depending on the type and size of the

use, but will be adequate to maintain public access to riparian areas and protect water quality in accordance with water quality standards established by the Department of Environmental Conservation. For non-water-dependent uses allowed adjacent to designated anadromous fish waters, this setback, to the extent feasible and prudent, will be a minimum of 100 feet landward of the ordinary high water mark.

-Where it is not feasible and prudent to maintain a setback of non-water dependent uses adjacent to fish habitat, public water supplies, or recreational waters, other measures will be implemented to meet the intent of this guideline.

-Where land is sold near a stream, a minimum residential building setback of 100 feet will be established landward from the ordinary high water mark on each bank unless land adjacent to the stream is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In a few cases setbacks may need to be reduced to allow for an adequate buffer or setback on a nearby, more valuable lake or wetland. In some management units different minimum staking setbacks already have been established.

**F. Uses Allowed in Easements, Setbacks and Publicly Owned Stream Buffers.** Water-dependent structures, such as docks and boathouses, are allowed within easements, setbacks and publicly owned buffers. If a structure would block public access alternative access will be provided. Other uses such as commercial and industrial uses, transportation facilities, pipelines, or uses associated with residential areas may be allowed adjacent to water bodies if these uses are consistent with the management intent for the easement, setback or publicly owned buffer.

**G. Alteration of the Hydrologic System.** To the extent feasible, channelization, diver-

sion, or damming that will alter the natural hydrological conditions and have a significant adverse impact on important riverain habitat will be avoided.

**H. Soil Erosion.** Soil erosion will be minimized by restricting the removal of vegetation adjacent to streams and by stabilizing disturbed soil as soon as possible.

**I. Structures in Fish Habitat.** See Fish and Wildlife guideline C page 2-10.

**J. Water Intake Structures.** See Fish and Wildlife guideline D page 2-10.

## **Management Guidelines for Instream Flow**

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**A. Stream Uses to Consider for Instream Flow Reservations.** DNR has statutes that establish a process for considering instream flow reservation. Under DNR's statutes, reservation of instream flow is possible for four types of uses:

1. Protection of fish and wildlife habitat, migration, and propagation. Instream flow reservations to protect habitat may be made for streams that have significant anadromous or resident fish populations; flow into wetlands that support significant waterfowl, fur bearer or other wildlife populations; or provide the water supply needed for other habitat types that support significant wildlife populations.
2. Recreation and park uses.
3. Transportation uses.
4. Sanitary and water quality uses.

Other uses of water, such as hydropower which is a diversion of water, are covered by the Alaska water rights statutes and regulations.

**B. Priorities.** Consumptive use of water and potential conflicts with instream water use are not significant issues in the Kuskokwim area

at present. There are no streams where near-term development is likely to result in consumptive use of water that will adversely affect instream water uses. Three streams have been identified where development could result in increased demand for water consumption in the future. If development is authorized on these waterways, instream flow studies may be needed prior to development to determine whether water reservations are needed to protect instream uses. The identified streams are the Jones River (subunit 13e, North Alaska Range subregion), Gagaryah River (subunit 12b, South Alaska Range subregion), and Takotna River (subunits 9d & 9e, Takotna River subregion). Guidelines for instream flow studies on these streams are included in the individual management units.

### **C. Process for Determining Reservations.**

The process for determining instream flow reservations should 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, 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 the Department of Fish and Game to identify necessary conditions for staging, reproduction, spawning, over wintering, and migration of valuable fish and wildlife resources.

**D. Other Guidelines Affecting Stream Corridors.** Several other guidelines may affect stream corridors. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Subsurface resources
- Trail management
- Transportation
- Wetlands management