

MATERIALS

Management Guidelines

A. Preferred Material Sites. Altering streams can cause significant negative effects on other resources and lands. Rivers in the Kuskokwim area are important for fisheries, public use, and transportation. Therefore, to the extent feasible and prudent, DNR will give preference to using upland material sources in any ownership when responding to a request for a material sale or identifying a source for materials on public lands. Extracting materials from wetlands, lakes and active¹ or inactive² floodplains of rivers or streams should be avoided unless no feasible upland alternative exists. Sales or permits for sand, silt, or gravel extraction will not be permitted in fish spawning areas identified by ADF&G unless extraction would enhance the site for rearing and if the activity is agreed to by ADF&G. The proliferation of new extraction sites in and along the Kuskokwim River will be avoided unless having more sites is determined to have fewer negative social, economic, or environmental impacts.

B. Material Sites. Material sites should be located as near as is feasible to the site where the material will be used. This is intended to minimize the construction and maintenance costs of facilities.

¹Active Floodplain - that portion of the floodplain that is flooded frequently; it contains flowing channels, high-water channels, and adjacent bars and usually contains little or no vegetation.

²Inactive Floodplain - that portion of the floodplain that is flooded infrequently; it may contain high-water and abandoned channels and is usually lightly to heavily vegetated.

³Some of these guidelines are adopted from, "Gravel Removal Studies in the Arctic and Subarctic Floodplains in Alaska," U.S.F.W.S, Biological Services Program, June 1980.

C. Material Extraction From Floodplains.³

Material extractions from uplands is generally preferred over extractions from floodplains. However, extraction from floodplain sites may take place if:

- the feasible and prudent source of gravel is a floodplain;
- extraction from a floodplain site is desirable for fisheries production, or;
- upland extraction would have adverse impacts on the terrestrial biota or scenery that could be avoided by extraction from floodplain sites, in such cases, material extraction may take place in floodplains under the following guidelines.

1. Stream types should be selected for material extraction based on the following order of preference (most to least preferable): braided, split, meandering, sinuous, and straight. This order of preference reflects the availability of gravel from exposed bars. The largest volumes are available from braided systems and the least from straight systems. An additional factor is the decreasing floodplain width of the stream types identified above. Wider floodplains allow extraction further from the river channel which reduces the environmental impacts.

2. Generally, the largest river feasible should be selected for a gravel operation in a given area. Larger rivers have higher volumes of gravel and a wider floodplain. The proportionally smaller disturbance in large river systems will reduce the overall effect of gravel removal.

3. The rate of deposition and potential for erosion should be considered in rivers or streams when permits are applied for

materials that will be taken from the active floodplain or channel.

4. Whenever possible, avoid vegetated habitats.

5. When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

6. When small quantities of gravel are required (up to 50,000 yd³), sites should be selected that have only unvegetated gravel deposits.

7. When large quantities of gravel are required (generally over 50,000 yd³), large rivers that contain sufficient gravel in unvegetated areas or terrace locations on the inactive side of the floodplain should be selected and mined by pit excavation.

8. If mining in vegetated areas, save all overburden, vegetative slash, and debris to use during site rehabilitation to facilitate vegetative recovery. This material should be piled or broadcast so that it will not be washed downstream.

9. When uplands adjacent to extraction sites located on river bars are not state-owned, extraction or use of the upland site above the ordinary high water mark will only be conducted with the permission of the upland owner.

10. To the extent feasible and prudent, DNR will avoid authorizing gravel extraction at sites that are in direct conflict with traditional activities such as, but not limited to, fish camps, fish wheels, net drying sites, and set-net locations. This will be accomplished by directing applicants to use alternate sites or stipulating that extraction occur at times that will not overlap with the conflicting use.

11. Stationary fuel storage facilities and unattended storage of fuel, lubricants, or other hazardous substances shall not occur within the active floodplain. Refueling shall occur in a manner that avoids spillage.

D. Maintaining Other Uses and Resources When Siting and Operating Material Sites. Before materials are extracted, the manager will ensure that the requirements of the permit or lease adequately protect other important resources and uses such as existing water rights; water resource quantity and quality; navigation; fish and wildlife habitat and harvest; commercial forest resources; recreation resources and opportunities; historic and archaeological resources; adjacent land uses; and access to public or private lands. The disposal of materials should be consistent with the applicable management intent statement and management guidelines of the plan.

The manager should also determine if other existing material sites can be vacated and rehabilitated as a result of opening a new material site.

E. Screening and Rehabilitation. Material sites should be screened from roads, residential areas, recreational areas, and other areas of significant human use. Sufficient land should be allocated to the material site to allow for such screening. Where appropriate, rehabilitation of material sites will be required. For additional guidelines affecting material extraction see policies under the Subsurface Resources section.

F. Other Guidelines Affecting Materials. A number of guidelines may affect materials. For details of these guidelines, see the following sections of this chapter:

- Cultural resources
- Fish and wildlife habitat
- Public access
- Public and commercial recreation resources
- Transportation and utilities

Land Allocation Summary

Background. State lands will continue to be available for materials extraction subject to the guidelines of the plan. Highest value materials sites are located adjacent to existing communities and between Upper Kalskag and Aniak along the Kuskokwim River (Unit 18). These materials are used for local and Kuskokwim Delta community projects including airports, roads, erosion control, and building foundations. The most frequently used materials site is located at Birch Tree Crossing which has supplied gravel for over 30 years. Materials are found in several other places in the planning area. However, transportation costs to project sites are prohibitive and their potential for use is low.

Proposed Studies. Two studies have been recommended in Chapter 4. The first proposed study would be a cooperative effort to generate data that provides agencies with needed background information to address concerns about the use of Birch Tree Crossing. The second proposed study will investigate feasible and prudent sites for materials extraction in and along the Kuskokwim River. Recommendations and information resulting from this effort would assist agencies in permitting materials extraction at sites in a manner locations that would minimize conflicts with other surface resources and land uses.