

# MATERIALS

## Management Guidelines

A. **Preferred Material Sites.** When responding to a request for a material sale or identifying a source for materials on public lands, the highest priority should be given to using existing upland material sources. Using materials from wetlands, lakes, and active<sup>1</sup> or inactive<sup>2</sup> floodplains of rivers or streams should be avoided unless no feasible public upland alternative exists. Sales or permits for gravel extraction will not be permitted in known fish spawning areas.

B. **Material Sites.** To minimize the construction and maintenance costs of transportation facilities, material sites should be located as near to the site where the material is used as practicable.

C. **Material Extraction From Sensitive Areas.** Material extraction from wetlands, lakes, or stream corridors (including active and inactive floodplains) should occur only after design consultation with the Department of Fish and Game, Division of Parks and Outdoor Recreation, Army Corps of Engineers, and Department of Environmental Conservation.

If the only feasible and prudent source of gravel is an active or inactive flood plain of a stream or river, the following guidelines<sup>3</sup> will be used, in addition to the design consultation required above, to minimize negative impacts of material extraction on other resources and uses.

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.

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<sup>1</sup> **Active 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.

<sup>2</sup> **Inactive 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.

<sup>3</sup> These guidelines are adopted from: 'Gravel Removal Studies in Arctic and Subarctic Floodplains in Alaska', U.S.F.W.S., Biological Services Program, June 1980. More detailed guidelines are continued in the 'Guidelines Manual' that accompanies that report.

3. Mining gravel from active channels should be avoided to reduce detrimental effects on water quality, aquatic habitat, and biota. However, if hydraulic changes can be minimized, in-channel sites will replenish more rapidly than other areas, and effects on the terrestrial biota and scenic quality of the floodplain will be avoided or greatly minimized.

Before gravel is extracted from the active floodplain, channel of a stream, or river, the State Geologist should be consulted to ensure that the planned operation does not exceed the annual rate of gravel deposition and cause upstream erosion. The State Geologist needs to establish the rate of deposition in rivers or streams when large quantities of gravel will be taken from the active floodplain or channel over long periods of time.

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 yd<sup>3</sup>), sites should be selected that have only unvegetated gravel deposits.
7. When large quantities of gravel are required (generally over 50,000 yd<sup>3</sup>), 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 pit excavation is used, design a configuration with high shoreline and water depth diversity and provide islands.
9. 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.

**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. Land Sales in Areas of High Material Potential.** Generally, if a designated settlement area contains sand and gravel deposits, rock sources or other similar, high value material resources, a pit area will be identified before land offerings and retained in public ownership for future use.

**F. 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 section on subsurface resources.

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

- Fish and wildlife habitat
- Recreation, cultural, and scenic resources
- Transportation
- Lakeshore management
- Public access
- Stream corridors and instream flow
- Trail management
- Wetlands management

### **Land Allocation Summary**

Existing gravel pits will be retained in state ownership. Most areas identified as having high or very high potential for additional sand and gravel will be retained in public ownership and be available for use.