

## **Upland and waterfront development**

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### **A. Performance guarantees**

The Department of Natural Resources will require performance guarantees or assurances from applicants whose development plans pose possible significant risk to state land. The Director of the Division of Land has the discretion to waive such requirements if: 1) there is a significant and overriding public benefit from the project which may not be realized without the waiver, or 2) sufficient performance guarantees are already in place through other municipal, state, or federal agencies.

### **B. Siting and operating resource transfer facilities and sites**<sup>25</sup>

1. **Avoid or minimize conflicts with other important uses.** Resource transfer sites and facilities should be sited and operated to avoid or minimize interference with important established personal, commercial, or recreational uses.
2. **Require joint use and consolidation.** Joint use and consolidation of Resource Transfer Sites will be required where feasible and prudent, for efficiency and to minimize impacts to other uses. The feasibility of using or modifying existing sites will be evaluated before a new site is authorized.
3. **Accommodate future use.** Resource transfer sites should be sited and designed to accommodate future development and avoid unnecessary relocation of sites.

### **C. Water pollution sources near rivers, lakes, and streams**

Where feasible and prudent, roads, log transfer facilities, sort yards, shops, generators, permanent fuel structures, camps (including set net camps) and other sources of pollution will be located farther than 300 feet from lakes, streams or rivers supporting anadromous or high quality resident fish.

### **D. Minimize soil erosion**

Soil erosion caused by development projects will be minimized by restricting the removal of vegetation adjacent to waterbodies and by stabilizing disturbed soil as soon as possible. Disturbed stream banks and lake shores should be recontoured, revegetated, or otherwise restored as soon as possible to prevent soil erosion.

### **E. Maintain windfirm timber**

In forested areas with high wind exposure, DNR may apply conditions to timber clearing in order to ensure a windfirm boundary along the remaining timber. The intent is to preserve commercial forestry, habitat, and aesthetic values of the timber.

### **F. Remove temporary berms, pads or ramps**

Temporary berms, pads, or ramps will be removed and restored to blend with original contours after the temporary access is no longer required, unless removal or restoration would cause more damage than leaving the berm, pad, or ramp in place.

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<sup>25</sup> **Resource transfer facility:** Any facility or mechanism necessary to transfer timber, minerals, or other resources from uplands to marine water, including all necessary components such as log rafting and sorting areas, or floating camps.  
**Resource transfer site:** A site for facilities necessary for transferring timber, minerals, or other resources from uplands to marine waters, including all necessary components such as log rafting and sorting areas, or floating camps. A single resource transfer site may contain more than one resource transfer facility.

### **G. Fuel storage**

1. **Permanent fuel storage.** Fuel storage structures that are located on state uplands will have a physical barrier to prevent the flow of fuel into rivers, lakes, streams, and tidelands. Where feasible and prudent, permanent fuel storage facilities will not be located on docks. This guideline may be waived if solutions are approved by DEC.
2. **Temporary fuel storage.** Temporary fuel storage, to the extent feasible and prudent, should be located at least 100 feet from any rivers, lakes, streams, and tidelands to minimize potential contamination.

### **H. Protect anchorages**

DNR will maintain the capacity and suitability of the anchorages shown in Chapter 3 (see tables and maps). Other activities may be allowed in anchorages only if DNR determines the use or capacity of the anchorage will not be significantly diminished, or if there is no feasible and prudent alternative for the other activity and DNR determines that allowing the activity serves the state's best interest.

### **I. Siting and design of breakwaters, jetties, causeways, harbors, and marinas**

Breakwaters, jetties, causeways, harbors, and marinas will, to the extent feasible and prudent, be sited and designed to minimize impacts on longshore transport, circulation, and mixing. The site and design should also optimize flushing to avoid concentration of pollutants. Harbors, marinas, and launch ramps should be sited where uplands are available to accommodate related demand for parking, support facilities, and increased traffic flow.

### **J. Design of bulkheads**

DNR will authorize bulkheads only for erosion control or to reduce the size of fills required for water-dependent uses. Where necessary, bulkheads should be designed to do the following:

1. facilitate flushing;
2. minimize the potential for toe scour, wave energy enhancement, or accelerated erosion;
3. allow for outward groundwater flow or runoff;
4. prevent fines from washing away, if fines are included in fill material.

### **K. Temporary access across tidelands**

Temporary access across tidelands (such as on-loading or off-loading materials from ships or barges) will, to the extent feasible and prudent, occur at higher tidal stages to minimize compaction of substrate and crushing of invertebrates.

### **L. Equipment on tidelands**

Equipment operated on tidelands will avoid or minimize significant adverse impacts to fish and wildlife habitat. DNR authorizations may require siting or timing restrictions to achieve this result.

### **M. Pilings preferable to fill**

Piling structures are preferable instead of fill for shoreline development in areas that are free from icebergs. All shoreline development must also comply with federal regulations implementing Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

### **N. Tidelands fill for residential purposes is not allowed**

Filling state tidelands, submerged lands, or shorelands for residential purposes will not be allowed.

**O. Surface uses in the coastal edge of timber**

DNR will, to the extent feasible and prudent, direct new surface uses that could compromise the integrity of the coastal edge of timber, such as roads, permanent facilities and camps, to locate outside of the 500-foot-wide coastal edge of timber. The intent is to maintain the biological and ecological functions of the natural coastal fringe of timber.

This guideline will allow continuation of authorized surface uses where they are actively occurring in the coastal fringe at the time this plan is adopted.

**P. Avoid outburst flood areas**

Development should be avoided in potential glacial-outburst flood areas. This includes low areas along the Yakataga, White, and Seal rivers. Where they are necessary, any permanent structures or facilities placed along these rivers should be engineered to withstand stream erosion, deposition, and severe flooding.

**Q. Assessment of natural hazards**

DNR may require an applicant to provide information on natural hazards at a proposed project site, to assist DNR in minimizing safety risks. Primary natural hazards in the planning area include: high earthquake potential associated with the Yakataga seismic gap; active seafloor faulting; tsunamis; ground instability (both onshore and offshore) associated with high influx of glacially derived sediment; coastal erosion; glacier outburst and related flooding; snow avalanches near steep terrain; severe storm winds and surges, particularly along the open gulf and spits that confine river mouths; and possible future influx of large icebergs into marine travel routes.

**R. Development considerations along exposed tidelands and shoreline**

The Gulf of Alaska coast in the planning area is exposed to extreme wave, storm, and erosion actions. When reviewing proposed tideland and shoreline development, DNR should consider the following:

1. The western shores of Icy Bay and Yakutat Bay are subject to relatively high wave energies compared to the eastern shores of these bays. If feasible, development on tidelands or the shoreline should be located on the eastern shores.
2. Erosion at the mouth of Icy Bay and west to Cape Yakataga is extreme (37 meters per year maximum at Pt. Riou).
3. Storm surge flooding occurs along the open Gulf of Alaska. There is also a high tsunami hazard because of the likelihood of major earthquakes or submarine landslides. Before authorizing shoreline development along the open Gulf of Alaska, DNR should determine reasonable set-backs or other measures to avoid or withstand storm surge flooding or tsunamis.
4. This coast has highly unstable seafloors due to steep slopes, unconsolidated sediments, and active surface and near-surface faults. Mapping and avoiding these features is the most effective measure to minimize damage to offshore structures from sea floor instability or active faulting .

**S. Other development west of the Duktath River**

State lands west of the Duktath River will accommodate non-forestry development and uses consistent with proper forest management and the protection of fish and wildlife habitat.