

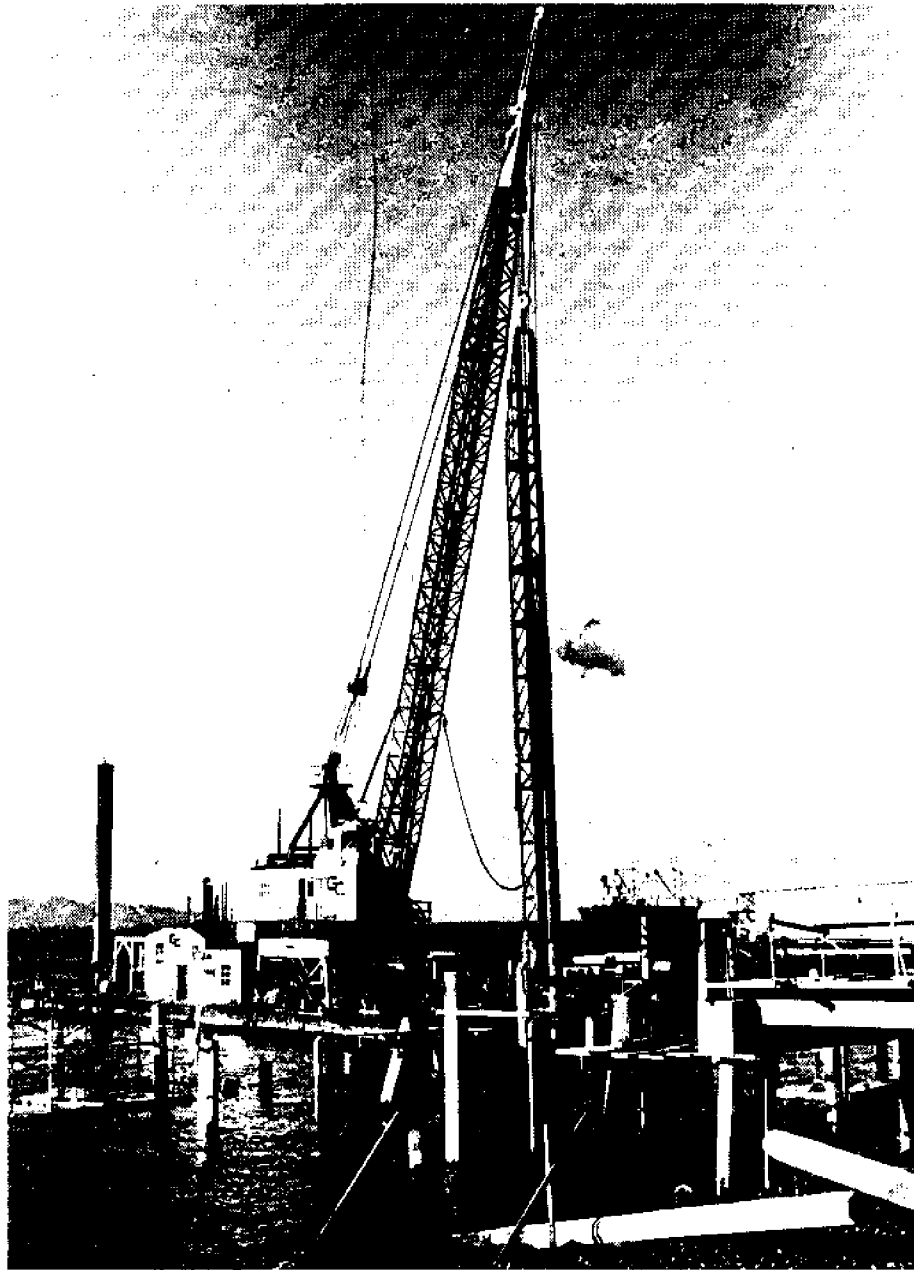
Obtaining permits for waterway development

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Oregon's waterways—the rivers, estuaries, lakes, and associated wetlands—are extremely valuable natural and economic resources. They harbor abundant fish, shellfish, and microscopic plants and animals. Waterways are also important for boating, fishing, swimming, and other recreation. Navigable rivers are essential highways of commerce, and industry uses the waterfront for transportation access and water supply.



Pile-supported waterfront development under construction... usually a preferred alternative to fill....



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SG 72 / October 1982

As we come down and build at the water's edge, however, conflicts arise. Dredging, filling, bulkheading, bridging, piledriving, and waste disposal are necessary to make economic use of waterways; but these activities usually have adverse impacts on natural aquatic resources.

Navigability is sometimes threatened by ill-placed development; ownership may be an issue.

Protecting navigability, natural resources, and the public interest spells regulation—and regulation means paperwork, studies, time, and money.

This publication briefly explains how these regulations work, how to apply for permits for waterway development, and how the public decisionmaking process works. It does not cover all the necessary permits for installing dams or hydroelectric facilities.

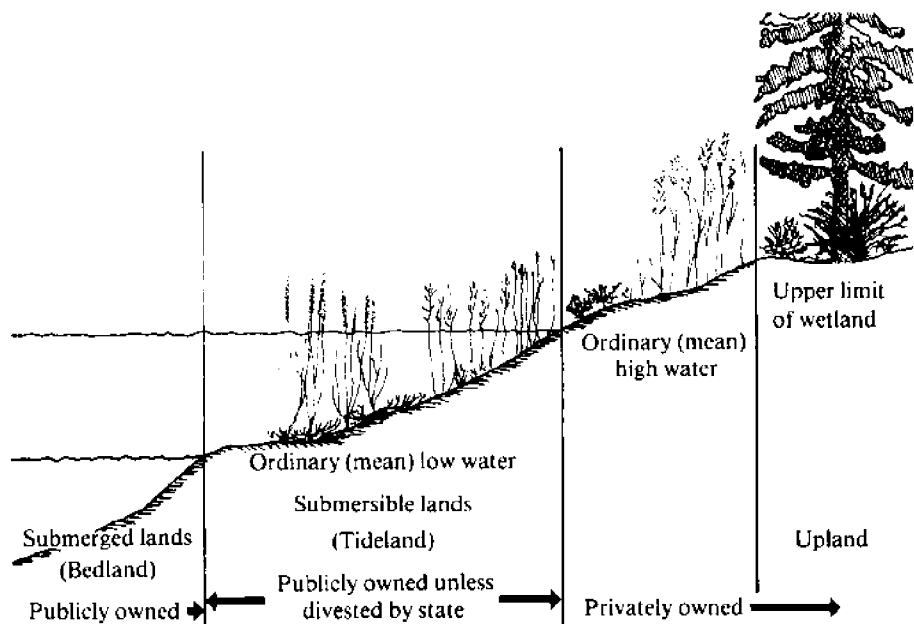


Figure 1.—Ownership of navigable and tidal waters (normally, nonnavigable waters are privately owned).

Ownership of waterways

The State of Oregon owns most land beneath tidal and commercially navigable waters, up to mean or ordinary high water (figure 1 and glossary). When Oregon was admitted to the Union in 1859, it received title to these submerged and submersible lands from the Federal Government. The basis for this provision rested in English common law, which formed the foundation for much of our legal system.

The State of Oregon, through the State Land Board, has in the past sold and leased these lands—and can still do so. But it may not relinquish responsibility to protect certain public rights. Collectively termed "the public trust doctrine," these public waterway rights are to navigate on and over the water, to harvest fish and shellfish, and to use the water as a highway of commerce.

Protection of these rights is now a fundamental principle used by the State of Oregon in leasing and regulating uses of state waterways. Even the many areas of land under waterways that were sold to private parties nearly a century ago are still subject to the public trust doctrine. Only permanent filling of waterways cancels these public rights.

The private rights associated with ownership of uplands. Oregon has a strong history of protecting this public trust of navigation, fishing, and commerce. Indeed, through the state removal/fill law, the public trust concept has effectively been extended to all waters of the state, public and private, including wetlands.

Who regulates waterway development?

A number of public agencies at Federal, state, and local levels are involved in regulating development activities and uses of both public and private waters. A project may require many different permits; but only a few involve multiagency scrutiny, wide public review, and discretionary decisionmaking. These few permits—Federal Section 10/404, state removal/fill, and local land-use requirements—are discussed here in detail.

Federal Section 10/404 permit

Section 10 of the Rivers and Harbors Act of 1899 gave authority to the U.S. Army Corps of Engineers to regulate obstructions to navigable waters. "Navigable waters" under Section 10 include those subject to the ebb and flow of the tide and those used for interstate commerce in the past, in the present, or (potentially) in the future. Dredging and disposal, filling, placement of in-water structures, and bank stabilization are regulated in navigable waters up to mean or ordinary high water (MHW or OHW) line permit program with Section 404.

Section 404 of the Clean Water Act (CWA) regulates disposal of dredged or fill material in "waters of the United States"—a much broader term than the "navigable waters" of Section 10 jurisdiction. Section 404 covers traditionally navigable waters,

tributary streams, and wetlands (figure 2). Section 404 wetlands are those areas with sufficient water to support vegetation adapted to life in saturated soils; these include forested and shrub swamps, bogs, marshes, and similar areas (see glossary).

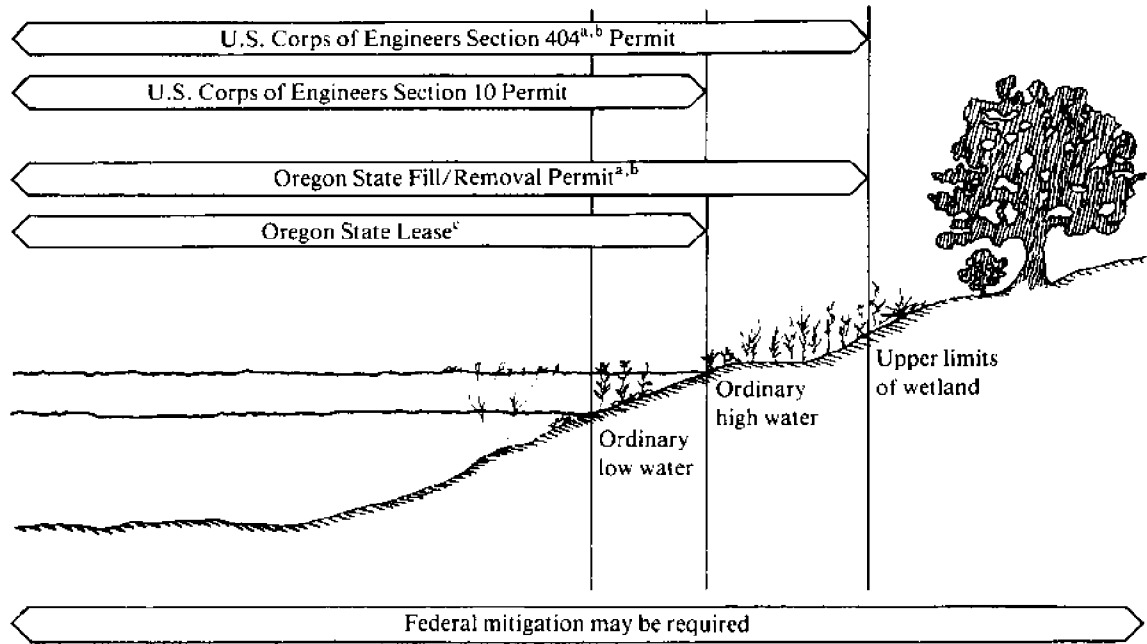
In nonvegetated, tidally influenced areas, such as rocky shoreline, Section 404 covers up to the high tide line. Normal farming, forestry, and ranching activities, structure maintenance, and other actions with minimal adverse effects may be exempted from Section 404 permits under the 1977 CWA amendments.

Other minor activities that may not require an individual permit include fills placed as minor stream crossings, utility line crossings, or minor bank protection; or in streams with average annual flows of less than 5 cubic feet per second and isolated lakes. They may be covered by a nationwide permit, if certain standard conditions are met. While the Corps of Engineers administers this program jointly with Section 10, the Environmental Protection Agency reviews and must approve or disapprove each permit.

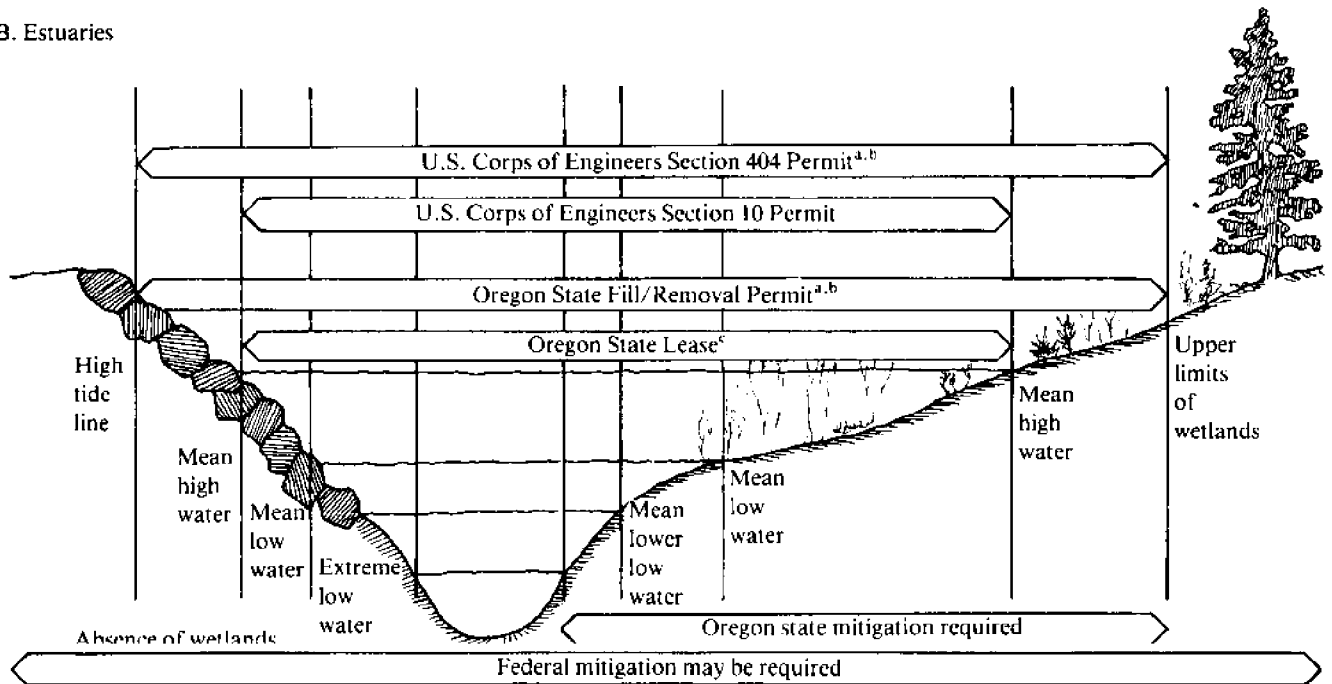
A number of other Federal laws are and/or Section 404 permits. Two of the most important are the National Environmental Policy Act (NEPA) and the Fish and Wildlife Coordination Act (FWCA).

The National Environmental Policy Act of 1969 requires that all Federal actions, including the decision to grant or deny a

A. Navigable rivers and lakes



B. Estuaries



^aThese permits are also required for nonnavigable waters.

^bFederal 404 jurisdiction may extend beyond that of the state to include forested and shrub-covered tidal and nontidal wetlands.

^cAreas between mean low and mean high water (submersible lands) are state leased only if state owned.

Figure 2.—Jurisdiction areas for permits, leases, and mitigation.

permit, be evaluated to determine whether they are "major actions" that "will significantly affect the quality of the human environment." If so, a Federal environmental impact statement (EIS) must be prepared to describe the impacts, evaluate alternatives, and consider long term versus short term gains and losses.

The thorough project planning and environmental evaluation fostered by NEPA is designed to ensure thoughtful, sound development decisions. While most permit decisions do not require a full EIS, the Corps of Engineers prepares preliminary and final environmental assessments as part of its internal decisionmaking. Information gathering and synthesis for an EIS, when required, may involve a long lead time for a development project.

The Fish and Wildlife Coordination Act requires that the Corps of Engineers seek advice from the U.S. Fish and Wildlife Service (USFWS) and the Oregon Department of Fish and Wildlife (ODFW) about possible adverse impacts to aquatic life from waterway development.

The National Marine Fisheries Service (NMFS) is also involved in this permit review, to ensure that fish and wildlife are considered equally with other factors when determining the suitability of waterway projects.

The USFWS also makes broad-ranging recommendations on mitigation needed to compensate for unavoidable adverse im-

acts. While recommendations of these agencies have a good deal of influence on permit decisions, the Corps of Engineers makes the final decision.

A third important Federal law, the Coastal Zone Management Act (CZMA) of 1972, affects permit decisions in Oregon's coastal zone, generally the area west of the crest of the Coast Range. Section 307 of the CZMA requires that corps decisions on Section 10/404 permits be consistent with Oregon's federally approved coastal management program. The permit applicant is responsible for making this "consistency" determination.

The Department of Land Conservation and Development (DLCD) then reviews this consistency determination in consultation with affected local governments, the Division of State Lands (DSL), the Department of Fish and Wildlife, and other state agencies.

The corps will not issue a Federal permit if the local or state permit for the activity is denied. Issuance of a local or state permit does not oblige the corps to issue the Federal permit, although the corps rarely disagrees with state or local decisions to issue a permit.

Oregon removal/fill permit

Administered by the Division of State Lands, the state removal/fill law (ORS 541.605-541.695) requires a permit for removal from a waterway of 50 cubic yards or more of material from one location in any

calendar year, or the filling of a waterway with 50 cubic yards or more of material at any one location at any time. Riprap for bank protection also requires a DSL permit.

This law applies to "waters of the state," which includes navigable and nonnavigable rivers, bays, estuaries, permanent and certain intermittent streams, and salt- and freshwater wetlands. Wetland jurisdiction is limited to those areas below the line of significant woody vegetation, such as trees (OAR 141-85-105).

The Division of State Lands has a *joint permit application* with the Corps of Engineers, since most development activities require both a state and a Federal permit. The exception is that the state does not require permits for in-water structures, such as piers or piling. Similarly, in Section 404 waters, the Federal Government does not require permits for dredging or other removal.

In the decision on a state permit, the director of the Division of State Lands considers recommendations from the Department of Fish and Wildlife, the Department of Land Conservation and Development, and other state agencies and local governments. All projects must be consistent with protection of the public trust. Removal permits are granted unless "inconsistent with the protection, conservation and best use of the water resources of the state."

A fill permit is issued if a project would not "unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation." Several factors go into this fill permit decision, including:

1. the public need and benefit of the project,
2. the public economic cost if the fill is not permitted,
3. available alternatives to the project,
4. alternative sites for the fill,
5. whether the project conforms to sound policies of conservation or would interfere with public health or safety,
6. compatibility with existing uses,
7. consistency with the local land-use plan and zoning, and
8. whether the fill is for streambank protection.

DSL issues riprap permits if natural resource damage is negligible, if other means of stabilization are not suitable, and if no new land area is created. DSL must also ensure that each removal, fill, or riprap permit complies with statewide planning goals adopted by LCDC. In the coastal zone, specific standards are included in the estuarine resources (No. 16) and coastal shorelands (No. 17) goals.



Development in sensitive habitats is usually prohibited....



Riprap is a common streambank erosion-control method, but it may adversely affect both aquatic and riparian habitats.

For alterations to estuarine intertidal or tidal marsh areas (figure 2), a 1979 removal/fill law amendment requires, with few exceptions, that you mitigate the adverse impacts of a project through creating, restoring, and enhancing another estuarine area. Economic gain or loss is a factor in the DSL's mitigation decision.

Earlier, we noted that the state owns most submerged and submersible lands under navigable and tidal waters. In addition to a removal/fill permit, therefore, a state lease may also be required before construction or use. You would obtain this from the DSL, but not until after you have received a state permit.

Local government permits

Local requirements for waterway development vary greatly. Larger counties and cities often have formal review procedures for the state and Federal permit notices they receive. Smaller ones may not. Often, a separate local permit is required for the use (for example, gravel operation) associated with state or federally licensed activity (dredging or removal).

In the coastal zone (see glossary), most local governments have instituted either a counterpart to the state and Federal permits or a procedure for a substantial review of these same permits against local development standards. Their standards are similar

in many respects to those of state and Federal agencies, but they may be more site-specific.

The local permit/review forms a partial basis for subsequent state and Federal permit consistency decisions. The DSL or the corps will not issue a permit for an activity not permitted locally. On the other hand, local approval does not mean automatic issuance of state or Federal permits.

Other permits

All development projects will require additional permits, most of which are relatively routine. The Oregon Department of Economic Development offers applicants a "one-stop" permit system to determine all state permits needed for a project. Some examples include point and nonpoint source pollutant-discharge permits, fire marshal review, building plans review, underwater blasting, etc. You may also need additional Federal and local permits.

Regulatory delay

"The great length of time necessary to obtain the multiple government permits and approvals" is the most common criticism of the waterway regulatory scheme. "The negative attitude of resource agency personnel" is probably the next greatest criticism.

Delays can be disastrous, particularly to the private sector. Delay may change market conditions for a commercial project, cause available financing to dry up, greatly increase the carrying costs associated with the project, and cause great frustration.

However, your positive action as project applicant, both before *and* after you apply for permits, can reduce these delays and result in cooperative working relationships with resource agencies. Positive action means spending time and effort to determine necessary permits, approvals and environmental standards; learning and responding to agency concerns; and planning and designing your project accordingly. The result will be long term time and cost savings.

Before you apply

Effort spent in planning your project before you apply for permits will save many days and much frustration afterwards. Here are some important planning steps before you apply. Following them will help you gather necessary information, determine project feasibility, and minimize unnecessary delays.

Develop a preliminary project proposal

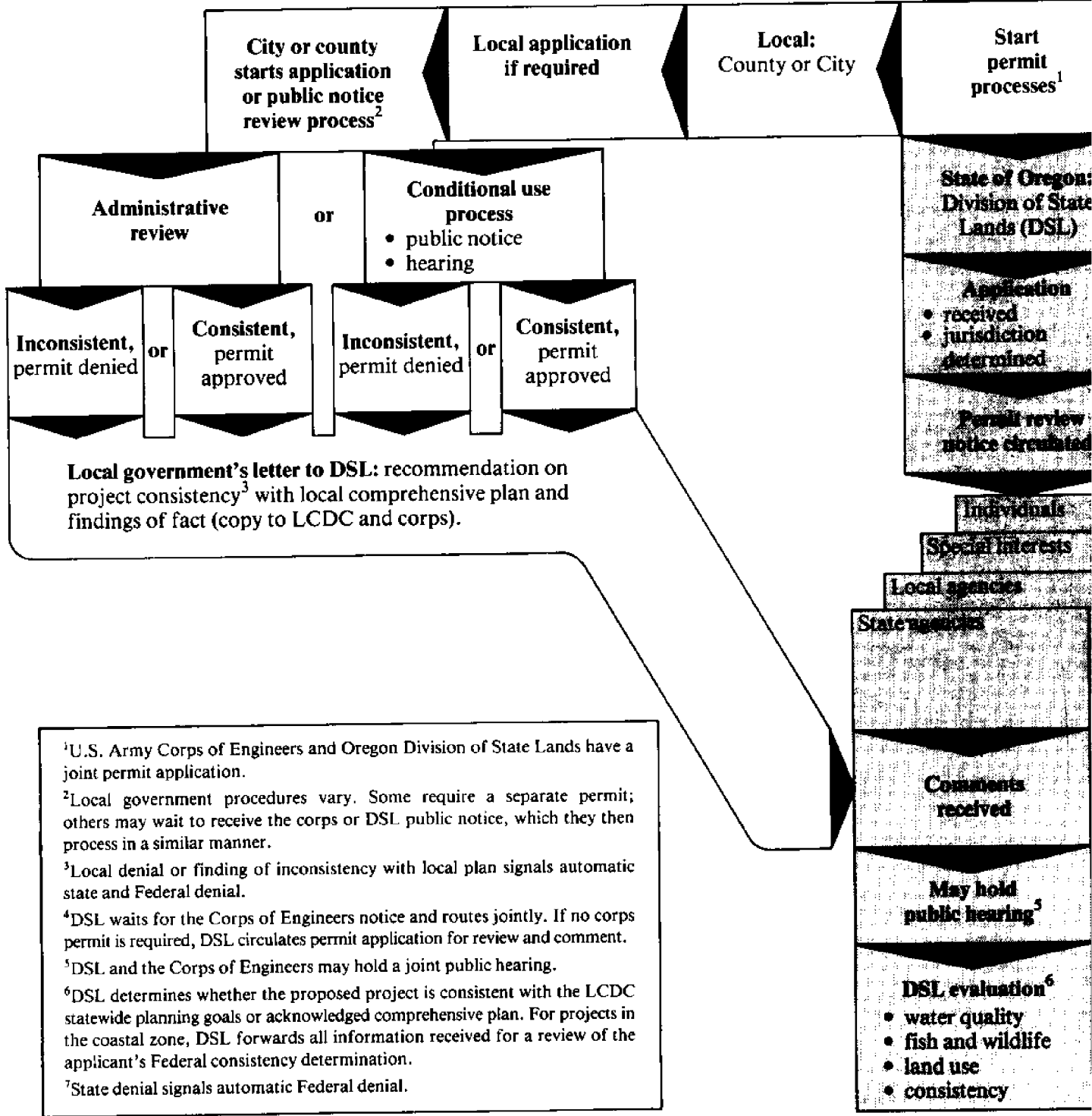
Pinpoint the location of the proposed project on the map. What is the water depth—will the project be above or below the ordinary (or mean) high water mark? Is



Preliminary project design must consider a variety of information....

Relationship between local, state, and Federal

- Preapplication plan**
- preliminary proposal
 - agency visits
 - detailed proposal



¹U.S. Army Corps of Engineers and Oregon Division of State Lands have a joint permit application.

²Local government procedures vary. Some require a separate permit; others may wait to receive the corps or DSL public notice, which they then process in a similar manner.

³Local denial or finding of inconsistency with local plan signals automatic state and Federal denial.

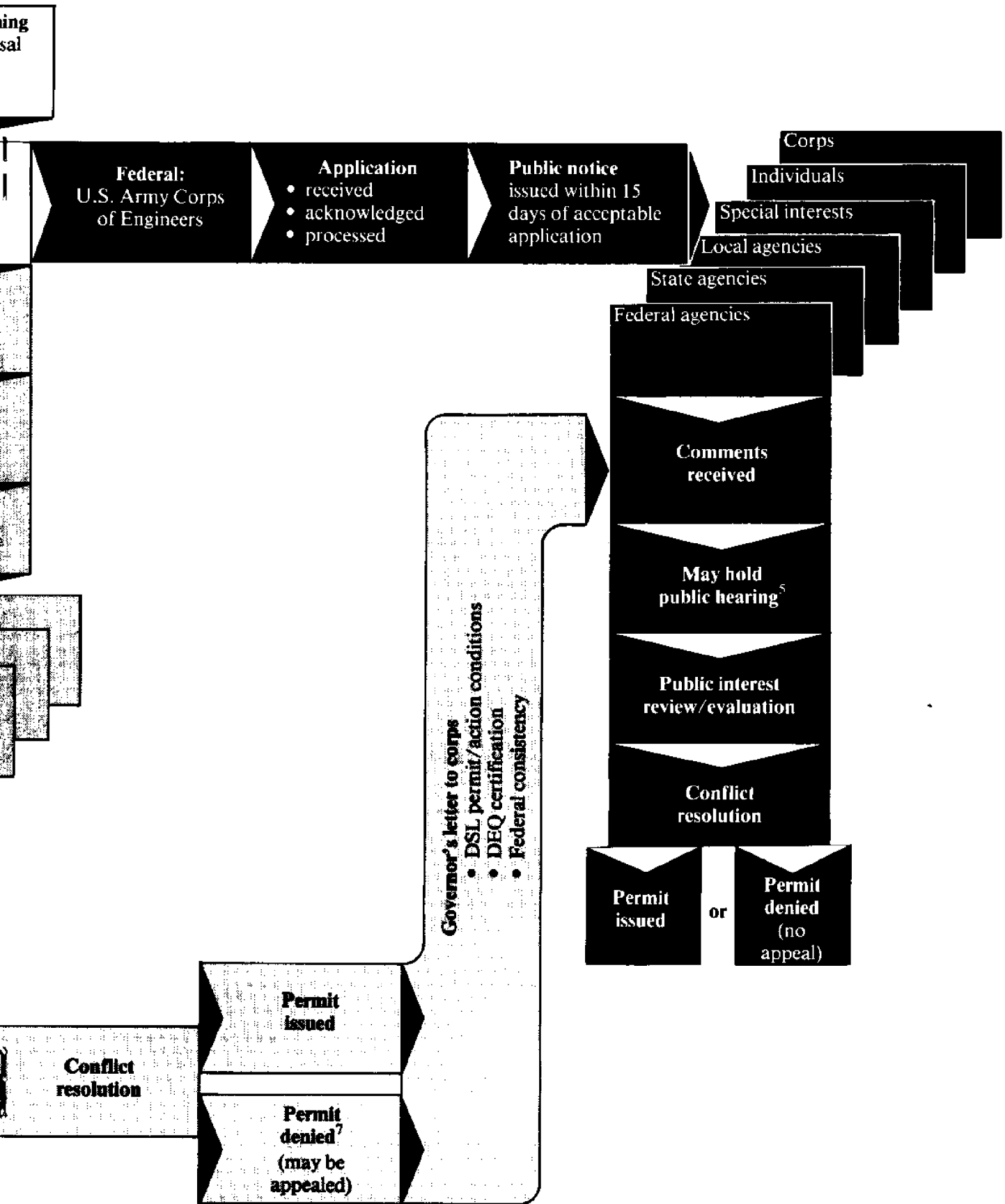
⁴DSL waits for the Corps of Engineers notice and routes jointly. If no corps permit is required, DSL circulates permit application for review and comment.

⁵DSL and the Corps of Engineers may hold a joint public hearing.

⁶DSL determines whether the proposed project is consistent with the LCDC statewide planning goals or acknowledged comprehensive plan. For projects in the coastal zone, DSL forwards all information received for a review of the applicant's Federal consistency determination.

⁷State denial signals automatic Federal denial.

Permit processes in waterway development



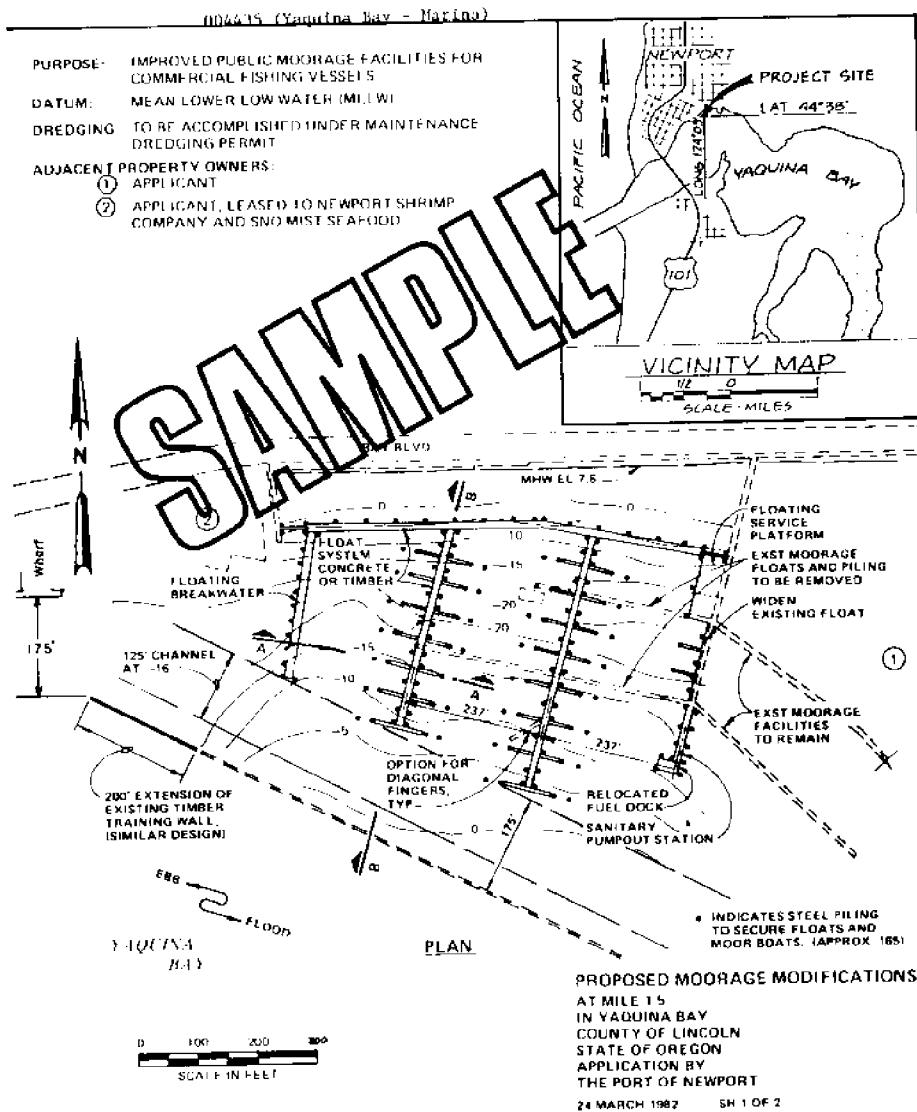


Figure 3.—Sample drawing of a proposed waterway development site.

the area a wetland, marsh, sand or mud flat, beach, or forested area? Is it a riverbank, gravel bar, or slough? What is the river mile?

Ownership is not always a clear-cut issue. Find out who owns the waterway site and, if land access is required, the adjacent upland. Is the area in public ownership (tidal waters, navigable) or private ownership (nonnavigable waters or held under a state deed)? Make sure that the deed is valid—check with Division of State Lands. If the area's state-owned, get a copy of DSL's leasing rules (OAR 82-005 to 82-035). You will need a lease after you get your permits.

Finally, using a large-scale map of your site, rough in your development plans. Include areas to be dredged, filled, or excavated, including the amount of material

and areas to be riprapped or bulkheaded. Show jetties, groins, piers, wharves, ramps, floats, underwater pipelines, buildings, or other structures. Provide approximate dimensions. The Corps of Engineers has sample drawings to guide you (figure 3).

Write a brief description of the proposal. Include possible alternatives and a draft proposal to mitigate adverse environmental effects, if you think one may be required. This preliminary information will be useful in your initial contacts with local, state, and Federal agencies that have jurisdiction over your project.

Visit local, state, and Federal permitting agencies

Visit the local county or city planning and building department. Take enough information with you about your proposed project to allow the planners to determine what comprehensive plan policies, zoning requirements, and development standards are applicable. Have copies of their requirements made. Get application forms, if necessary, and assistance in filling them out, collecting required information, etc. If there are local roadblocks, find out whether and how they might be removed.

Call or visit the Division of State Lands permit coordinator in Salem. Find out what type of permit you will need (removal, fill, riprap) and what standards DSL will use to judge your project. For estuary projects, will mitigation be required? Get application forms (DSL and the corps have a joint permit application form) and instructions.

Call or visit the U.S. Army Corps of Engineers district regulatory functions branch office. Find out whether you need a Section 10 and/or Section 404 permit. Get application forms (unless you have already obtained them from DSL) and instructions. Ask for names and addresses of other agency reviewers and find out what standards will be used to make a decision on your project.

From your visits to local, state, and Federal agencies, list all permits and approvals, how they interrelate, and the steps required for each.

Arrange a preapplication conference (optional)

For major projects (or for smaller projects with apparent technical or design problems or serious environmental constraints), you will want to ask DSL or the corps to arrange a conference with all affected agencies. Be prepared—have necessary site plans, aerial photographs, and environmental descriptions so that natural resource agencies can express their specific concerns and offer useful suggestions. Keep an open mind.

Develop a detailed project proposal

If you feel confident your proposal stands a good chance of approval, prepare a detailed project design and assemble required environmental and other information for each permit or approval. You may do the work yourself for a small project, or you may wish to employ professional help. Make full use of available technical assistance from public agencies. Incorporate the recommendations of natural resource agencies as far as possible. Develop information that responds to policies and standards of the public agencies. Prepare mitigation plans if necessary.

Your formal application

Whether to submit local or state-Federal applications first will depend on your particular situation. If your project appears to be consistent with local plans and ordinances, you might submit the local and joint state-Federal applications at the same time. If at the local level you are faced with plan or zone changes, or conditional use proceedings, you may wish to clear those hurdles before applying for state or Federal permits. Almost every case is unique. Follow the collective advice of the agency people with whom you are working, or your professional advisor.

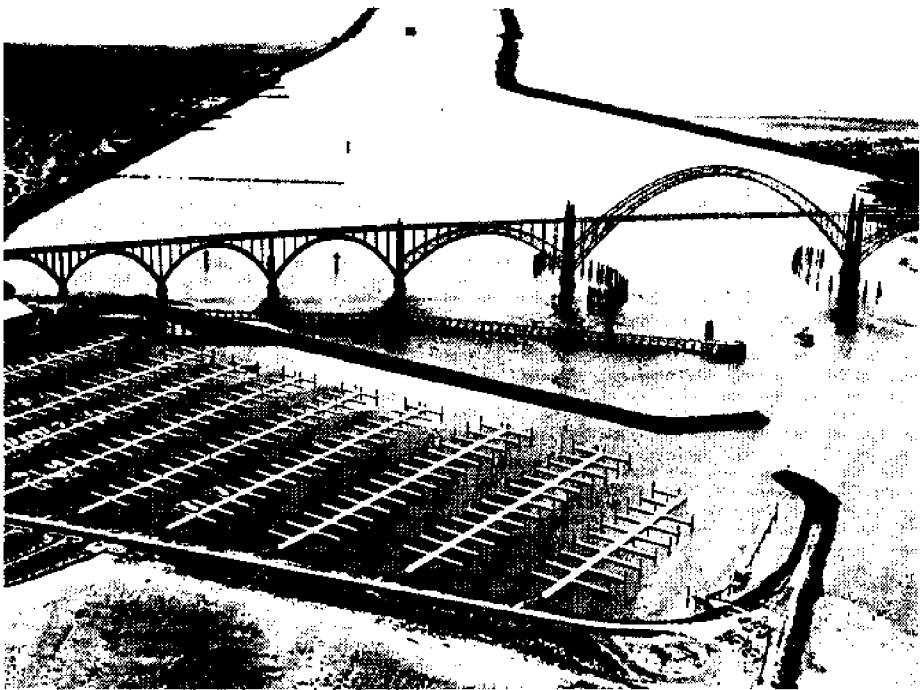
How your permit is processed

Federal Section 10/404 process

The Corps of Engineers publishes a public notice of your proposed project within 15 days of receiving your completed joint state-Federal application. During that period, it prepares a preliminary environmental assessment (PEA) to determine whether or not an environmental impact statement (EIS) is needed.

The corps distributes the public notice to the Oregon Division of State Lands (which serves as the clearinghouse for state agencies and local governments), interested parties, and to Federal agencies, post offices, and newspapers. Normally, comments must be received within 30 days. Particularly important are comments from the following agencies:

U.S. Fish and Wildlife Service may recommend modification or denial of permit. Disagreements may be resolved at higher levels in the Department of the Army.



Major projects, such as this large marina, can require several years for planning, environmental assessment, and construction....

National Marine Fisheries Service has responsibility for managing anadromous fisheries and other marine commercial fisheries. NMFS' comments relate to preserving critical habitat for these species.

U.S. Environmental Protection Agency has veto authority on Section 404 permits. Water quality is its chief concern.

Governor of Oregon has responsibility for compliance with removal/fill law (Division of State Lands), fish and wildlife habitat (Department of Fish and Wildlife), and consistency with the Oregon

Coastal Management Program (Department of Land Conservation and Development).

The process leading up to the corps decision on whether to issue a permit is called the public interest review. Originally, the impacts on navigation were the only considerations. But beginning in 1968, the corps expanded its review to include additional factors that reflect the national concern for both protection and use of important resources.

All the public interest factors relevant to a proposal must be considered, including conservation, economics, esthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and, in general, the needs and welfare of the people.

Comments from agencies and individuals holds public hearings if necessary. It then makes a final determination of need for an EIS and files a final environmental assessment (FEA). If there are conflicts, the corps makes every effort to resolve them, incorporating agency recommendations as much as possible.

Conflicts that cannot be resolved at the corps district level are forwarded to a higher



Because they dramatically change shoreline configuration and habitat, proposals to fill waterways must meet strict standards....

level within the corps for a decision. Finally, the corps determines whether or not the public interest will be served by issuing the permit, develops findings of fact, and issues or denies the permit.

State removal/fill permit process

On receipt of your application and fee, the Division of State Lands (DSL) determines whether it has jurisdiction. If a corps permit is also required, DSL will wait until the corps' public notice is received, attaches a waterway project review sheet and routes it. Your state permit application is routed independently if no corps permit is required. Comments are due in 20 days if there is also a corps permit, or 45 days if not. The shortened time allows the state to respond to the 30-day corps comment period. However, if a local permit is required, your state permit is not issued until the local permit has been obtained. In these cases, the 30-day corps timetable often cannot be met.

DSL may decide a public hearing is warranted. After all necessary information and comments are gathered, DSL evaluates your application. Particularly important are comments and findings of local government on land-use concerns and of the local soil and water conservation district. The DSL also consults with the Oregon Department of Fish and Wildlife, about their concerns and recommendations, and with the Oregon Department of Environmental Quality, about potential water pollution problems. After attempting to resolve conflicts, the DSL director decides whether your permit should be issued (with or without conditions) or denied. The governor of Oregon conveys this information and decision by letter to the Corps of Engineers.

The applicant or an aggrieved party may appeal permit decisions. A contested-case hearing is held. A final appeal is possible to the Oregon Court of Appeals. The permit process can take anywhere from 45 days to a year or more, depending on the degree of environmental conflict and public opposition.

Local permit processes

As noted earlier, local involvement in waterway regulation varies greatly. It may consist of as little as a local planning staff administrative review of the public notice on your state-Federal application, to as much as a quasi-judicial conditional-use process, zone change, or plan amendment by the local planning commission. Separate permits for land use and waterway activities may also be required.

Local governments forward their findings of fact and other comments to the DSL concerning the consistency of your project with their local comprehensive plan. Disap-

proval or a finding of "not consistent" at the local level will signal automatic disapproval at the DSL and the corps.

Local policies and standards are often the most complex and difficult to satisfy, even when local officials look favorably on the project. Coastal zone areas and specially managed waterways, such as the Willamette River, usually have the most stringent requirements.

Summary

For the uninitiated, going through the waterway development permit process can be a confusing, frustrating, and time-consuming experience. It need not be. While there are a number of interrelated laws and regulations and separate agencies you must deal with, thorough planning before you apply will reduce delay and ensure an easier trip through the process.

Natural resource agencies—often thought of as roadblocks—are ready and able to assist the conscientious waterway developer. Seeking their advice will help you design a project that suits the environment and gets constructed earlier.

Other sources of information:

Marina Development handbook, 1977, prepared for the Oregon Department of Economic Development by Montagne-Bierly Associates, Inc.

A Guide to the Dredge and Fill Permit Program, 1979, U.S. Environmental Protection Agency (C-6).

U.S. Army Corps of Engineers Permit Program—A Guide for Applicants, 1977, Pamphlet EP 1145-2-1 (step-by-step guide; sample drawings).

The U.S. Fish and Who? 1977, describes the role of the U.S. Fish and Wildlife Service in waterway development.

Federal Consistency and Your Permit Application, available from the Oregon Department of Land Conservation and Development, Salem.

Agency addresses and telephone numbers

State of Oregon

Department of Environmental Quality
522 SW Fifth Ave.
P.O. Box 1760
Portland, OR 97204
(503) 229-5696 or 229-5630

Department of Fish and Wildlife
Environmental Management Section
506 SW Mill St.
P.O. Box 3503
Portland, OR 97204
(503) 229-5678

Department of Land Conservation and Development
1175 Court St.
Salem, OR 97310
(503) 378-4926

Division of State Lands
Permit Coordinator
1445 State St.
Salem, OR 97310
(503) 378-3805

Department of Economic Development
One-Stop Permit Coordinator
155 Cottage St.
Salem, OR 97310
(503) 373-1234

Oregon State University
Extension Coastal Resources
School of Oceanography
Extension Hall 330
Corvallis, OR 97331
(503) 754-3771

U.S. Government

Environmental Protection Agency
Environmental Evaluations Branch (EEB)/
404 Review
Mail Stop 423
1200 Sixth Ave.
Seattle, WA 98101
(206) 442-1096

National Marine Fisheries Service
847 NE 19th Ave.
Portland, OR 97232
(503) 230-5400

U.S. Coast Guard
Thirteenth Coast Guard District
Aids to Navigation Branch
915 Second Ave.
Seattle, WA 98174
(206) 442-5233

U.S. Fish and Wildlife Service
Division of Ecological Services
727 NE 24th
Portland, OR 97232
(503) 231-6179

U.S. Army Corps of Engineers
Portland District
Regulatory Functions Branch
319 SW Pine St.
P.O. Box 2946
Portland, OR 97208
(503) 221-6995

Glossary

Alteration: Any change people make in the existing conditions at a development site.

Bulkhead: A retaining wall or structure extending from the bank line down to or below the normal low water level.

Bulkheads generally create a vertical bank line and require backfill (see fill).

Causeway: A road or path raised above the natural level of the ground by fill to provide passage over wet or marshy ground (see fill).

Coastal zone (Oregon): The area lying between the Washington border on the north to the California border on the south, bounded on the west by the extent of the state's jurisdiction, and in the east by the crest of the coastal mountain range, with the exception of: (a) the Umpqua River basin, where the coastal zone extends to Scottsburg; (b) the Rogue River basin, where the coastal zone extends to Agness; (c) the Columbia River basin, where the coastal zone extends to the downstream end of Puget Island (LCDC Coastal Goals).

Dike: A bank or mound (usually of earth) constructed to prevent flooding, contain dredged material, or otherwise control the flow of water.

Dock: Any structure for the purpose of mooring vessels, transfer of people and materials from land to vessel, or access to the waterway (does not include any new land created by waterway filling).

Dolphin: A mooring structure consisting of one or a bound cluster of posts or piles driven into the riverbed or bank to which floating objects could be secured. Term sometimes applied to a mooring post on a pier or beach.

Dredging: Removal and relocation of materials from the bed and/or banks of a waterway.

Estuary: An arm of the sea where freshwater from lakes and rivers meets and mixes with the water of the sea. Scientists define an estuary as a semienclosed coastal body of water that has a free connection to the open sea and within which seawater is measurably diluted with freshwater derived from land drainage. An estuary includes: estuarine water, tidelands, tidal marshes, and submerged lands. Estuaries extend upstream to the head of tidewater, except for the Columbia River Estuary, which by definition is considered to extend to the downstream end of Puget Island (LCDC Coastal Goals).

Fill: The placement or disposal of sand, soil, gravel, or other material on land, wetland, or water area, to raise the

surface level. The purpose usually is to create dry land suitable for construction.

Flushing: The ability of water to freely and continuously circulate through an area and wash away or dilute pollutants.

Groin: A shore protection structure usually built perpendicular to the shoreline (see jetty).

High tide line: A line or mark left upon the tide flats, beaches or along shore objects that indicates the intersection of the land with the water's surface at the maximum height reached by a rising tide (see 33 CFR 323.2 [g] for complete definition).

Intertidal: Between the levels of mean lower low water (MLLW) and mean higher high water (MHHW). Extends to extreme low water for purposes of mitigation in Oregon.

Jetty (pile dike, sill, groin, spur): A river training aid constructed of earth, wood, or stone, designed to deflect erosive currents away from a bank and to control movement of bed material.

Lease: A contract for possession of and/or profits from a land for a certain period of time, whereby a person having a legal estate in property conveys a portion of his or her interest to another in consideration of certain rent or other payment.

Mean high water: The average of all observed high tides. The average is of both the higher high and of the lower high tide recorded each day over a specific time period. The datum of MHW is the upper limit of submersible lands. It is used on navigation charts to reference topographical features.

Mean higher high water: The average height of the higher high tides observed over a specific time interval. The intervals are related to the moon's many cycles, which range from 28 days to 18.6 years. The time length chosen depends upon the refinement required. The datum plane of MHHW is used on National Ocean Survey charts to reference rocks awash and navigational clearances.

Mean low water: The average of all observed low tides. The average is of both the lower low and of the higher low tides recorded each day over a specific time period. The datum of MLW is the boundary between submerged and submersible land.

Mean lower low water: The average height of the lower low tides observed over a specific time interval. The datum plane is used on Pacific Coast nautical charts to reference soundings. It is the "zero" reference plane.

Mitigation: In Oregon, mitigation means the creation, restoration, or enhancement of

an estuarine area to maintain the functional characteristics and processes of the estuary, such as its natural biological productivity, habitats, species diversity, unique features, and water quality (Division of State Lands, ORS 541.626). In the National Environmental Policy Act regulations, which the U.S. Fish and Wildlife Service has also adopted, *mitigation* includes: "(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments" (40 CFR Part 1508.20, a-e).

Navigable waters (Federal): U.S. waters that are subject to the ebb and flow of the tide, and/or are presently, or have been in the past, or may be in the future, susceptible for use for purposes of interstate or foreign commerce. Generally determined by the U.S. Corps of Engineers and the Coast Guard for purposes of administering their responsibility in navigable waterways (33 CFR 322.2(a); see 33 CFR 329 for a more complete definition of this term).

Navigable waters (state): The bed and banks of all waters navigable or capable of being navigated at the time of statehood subject to legislative grants and tideland sales. From ORS 274.034: "... navigability means, for the purposes of the Division's [Division of State Lands] performance of its lawful functions, whether a stream was navigable in fact on February 14, 1859. A stream was navigable in fact on that date if it was susceptible of being used in its ordinary condition as a highway for commerce, trade and travel in the customary modes of trade and travel on water." The state defines a navigable waterway for purposes of bed ownership control. They *do not always* correspond to Federal limits.

Ordinary high water line: From ORS 274.005 (3): "Line of ordinary high water means the line on the bank or shore to which the high water ordinarily rises annually in season" (synonymous with mean high water).

Ordinary low water line: From ORS 274.005 (4): "Line of ordinary low water means the line on the bank or shore to which the low water ordinarily recedes annually in

season" (synonymous with mean low water).

Pier: A structure extending from the solid land out into the water to afford convenient passage for persons and goods to and from vessels alongside the pier. Sometimes used synonymously with wharf.

Pollution: Alterations that people make or induce in the chemical, physical, biological, or radiological integrity of the water.

Public trust rights: The doctrine that the state has a trust for all the people of the state on navigable waters and the land beneath them. The beds of navigable waters are held in trust for the public purposes of navigation and fishery (see navigable waters [state]).

Riprap: Facing of a waterway bank with rock or similar substance for erosion-control purposes.

Riparian: Relating to or living or located on the bank of a natural watercourse, such as a stream, lake, or tidewater.

Riparian rights: The rights of owners of land on the bank of watercourses. Relates to access to the water, certain privileges regarding its uses, and the benefits of accretions and relictions. If navigable (as defined by the state), the banks and bed are public property unless the state grants or sells it. If not navigable, the bed and banks are usually privately owned. Riparian rights are governed by state statutes and related court decisions. In Oregon, a riparian owner on a navigable waterway has the right of access to the water including the right to build a wharf out to the line of navigation (harbor line), providing the property is within the boundaries of an incorporated city or within a port district, and applicable permits are obtained.

Submerged land: In Oregon, the term relates to land below ordinary or mean low water. From ORS 274.005 (7): "Submerged lands, except as provided in ORS 274.705, means lands lying below the line of ordinary low water of all navigable waters within the boundaries of this state as heretofore or hereafter established, whether such waters are tidal or nontidal."

Submersible land (tideland or riverbank): In Oregon, the term relates to land that is periodically covered by tides or lies between mean low and high water marks on nontidal waters. From ORS 274.005 (8): "Submersible lands, except as provided in ORS 274.705, means lands lying between the line of ordinary high water and the line of ordinary low water of all navigable waters and all islands, shorelands or other such lands held by or

granted to this state by virtue of her sovereignty, wherever applicable, within the boundaries of this state as heretofore or hereafter established, whether such waters or lands are tidal or nontidal."

Subtidal: Below the level of mean lower low water (MLLW).

Water-dependent: A use or activity that can be carried out only on, in, or adjacent to water areas because the use requires access to the water body for waterborne transportation, recreation, energy production, or source of water (LCDC Coastal Goals).

Water-related: Uses that are not directly dependent upon access to a water body, but which provide goods or services that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. Except as necessary for water-dependent or water-related uses or facilities, residences, parking lots, spoil and dump sites, roads and highways, restaurants, businesses, factories, and trailer parks are not generally considered dependent on or related to water location needs (LCDC Coastal Goals).

Waterway: All natural waterways, tidal or nontidal, navigable or nonnavigable, including the Pacific Ocean.

Wetlands: Swamps, marshes, and other land areas frequently covered by water to a depth great enough to limit vegetation to water-loving types not found in well-drained locations. From 33 CFR 323.2 (Corps of Engineers regulations): "The term 'wetlands' means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." From LCDC Coastal Goals, wetlands are "land areas where excess water is the dominant factor determining the nature of soil development and the types of plant and animal communities living at the soil surface. Wetland soils retain sufficient moisture to support aquatic or semi-aquatic plant life. In marine and estuarine areas, wetlands are bounded at the lower extreme by extreme low water; in freshwater areas, by a depth of six feet. The area below wetlands are submerged lands."

Wharf: An artificial landing place upon a waterway for the purpose of receipt and discharge of goods and merchandise from boats or vessels engaged exclusively in the receipt and discharge of goods and merchandise or performance of governmental functions.

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