

Information for Environmental Review Applications [EN 3]

When an Environmental Review is Required

You must complete an Environmental Review if your project cannot meet the environmental development standards found in Sections 33.430.110 through 33.430.170 of the Zoning Code. There are also some special districts where all projects are subject to Environmental Review even if all development standards are met.

Special districts which always require Environmental Review include The Columbia South Shore Plan District (north of NE Columbia Boulevard, and east of NE 82nd), and the Smith and Bybee Lakes Natural Resources Management Area. If your project is in either of these areas, talk with a staff planner to determine if the project is subject to review.

You must complete the Environmental Review before you can obtain a building permit.

Necessary Steps for all Environmental Reviews

1. Prepare an Impact Evaluation
2. Prepare an Alternatives Analysis
3. Describe the proposal including existing and proposed uses or changes to the site or building
4. Prepare all necessary site plans
 - Existing Site Plan
 - Proposed Development Site Plan
 - Construction Management Plan
 - Mitigation or Remediation Plan
5. Respond to each approval criteria and describe how they are met

Step 1: Impact Evaluation

The application of the environmental zones is based on detailed studies that have been carried out within eight separate areas of the City. The City's policy objectives for these study areas are described in these reports. Each study report identifies the environmental resources and describes the environmental functional values of the resource sites. Functional values are the benefits provided by environmental resources. The values for each resource site are described in the inventory section of these reports.

Evaluate the site and design with it, choosing the least intrusive or disruptive option. The following is step by step process to evaluate the impacts of your proposal:

- _____ Determine the study area within which your development is located. A map is located within the Development Services Center showing all of the Plan areas.
- _____ Obtain a copy of the background study report for the study area your project is in. This report will help you gather the base information about the resources at your development site. You may purchase a copy of the full report from the Bureau of Development Services, or you may make copies of the pages applicable to your property (a copying fee will be charged).
- _____ Each study report is broken down into smaller "resource sites." Identify which resource site your development is located in.
- _____ Locate the list of resources and functional values found on the site.
- _____ Identify which of the resources and functional values identified in the study report are actually present at your development site and in what quantity. Include resources that are near your site if they could be affected by your development. This should be part of your written narrative of your application. For large projects, you may want to consider consulting with an environmental expert to help identify environmental resources present on the site.

Step 2: Alternative Analysis

An alternatives analysis is necessary in order to determine the best design option has been selected based on the resources and functional values found on the site. Show how your proposal best fits the site. Do not make your site fit a design. Depending upon the approval criteria you are required to address, you will need to describe how your design better protects the resources and functional values and why the alternatives are not appropriate for this site.

- _____ Evaluate the site to determine a location for your development that has the least impact on the resources that you identified. You should present several alternatives for

discussion to show why the preferred plan is best.

Once you have determined the least disruptive design and location for your development, make a list of the resources that will be lost or removed. This information will be the basis for the design of your mitigation plan.

Step 3: Write a Description of the Proposal

Write a description of what you plan to do with the site. Include the following:

- Existing and proposed uses or changes to the site
- What land use review(s) are you requesting
- Give dimensions of proposal, total lot dimensions, percent of building coverage, percent of landscaping
- Identify nearby streets and landmarks which put your site in context
- State whether development will be within the Environmental Conservation zone, Environmental Protection zone or within both zones
- State whether trees or vegetation will be removed as a result of your proposal
- Identify any natural water features and their location on the site

Step 4a: Prepare an Existing Condition Plan

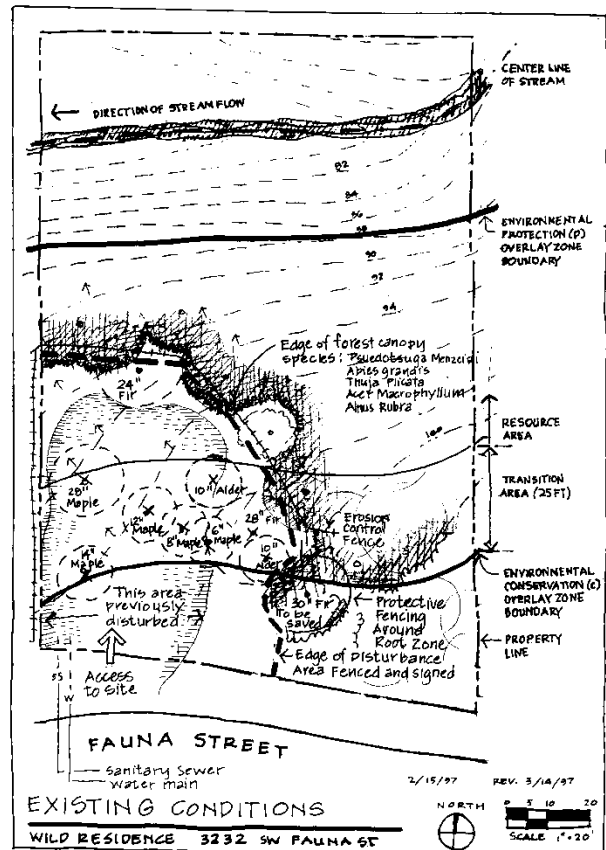
Prepare an Existing Conditions Site Plan; once you have settled on a development design. One copy of the Existing Conditions Site Plan must be submitted on an 8 1/2 x 11 sheet for posting and mailing purposes. The following items must be identified on the site plan:

- ___ All property lines with dimensions and total lot area
- ___ North arrow and scale of drawing
- ___ Location of zone boundaries
- ___ Adjacent streets, access (driveways), curbs, sidewalks, and bicycle routes
- ___ Existing natural features such as watercourses including the “ordinary high water line” and “top of the bank” (see definitions)
- ___ All trees greater than 6 inches in diameter, measured 5 feet above the ground, in areas to be disturbed
- ___ Easements and on-site utilities
- ___ Existing development with all dimensions and building elevations
- ___ Location of all adjacent buildings
- ___ Distances of all existing development to property lines

- ___ Motor vehicle & pedestrian access & circulation systems, & connections off-site
- ___ Existing motor vehicle and bicycle parking areas, number of spaces and loading areas
- ___ Bus routes, stops, pullouts or other transit facilities on or within 100 feet of the site
- ___ Existing natural features such as watercourses including the ordinary high water line and top of the bank
- ___ 100-year floodplain and floodway boundaries (if present)
- ___ Topography shown at two foot vertical contours in areas of slopes less than ten percent and at five foot vertical contours in areas of slopes less than ten percent or greater
- ___ Drainage patterns, using arrows to indicate the direction of major drainage flow
- ___ Date plan was drawn and revised
- ___ Label plan as “Existing Condition Plan”

In areas of the site that have or will be disturbed:

- ___ Distribution outline of shrubs and ground covers & a list of the most abundant species
- ___ Trees greater than six inches in diameter, identified by species (In the case of a violation also indicate those that were cut or damaged by stump diameter and species)



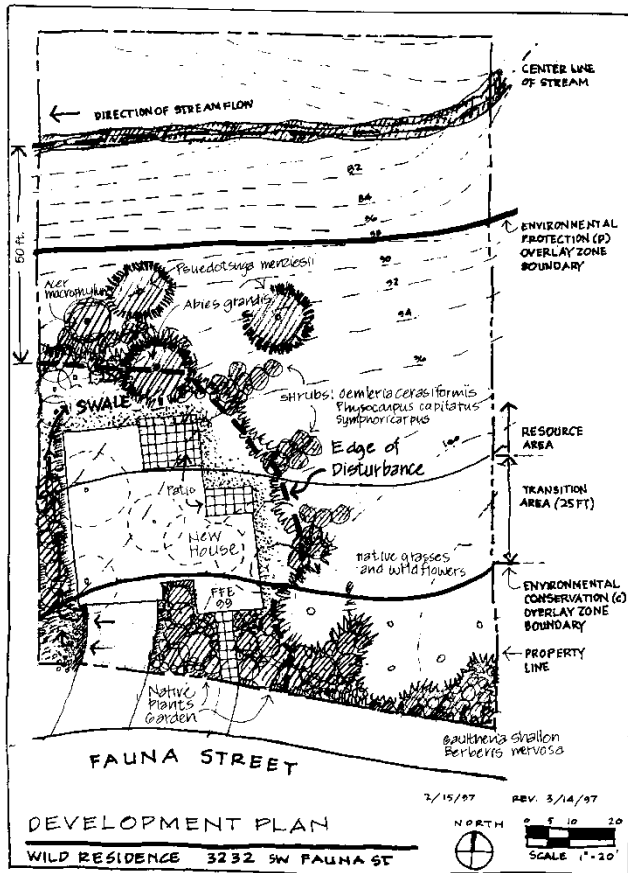
The above is an example of an Existing Conditions Site Plan.



Step 4b: The Proposed Development Plan

The proposed development plan should graphically show what you plan to do with the site. The following items must be identified on the site plan:

- ___ All property lines with dimensions and total lot area
- ___ North arrow and scale of drawing
- ___ Adjacent streets, access (driveways), curbs, sidewalks, and bicycle routes
- ___ All trees greater than 6 inches in diameter, measured 5 feet above the ground, in areas to be disturbed
- ___ Easements and on-site utilities
- ___ Proposed development with all dimensions and building elevations
- ___ Distance of proposed development to the property line
- ___ Location of all adjacent buildings
- ___ Location of zone boundaries
- ___ Boundaries of the resource area and the transition area
- ___ Proposed grading (new contours or cross section showing where contours will be altered)
- ___ Date plan was drawn and revised
- ___ Label plan as "Proposed Development Plan"



The above is an example of a Development Plan.



Step 4c: The Construction Management Plan

The purpose of the construction management plan is to protect resources both on and off the site prior to, during, and immediately after construction. Depending on the size and complexity of the project, a construction management plan can be a single site plan or a more extensive document that sets out procedures and responsibilities for the entire construction process. In either case, it should include a written description of proposed management activities as well as a graphic illustration. Address the following topics in the Construction Management plan and/or on a site plan.

Disturbance Area:

Show the limits of the area to be disturbed-temporary and permanent- on the site plan including parts of the site that will be affected during construction. Show the type of disturbance and the location. This includes:

- ___ Location of access and egress during construction
- ___ Areas where construction materials will be stored, including protection measures for wet and windy weather
- ___ Where construction equipment will maneuver
- ___ Staging areas
- ___ The limits of grading and how undisturbed areas will be protected
- ___ How disturbance areas will be marked in field
- ___ Date plan was drawn and revised
- ___ Label plan "Construction Management Plan"

Excavation Procedures:

- ___ Areas to be excavated
- ___ Where topsoil will be stockpiled
- ___ How excavated material will be disposed of
- ___ Areas where existing topography and vegetation will be left undisturbed

Erosion Control:

- ___ Type and location of erosion control measures
- ___ Timing of proposed construction and wet weather measures if applicable
- ___ Consult the Bureau of Environmental Services *Erosion Prevention and Sediment Control Plans Technical Guidance Handbook*
- ___ Required installation details, maintenance, & monitoring procedures shown as note on plan

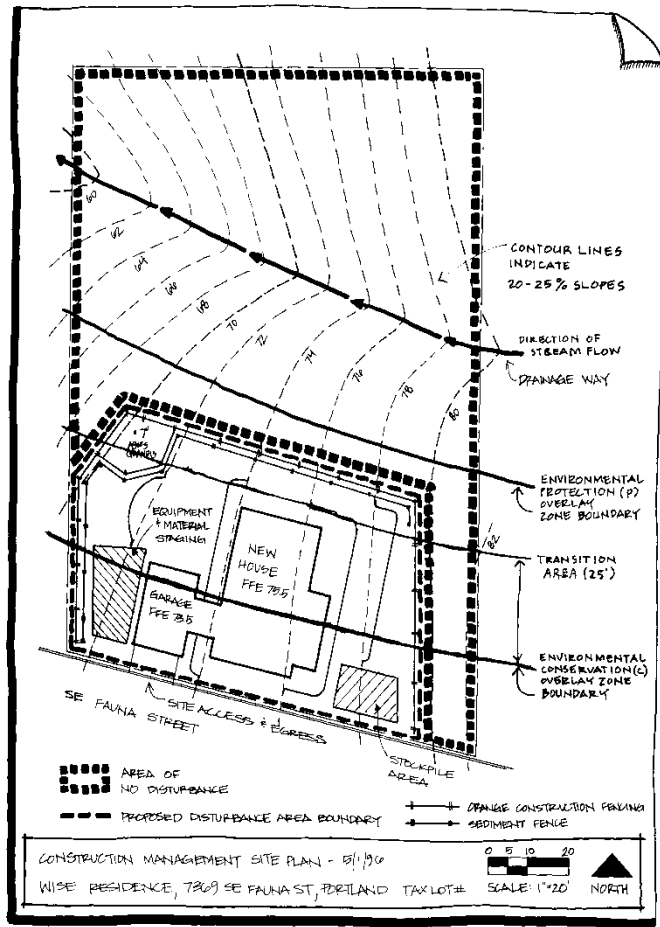
Tree Protection Measures: (see chapter 11.60)

- ___ Trees that will be removed
- ___ Trees that will be preserved
- ___ How the trees will be protected during construction, such as construction fencing

Site Management:

Explain how the following will be controlled or disposed during the construction period.

- ___ Construction debris
- ___ Hazardous materials
- ___ Human waste and litter



The above is an example of a Construction Management Site Plan.

Step 4d: Prepare a Mitigation or Remediation Site Plan

Mitigation is required when your development removes or has significant impacts on any of the identified resources within the resource area of the environmental zone. In step 7 of the impact evaluation process, you made a list of the resources that would be removed or adversely impacted. These resources and their functional values must be replaced. The mitigation plan shows how this will be accomplished.

There are many ways to mitigate for lost resources and functional values. The preferred method is to replace lost resources and functional values by adding the same type elsewhere on the site. Acceptable replacement

mitigation strategies are ranked below. Number 1 is the most desirable.

1. On-site with the same type of resource
2. On-site with a different type of resource
3. Off-site with the same type of resource
4. Off-site with a different type of resource

The first strategy is not always possible. The site may be constrained and it may be difficult to “replace” the lost resource. In addition to mitigating for lost resources you can enhance your site by improving the value of existing resources or by creating new resources. New resources are desirable because they increase the diversity of the resources and functional values already present on the site.

Describe how you will mitigate for the unavoidable impacts of the development. The most common impacts are loss of vegetation cover, loss of wildlife habitat, and changes to stormwater run-off patterns. Mitigation plans often include: planting of native trees, shrubs and groundcovers; removing non-native invasive plants (such as ivy and blackberries) and methods of stormwater disposal. If new plantings are part of the mitigation, you should describe how those plantings will be maintained to insure survival.

The following items must be identified on the mitigation plan, if applicable:

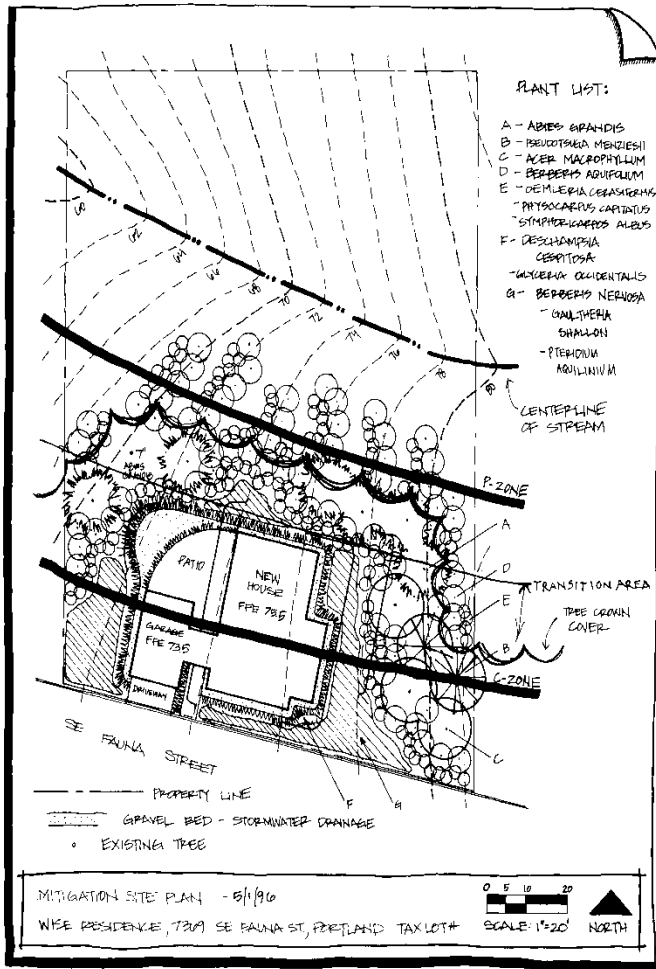
- ___ All property lines with dimensions and total lot area
- ___ North arrow and scale of drawing
- ___ Location of zone boundaries
- ___ Ground covers to be seeded or planted: distribution outline, species composition, and percent cover
- ___ Shrubs to be planted: distribution outline, species composition, size and spacing
- ___ Trees to be planted: species, location, and size

Example Mitigation Planting Table:

Common Name	Scientific Name	Number	Size	Spacing
Red Alder	Alnus rubra	2	1 gal.	10 ft. OC
Oregon Ash	Fraxinus latifolia	5	6 ft. B&B	5 ft. OC
Red Dogwood	Cornus servcea	10	1 gal.	3 ft. OC
Nootka Rose	Rosa nutkara	5	1 gal.	2 ft. OC

- ___ Stormwater management features, including retention, infiltration, detention, discharges and outfalls

- Other information to adequately describe your mitigation plan
- Date plan was drawn and revised
- Label plan as "Mitigation or Remediation Plan"



The above is an example of a Mitigation Site Plan.

Step 5: Addressing the Approval Criteria

You have the responsibility to demonstrate that your proposal meets all of the applicable approval criteria for the application to be approved. The approval criteria are the central part of the environmental review application.

You should write out and address each of the applicable approval criteria individually. Each of the criteria which you will address must have a response or finding associated with it. Information submitted must be relevant to the approval criteria. Relevant information is a fact which shows whether one of the approval criteria is or is not met. Base your response to the approval criteria on your impact evaluation, construction management plan, and mitigation plan.

Examples and Tips:

E. Other Development in the Environmental Conservation Zone. In Environmental Conservation zones, the applicant's impact evaluation must demonstrate that all of the following are met. For example:

Criterion 1: Proposed development minimizes the loss of resources and functional values, consistent with allowing those uses generally permitted or allowed in the base zone without a land use review;

Responses:

Do's Provide Relevant Facts:

- Uses which are normally allowed by the base zone on the project site. Example: "The base zone on this site normally allows the construction of a single-dwelling (detached) home."
- Environmental resources and values on the project site, and in the vicinity of the project site. Example: "The site is located at the headwaters of Cedar Mill Creek. The existing trees on this site help to stabilize the soil on this steeply sloped site."
- How the project may impact environmental resources (on or off site). Example: "Removal of native vegetation from this steeply sloped site may lead to erosion, with a negative impact on the creek located in the ravine below."
- Design elements of the project that reduce the environmental impact of this project. Example: "The construction of a standard one story home on this site would require extensive removal of existing trees. By designing a home with three smaller floors, rather than one large floor, the development footprint is reduced in area. Because the development footprint is smaller, fewer trees must be cut."

Don't's Don't Provide Irrelevant Facts or Conclusionary Statements:

- Make the statement that "the design minimizes environmental impacts." You must explain how it does.
- Conclude that "there are no environmental impacts because no trees will be cut." The Environmental Review process must address a variety of environmental values, including wildlife habitat, stormwater drainage, scenic views, water quality, etc. Trees are not the only resource which is protected by an Environmental Resource designation.
- Make up statements in order to justify your existing plan. For projects in

Environmental Zones, environmental issues should be discussed early in the design of the project. Environmental review should be part of the design process, not an after-the-fact attempt to justify an existing design.

Criterion 2: *Proposed development locations, designs, and construction methods are less detrimental to identified resources and functional values than other practicable and significantly different alternatives;*

Responses:

Do's Provide Relevant Facts:

- Alternative analysis. Explain a variety of different options for this development, and explain why the chosen design is the better option from an environmental point of view. "Practicable" is defined by the Portland Zoning Code as: "Capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."
- Discuss the location of the proposed development, and explain why other locations on the same site are less practicable and would result in greater impacts.
- Discuss the construction methods to be used, and explain why other methods are less practicable and would result in greater impacts. For example, you might discuss what methods will be used to limit the damage to vegetation during construction, such as fencing off vegetation to prevent damage from construction equipment, and installing silt fences to prevent exposed soil from washing off the construction site during a rain. Consult the Bureau of Environmental Services *Erosion Prevention and Sediment Control Plans Technical Guidance Handbook*.

Don'ts Don't Provide Irrelevant Facts or Conclusionary Statements:

- Don't create a "straw man" alternative. In other words, don't create a flawed alternative for the purpose of making the chosen alternative look better.
- Some pre-designed house plans may not be appropriate in an environmentally sensitive area. Design to the site. Do not make the site fit your design. Even if you have already purchased plans, there are often a variety of possible locations and configurations. Don't state that "the chosen location is the only possible location

because the house is already designed and it must be located as it has been designed.

- Don't say, for example, that "the Fire Bureau requires that the house be here" without documentation. The City of Portland is a large organization made up of many different bureaus. Cite names and provide documentation if the design is limited by the requirements of another City agency. Citing other city requirements is fine, but you must provide documentation.

Criterion 3: *There will be no significant detrimental impact on resources and functional values in areas designated to be left undisturbed;*

Responses:

Do's Provide Relevant Facts: Show on your plans portions of the site which will be left undisturbed. Choose appropriate locations to remain undisturbed, such as very steep slopes, groves of large trees, areas near creeks, etc. Describe the area to be left undisturbed in a written response to this criterion.

- As with criterion E.2 above, discuss what methods will be used to limit the damage to areas left undisturbed. For example, will you fence off vegetation to be retained to prevent damage from construction equipment? Will you install silt fences to prevent exposed soil from eroding from the construction site during a rain and washing into sensitive areas?

Don'ts Don't Provide Irrelevant Facts or Conclusionary Statements:

- Don't propose development on very steep slopes, in groves of large trees, or in areas near creeks if the proposed development would fit within areas of the site which have already been disturbed.
- Don't state that "the house will not be located within the ravine on the site, therefore there will be no impact to the ravine." Address indirect impacts, such as how rainwater will drain from the roof and driveway, and how wildlife will be impacted by human activity on the site. Applicants often fail to consider indirect impacts. Because a creek is not going to be directly altered does not mean that impacts do not exist.

Criterion 4: *The mitigation plan demonstrates that all significant detrimental impacts on resources and functional values will be compensated for.*

Responses:

Do's Provide Relevant Facts:

- Submit a plan and narrative which shows how mitigation will occur.
- Clearly identify mitigation areas on the plan.
- Provide specific numbers, species, and sizes for all proposed mitigation.

Environment-Related Definitions

You may find the following definitions helpful as you prepare your application. These and other definitions are found in Chapter 33.910 of the Zoning Code.

- **Crown Cover.** The area directly beneath the crown and within dripline of a tree or shrub. The crown consists of the above ground branches, stems, and leaves.
- **Disturbance Area.** An area which contains all temporary and permanent development, exterior improvements, and staging and storage areas on the site, both existing and proposed. For new development the disturbance area must be contiguous. Native vegetation planted for resource enhancement and agricultural and pasture land is not included. For Section 33.430.150, Standards for Utility Lines, only the proposed development is included.
- **Drainageway.** An open linear depression, whether constructed or natural, which functions for the collection and drainage of surface water. It may be permanently or temporarily inundated.
- **Ecologically and Scientifically Significant Natural Areas.** Land and water that has substantially retained its natural character, but is not necessarily completely natural or undisturbed, and which is significant for historical, scientific, paleontological, or natural features.
- **Fish and Wildlife Habitat Areas.** Lands which contain significant food, water, or cover for native terrestrial and aquatic species of animals. Examples include forests, fields, riparian areas, wetlands, and water bodies.
- **Flood Desynchronization.** Modification of the timing of stormwater runoff from various parts of a watershed through water retention, detention, or other means which will result in a decrease in flood elevations.
- **Functional Values.** Functional values are the benefits provided by resources. The functional value may be physical, aesthetic, scenic, educational, or some other nonphysical function, or a combination of these. For example, two values of a wetland could be its ability to provide stormwater detention for x units of water draining y acres, and its ability to provide food and shelter for z varieties of migrating waterfowl. As another example, an unusual native species of plant in a natural resource area could be of educational, heritage, and scientific value. Most natural resources have many functional values.
- **Identified Wetlands, Identified Streams.** Those streams and wetlands that are identified in the resource inventory and maps as being significant and in need of protection.
- **Practicable.** Capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
- **Remediation.** The restoration and enhancement of resources and/or functional values lost as the result of a violation of the environmental zone regulations.
- **Resource Enhancement.** The modification of resources or functional values to improve the quality or quantity of the resource or functional values. It can include actions that result in increased animal and plant species, increased numbers of types of natural habitat, and/or increased amount of area devoted to natural habitat. It may also include improvements in scenic views and sites, increased capacity for stormwater detention, changes in water quantity or quality, or other improvements to resources or functional values. A resource enhancement project must result in no loss of any resource or functional values, and the gain of at least one.
- **Riparian Areas.** Lands which are adjacent to rivers, streams, lakes, ponds, and other water bodies. They are transitional between aquatic and upland zones, and as such, contain elements of both aquatic and terrestrial ecosystems. They have high water tables because of their close proximity to aquatic systems, soils which are usually made up largely of water-carried sediments, and some vegetation that requires free (unbound) water or

conditions that are more moist than normal.

- **Significant Detrimental Impact.** An impact that affects the natural environment to the point where existing ecological systems are disrupted or destroyed. It is an impact that results in the loss of vegetation, land, water, food, cover, or nesting sites. These elements are considered vital or important for the continued use of the area by wildlife, fish, and plants, or the enjoyment of the area's scenic qualities.
- **Stream.** An area where enough natural surface water flows to produce a stream channel, such as a river or creek, that carries flowing surface water during some portion of the year. This includes:
 - ✓ The water itself, including any vegetation, aquatic life, or habitat
 - ✓ Beds and banks below the high water level which may contain water, whether or not water is actually present
 - ✓ The floodplain between the high water level of connected side channels
 - ✓ Beaver ponds, oxbows, and side channels if they are connected by surface flow to the stream during a portion of the year and
 - ✓ Stream-associated wetlands.
- **Stream Channel.** An area which demonstrates evidence of the passage of water. The depression between the banks worn by the regular and usual flow of the water. The channel need not contain water year-round. This definition does not include irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses.
- **Top of Bank.** The first major change in the slope of the incline from the ordinary high water level of a waterbody. A major change is a change of ten degrees or more. If there is no major change within a distance of 50 feet from the ordinary high water level, then the top of bank will be the elevation 2 feet above the ordinary high water level.
- **Uplands.** Lands not characterized by the presence of riparian areas, water bodies, or wetlands.
- **Water Bodies.** Permanently or temporarily flooded lands which may lie below the deepwater boundary of wetlands. Water depth is such that water, and not the air, is the principal medium in which prevalent organisms live, whether or not they are

attached to the bottom. The bottom may sometimes be considered nonsoil or the water may be too deep or otherwise unable to support emergent vegetation. Water bodies include rivers, streams, creeks, sloughs, drainageways, lakes, and ponds.

- **Wetland.** An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas.
- **Excavating or Filling.** The removal, placement, or replacement of earth, concrete, asphalt, and similar nondecomposable materials whether permanent or temporary in nature. Excavating or filling does not include the movement of earth or placement of gravel, asphalt, or other paving materials that is done in conjunction with road improvements. It does not include the excavation of mineral or aggregate resources. Excavating or filling includes the terms grading, preloading, surcharging, and stockpiling.

For More Information

A handbook is available about the City of Portland's Environmental Zoning program. A copy of the *Portland Environmental Handbook* may be purchased at the Development Services Center.

Additional handouts are available about the Environmental Plan Check procedure (see handout EN2).

Information found in Portland Zoning Code 33.430 will identify the specific environmental regulations which may apply to your proposal. This Zoning Code Subsection can be purchased at the Development Services Center.