

Chapter 19.700 Special Reports

19.700.100 Special Reports-General

- A. Special reports shall be submitted by the applicant and approved by the Department for regulated uses when required by this Program for the protection of shorelines or critical areas in shoreline jurisdiction per Chapter 24.35 TCC.
- B. The applicant shall pay for or reimburse the county for the costs incurred in the preparation of special reports or tests, and for the costs incurred by the county to engage technical consultants or staff for review and interpretation of data and findings submitted by or on behalf of the applicant. The applicant shall pay permit fees or technical assistance fees as required by the Community Development Fee Schedule, as now or hereafter amended.
- C. Any special report shall be prepared by a professional, as defined in Chapter 19.150 (Definitions), and shall include his or her resume, or other list of qualifications, to aid the Department in assessing these qualifications.
- D. The special reports described in Sections 19.700.105 through 19.700.145 may be required to provide environmental information and to present proposed strategies for maintaining, protecting and/or mitigating shoreline functions and conditions.

19.700.105 Wetland Delineation Report

A. Minimum Wetland Delineation Report Contents

- 1. Vicinity map;
- 2. When available, a copy of a National Wetland Inventory Map (U.S. Fish and Wildlife Service) and/or a Thurston County Wetland Inventory Map identifying the wetlands on or within 250feet of the site;
- 3. A site map setting forth all of the following:
 - a. Surveyed wetland boundaries based upon a delineation by a wetlands specialist;
 - b. Site boundary property lines and roads;
 - c. Internal property lines, right-of-way, easements, etc.;
 - d. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, waterbodies, etc.;
 - e. Contours at the smallest readily available intervals, preferably at two-foot intervals;
 - f. Hydrologic mapping showing patterns of surface water movement and known subsurface water movement into, through, and out of the site area.
 - g. Location of all test holes and vegetation sample sites, numbered to correspond with flagging in the field and field data sheets.
 - h. The Department may require an air photo with overlays displaying the site boundaries and wetland delineation.

4. Location information (legal description, parcel number and address);
5. Discussion of wetland boundary. If the wetland extends outside the site, the delineation report shall discuss all wetland areas within 250 feet of the site, but need only delineate those wetland boundaries within the site;
6. General site conditions including topography, acreage, and surface areas of all wetlands identified in the Thurston County Wetland Inventory Map and water bodies within one quarter mile of the subject wetland(s);
7. Hydrological analysis, including topography, of existing surface and known significant sub-surface flows into and out of the subject wetland(s);
8. Analysis of functional values of existing wetlands, including vegetative, fauna, and hydrologic conditions;
9. A summary of proposed activity and potential impacts to the wetland(s);
10. Recommended wetland category using the Washington State Wetlands Rating System Categories, including rationale for the recommendation;
11. Recommended buffer boundaries, including rationale for boundary locations;
12. Site plan of proposed activity, including location of all parcels, tracts, easements, roads, structures, and other modifications to the existing site. The location of all wetlands and buffers shall be identified on the site plan.

B. Administrative Wetland Boundary and Rating Evaluation

1. The Thurston County Department of Community Development may delineate and evaluate wetland areas for any proposed single-family dwelling project listed in Chapter 24.30 TCC (Wetlands) as incorporated herein by Section 19.400.115 (Critical Areas), unless the applicant wishes to employ a qualified wetland biologist at the applicant's expense, or if such a report is required by the Department. Fees may be collected for this determination and evaluation, as specified in Community Development Fee Schedule.
2. The approved federal wetland delineation manual and applicable regional supplements shall be the methodology for delineation of the regulated wetland boundary.
3. The wetland boundary shall be field-staked and this line shall be depicted on the building site plan application.
4. The regulated wetland boundary and regulated wetland buffer shall be identified on all grading, building, site, utility or other development plans submitted on the project.

19.700.110 Wetland Mitigation Plan/Report

- A. As required by TCC 24.30.070 (Wetland Mitigation), a mitigation plan shall be prepared. A detailed mitigation plan shall contain the following:

1. Executive summary which summarizes the project, its potential wetland related impacts, and the proposed mitigation to include the following information:
 - a. Applicant Name/Address/Phone
 - b. Agent/Consultant
 - c. Description of land use proposal
 - d. Description of mitigation area
 - e. Description of impact avoidance and minimization measures
 - f. Description of unavoidable wetland impacts and mitigation measures:
 - i. Size (acres)
 - ii. Wetland classification
 - iii. Hydrogeomorphic (HGM) classification
 - iv. Wetland rating
 - v. Functions
 - vi. Compensation ratios used
 - g. Explanation of other impacts to waters of the state
 - h. Goals, objectives and monitoring period
2. Project Description
 - a. Type of development (existing and proposed land uses)
 - b. Project size
 - c. Implementation schedule
 - d. Project location, maps
 - e. Project summary
3. Ecological Assessment of Impact
 - a. Impacts (acreage) and extent of disturbance to wetlands (wetland delineation)
 - b. Summary of historic and current on-site and nearby land uses (zoning designations)
 - c. Description of any known cultural resources on the site
 - d. Description of the site in context of other wetlands/water bodies
 - e. Description of the water regime
 - f. Description of the soils
 - g. Description of the plant communities
 - h. Description of any fauna using the site
 - i. Landscape position and geomorphology
 - j. Description of functions provided
 - k. Wetland category rating and buffer requirements
4. Mitigation Approach
 - a. Mitigation sequencing followed
 - b. Goals and objectives
 - c. Performance standards to assess each objective
5. Proposed Compensation Site
 - a. Site description (location, size, maps):
 - i. Ownership
 - ii. Total area of mitigation site (acres)
 - iii. Current/past land use
 - b. Site selection rationale
 - c. Existing/baseline ecological conditions of the compensation site:
 - i. Acreage of existing wetlands and uplands
 - ii. National Wetland Inventory or local jurisdiction wetland mapping of the site
 - iii. Summary of historic and current on-site and nearby land uses (zoning designations)

- iv. Description of any known cultural resources on the site
 - v. Description of the site in context of other wetlands/waterbodies
 - vi. Description of the water regime
 - vii. Description of the soils
 - viii. Description of the plant communities
 - ix. Description of any fauna using the site
 - x. Landscape position and geomorphology
 - xi. Description of functions provided
 - xii. Wetland rating of any existing wetlands, buffer requirements
 - d. Site constraints
- 6. Preliminary Site Plan
 - a. Explanation of how adequate hydrology will be provided
 - b. Discussion of how project was designed to provide the proposed functions
 - c. Schematic drawings: Change in topography:
 - i. Hydrologic structures
 - ii. Soils
 - iii. Vegetation distributions
 - iv. Habitat attributes
 - v. Buffers
 - d. Section drawings showing relationship of topography to water regime and vegetation
- 7. Final Site Plan/Design
 - a. Site survey and topography
 - b. Water regime including:
 - i. Engineering drawings of water control structures
 - ii. Source of water (volume, velocity, hydro period)
 - c. Soil amendments
 - d. Landscape plans:
 - i. Drawing of proposed plant distribution
 - ii. Location of existing or proposed upland buffers
 - iii. Section drawings showing relationship of topography to vegetation
 - iv. Erosion control
 - v. Location of habitat structure
 - vi. Location of upland buffers
 - vii. Soil amendments
 - e. Construction specifications
- 8. Monitoring Plan
 - a. Vegetation
 - b. Water regime
 - c. Soils
 - d. Fauna
 - e. Functions and values
 - f. Development of habitat structure
 - g. Water quality
 - h. Buffers
 - i. Timetable for reporting monitoring results
- 9. Site Protection
 - a. Physical site protection
 - b. Legal protection
 - c. Buffers
- 10. Maintenance and Contingency Plans

- a. Maintenance schedule
 - b. Contingency plan:
 - i. Initiating procedure
 - ii. Funding
 - iii. Responsible parties
11. Implementation Schedule
- a. Construction schedule
 - b. Monitoring schedule
 - c. Reporting schedule
 - d. Financial assurance
- B. Permit Conditions. Any compensation project prepared pursuant to this section and approved by the Department shall become part of the application for the permit. The Department will require an additional growing season year for approval of mitigation plan unless the applicant requests an inspection for final monitoring year during the final monitoring year assessment.
- C. Performance Bonds and Demonstration of Competence. A demonstration of financial resources, administrative, supervisory, and technical competence and scientific expertise of sufficient standing to successfully execute the compensation project shall be provided. A compensation project manager shall be named, and the qualifications of each team member involved in preparing the mitigation plan and implementing and supervising the project shall be provided, including educational background and areas of expertise, training and experience with comparable projects. A performance bond, assignment of savings, or other like security will be required by the Department in an amount necessary to provide for future site monitoring and possible corrective action required for compensatory mitigation projects. This bond, assignment of savings, or the security will be released no later than five years after completion of the mitigation project. If the approved mitigation is not completed or fails to meet its success standards, the property owner must agree to a property access release form, with forfeiture of funds after the specified monitoring period.
- D. Waiver. The Department may waive portions of this report if, in its opinion, there is adequate information available on the site to determine its impacts and appropriate mitigation measures.

19.700.115 Habitat Management Plan

- A. A Habitat Management Plan (HMP) is a site investigation report to evaluate the potential presence or absence of a regulated fish or wildlife species or habitat, including critical freshwater and saltwater habitats, affecting a subject property and proposed development. This report shall identify how development impacts to fish and wildlife habitat from a proposed project will be mitigated. WDFW Priority Habitat and Species (PHS) management recommendations or bald eagle protection rules outlined in the U.S. Fish and Wildlife Service Bald Eagle Management Guidelines and Conservation Plan for the Pacific Region, as now or hereafter amended, may serve as guidance for this report.
- B. The HMP shall contain a map prepared at an easily readable scale, showing:
- 1. The location of the proposed development site
 - 2. The relationship of the site to surrounding topographic, water features, and cultural features
 - 3. Proposed building locations and arrangements

4. A legend which includes a complete legal description, acreage of the parcel, scale, north areas, and date of map revision
 5. WDFW PHS Data, no older than one year from the project submittal. Locations of any identified federally listed species and critical freshwater or saltwater habitats
- C. The habitat management plan shall also contain a report which describes:
1. The nature and intensity of the proposed development
 2. An analysis of the effect of the proposed development, activity or land use change upon the wildlife species and habitat, including critical freshwater and saltwater habitats, identified for protection
 3. A discussion on how the applicant proposes to mitigate any adverse impacts to wildlife habitats created by the proposed development. (See Sections 19.700.105 Wetland Delineation Report, and 19.700.110 Wetland Mitigation Plan/Report).
- D. Examples of mitigation measures to be included in the HMP report, include, but are not limited to:
1. Establishment of Buffer Zones. When applicable, the order of sequence for buffer reductions shall be as follows:
 - a. Use of buffer averaging maintaining one hundred percent of the buffer area under the Standard Buffer requirement
 - b. Reduction of the overall buffer area by no more than twenty-five percent of the area required under the Standard Buffer requirement
 - c. Enhancement of existing degraded buffer area and replanting of the disturbed buffer area
 - d. The use of alternative on-site wastewater systems in order to minimize site clearing
 - e. Infiltration of stormwater where soils permit. Retention of existing native vegetation on other portions of the site in order to offset habitat loss from buffer reduction
 2. Preservation of native plants and trees essential to maintaining habitat function;
 3. Limitation of access to habitat areas;
 4. Seasonal restriction of construction activities; and
 5. Establishing phased development requirements and/or a timetable for periodic review of the plan.
- E. A HMP shall be prepared by a fish or wildlife biologist, as defined in Section 19.150.655. For proposed single-family dwelling construction, the Department may complete the plan. Fees may be collected for this plan as specified in Community Development Fee Schedule. Where this plan is required for the protection of an eagle habitat, the USFWS Bald Eagle Management Guidelines and Conservation Plan for the Pacific Region shall be utilized.

19.700.120 Geotechnical Report and Geological Report

- A. Whenever development is proposed in a geologically hazardous area or where required in this Program, or when the Department determines that additional soils and slope analysis is appropriate on a particular site, the applicant is required to submit a geotechnical or geological report that evaluates the surface and subsurface soil conditions on the site.

- B. Qualifications.
1. Geotechnical reports shall be prepared by a geotechnical engineer.
 2. Geological reports may be prepared by a licensed geologist or geotechnical engineer.
- C. General Provisions. Report recommendations for earthwork, clearing or siting structures in geologically hazardous areas shall be based on existing site conditions rather than measures that have not yet been successfully approved, designed, or constructed (e.g., slope re-contouring, slope retaining walls, vegetation improvements, bulkheads, etc.). Shoreline stabilization and retaining walls may only be utilized only as an engineering solution where it can be demonstrated that:
1. An existing residential structure or other permitted existing public or private structures or public facilities such as roads or highways, cannot be safely maintained without such measures;
 2. Other non-structural methods of beach stabilization have been considered and determined infeasible; and
 3. The resulting stabilization structure is the minimum necessary to provide stability for the existing structure and appurtenances. Minor repair activities on existing permitted structures (e.g., those that do not involve design modifications, changes in structure location, and/or demolition or abandonment of failed structure and replacement with new structure) are not subject to the following project submittal standards.
- D. Geological Report Submittal Standards. A Geological Report is required for site development proposals that involve development activity or the installation of structures within a geologically hazardous area or shoreline setbacks, or as otherwise required pursuant to Chapters 24.15 and 24.35 TCC as incorporated herein by reference, but do not involve or require engineering design recommendations. The following minimum information is required:
1. Site information regarding the Thurston County Shoreline Environment Designation and critical areas designations that affect site features.
 2. Description of surface and subsurface conditions, including ground materials, vegetation, surface drainage, groundwater, and a preliminary geologic hazard assessment which includes the locations of structures and the identification of the slope and/or coastal processes occurring at the site and factors that contribute to them;
 3. Review of available site information, literature, and mapping;
 4. Detailed description of slope and other topographic features
 5. Conceptual siting of structures and general recommendations, which include methods and practices that avoid and/or reduce slope and shore impacts. Minimum recommendations should include upland and slope drainage control, groundwater control, site vegetation management, and erosion control.
- E. Geotechnical Report Submittal Standards. A Geotechnical Report is required when the Department or a Geological Report determines that a site development proposal requires additional site information such as engineering design recommendations, slope stability analysis, subsurface exploration and testing, coastal process analyses, or construction recommendations. Depending on the level of activity proposed, the report will either be a more limited geotechnical slope evaluation report or a full geotechnical design investigation report as described below.
1. Geotechnical Slope Evaluation Report. A geotechnical slope evaluation report is required when slope stability analyses are confined to addressing only existing surface and/or

drainage conditions, including the relationship of natural and constructed slope features to proposed changes in environmental conditions such as drainage, vegetation removal and slope geometry. The following minimum information is required:

- a. All the information required under Subsection D, above (Geological Report);
 - b. Subsurface data, exploration logs, and testing data, when required by the geotechnical engineer;
 - c. Estimated (or surveyed) site plan with ground surface profiles and typical cross-sections;
 - d. Relative location of ordinary high water (OHW) on the surface profile and cross-sections, which includes mean higher high water (MHHW) for the site location, where applicable;
 - e. Soil strength parameters;
 - f. Stability analysis of existing site;
 - g. Analysis of the relationship of vegetation and slope stability; and
 - h. Conceptual site development plans and cross-sections.
2. Geotechnical Design Investigation Report. A geotechnical design investigation report is required for site development activities that propose design and construction measures at the slope crest, face and/or toe. If a designed structure does not impact slope stability or coastal processes, the report will not be required to perform all items listed under this section, as long as each item is addressed and the report details why a particular item does not apply. The report shall include all items considered necessary by the engineer to fully address the engineering design requirements of the site. The following minimum information is required:
- a. All the information required under subsection E.1., above (Geotechnical Slope Evaluation Report);
 - b. Geotechnical requirements and measures to reduce risks;
 - c. Geotechnical criteria used for any designs including all critical dimensions, lateral earth pressures, soil bearing pressures, location and limits of structures on or near the slope, maximum constructed slope angles, minimum soil reinforcement embedment, soil compaction requirements, and structure heights;
 - d. Temporary construction slope stability recommendations and analysis of proposed final site stability measures;
 - e. Required construction specifications and construction monitoring procedures;
 - f. Revegetation and surface and groundwater management requirements;
 - g. Evaluation of erosion potential, recommendations for erosion avoidance and any proposed mitigation measures;
 - h. Detailed tabulation of all basic geotechnical engineering test results pertinent to design and construction, and when required for clarification, detailed examples of tests conducted for the project; and
 - i. Information outlined in the geotechnical design investigation report site evaluation checklist (See subsection G., below).
- F. Additional Requirements for Sites in Geologically Hazardous Areas. When a project site is located within a landslide-prone geologically hazardous area, as classified in Section 24.35.050 TCC, the following additional project submittal requirements shall apply:
1. Erosion Control Information. An evaluation of the erosion potential on the site during and after construction is required. The evaluation shall include recommendations for mitigation, including retention of vegetative buffers and a revegetation program. The geotechnical engineer shall provide a statement identifying buffer areas at the top or toe

of a slope based on geotechnical site constraints and the impacts of proposed construction methods on the erosion potential of the slope.

2. Seismic Information. The geotechnical engineer shall submit a statement that the design criteria consider the one-in-one-hundred-year seismic event (an earthquake ground motion that has a 40 percent probability of exceedance in 50 years). Calculations of soil bearing capacity, general soil stability, and wall lateral earth pressures shall be adjusted to reflect a one-in-100 year seismic event and the structural plans for the project shall be reviewed by the geotechnical engineer for consistency with these design criteria. Analysis for the one-in-one-hundred-year seismic event shall be based on a near crustal event having an assumed magnitude of 6.5 and occurring directly below the site. Based on regional studies performed by others, the Department will allow the use of the following minimum general values of horizontal peak ground accelerations for this event:
a = 0.2g for fill, alluvial soils
a = 0.17g for till, firm glaciated soils
a = 0.15g for rock.
The appropriateness of the above accelerations shall be confirmed by the geotechnical engineer based on the actual site characteristics. Reduction in the above values may be considered when supported by the appropriate analytical evidence. Slope stability, lateral pressures, and liquefaction of the site shall be assessed by using subsurface soil, rock and groundwater conditions, as well as the seismic parameters discussed above.
3. Recommendations on Relative Site Stability. The geotechnical engineer shall make recommendations as to which portion of the site are the least prone to instability and the preferred location of the structure. The limits of any area proposed for grading activity shall be identified.
4. Construction Season Limitation. In general, no excavation will be permitted in landslide-prone geologically hazardous areas during the typically wet winter months. When excavation is proposed, including the maintenance of open temporary slopes, between October 1 and April 30, technical analysis shall be provided to ensure that no environmental harm, threat to adjacent properties, or safety issues would result. In addition, recommendations for temporary erosion control and shoring/mitigating measures shall be provided. The technical analysis shall consist of plans showing mitigation techniques and a technical memorandum from the geotechnical engineer.
5. Revisions to Geotechnical Report. Further recommendations shall be provided by the geotechnical engineer should there be additions or exceptions to the original recommendations based on the plans, site conditions, or other supporting data. If the geotechnical engineer who revises the plans and specifications is not the same engineer who prepared the geotechnical report, the new engineer shall, in a letter to the Department, express his or her agreement or disagreement with the recommendations in the geotechnical report and state whether the plans and specifications conform to his or her recommendations.
6. Plan and Specification Review. The geotechnical engineer shall submit a statement that in his or her judgment, the plans and specifications (if prepared by others) conform to the recommendations in the geotechnical report and that all portions of the site which are disturbed or impacted by the proposed development have appropriate measures or specifications that permit construction to occur while addressing slope stability so that the work does not create additional risk. The statement shall also indicate whether or not a relative gain in slope stability will be achieved after construction is complete.
7. Construction Inspection. A final inspection report shall be provided by the geotechnical engineer stating that construction has or has not implemented the design recommendations of the geotechnical report, and evaluating of any deviation from the design recommendations.

- G. Geotechnical Design Investigation Report – Site Evaluation Checklist. The following are general report guidelines for geotechnical design investigation reports. The following guidelines are not intended to be all-inclusive. It is the responsibility of the geotechnical engineer to address all factors, which in their opinion are relevant to the site. The checklist information shall be included as part of the geotechnical design investigation report. All items listed below must be addressed in the report. Information shall be provided for those items, which are not relevant to a given site to demonstrate why the items are not applicable.
1. Project Information:
 - a. Site Owner Name;
 - b. Project Proponent Name;
 - c. Shoreline Environment Designation (where applicable); and
 - d. Critical Areas Ordinance (CAO) designations affecting site features.
 2. Project Description:
 - a. Description of proposed structures, site improvements, and adverse impact avoidance and reduction methods.
 - b. Location and total area of the construction zone.

19.700.125 Hydrogeological Report

- A. The hydrogeological report shall address the impact the proposed land use will have on both the quality and quantity of the water transmitted to the aquifer.
- B. The report shall be submitted to the Department and shall address, at a minimum, the following criteria:
1. Surficial soil type and geologic setting;
 2. Location and identification of wells within 1,000 feet of the site;
 3. Location and identification of surface water bodies and springs within 1,000 feet of the site with recharge potential;
 4. Description of underlying aquifers and aquitards, including water level, gradients and flow direction;
 5. Available surface water and groundwater quality data;
 6. Effects of the proposed development on water quality;
 7. Sampling schedules required to assure water quality;
 8. Discussion of the effects of the proposed development on the groundwater resource;
 9. Recommendations on appropriate best management practices (BMPs) or mitigation to assure no significant degradation of groundwater quality; and
 10. Other information as required by the Thurston Public Health District.
 11. The report shall also address the types of pesticides, herbicides and fertilizers that can safely be used for the care of landscaping proposed by the applicant.
- C. The hydrogeologic report shall be prepared by a professional geologist/hydrologist or by a soil scientist with a strong background in geology.
- D. Applications for development or operations with underground storage of petroleum products will be processed using the appropriate procedure as specified in existing Thurston County ordinances.

- E. Analysis for a specific parcel(s), using the criteria outlined below, will be employed to confirm if the soils present require a recharge area designation. Data collection will include, at a minimum, six soil logs to a depth of ten feet (or to a depth four feet below the lowest proposed excavation point whichever is greater) for each acre in the parcel(s) being evaluated. At least one well, two hundred feet or greater in depth with an adequate drilling report, must be available within one mile. The associated data shall be analyzed and included in the hydrogeologic report to determine the presence of highly permeable soils with the recharge area designation. For development proposals within aquifer recharge areas of concern, the hydrogeological report may be based on quarter-quarter section basis where the number of wells within a half-mile radius is thirty-six or more. To facilitate computer analysis, the evaluation may be done on a quarter-quarter section basis using the quarter-quarter section in which a parcel of interest is located and all the surrounding quarter-quarter sections, in place of the half-mile circle.

19.700.130 Cumulative Impacts Report

A. Introduction

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances. Thus, the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community, i.e., the sum of this action to all other activities affecting that resource no matter what entity is taking the actions.

Unlike direct and indirect impacts assessments, the cumulative impact assessment entails a more extensive and broader review of possible effects. It should be recognized that while no "cookbook" approach to cumulative impacts analysis exists, a general approach is described here.

B. Approach

1. Considerations:
 - a. The proximity of the projects to other similar projects either geographically or temporally;
 - b. The probability of actions affecting the same environmental system, especially systems that are susceptible to development pressures; and
 - c. The likelihood that the project will lead to a wide range of effects or lead to a number of associated projects
2. Resources and Ecosystem Components. To determine which resources are cumulatively affected, consider:
 - a. Whether the resource is especially vulnerable to incremental effects;
 - b. Whether the proposed action is one of several similar action in the same geographical area;
 - c. Whether other activities in the area have similar effects on the resource;
 - d. Whether the effects have been historically significant for this resource; and
 - e. Whether other analyses in the area have identified a cumulative effects concern.

3. **Geographic Boundaries and Time Period.** An appropriate spatial scope of the cumulative impacts analysis is determined by:
 - a. Identifying a geographic area that includes resources potentially affected by the proposed project;
 - b. Extending that area, where necessary, to include resources affected by the combined impacts of the project and other actions; and
 - c. Combining ecological boundaries with political boundaries when necessary to adequately delineate the assessment area.
4. **Past, Present and Reasonably Foreseeable Future Actions.** Consider:
 - a. Whether the environment has been degraded, and if so, to what extent,
 - b. Whether ongoing activities in the area are causing impacts, and
 - c. The trends of activities and impacts in the area.
5. **Describing the Condition of the Environment.** Describe:
 - a. How the environment to be affected by the project functions naturally and whether it has been significantly degraded;
 - b. The specific characteristics of the affected environment and the extent of change, if any, that has occurred in that environment; and
 - c. The natural condition of the environment or, if that is not available, some modified, but ecologically sustainable, condition to serve as a benchmark.
6. **Using Thresholds to Assess Resource Degradation.** Thresholds should be practical, scientifically defensible, and fit the scale of the analysis. They may be either numeric standards, qualitative standards or based on desired management goals.

19.700.135 Navigation Study

- A. Any overwater structure that will exceed a length of 15% of the shore-to-shore distance shall require a navigation study.
- B. A navigation study, at a minimum, shall include:
 1. Demonstration of the need for a structure longer than 15% of the shore-to-shore distance;
 2. The proposed structure length and its percent of the shore-to-shore distance;
 3. Location of the nearest parks or public access points, especially those that provide haul-outs to recreational, scientific or tribal boaters/paddlers;
 4. Number of days for which the tides (low and high) would render navigation under or around the proposed structure to be hazardous for paddlers or motorized boaters (if allowed in the water body); and
 5. Any measures that could be taken to minimize impacts to navigation.

19.700.140 Shoreline Mitigation Plan

When required, a Shoreline Mitigation Plan shall include the following:

- A. Requested biological and/or habitat surveys (Section 19.700.145) to determine the existing site condition;
- B. A description of the existing conditions, functions and processes;
- C. A plan for mitigating any development impacts so that the proposed development does not result in a net loss of those identified conditions, functions and processes.
- D. The mitigation must be completed or installed prior to development activity, unless demonstrated infeasible.
- E. The mitigation will require semi-annual progress updates until the Department determines the mitigation is successful.
- F. Mitigation done as part of a Shoreline Mitigation Plan shall be subject to all other mitigation requirements of the Program.

19.700.145 Biological and Habitat Surveys

- A. When a biological or habitat survey is required, it shall be conducted according to the WDFW, Washington Department of Natural Resources, and the U.S. Army Corps of Engineers parameters, where applicable.
- B. A vegetation habitat survey must be conducted according to the most current WDFW eelgrass and macroalgae survey guidelines.
- C. Surveys should be conducted by consultants or staff trained and certified in forage fish spawning survey protocols.