

# **Guidance for Preparation of Sensitive Areas Special Studies: Wetlands and Watercourses**

## **Who Should Prepare the Wetland or Watercourse Sensitive Area Study?**

An applicant whose proposed action is on property that may contain a wetland or watercourse must submit a Sensitive Area Special Study under Tukwila Sensitive Areas Ordinance (Municipal Code 18.45.040). The study must be prepared by a qualified, experienced professional as required under the code (i.e., for wetlands - a Certified Professional Wetland Scientist or a professional with at least 2 years experience in wetland work; for watercourses, a professional hydrologist or other scientist with experience in watercourse assessments).

## **What kind of information should be included in the Wetland or Watercourse Sensitive Area Study?**

The study must include the following information (as applicable). Note that the information in the Sensitive Area Study may be combined with studies required by other agencies/ordinances.

1. Applicant's name and contact information.
2. Description of the proposed action and identification of the permit(s) required.
3. Copy of the site plan with north arrow, scale and property lines showing: development proposal and dimensions, location of existing wetlands/watercourses, buffers and drainage features, clearing limits, proposed stormwater management plan, proposed plan for mitigating impacts, and topographical contours at two (2) foot intervals.
4. Names and qualifications of the professional(s) preparing the study.
5. Dates and description of the fieldwork carried out on the site.
6. Detailed characterization of the wetland/watercourse, and buffers, which will include:
  - a. Wetland delineation report that includes methods used, field indicators evaluated and the results (wetland delineation must be performed in accordance with the Washington State Wetlands Identification and Delineation Manual, Washington Department of Ecology, March 1997). Field data forms are to be included in the report. Wetland boundaries are to be marked in the field with numbered stakes or flagging. These markers are to be shown on the site plan with their corresponding numbers indicated. After the City of Tukwila confirms the boundaries, they are to be professionally surveyed to the nearest square foot and the site plan modified as necessary. Exact wetland acreage will be calculated after the boundaries have been surveyed.
  - b. Cowardin classification of the wetland(s).<sup>1</sup>

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<sup>1</sup> "Classification of Wetlands and Deepwater Habitats of the United States", Cowardin, L., Carter, V., Goleth, F.C., and LaRoe, E.T., US Fish and Wildlife Service, office of Biological Services, Washington, D.C., 1979.

- c. Hydrogeomorphic classification of the wetland(s).<sup>2</sup>
  - d. Characterization of the watercourse on site: flow regime, streambed, banks, dimensions, vegetation, habitat conditions, existing modifications.
  - e. Brief landscape assessment of the wetland/watercourse (identify hydrologic basin/sub-basin, inlets, outlets, surrounding land use, habitat quality and connectivity, ultimate point of discharge, presence of culverts or other constraints to flow, relationship to other wetlands/watercourses adjacent to or potentially impacted by the proposed project, flow regime, surrounding land uses).
  - f. Classification of the wetland/watercourse under Tukwila's Sensitive Area Ordinance Rating system (see TMC 18.45.080 for wetlands and TMC 18.45.100 for watercourses).
  - g. Description of buffer size per TMC 18.45.080 E. and TMC 18.45.100 D., conditions (topographic considerations, existing vegetation types and density, habitat features, watercourse edges, presence of invasive species, etc.), and functions.
  - h. Functional assessment of the wetland(s). For proposed wetland filling the Washington Functional Assessment Method (WAFAM) must be used. For proposed projects that will impact buffers, the Washington Wetland Classification System may be used as a functional assessment.
  - i. Description of habitat conditions, wildlife/fish use of the sensitive area, including sensitive, threatened or endangered species.
  - j. Citations of any literature or other resources utilized in preparation of the report.
  - k. Description of adjacent land uses and ownership.
7. A statement verifying the accuracy and limitations of the study and the assumptions used.
  8. Assessment of hazards, risks and impacts. An assessment of likely impacts to the wetland/watercourses must be performed and must include an evaluation of short-term, direct, indirect and cumulative impacts on the sensitive areas and their buffers and to neighboring properties. A description of the wetland/watercourse functions that will be lost as a result of implementing the project should be provided, as well as an evaluation of impacts to wildlife/fish, if applicable.
  9. Description of development alternatives considered and efforts made to avoid and minimize adverse impacts (see TMC 18.45.090C regarding mitigation sequencing).
  10. Description of proposed conceptual mitigation plan for offsetting impacts of the proposal. For wetlands, the consultant shall use as a guide the Department of Ecology "Guidance on Wetland Mitigation in Washington State, Part 2, Guidelines for Developing Wetland Mitigation Plans and Proposals, April 2004". The conceptual mitigation plan shall include the following:
    - a. Rationale, mitigation goals, expected functions of completed mitigation;
    - b. Amount of restoration/creation/enhancement proposed;
    - c. Location and dimensions of proposed mitigation;
    - d. Description of expected hydrology (and explanation of how this was determined);

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<sup>2</sup> "A Hydrogeomorphic Classification for Wetlands", Brinson, M.M., Wetlands Research Program Technical Report WRP-DE-4, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi, 1993.

- e. Description of means to stabilize relocated watercourse channels, actions to improve watercourse functions such as water quality, habitat, flood control, etc.;
  - f. Preliminary planting plan and invasive plant control plan; and
  - g. Timing and schedule.
  - h. Recommended maintenance, monitoring (short-term and long-term), contingency plans, bonding measures for mitigation, per TMC 18.45.210.
11. Any additional technical information as required by the Director to assist in determining compliance with TMC Chapter 18.45.

The applicant is responsible for obtaining all necessary jurisdictional determinations and permits from state and federal agencies and for providing this information to the City.