

1 **Public Review Draft 3/1/17**

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4 **Kitsap County Code Title 19**

5 **Critical Areas Ordinance**

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8 Underline / Strike-out Version

9 **19.700 Special Reports**

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Chapter 19.700 SPECIAL REPORTS

Sections:

19.700.705 Special reports.

19.700.710 Wetland delineation report.

19.700.715 Wetland mitigation report.

19.700.720 Habitat management plan (HMP).

19.700.725 ~~Geotechnical report and geological report.~~ Geological assessments.

19.700.730 Hydrogeological report.

19.700.705 Special reports.

A. Purpose. The following special reports may be required to provide environmental information and to present proposed strategies for maintaining, protecting and/or mitigating impacts to critical areas:

1. Wetland Delineation Report (Section 19.700.710)

2. Wetland Mitigation Plan (Sections 19.700.710 and 19.700.715).

3. Habitat Management Plan (Section 19.700.720).

4. Geotechnical Report /Geological Report (Section 19.700.725).

5. Hydrogeological Report (Section 19.700.730).

B. When Required. Special reports shall be submitted by the applicant for and approved by the department ~~for regulated uses~~ when required by this title ~~for the protection of a critical area. Refer to specific critical area protection standards for when special reports are required.~~

C. ~~Special Reports~~ – Responsibility for Completion. 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 Title 21 of the Kitsap County Code, as now or hereafter amended. In such circumstances where a conflict in the findings of a special report and the findings of the county in review of the special report exists, the applicant or affected party may appeal such decisions of the county pursuant to the procedures in Section 19.100.15045 (Appeals) and KCC 21.04 of this code.

1 D. Qualifications of Professionals. Any special report ~~as described below~~ required herein shall be
2 prepared and signed by the a-professionals identified below and in chapter 19.500.), and shall include his
3 or her resume, or other list of qualifications, to aid the department in assessing these qualifications.

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5 **19.700.710 Wetland delineation report.**

6 A. Wetland delineation reports shall be valid for a period of five years from the date of the report unless a
7 longer or shorter period is specified by the department. An extension of an original report may be granted
8 upon submittal of a written request to the department prior to expiration. Prior to granting an extension,
9 the department may require updated studies if, in its judgement, the original intent of the application is
10 altered, enlarged or if circumstances relevant to the review and issuance of the original permit have
11 changed substantially, or if the applicant failed to abide by the terms of the original approval. Time
12 extensions shall be granted in writing and documented in the file.

13 B. A wetland delineation report shall include, but not be limited to, the following:

14 1. Vicinity map;

15 2. When available:

16 a. A copy of a National Wetland Inventory Map (U.S. Fish and Wildlife Service) and/or a
17 Kitsap County Wetland Inventory Map identifying the wetlands on or within two hundred
18 fifty feet of the site;

19 b. A copy of any known previous delineations or investigations;

20 c. A copy of forms used to delineate the wetland area (1987 Wetland Delineation Manual,
21 Western Mountains, Valleys, and Coast Regional Supplement).

22 3. A site map setting forth all of the following:

23 a. Surveyed wetland boundaries based upon a delineation by a wetlands specialist;

24 b. Site boundary property lines and roads;

25 c. Internal property lines, right-of-way, easements, etc.;

26 d. Existing physical features of the site including buildings, fences, and other structures,
27 roads, parking lots, utilities, water bodies, etc.;

- 1 e. Contours at the smallest readily available intervals, preferably at two-foot intervals;
- 2 f. Hydrologic mapping showing patterns of surface water movement and known
- 3 subsurface water movement into, through, and out of the site area.
- 4 g. Location of all test holes and vegetation sample sites, numbered to correspond with
- 5 flagging in the field and field data sheets.
- 6 h. ~~The department may require an~~ most recent, dated air photo with overlays displaying
- 7 the site boundaries and wetland delineation.
- 8 4. Location information (legal description, parcel number and address);
- 9 5. Discussion of wetland boundary. The delineation report shall delineate the entire wetland
- 10 boundary. If the wetland extends outside the site, the delineation report shall discuss methods for
- 11 delineation beyond the site if physical access was not granted. Remote mapping methods may be
- 12 used, but this should be noted in the report. ~~all wetland areas within two hundred fifty feet of the~~
- 13 ~~site, but need only delineate those wetland boundaries within the site;~~
- 14 6. General site conditions within one quarter mile of the subject wetland(s), including
- 15 topography, acreage, and surface areas of all wetlands identified in the Kitsap County Wetland
- 16 Inventory Map and water bodies, including ditches and streams; ~~within one quarter mile of the~~
- 17 ~~subject wetland(s);~~
- 18 7. Hydrological analysis, including topography, of existing surface and known significant sub-
- 19 surface flows into and out of the subject wetland(s), and location of the wetland within the
- 20 watershed;
- 21 8. Analysis of the functional values of existing wetland(s), including vegetative, fauna, habitat,
- 22 water quality, and hydrologic conditions;
- 23 9. A summary of proposed activity and potential impacts to the wetland(s);
- 24 10. Recommended wetland category using the Washington State Wetlands Rating System
- 25 Categories (See Chapter 19.800, Appendix "A"), including rationale for the recommendation and
- 26 a copy of the completed Wetland Rating Summary Form with associated figures;
- 27 11. Recommended buffer boundaries, including rationale for boundary locations;

1 12. Site plan of proposed activity, including location of all parcels, tracts, easements, roads,
2 structures, and other modifications to the existing site. The location of all wetlands and buffers
3 shall be identified on the site plan.

4 CM. Administrative Wetland Boundary and Ranking Evaluation.

5 1. The department may delineate and evaluate wetland areas for any proposed single-family
6 dwelling project listed in Chapter 19.200 (Wetlands), unless the applicant wishes to employ a
7 qualified wetland biologist at the applicant's expense, or ~~if such a~~ wetland delineation report is
8 required by the department. Fees may be collected for this determination and evaluation, as
9 specified in Title 21 of the Kitsap County Code.

10 ~~2. Methodology for delineation of the regulated wetland boundary shall be the "plant community~~
11 ~~assessment" procedure, which is described in the Washington State Wetlands Identification and~~
12 ~~Delineation Manual, March 1997, or as amended hereafter.~~

13 23. The wetland boundary shall be field-staked prior to department review and this line shall be
14 depicted on the building site plan application.

15 34. The ~~regulated~~ wetland boundary and ~~regulated wetland~~ buffer shall be identified on all
16 grading, building site, utility or other development plans submitted on the project. Wetland
17 delineation stakes shall remain in place for the duration of the application process and not
18 removed until project completion / final inspection when wetland buffer signs have been reviewed
19 and installed.

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23 **19.700.715 Wetland mitigation report.**

24 Compensatory mitigation shall be required for activities that result in the loss of wetland acreage or
25 functions, in accordance with 19.200.250 (Wetland Mitigation Requirements) .

26 1. A compensatory mitigation plan shall be completed. The applicant shall submit a detailed
27 mitigation plan for compensatory mitigation to the department.

28 2. The detailed mitigation plan shall be prepared, signed, and dated by the wetland specialist to
29 indicate that the plan is in accordance with specifications as determined by the wetland specialist.
30 A signed original mitigation plan shall be submitted to the department.

1 3. Approval of the detailed mitigation plan shall be signified by a critical area Notice to Title,
2 signed by the applicant and department director or designee, and recorded with the Kitsap
3 County Auditor (Appendix E, 19.800). The Notice shall refer to all requirements for the mitigation
4 project.

5 4. The mitigation project shall be completed according to a schedule agreed upon between the
6 department and the applicant.

7 5. Wetland mitigation shall occur according to the approved wetland mitigation plan and shall be
8 consistent with provisions of this chapter and title.

9 6. The wetland specialist shall be onsite during construction and plant installation phases of all
10 mitigation projects.

11 7. Upon completion of construction for the wetland mitigation project, the wetland specialist
12 shall submit an as-built report to the department for review and approval.

13
14 As required by Section [19.200.250](#) (Wetland Mitigation Requirements), a mitigation report plan shall be
15 prepared and. A ~~detailed mitigation plan~~ shall contain the following:

16 A. Cover / Title Page

- 17 1. Project name.
18 2. Reference numbers to other permit applications (Local, State and/or Federal).
19 3. Date of publication.
20 4. Who it was prepared for / contact information.
21 5. Who is was prepared by / contact information.

22 B. Table of Contents, including a list of figures and tables

23 C. Responsible Parties. Provide the names, titles, addresses, phone numbers, and information
24 regarding the professional experience (if applicable) for those involved in the development and
25 mitigation projects. Provide the name of the company or agency, as well as the individuals involved.

- 26 1. Applicant(s).
27 2. Applicant's representative / agent.
28 3. Preparer(s) of the wetland delineation report
29 4. Preparer(s) of the mitigation report, mitigation construction plans and specifications.

1 5. Parties responsible for monitoring, long-term maintenance, and contingency plans. If this is
2 unknown at the time the mitigation report is submitted, provide this information with the
3 monitoring reports.

4 D. Executive summary that ~~which~~ summarizes the project, its potential wetland related impacts, and the
5 proposed mitigation. The executive summary shall ~~to~~ include the following information:

6 1. Applicant Name/Address/Phone.

7 2. Agent/Consultant.

8 3. Description of land use proposal and location.

9 4. Description of the measures taken to avoid and minimize the impacts to the wetland and
10 other aquatic resources.

11 ~~5. Description of impact avoidance and minimization measures.~~

12 56. Description of unavoidable wetland impacts and the proposed compensatory mitigation
13 measures:

14 a. Size (acres);

15 b. Cowardin Wetland classification;

16 c. Hydrogeomorphic (HGM) classification;

17 d. Wetland rating;

18 e. Wetland functions;

19 f. Compensation ratios used.

20 64. Description of mitigation area.

21

22 7. Explanation of other unavoidable impacts to other aquatic resources ~~waters of the state.~~

23 8. Other relevant details, including but not limited to:

24 a. Goals and objectives and monitoring period.

1 b. Proposed improvements to the functions and environmental processes of the larger
2 watershed.

3 c. Proposed buffers for the compensatory mitigation site (minimum and maximum width
4 and total area).

5 EB. Project Description.

6 1. Type of development (existing and proposed land uses).

7 2. Development pProject size.

8 3. Implementation schedule (start date and duration).

9 4. Project location and maps.

10 a. Section, Township, Range

11 b. Water Resource Inventory Area (WRIA)

12 c. Watershed and subwatershed

13 d. Vicinity Map

14 5. Description of the Development Site. ~~Project summary.~~

15 a. Historic and current land uses, zoning designations, and structures on development
16 site and adjacent properties (if known).

17 b. A local area map (zoning, land use, wetlands, other aquatic resources, 100 year
18 floodplain).

19 c. Existing wetlands on or adjacent to the development site. Attach delineation report.

20 d. Other aquatic resources on the site or adjacent properties, noting hydrologic
21 connections. Describe any flooding that affects the development site and the location of
22 the development within the floodplain, where applicable.

23 e. Known historic or cultural resources on the development site.

24 EG. Ecological Assessment of Impact.

- 1 1. Description of the impacts (acreage) and extent of disturbance to wetlands (including
2 acreage/wetland delineation). This includes temporary, indirect, and direct impacts.
- 3 ~~2. Summary of historic and current on-site and nearby land uses (zoning designations).~~
- 4 ~~3. Description of any known cultural resources on the site.~~
- 5 24. Description of the site in context of other wetlands/water bodies.
- 6 35. Description of the water regime.
 - 7 a. Describe the source of water to the wetland being affected by the development project.
8 For multiple sources, estimate the percentage of each.
 - 9 b. Describe the hydrologic regime of the wetland being affected through qualitative
10 estimates of duration and frequency of inundation / saturation.
 - 11 c. Map of the surface and groundwater flowing into the impacted areas with the directions
12 of water flow indicated.
- 13 46. Description of the soils.
 - 14 a. Description of the soil characteristics of the wetland being affected including; soil type
15 and classification; and a description of texture, color, structure, permeability, and organic
16 content.
 - 17 b. Soil survey map (indicate the source of the map).
 - 18 c. Map showing soil sampling locations (typically the location of the soil pits used for
19 delineation).
- 20 57. Description of the plant communities.
 - 21 a. Qualitative descriptions of the different Cowardin (1979) classes at the wetland being
22 affected (including subclass and water regime modifiers). If a forested class is present,
23 also estimate the average age of the canopy species.
 - 24 b. Estimate the relative abundance of dominant and subdominant plants within each
25 Cowardin class (use information collected during routine delineation unless more detailed
26 data are available).

1 c. List of the wetland indicator status of dominant and subdominant species (obligate-
2 OBL, facultative-FAC, facultative wet-FACW)

3 d. Description of the prevalence and distribution of non-native and/or invasive species, if
4 any are present at the wetland being affected.

5 e. General description of upland plant communities within 330 ft (100m) of the wetland
6 being affected, if any.

7 f. List of rare plants and plant communities that are known to occur on the development
8 project site or adjacent properties. If any of these species are observed on the site,
9 include descriptions of the occurrence and any potential impacts to them.

10 68. Description of any fauna using the site. If a biological assessment was prepared for the
11 project, the report may simply be referenced in this mitigation report.

12 a. Description of any animals (including amphibians) using the wetland being affected or
13 its buffer. Especially note evidence of past or present beaver use. In most cases, a list of
14 species likely to use the habitats on the site is sufficient, with brief descriptions of the
15 existing habitats.

16 b. Include a description of endangered, threatened, sensitive, and candidate animal
17 species that are known to occur in the general areas (distance depends on species) of
18 the development site, as well as observations of such species. Also, include those listed
19 as "Priority Species" or "Species of Concern" by the Washington Department of Fish and
20 Wildlife.

21 79. Landscape position and geomorphology.

22 a. Class of the wetland being affected by the development project. Use the
23 hydrogeomorphic classification (class and subclass) to describe its position in the
24 watershed.

25 b. Qualitative description of the functions performed by the wetland affected relative to
26 the position in the watershed. This may include its role in attenuating flooding, as a
27 corridor for wildlife between different region of the watershed, as part of a regional flyway,
28 or in improving water quality regionally.

29 840. Description of functions provided.

1 a. Description of the functions provided by the wetland being affected and to what level
2 they are performed. The method used to assess functions, varies depending on the scale
3 of the impact (size/type), the complexity of the wetland, etc. The same method must be
4 used for assessing the impact site and the mitigation site, as well as for monitoring.

5 b. Qualitative or quantitative description of the characteristics that enable the wetland
6 being affected to perform specific functions, depending on the method used.

7 c. Description of the sampling and assessment methods used.

8 d. Documentation of the training of professionals assessing the functions.

9 e. List of the references consulted.

10 944. Wetland category rating and buffer requirements.

11 a. The category of the wetland being affected using the Washington State rating system
12 for western Washington, as revised.

13 b. Copies of the original data sheets used to rate the wetland.

14 c. Size (width) of the undeveloped upland buffer within 330 feet (100m) of the wetland
15 being affected by the development project.

16 d. Qualitative description of the dominant vegetation in the buffer and the physical
17 structure of the plants in it (e.g., deciduous forest, coniferous forest, and prevalence of
18 snags and downed woody debris.)

19 e. Maps of the buffer areas and the vegetation types.

20 1042. Information on water quality, where applicable.

21 a. Description of any known or observable water quality problems at the development site
22 and whether they will continue after the development project is completed. Basic water
23 quality parameters that should be considered include dissolved oxygen (DO), pH and
24 alkalinity, temperature, turbidity/suspended solids/sediment accretion, nutrients, fecal
25 coliform, and heavy metals.

26 b. Assessment of whether the development project is expected to worsen or improve
27 existing water quality conditions.

1 GD. Mitigation Approach.

2 1. Mitigation sequencing followed.

3 a. Descriptions of the specific steps taken to avoid and minimize impacts to the maximum
4 extent practicable. Larger projects may need to include an Alternatives Analysis in an
5 appendix.

6 b. Description of the specific steps to minimize wetland impacts to the site or reduce
7 impacts over time (timing of project, redesign of project, orientation and/or location).
8 Where applicable, note how proposed stormwater treatment facilities may reduce water
9 quality impacts.

10 c. Discussion of wetland rectification strategies. Where applicable note how temporary
11 impacts, occurring during implementation of the development project, could be rectified
12 through restoration and maintenance activities.

13 d. Notation of the size and type of compensation being proposed. Include a description of
14 the mitigation ratios and why they are adequate to compensate for the lost or degraded
15 area and functions. A full description of the compensatory mitigation should be provided
16 as described in the following sections.

17 2. Goals and objectives. Identify the goal or goals of the compensatory mitigation project.

18 3. Mitigation strategy. Describe in general terms the strategies (actions) that will be use to
19 achieve the goals. ~~Performance standards to assess each objective.~~

20 HE. Proposed Mitigation Compensation Site.

21 1. Site description (location, size, maps):

22 a. Ownership;

23 b. Total area of mitigation site (acres);

24 c. Current/past land use. Include, also, a description of the constraints at the mitigation
25 site that could affect the success of the mitigation project, and strategies used to address
26 each constraint.

- 1 2. Site selection rationale. Discuss how the site fits with the environmental needs in the
2 watershed. If watershed or regional planning efforts exist for the area, explain how the selection
3 of the compensation site is consistent with those plans.
- 4 3. Existing/baseline ecological conditions of the mitigation ~~compensation~~ site:
- 5 a. ~~Acreeage of existing wetlands and uplands;~~
- 6 b. ~~National Wetland Inventory or local jurisdiction wetland mapping of the site;~~
- 7 ae. Summary of historic and current on-site and nearby land uses (zoning
8 designations);
- 9 i. Historic land uses and structures on the mitigation site and adjacent properties,
10 if known;
- 11 ii. Current land uses and structures on the mitigation site;
- 12 iii. Current land uses and zoning designations of adjacent properties;
- 13 iv. A local area map showing land uses and zoning designations.
- 14 bd. Description of any known cultural resources on the site. If a separate report on
15 cultural/historic resources was prepared, it may be referenced in the mitigation report.
- 16 i. List of structures listed or eligible for historic registers;
- 17 ii. Brief description of resources having archaeological or cultural significance.
- 18 ce. Description of the site in context of other wetlands/water bodies. Any existing
19 wetland boundaries shall be summarized here, but may reference the delineation report.
- 20 i. A topographic base map (scale 1 in. = 400 ft. or smaller) outlining the
21 boundaries of the wetlands that are under state, federal, or local jurisdiction;
- 22 ii. Name of the delineation manual and method used. Included date field work
23 was performed, field data sheets documenting the data collected on the three
24 criteria (hydrology, vegetation, soils);
- 25 iii. Provide the total area of wetlands on the mitigation site, identifying the area
26 (acres) of individual wetlands.

- 1 d. Description of other aquatic resources on the mitigation site and adjacent properties.
- 2 i. Description of the other aquatic resources (e.g., streams, lakes, tidal waters) on
- 3 the mitigation site and adjacent properties, noting hydrologic connections among
- 4 them and with existing wetlands.
- 5 ii. Include and/or reference a map showing the approximate location of all aquatic
- 6 resources.
- 7 iii. Description of any flooding that affects the mitigation site and location of the
- 8 development within the floodplain, where applicable, indicating on a map whether
- 9 the project is located within the mapped 100-year floodplain).
- 10 f. Description of the water regime.
- 11 i. Description of the source of water to the mitigation site. If several sources are
- 12 present, estimate the percentage contribution from each;
- 13 ii. Description of the existing water regimes at the mitigation site (ie., rough,
- 14 qualitative estimate of duration and frequency of inundation and/or saturation.
- 15 iii. Map of the surface and groundwater flowing into the mitigation area with the
- 16 directions of water flow indicated.
- 17 g. Description of the soils;
- 18 i. Description of the soil characteristics of the mitigation site including; soil type
- 19 and classification; and a description of texture, color, structure, permeability, and
- 20 organic content. Use soil surveys confirmed by representative soil samples;
- 21 ii. Soil survey map (indicate source);
- 22 iii. Map showing soil sampling locations (typically the location of the soil pits used
- 23 for delineation).
- 24 h. Description of the plant communities;
- 25 i. Qualitative descriptions of the different Cowardin (1979) classes at the
- 26 mitigation site (include subclass and water regime modifiers). If a forested class
- 27 is present, also estimate the average age of the canopy species;

1 ii. Estimate the relative abundance of dominant and subdominant plants within
2 each Cowardin class (use information collected during routine delineation unless
3 more detailed data are available);

4 iii. List of the wetland indicatory status of dominant and subdominant species
5 (obligate-OBL, facultative-FAC, facultative wet-FACW);

6 iv. Description of the prevalence and distribution of non-native and/or invasive
7 species, if any are present;

8 v. General description of upland plant communities within 330 ft (100m) of the
9 mitigation site, if any;

10 vi. List of rare plants and plant communities that are known to occur on the
11 mitigation site or adjacent properties. If any of these species are observed on
12 the site, include descriptions of the occurrence and any potential impacts to
13 them.

14 i. Description of any fauna using the site if a biological assessment was prepared for
15 the project, the report may simply be referenced in this mitigation plan.

16 i. Description of any animals (including amphibians) using the wetland being
17 affected or its buffers. Especially note evidence of past or present beaver use. In
18 most cases, a list of species likely to use the habitats on the site is sufficient, with
19 brief descriptions of the existing habitats.

20 ii. Include a description of endangered, threatened, sensitive, and candidate
21 animal species that are known to occur in the general areas (distance depends
22 on species) of the development site, as well as observations of such species.
23 Also, include those listed as "Priority Species" or "Species of Concern" by the
24 Washington Department of Fish and Wildlife.

25 j. Landscape position and geomorphology;

26 i. Class of any existing wetlands on the mitigation site. Use hydrogeomorphic
27 classification (class and subclass) to describe the position in the watershed;

28 ii. Qualitative description of the functions performed by the mitigation site relative
29 to the position in the watershed. This may include its role in attenuating flooding.

1 as a corridor for wildlife between different regions of the watershed, as part of a
2 regional flyway, or in improving water quality regionally.

3 k. Description of functions provided.

4 i. Description of the functions provided by the wetland being affected and to what
5 level they are performed. The method used to assess functions, varies
6 depending on the scale of the impact (size/type), the complexity of the wetland,
7 etc. The same method must be used for assessing the impact site and the
8 mitigation site, as well as for monitoring;

9 ii. Qualitative or quantitative description of the characteristics that enable the
10 wetland being affected to perform specific functions, depending on the method
11 used;

12 iii. Description of the sampling and assessment methods used;

13 iv. Documentation of the training of professionals assessing the functions; and

14 v. List of the references consulted.

15

16 l. Wetland rating of any existing wetlands, buffer requirements.

17 i. The category of the wetland being affected using the Washington State rating
18 system for western Washington, as revised;

19 ii. Copies of the original data sheets used to rate the wetland;

20 iii. Size (width) of the undeveloped upland buffer within 330 feet (100m) of the
21 mitigation site. Note how much of the existing buffers extend off-site;

22 iv. Qualitative description of the dominant vegetation in the buffer and the
23 physical structure of the plants in it (e.g., deciduous forest, coniferous forest, and
24 prevalence of snags and downed woody debris.); and

25 v. Maps of the buffer areas and the vegetation types.

26 m. Information on water quality, where applicable.

1 i. Description of any known or observable water quality problems at the mitigation
2 site and whether they will continue after the mitigation project is completed. Basic
3 water quality parameters that should be considered include dissolved oxygen
4 (DO), pH and alkalinity, temperature, turbidity/suspended solids/sediment
5 accretion, nutrients, fecal coliform, and heavy metals.

6 ii. Assessment of whether the mitigation project is expected to worsen or improve
7 existing water quality conditions.

8 4. Site constraints.

9 I.F. Preliminary Site Plan.

10 1. A qualitative description of the water regime and Explanation of how adequate hydrology will
11 be provided to support a wetland over the long term.

12 2. Discussion of how project was designed to provide the proposed functions, including
13 description of the hydrologic data that will support the proposal. Provide a rationale for each
14 proposed function and describe the design features that will contribute to providing the function.

15 3. Schematic drawings:

16 a. Change in topography:

17 ba. Hydrologic (water control) structures;

18 cb. Soils;

19 de. Vegetation distributions;

20 ed. Habitat attributes (structures) and their location;

21 fe. Existing and proposed bBuffers.

22 4. Section drawings showing relationship of topography to water regime and vegetation.

23 J.G. Final Site Plan/Design.

24 1. Site survey and topography.

1 a. Site surveys are needed when the mitigation project includes changes to ground
2 elevations. If no changes to grade are proposed, then a simpler map of the site will be
3 sufficient showing property and wetland boundaries, landmarks, scale, site features, and
4 other existing conditions;

5 b. Orientation and scale (north arrow; typically scales are 1 inch = 25 or 50 ft.);

6 c. Existing and proposed elevation contours. Contours at one-foot intervals are typically
7 sufficient for most mitigation reports. Contours at 6-inch intervals may be desirable in
8 certain cases where the seasonal fluctuation of water levels is low or in specific areas on
9 the mitigation site where it is critical to have a high level of accuracy;

10 d. Spot elevations for low points, high points and structures (culverts, hydraulic controls,
11 utilities, and roads);

12 e. Property boundaries;

13 f. On-site wetland boundaries (including all wetlands existing and after mitigation);

14 g. Survey benchmarks;

15 h. Location and elevation of soil borings or test pits and water level sampling devices;

16 i. Location of soils to be stockpiled, if any;

17 j. Description of methods of erosion control and bank stabilization, if applicable;

18 k. Buffer areas proposed for the mitigation site and their boundaries.

19
20 2. Water regime including:

21 a. Description of the proposed frequency and duration of flooding, inundation, or soil
22 saturation;

23 b. Description of the proposed groundwater and surface water sources and
24 characteristics;

25 c. Description of the elevation of the water table and dates when measured (note if table
26 is perched).

1 d. Engineering drawings of any proposed water control structures;

2 ~~b. Source of water (volume, velocity, hydro period).~~

3 3. Soil amendments.

4 a. Soil logs from an on-site evaluation. Depending on proposed depth of grading, soil
5 information may come from hand-dug shallow pits or from deeper samples that are
6 typically obtained with small drilling rigs. As a minimum, the shallow soil profile should be
7 described even if no changes in site elevations are proposed.

8 b. Description of how the soil characteristics will be affected by the mitigation activities.

9 4. Landscape plans. For most projects, planting plans should be prepared by a landscape
10 architect with assistance from a wetland or plant ecologist. In some cases where very simple
11 planting plans are proposed for small areas, the level of expertise provided by a landscape
12 architect may not be needed. The list below includes the minimum information needed for
13 planting plans. ÷

14 a. Section dDrawing of proposed plant distribution, density and spacing, in relation to
15 topography and water levels. The projected average water level during winter wet
16 season, early growing season, and lat summer dry season should be displayed;

17 b. List of plant materials (common and Latin names, sizes, sources, quantity, etc).

18 ~~c.~~ Location of existing or proposed upland buffers;

19 d. Description of the methods that will be used to control invasive and exotic plants if they
20 exist in the vicinity;

21 e. A plan for irrigating the plants until they are established including method, frequency,
22 and amount of water;

23 ~~e.~~ ~~Section drawings showing relationship of topography to vegetation;~~

24 ~~f.~~ Erosion control;

25 ~~g.~~ Map of the lLocation of habitat structures or habitat features;

26 ~~h.~~ Location of upland buffers;

1 ig. Description of the sSoil amendments, including use and sources of mulch.

2 5. Construction specifications.

3 ~~KH.~~ Monitoring Plan. A monitoring plan describes the methods used to collect and analyze data needed
4 to show that performance standards are being met. They are also used to track environmental changes at
5 mitigation sites throughout the monitoring period. Monitoring plans will vary depending on mitigation
6 objectives and performance standards, but all must be designed to assess the quantitative or qualitative
7 performance standards. The methods used for monitoring specific variables generally need to be the
8 same as those used in establishing baseline data at the wetland affected by the development project.
9 Monitoring plans will typically include the elements described below.

10 1. Variables to be measured (plant survival, canopy cover, plat diversity, water levels and
11 duration or inundation/saturation);

12 2. Sampling methods for each variable;

13 3. A map of the sampling locations for each variable or a description of the methods that will be
14 used to determine sampling locations for each monitoring event. Permanent sampling locations
15 may be the best choice for some variables, but for others, such as percent cover of vegetation,
16 sampling locations may be varied through random selection or other methods for each monitoring
17 event. The map should include clearly identifiable markers on the ground to act as reference
18 points for orientation. These may include roads, benchmarks, and permanent structures;

19 4. Laboratory methods to be used, if applicable;

20 5. Provide a timetable for reporting monitoring results to the agencies. It is preferred to tie the
21 specific dates to the start of construction;

22 ~~Vegetation.~~

23 2. ~~Water regime.~~

24 3. ~~Soils.~~

25 4. ~~Fauna.~~

26 5. ~~Functions and values.~~

27 6. ~~Development of habitat structure.~~

1 ~~7. Water quality.~~

2 ~~8. Buffers.~~

3 ~~9. Timetable for reporting monitoring results.~~

4 L. Site Protection.

5 1. Physical site protection.

6 2. Legal protection (deed restriction, conservation easement). Provide copies.

7 3. Buffers.

8 M. Maintenance and Contingency Plans. The need for activities such as inspecting irrigation systems,
9 replacing plants, weeding, preventing or managing herbivory, removing trash, and controlling erosion
10 (and the funding to conduct them) should be anticipated based on the site characteristics, level of public
11 access to the mitigation site, and typical uses of adjacent areas. Frequency of the activities may changes
12 through the monitoring period, so maintenance plans should be written with room for flexibility.
13 Contingency plans contain corrective measures that will be taken if monitoring indicates that performance
14 standards are not being met.

15 1. Maintenance schedule for each activity. Include a description of and reason for each
16 maintenance activity planned.

17 2. Contingency plan:

18 a. Description of initiating procedures. If a performance standard is not met within the
19 time specified in the mitigation plan the permittee will be required to complete the
20 activities in the following list

21 i. An analysis of the causes of failure;

22 ii. Description of the proposed corrective actions;

23 ii. Timeframe for implementing these actions.

24 b. Description of a contingency fund Funding. A contingency fund should be
25 established for use if any corrective actions are necessary. The description should
26 include what funds will be available for planning, implementing and monitoring any

1 contingency procedures that may be required to achieve the mitigation goals. Generally,
2 the fund amount should equal 20% of the total cost of mitigation associated with the
3 project.

4 c. Responsible parties.

5 ~~NK.~~ Implementation Schedule.

6 1. ~~Construction schedule.~~ sequence and time schedule for project start, grading, water
7 diversions, plantings, completion etc. The applicant must work with the department to
8 develop an agreed construction schedule for the mitigation project. Delays in
9 implementing the construction of the mitigation site may result in an increase in the
10 mitigation required and enforcement actions.

11 2. Completion. Acknowledgement that the wetland specialist will submit an as-built report to
12 the department for review and acceptance.

13 ~~2. Monitoring schedule.~~

14 ~~3. Reporting schedule.~~

15 ~~4. Financial assurance.~~

16 ~~OL.~~ Permit Conditions. Any compensation project prepared pursuant to this section and approved by
17 the department shall become part of the application for the permit. The department will require an
18 additional growing season year for approval of mitigation plan unless the applicant requests an inspection
19 for final monitoring year during the final monitoring year assessment.

20 ~~PM.~~ Performance Bonds and Demonstration of Competence. A demonstration of financial resources,
21 administrative, supervisory, and technical competence and scientific expertise of sufficient standing to
22 successfully execute the compensation project shall be provided. A compensation project manager shall
23 be named, and the qualifications of each team member involved in preparing the mitigation plan and
24 implementing and supervising the project shall be provided, including educational background and areas
25 of expertise, training and experience with comparable projects. A performance bond, assignment of
26 savings, or other like security will be required by the department in an amount necessary to provide for
27 future site monitoring and possible corrective action required for compensatory mitigation projects.
28 Typically, this amount is one and a half times the estimated cost of mitigation. This bond, assignment of
29 savings, or the security will be released no ~~earlier~~ later than five years after completion of the mitigation
30 project. If the approved mitigation is not completed or fails to meet its success standards, the property

1 owner must agree to a property access release form, with forfeiture of funds after the specified monitoring
2 period.

3 ~~QN.~~ Waiver. The department may waive portions of a wetland mitigation ~~this report if, in its opinion,~~
4 there is adequate information available on the site to determine its impacts and appropriate measures.

5 ~~RQ.~~ List of Qualified Consultants. The department shall establish a list of qualified consultants to
6 prepare mitigation plans.

7

8

9 **19.700.720 Habitat management plan (HMP).**

10 A. A HMP is a site investigation report to evaluate the potential presence or absence of a regulated fish
11 or wildlife species or habitat affecting a subject property and proposed development. This report shall
12 identify how development impacts to fish and wildlife habitat from a proposed project will be mitigated.
13 WDFW Priority Habitat and Species (PHS) management recommendations, dated May 1991 and all
14 applicable volumes and revisions, or the National Bald Eagle Management Guidelines ~~bald eagle~~
15 ~~protection rules outlined in WAC 232-12-292, as now or hereafter amended,~~ may serve as guidance for
16 this report.

17 B. The HMP shall contain a map prepared at an easily readable scale, showing:

- 18 1. The location of the proposed development site;
- 19 2. The relationship of the site to surrounding topographic, water features, and cultural features;
- 20 3. Proposed building locations and arrangements;
- 21 4. A legend ~~that which~~ includes a complete legal description, acreage of the parcel, scale, north
22 arrow ~~reas~~, and date of map revision; and
- 23 5. A WDFW PHS Data Base search that is no older than one year from the project submittal.

24 C. The habitat management plan shall also contain a report which describes:

- 25 1. The nature and intensity of the proposed development;

1 2. An analysis of the effect of the proposed development, activity or land use change upon the
2 wildlife species and habitat identified for protection; and

3 3. A discussion on how the applicant proposes to avoid, minimize and mitigate any adverse
4 impacts to fish and wildlife habitats created by the proposed development. (See Sections
5 19.700.710 and 19.700.715, Wetland Report/Wetland Mitigation Plan requirements.).

6 D. Examples of mitigation measures to be included in the HMP report, include, but are not limited to:

7 1. Establishment of Buffer Zones. When applicable, the order of sequence for buffer reductions
8 shall be as follows ~~methods for buffer reduction may include the following:~~

9 a. Reduction of building setback;

10 b. Use of buffer averaging maintaining one hundred percent of the buffer area under the
11 standard buffer requirement;

12 c. Reduction of the overall buffer area by no more than twenty-five percent of the area
13 required under the standard buffer requirement;

14 d. Enhancement of existing degraded buffer area and replanting of the disturbed
15 buffer area;

16 e. The use of alternative on-site wastewater systems in order to minimize site clearing;

17 f. Infiltration of stormwater where soils permit; and

18 g. Retention of existing native vegetation on other portions of the site in order to offset
19 habitat loss from buffer reduction.

20 2. Preservation of native plants and trees that is essential to maintaining habitat function,
21 including connection to existing wildlife corridors;

22 3. Limitation of access to habitat areas;

23 4. Seasonal restriction of construction activities; and

24 5. Establishing phased development requirements and/or a timetable for periodic review of the
25 plan.

1 E. A HMP shall be prepared by a fish or wildlife biologist, as defined at Sections 19.150.330 and
2 19.150.73020. For proposed single-family dwelling construction, the department may complete the plan.
3 Fees may be collected for this plan as specified in Title 21 of the Kitsap County Code. ~~Where this plan is~~
4 ~~required for the protection of an eagle habitat, the eagle habitat management plan shall meet bald eagle~~
5 ~~management rules and will normally be prepared by the WDFW.~~

6

7 **19.700.725 Geological Assessments ~~Geotechnical report and geological report.~~**

8 Whenever development is proposed in a potentially geologically hazardous area or shoreline setback as
9 defined in Chapters 19.300 and 19.400 of this title, or when the department determines that additional
10 soils and slope analysis is appropriate on a particular site, the applicant is required to submit a geological
11 assessment. This assessment may be in the form of a letter, a geological report, or geotechnical report,
12 as determined in 19.400. ~~These assessments or geological report that~~ evaluates the surface and
13 subsurface soil conditions on the site.

14 A. Qualifications.

15 1. Geotechnical reports shall be prepared by a geotechnical engineer (defined at Section
16 19.150.370).

17 2. Geological reports or letters may be prepared by a licensed geologist (Section 19.150.365), or
18 geotechnical engineer (Section 19.150.370).

19 B. General Provisions. Report recommendations for earthwork, clearing or siting structures in
20 geologically hazardous areas shall be based on existing site conditions rather than measures that have
21 not yet been successfully approved, designed, or constructed (e.g., slope recontouring, slope retaining
22 walls, vegetation improvements, bulkheads, etc.). Shoreline bulkheads and retaining walls may only be
23 utilized only as an engineering solution where it can be demonstrated that:

24 1. An existing residential structure or other permitted existing public or private structures or public
25 facilities such as roads or highways, cannot be safely maintained without such measures;

26 2. Other non-structural methods of beach stabilization have been considered and determined
27 infeasible; and

28 3. The resulting stabilization structure is the minimum necessary to provide stability for the
29 existing structure and appurtenances.

1 Minor repair activities on existing permitted structures (e.g., those that do not involve design
2 modifications, changes in structure location, and/or demolition or abandonment of failed structure and
3 replacement with new structure) are not subject to the following project submittal standards.

4 C. Geological Report Submittal Standards. A Geological Report is required for site development
5 proposals that involve development activity or the installation of structures within a geologically hazardous
6 area or shoreline setbacks, or as otherwise required pursuant to Chapters 19.300 and 19.400 of this title,
7 but do not involve or require engineering design recommendations. The following minimum information is
8 required:

- 9 1. Site information regarding the Kitsap County Shoreline Environment Designation and critical
10 areas designations that affect site features.
- 11 2. Description of surface and subsurface conditions, including ground materials, vegetation,
12 surface drainage, groundwater, and a preliminary geologic hazard assessment which includes the
13 locations of structures and the identification of the slope and/or coastal processes occurring at the
14 site and factors that contribute to them;
- 15 3. Review of available site information, literature, and mapping;
- 16 4. Detailed description of slope and other topographic features; and
- 17 5. Conceptual siting of structures and general recommendations, which include methods and
18 practices that avoid and/or reduce slope and shore impacts. Minimum recommendations should
19 include upland and slope drainage control, groundwater control, site vegetation management, and
20 erosion control.

21 D. Geotechnical Report Submittal Standards. A geotechnical report is required when the department or
22 a Geological Report determines that a site development proposal requires additional site information such
23 as engineering design recommendations, slope stability analysis, subsurface exploration and testing,
24 coastal process analyses, or construction recommendations. Depending on the level of activity proposed,
25 the report will either be a more limited geotechnical slope evaluation report or a full geotechnical design
26 investigation report as described below.

- 27 1. Geotechnical Slope Evaluation Report. A geotechnical slope evaluation report is required when
28 slope stability analyses are confined to addressing only existing surface and/or drainage conditions,
29 including the relationship of natural and constructed slope features to proposed changes in

1 environmental conditions such as drainage, vegetation removal and slope geometry. The following
2 minimum information is required:

- 3 a. All the information required under subsection C, above (Geological Report);
- 4 b. Subsurface data, exploration logs, and testing data, when required by the geotechnical
5 engineer;
- 6 c. Estimated (or surveyed) site plan with ground surface profiles and typical cross-sections;
- 7 d. Relative location of Ordinary High Water (OHW) on the surface profile and cross-
8 sections, which includes Mean Higher High Water (MHHW) for the site location, where
9 applicable;
- 10 e. Soil strength parameters;
- 11 f. Stability analysis of existing site;
- 12 g. Analysis of the relationship of vegetation and slope stability; and
- 13 h. Conceptual site development plans and cross-sections.

14 2. Geotechnical Design Investigation Report. A geotechnical design investigation report is
15 required for site development activities that propose design and construction measures at the slope
16 crest, face and/or toe. If a designed structure does not impact slope stability or coastal processes,
17 the report will not be required to perform all items listed under this section, as long as each item is
18 addressed and the report details why a particular item does not apply. The report shall include all
19 items considered necessary by the engineer to fully address the engineering design requirements
20 of the site. The following minimum information is required:

- 21 a. All the information required under subsection (D)(1), above (Geotechnical Report);
- 22 b. Geotechnical requirements and measures to reduce risks;
- 23 c. Geotechnical criteria used for any designs including all critical dimensions, lateral earth
24 pressures, soil bearing pressures, location and limits of structures on or near the slope,
25 maximum constructed slope angles, minimum soil reinforcement embedment, soil compaction
26 requirements, and structure heights;

- 1 d. Temporary construction slope stability recommendations and analysis of proposed final
- 2 site stability measures;
- 3 e. Required construction specifications and construction monitoring procedures;
- 4 f. Revegetation and surface and groundwater management requirements;
- 5 g. Evaluation of erosion potential, recommendations for erosion avoidance and any
- 6 proposed mitigation measures;
- 7 h. Detailed tabulation of all basic geotechnical engineering test results pertinent to design
- 8 and construction, and when required for clarification, detailed examples of tests conducted for
- 9 the project; and
- 10 i. Information outlined in the geotechnical design investigation report site evaluation
- 11 checklist (See subsection (F), below).

12 E. Additional Requirements for Sites in Geologically Hazardous Areas. When a project site is located
13 within a landslide-prone geologically hazardous area, as classified in Section 19.400.4105, the following
14 additional project submittal requirements shall apply:

- 15 1. Erosion Control Information. An evaluation of the erosion potential on the site during and after
- 16 construction is required. The evaluation shall include recommendations for mitigation, including
- 17 retention of vegetative buffers and a revegetation program. The geotechnical engineer shall provide
- 18 a statement identifying buffer areas at the top or toe of a slope based on geotechnical site
- 19 constraints and the impacts of proposed construction methods on the erosion potential of the slope.
- 20 2. Seismic Information. The geotechnical engineer shall submit a statement that the design
- 21 criteria consider the one-in-one-hundred-year seismic event (an earthquake ground motion that has
- 22 a 40 percent probability of exceedance in 50 years). Calculations of soil bearing capacity, general
- 23 soil stability, and wall lateral earth pressures shall be adjusted to reflect a one-in-100 year seismic
- 24 event and the structural plans for the project shall be reviewed by the geotechnical engineer for
- 25 consistency with these design criteria.

26 Analysis for the one-in-one-hundred-year seismic event shall be based on a near crustal event having an
27 assumed magnitude of 6.5 and occurring directly below the site. Based on regional studies performed by
28 others, the department will allow the use of the following minimum general values of horizontal peak
29 ground accelerations for this event:

1 a = 0.2g for fill, alluvial soils

2 a = 0.17g for till, firm glaciated soils

3 a = 0.15g for rock.

4 The appropriateness of the above accelerations shall be confirmed by the geotechnical engineer based
5 on the actual site characteristics. Reduction in the above values may be considered when supported by
6 the appropriate analytical evidence. Slope stability, lateral pressures, and liquefaction of the site shall be
7 assessed by using subsurface soil, rock and groundwater conditions, as well as the seismic parameters
8 discussed above.

9 3. Recommendations on Relative Site Stability. The geotechnical engineer shall make
10 recommendations as to which portion of the site are the least prone to instability and the preferred
11 location of the structure. The limits of any area proposed for grading activity shall be identified.

12 4. Construction Season Limitation. In general, no excavation will be permitted in landslide-prone
13 geologically hazardous areas during the typically wet winter months. When excavation is proposed,
14 including the maintenance of open temporary slopes, between October 1 and April 30, technical
15 analysis shall be provided to ensure that no environmental harm, threat to adjacent properties, or
16 safety issues would result. In addition, recommendations for temporary erosion control and
17 shoring/mitigating measures shall be provided. The technical analysis shall consist of plans
18 showing mitigation techniques and a technical memorandum from the geotechnical engineer.

19 5. Revisions to Geotechnical Report. Further recommendations shall be provided by the
20 geotechnical engineer should there be additions or exceptions to the original recommendations
21 based on the plans, site conditions, or other supporting data. If the geotechnical engineer who
22 revises the plans and specifications is not the same engineer who prepared the geotechnical
23 report, the new engineer shall, in a letter to the department, express his or her agreement or
24 disagreement with the recommendations in the geotechnical report and state whether the plans and
25 specifications conform to his or her recommendations.

26 6. Plan and Specification Review. The geotechnical engineer shall submit a statement that in his
27 or her judgment, the plans and specifications (if prepared by others) conform to the
28 recommendations in the geotechnical report and that all portions of the site which are disturbed or
29 impacted by the proposed development have appropriate measures or specifications that permit
30 construction to occur while addressing slope stability so that the work does not create additional

1 risk. The statement shall also indicate whether or not a relative gain in slope stability will be
2 achieved after construction is complete.

3 7. Construction Inspection. A final inspection report shall be provided by the geotechnical
4 engineer stating that construction has or has not implemented the design recommendations of the
5 geotechnical report, and evaluating of any deviation from the design recommendations.

6 F. Geotechnical Design Investigation Report – Site Evaluation Checklist. The following are general
7 report guidelines for geotechnical design investigation reports. The following guidelines are not intended
8 to be all-inclusive. It is the responsibility of the geotechnical engineer to address all factors, which in their
9 opinion are relevant to the site. The checklist information shall be included as part of the geotechnical
10 design investigation report. All items listed below must be addressed in the report. Information shall be
11 provided for those items, which are not relevant to a given site to demonstrate why the items are not
12 applicable.

13 1. Project Information:

14 a. Site Owner Name;

15 b. Project Proponent Name;

16 c. Shoreline Environment Designation (where applicable); and

17 d. Critical Areas Ordinance (CAO) designations affecting site features.

18 2. Project Description:

19 a. Description of proposed structures, site improvements, and adverse impact avoidance
20 and reduction methods.

21 b. Location and total area of the construction zone.

22

23 **19.700.730 Hydrogeological report.**

24 The report shall address the impact the proposed land use will have on both the quality and quantity of
25 the water transmitted to the aquifer.

26 A. The report shall be submitted to the department and shall address, at a minimum, the following
27 criteria:

- 1 1. Surficial soil type and geologic setting;
- 2 2. Location and identification of wells within 1,000 feet of the site;
- 3 3. Location and identification of surface water bodies and springs within 1,000 feet of the site with
- 4 recharge potential;
- 5 4. Description of underlying aquifers and aquitards, including water level, gradients and flow
- 6 direction;
- 7 5. Available surface water and groundwater quality data;
- 8 6. Effects of the proposed development on water quality;
- 9 7. Sampling schedules required to assure water quality;
- 10 8. Discussion of the effects of the proposed development on the groundwater resource;
- 11 9. Recommendations on appropriate BMPs (Best Management Practices) or mitigation to assure
- 12 no significant degradation of groundwater quality; and
- 13 10. Other information as required by the Kitsap Public County Health ~~District~~.
- 14 11. The report shall also address the types of pesticides, herbicides and fertilizers that can safely
- 15 be used for the care of landscaping proposed by the applicant.

- 16 B. The hydrogeologic report shall be prepared by a professional geologist/hydrologist or by a soil
- 17 scientist with a strong background in geology (See Section 19.150.365).

- 18 C. Applications for development or operations with underground storage of petroleum products will be
- 19 processed using the appropriate procedure as specified in existing Kitsap County ordinances.

- 20 D. Analysis for a specific parcel(s), using the criteria outlined below, will be employed to confirm if the
- 21 soils present require a recharge area designation. Data collection will include, at a minimum, six soil logs
- 22 to a depth of ten feet (or to a depth four feet below the lowest proposed excavation point whichever is
- 23 greater) for each acre in the parcel(s) being evaluated. At least one well, two hundred feet or greater in
- 24 depth with an adequate drilling report, must be available within one mile. The associated data shall be
- 25 analyzed and included in the hydrogeologic report to determine the presence of highly permeable soils
- 26 with the recharge area designation.

1 For development proposals within aquifer recharge areas of concern, the hydrogeological report may be
2 based on quarter-quarter section basis where the number of wells within a half-mile radius is thirty-six or
3 more. To facilitate computer analysis, the evaluation may be done on a quarter-quarter section basis
4 using the quarter-quarter section in which a parcel of interest is located and all the surrounding quarter-
5 quarter sections, in place of the half-mile circle.

6