



KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

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Jeffrey Rowe, Acting Director

STAFF REPORT and INFORMATION FOR THE HEARING EXAMINER

Report Date: April 6, 2016

Application Submittal Date: January 25, 2016

Hearing Date: April 14, 2016

Application Complete Date: January 25, 2016

Project: Manchester Pump Station Retrofit, Beach Transport-line Rehabilitation and Shoreline Stabilization Project

This staff report was prepared by Steve Heacock, Environmental Planner, based on information available up until the time the report was prepared. New information relevant to review of this application may become available prior to the hearing or at the hearing. Staff may wish to change their analysis based upon that new information, and reserves the right to do so.

Project Summary: The Department of Community Development is recommending approval of the shoreline substantial development permit (SSDP) and the shoreline conditional use permit (SCUP), with conditions, of the applicant's request to upgrade Pump Stations (PS) 45, 46, and 47; associated beach line rehabilitation and appurtenance facilities; in Manchester Washington. The proposal includes hard armoring adjacent to relocation sites for PS- 45 and PS-46 with a net increase in 477 sq. ft. of intertidal restoration upon removal of the pump stations from the intertidal zone. The armoring will include 35 LF and 50 LF of new armoring to protect the relocated pump stations and appurtenances. The armoring is reviewed with the SCUP. This proposal is located within the public right of way or sewer line easement areas, described as follows:

- PS-45 is a beach line pump station located at the easternmost portion of East Daniels Loop. The pump station conveys sewage directly west approximately 250 lineal feet (LF) through a 4-inch diameter force main and discharges into a gravity manhole in east Daniels Loop.
- PS-46 is a beach line pump station located at the end of East Caraway Road. The pump station pumps nearly vertical approximately 20 ft.) through a 4-inch diameter force main and discharges to an adjacent beachfront manhole.
- PS-47 is a beach line pump station located at the end of East Hemlock Street. The pump station conveys sewage directly west (approximately 210 ft.) through a 4-inch diameter force main into a gravity manhole located at the intersection of Nubling Avenue East and East Hemlock Street.
- In addition to the described pump stations, approximately 3,300 LF of existing transport beach lines will be restored using a cured-in-place pipe (CIPP) liner applied from existing manholes, reconnecting into existing side sewers.
- Lastly, nine existing beach-line manholes will be repaired and retrofitted, as needed. These manholes are located within the intertidal zone and associated sub-beach transport line. The manholes are required for maintenance purposes, and may be elevated to provide flood protection for future sea level advances.

Permit Number: 16 00278 SSDP and 16 00291 SCUP

Type of Application: Shoreline Substantial Development Permit and Shoreline Conditional Use Permit

Project Request: The Kitsap County Wastewater Division (KCWD) is upgrading and replacing three pump stations in the Manchester Village community; including PS-45, PS-46 and PS-47. These upgrades and replacements would include conveyance upgrades to redirect flows from the current pump stations located in the intertidal zone, to new stations relocated in the upland, and within existing public right-of-way. All three pump stations are aging and in need of complete replacement. The goal at each pump station is to locate the facilities further upland above the ordinary high water mark and at a reasonable location to 1) create a safe working environment for operation and maintenance (O&M) staff, 2) minimize improvements necessary to elevate the facility above the 100-year flood plain, and 3) maintain accessibility of the site for O&M staff and the adjacent residences.

New rock revetments will extend approximately 35 LF and 50 LF along the shoreline in the area formerly occupied by PS-45 and PS-46, respectively. The revetments will protect residential areas, roadways, and new facilities landward of the shoreline.

Project Location: The three new facilities are located adjacent to residential properties with the Manchester community. PS-45 on East Daniels is related to parcel 4522-003-001-0004 and is zoned Manchester Village Residential. PS-46 is associated with parcel 222402-2-045-2003 on East Caraway and is zoned Manchester Village Low Residential (MVLRL). PS-47 is located on East Hemlock and is associated with parcel 4524-005-008-0000, zoned Manchester Village Residential.

The project areas also extend in the shoreline via an existing 3300 LF conveyance transport line connected and extent between Hemlock Street at the south, to East Caraway to the north. The project area is generally located within Section 22, Township 25 N, Range 2 E., WM, within the unincorporated Kitsap County Manchester Community, Commissioner District 2.

Associated Assessor's Account Numbers: 4522-003-001-0004, 222402-2-045-2003, and 4524-005-008-0000.

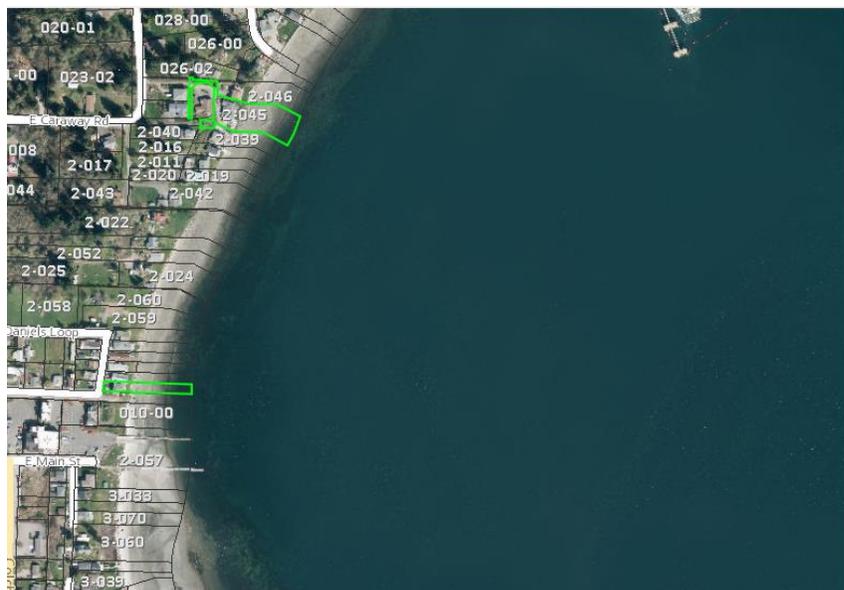


Figure 1. An aerial image of the project area.

Applicant: Kitsap County Wastewater Division
ATTN: Barbara Zaroff
12351 Brownsville Highway NE
Poulsbo, WA. 98370

Representative: Steven Quarterman, Landau Associates
 130 2nd Ave. S.
 Edmonds, WA 98020

SEPA Status: The Responsible SEPA Official issued a Mitigated Determination of Nonsignificance (MDNS) on March 17, 2016. The appeal deadline for the project proposal was March 31, 2016. Kitsap County Department of Community Development (DCD) received no SEPA comments or appeals; therefore, the SEPA decision is final. Construction activity shall be subject to Washington Department of Fish and Wildlife (WDFW) requirements to limit habitat impacts, as established through the Hydraulics Project Approval (HPA) process.

Property Characteristics:

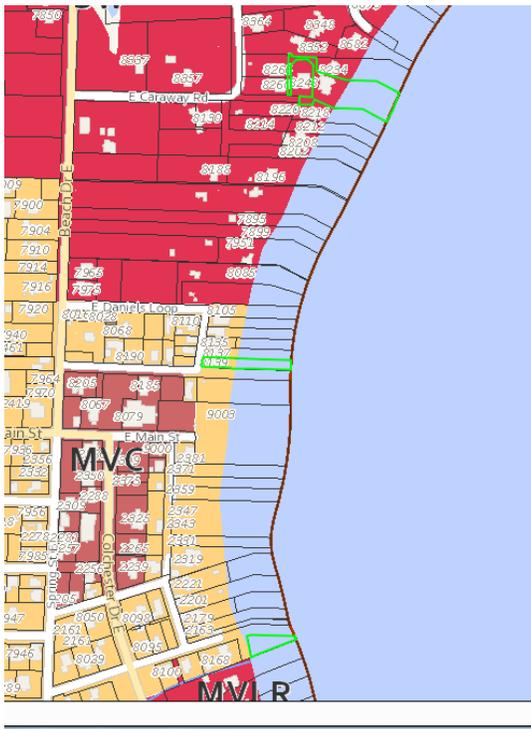
The topography of the Manchester project area is generally on flat-lying shoreline beach with roadways located on slightly elevated benches. The associated property road-ends are generally sloping from west to east into Puget Sound. The sites are bordered by single-family residential properties and Puget Sound.

Comprehensive Plan and Zoning Designations:

The Comprehensive Plan designation is a Type 1 Limited Area of More Intensive Rural Development (LAMIRD). The zoning designations for the subject parcels are Manchester Village Low and Manchester Village Low Residential.

Surrounding Land Use and Zoning:

The surrounding area is zoned MVL R and MVR. The primary use is residential development on urban size lots in the general vicinity.



Shoreline Environmental Designation: Urban Conservancy and Shoreline Residential

Flood zone Designation: AE (13 foot elevation under NAVD 88 survey methods)

Public Utilities and Services:

Water: Manchester Water District
Power: Puget Sound Energy
Sewer: Kitsap County Public Works
Police: Kitsap County Sheriff
Fire: South Kitsap Fire
Schools: South Kitsap School District

ANALYSIS

Policies and Regulations Applicable to the Subject Proposal:

The Growth Management Act of the State of Washington, RCW 36.70A, requires that the County adopt a Comprehensive Plan, and then implement that plan by adopting development regulations. The development regulations must be consistent with the Comprehensive Plan. The Comprehensive Plan process includes public involvement as required by law, so that those who are impacted by development regulations have an opportunity to help shape the Comprehensive Plan which is then used to prepare development regulations.

Kitsap County Comprehensive Plan

Adopted December 11, 2006 (Amended December 2012)

The following Comprehensive Plan goals and policies are most relevant to this application:

Shorelines

Policy SH-1

Encourage and support shoreline diversity through planned and coordinated development, which gives preference to water-dependent uses, traditional and historic use patterns, resource values, and environmental protection.

Policy SH-3

Uses and activities along shorelines and in the waters of Kitsap County should not have a significant adverse affect on water quality.

Policy SH-8

Land use activities shall be sited and designed to minimize conflicts with and impacts on the shoreline environment.

Utility Goals and Policies

Policy UT-2

Encourage the designation and development of utility corridors and facilities in a manner consistent with the needs and resources of Kitsap County.

The County's development regulations are contained within the *Kitsap County Code*. The following development regulations are most relevant to this application:

Kitsap County Code (KCC)

Title 17 Zoning

Title 18 Chapter 18.04 State Environmental Policy Act (SEPA)

Title 19 Critical Areas Ordinance

Title 21, Chapter 21.04 - Land Use and Development Procedures

Title 22 (Kitsap County Shoreline Management Master Program), Chapter 22.600.105 Utilities are analyzed under 22.600.185(B) and shoreline armoring is analyzed under 22.600.175(c).

Relevant Documents Consulted in the Analysis:

A complete index of exhibits is located in the project file. To date, the index to the record consists of Exhibits 1 -16.

Applicant submittals and communications:

<u>Document</u>	<u>Exhibit #</u>	<u>Dated or date stamped</u>
Project application	1	January 11, 2016
Submittal checklist	2	January 25, 2016
Supporting document-submittal waiver RE: Baseline report of eelgrass, aquatic and benthic organisms	3	January 25, 2016
JARPA	4	January 11, 2016
Preliminary Designs	5	January, 2016
Project area photos	6	January 12, 2016
Technical memorandum: SMP Compliance Evaluation and Mitigation Plan	7	January 11, 2016
SEPA checklist	8	December 4, 2015
Geotechnical Engineering Report	9	July 28, 2015
Notice of Complete Application	10	January 25, 2016
Notice of Application (Type 3)	11	February 17, 2016
Stormwater Memo from Candy Mursell	12	February 22, 2016
Interested Party comments, Paul Nuchims	13	February 25, 2016
Interested Party comment, Jerry Clark	14	March 1, 2016
Interested Party comments, Dave Kimble	15	March 18, 2016
Mitigated Determination of Non-significance	16	March 17, 2016

Public comments:

We received three public comments. All comments were generally in favor of the Manchester Pump Station Retrofit project and included details regarding the general satisfaction of the project design, and interactions with Kitsap County Public Works Staff.

A letter from Mr. Nuchims asked for additional information related to existing drainage facilities on the East Daniels portion of the project, near his residence there. After significant interaction, including an office visit where we went over the design and specific plans; and several points of interaction with Dr. Chris May and staff with Clean Water Kitsap; it was determined that a retrofit of his existing private drainage facility and associated seasonal flood events could not be incorporated into this project scope due to the private nature of his drainage system. Both Dr. May and Mr. Chuck Smiley with Clean Water Kitsap relayed via e-mail and direct conversation in the field that they would continue to work with Mr. Nuchims regarding assistance and possible remedies outside of the scope of this project.

A letter from Mr. Dave Kimble was provided stating extreme concern regarding his initial understanding of the beach line being replaced via excavation. Further, he was able to connect with Mr. Waldbillig from Washington State Department of Fish and Wildlife and as the transport lines will be repaired via CIPP technology, no excavation will be required. Mr. Kimble was pleased no earthwork was proposed in the beach area and was satisfied.

Analysis:

KCC 22.300.140 Utilities

Goal: Plan, locate and design essential utility facilities in shoreline areas where they have the least possible adverse effect on shoreline ecological functions and/or processes and existing or planned water-dependent uses.

Policy SH-41. Plan, locate and design proposed transportation, parking facilities, and utility facilities where routes will avoid a net loss of shoreline ecological functions or will not adversely impact existing or planned water-dependent uses.

Staff analysis and comments are italicized: No existing water dependent uses will be impacted.

Policy SH-43. New or expanded transportation routes and essential utility facilities shall, to the extent feasible:

1. Be located in areas that do not require shoreline stabilization, dredging, extensive cut/fill and other forms of shoreline alteration;
2. Be limited to local access and public shoreline access routes;
3. Be located in existing rights-of-way and corridors; and
4. Not be built within shoreline jurisdiction when other options are available.

The proposal requires some armoring to protect existing critical facilities from future flood impacts and also protects critical O&M staff during inclement weather when systems typically fail. There are no practicable or feasible alternatives to this proposed retrofit project. The application is compliant with all other items.

Policy SH-44. Transportation and utility projects shall be consistent with the public access policies and plans of this program.

Public access is not significantly modified by this proposal.

Policy SH-46. Maintenance of existing transportation corridors and utility facilities shall be carried out in a manner that:

1. Will avoid a net loss of shoreline ecological functions; and
2. Where feasible and appropriate, improve shoreline ecological functions.

There will be a net gain of habitat upon completion of the project as the existing sewer lift stations will be moved out of the aquatic environment.

Unavoidable adverse impacts shall be mitigated.

Mitigation in the form of beach nourishment is proposed as well as restoration of the adjacent beach areas.

KCC 22.300.145 Shorelines of Statewide Significance

The Shoreline Management Act of 1971 designated certain shoreline areas as shorelines of statewide significance. Shorelines, thus designated, are important to the entire state.

The project work area is located outside of the designation and therefore requires no further analysis under this classification.

General Regulations

The summary below provides description of project consistency with the general regulations provided in **KCC 22.400**. The applicable general regulations include mitigation; vegetation conservation buffers; water quality and quantity; historic, archaeological, cultural, scientific and educational resources; view blockage; bulk and dimension standards; public access, and flood hazard reduction measures.

Discussion of mitigation and vegetation conservation buffers are presented as part of the No Net Loss Analysis below provided in detail below and further analyzed in-total in the Technical Memorandum provided by Landau Associates, and dated January 11, 2016 (Exhibit 7).

Staff has reviewed the summary analysis and find the proposal is consistent with the required provisions in KCC 22.400.125, Water Quality and Quantity; KCC 22.400.130, Historic, Archeological, Cultural, Scientific and Educational Resources; KCC 22.400.135, View Blockage; KCC 400.140, Bulk Dimension Standards; KCC 22.400.145, Public Access; KCC 22.400.150, Flood Hazard Reductions; 22.400.(110,115, and 120) No Net Loss Analysis, which includes Mitigation Sequencing, Avoidance, Minimization, Restoration, Compensatory Mitigation and Assessment of No Net Loss.

22.600.185 (B) Utilities (Reviewed under the SSDP permit 16 00278)

As detailed in KCC 22.600.105, utilities are permitted uses in both the Urban Conservancy and Shoreline Residential environments. KCC 22.600.185(8) indicates all applications for utility facilities shall include, at a minimum, the following items, which include responses associated with the proposed project:

1. **Reason why facility must be located in the shoreline jurisdiction**
The proposed project is rehabilitation of existing facilities. The existing pump stations will be relocated, but are required to be within the Shoreline jurisdiction due to proximity to the existing sewer line along the beach.
2. **Alternative locations considered and reasons for their rejection**
The proposed project is rehabilitation of existing facilities. Alternative locations for beach line rehabilitation were not considered feasible; CIPP rehabilitation is the least intrusive rehabilitation method for the existing beach lines. Alternatives for siting the pump stations were limited to existing right-of-way within relatively close proximity to the existing beach line.
3. **Location of other facilities near the proposed project and if the location is to include other types of facilities**
A U.S. Navy marine fueling facility is located north of the project area. Puget Sound is located west of the project area, and the project area is surrounded to the south and west primarily by residential development, with some commercial developments. The existing Manchester Wastewater Treatment Plant is located near the proposed project (outside of Shoreline jurisdiction). The proposed project does not include any additional facilities.
4. **Proposed method of construction and plans to control erosion and turbidity during construction**

Beach line Repair:

CIPP liner is an effective rehabilitative measure that provides an existing pipe a new interior surface while minimizing impacts. The CIPP process involves insertion of a resin-saturated sock (glass or synthetic fibers) into a pipe which is then cured by water, steam or ultra-violet light.

Access to the beach line manholes will only be available during low tides, unless the Contractor were to effectively keep the water out of the manholes during higher tides by means of a cofferdam or structure above the tide level. CIPP liner installation typically includes multiple large, heavy trucks and a scaffolding tower. Portable CIPP equipment may also be used. Accessing the manholes from the water side of the project (by means of a dock system or barge) is another possible approach to construction.

To access the sewer line, a temporary crossing of the Duncan Creek channel below the Puget Sound ordinary high water mark at low tide will be required, which may result in temporary impacts to the creek channel and bed. The channel will be restored to existing conditions as necessary following construction.

Temporary bypass systems will be installed during both beach line CIPP repair and pump station construction.

Pump Stations:

Pump station construction includes the following activities:

- 1) *Elevated Concrete Structure* - The finished floor elevation of the proposed pump station structure at each project site will be located above the 100-year flood level at elevation 11.0 ft., approximately 2-3 ft. higher than existing (and finished) grade. The elevated structure will allow the pump station equipment to remain in operation and accessible to operation and

maintenance (O&M) staff during high Puget Sound flood events. The elevated structure will be equipped with guard railing around its full perimeter for O&M staff safety and pump station security. All elevated concrete structures will include textured concrete on the outside wall for better visual appearance. The aboveground pump station equipment varies location for each pump station and is described below.

The proposed location for the electrical equipment at PS-45 is upland approximately 50 ft. from the elevated structure next to a tall row of arborvitae and located on an approximate 3 by 11 foot concrete equipment pad. The standby generator is located on the elevated concrete structure. A cedar fence or similar, if decided upon by the adjacent property owners, will be placed south of the pump station to provide additional screening.

The proposed location for the generator and electrical equipment at PS-46 is upland approximately 60 ft. from the elevated structure, near the existing pump station electrical equipment. The current proposed design concept includes a 12 by 14 foot 15-inch concrete slab on grade. The hillside will be partially cut into and supported by a vertical retaining wall approximately 3 ft. in height to create a pad for the new equipment:

At PS-47 site, the elevated structure will house the electrical equipment cabinet and standby generator. To screen these facilities from adjacent residences and blend in to the surrounding environment, natural looking shrubbery on the south and west sides of the structure are proposed. Final plant selection will be coordinated with adjacent property owners prior to finalizing the design.

- 2) **Dewatering** - It is anticipated that temporary excavations for the new valve vault and wet well, beach manhole, and gravity pipeline connecting the counterparts will be completed as single, shored excavation. Dewatering from outside the excavation would be impractical due to the high connectivity to Puget Sound. Shoring and dewatering measures for the projects may be limited to a sheet pile cutoff wall, with a concrete bottom seal that is trimmed under water. Dewatering requirements, after the bottom seal is poured and initial water is pumped out, would be limited to removing the nominal water that seeps through the sheet pile interlocks.
- 3) **Wet Well/Vaults** - The wet well and valve vault proposed for each pump station are precast concrete structures. The exterior of the structures are proposed to be coated with a factory applied epoxy to provide additional protection from the high groundwater and brackish water environment. The inside of the wet well is proposed to be coated with a high build epoxy coating to protect the structure from corrosive hydrogen sulfide released from the wastewater. To counteract buoyancy uplift forces, the wet well and valve vault may be structurally connected to the concrete bottom seal discussed above or include thickened and/or extended bases. The wet well and valve vault will also be connected to the concrete elevated structure above, which will further assist in counteracting buoyant forces once installed.
- 4) **Beach Manholes** - Given the location of the existing pump station influent manhole and proposed location of the new wet well at each project site, a new influent manhole located in the beach will be required to intercept the existing beach sewer pipeline and divert flow through a new 8-inch diameter sewer pipeline to the new pump station. The existing lift stations will remain in service during construction of the beach manholes; therefore, design and construction methods will consider minimizing interruption to the existing

facility and the need for temporary sewage bypassing systems. The new beach manhole will be a conventional manhole in which the existing sewer pipeline is cut, manhole inserted, and pipe reconnected.

- 5) **Force Main** - Each existing pump station pumps through a 4-inch diameter force main that free discharges into an existing manhole within close proximity to the project sites. The existing 180 lineal foot force main at PS-45 is original construction from the 1960s and is proposed to be replaced with a new 4-inch diameter high density polyethylene force main. The existing force main at PS-46 is approximately 5 feet in length, where the pump station only serves to lift and discharge the sewage into an adjacent beach manhole. The force main will be replaced with a new 4-inch diameter ductile iron force main, approximately 10 feet in length. The existing force main at PS-47 has been replaced since the station's original 1960s construction with a polyvinyl chloride (PVC) force main. The proposed PS-47 improvements connect to the existing force main at the pump station site and reuse approximately 160 feet to its point of discharge in an existing manhole.
- 6) **Existing Pump Station Decommissioning** - The existing pump stations will be partially and/or fully demolished after the new pump stations are placed in operation. The existing pump station facilities and cemented rock jetties projecting into the Puget Sound at PS-45 and PS-46 sites will be removed; however, existing deep pump station structures (wet well and influent manhole) are proposed to be removed to 3 feet below grade, filled with sand and abandoned in place. Similar to PS-45 and PS-46, the existing PS-47 facilities will be removed and existing deep pump station structures (wet well and influent manhole) are proposed to be removed to 3 feet below grade, filled with sand and abandoned in place.

Work will occur in intertidal zone, but will occur in the dry during low tides. A temporary erosion and sediment control (TESC) plan will be implemented during construction activities.

5. **Plans for restoration of areas disturbed during construction**

A net increase of 477 square feet (ft.²) of intertidal habitat (i.e., beach) will be reclaimed following removal of PS-45 and PS-46, which currently jut out into the Puget Sound.

Impacts will occur to areas of grass/lawn within the shoreline buffers, and the project provide areas a revegetation that exceed the mitigation standards for these unavoidable impacts (refer to *No Net Loss Analysis* below).

New rock revetments will extend approximately 35 linear ft. and 50 linear ft. along the shoreline in the area formerly occupied by PS-45 and PS-46, respectively. The revetments will protect residential area and roadways landward of the shoreline. These revetments are subject to conditional use permit (refer to *Shoreline Stabilization* below).

6. **Possibility of locating proposed facility within existing utility right-of-way**

The proposed project is rehabilitation of existing facilities. The beach line will remain in an existing easement. The pump stations will be relocated landward of the OHWM of Puget Sound, and will remain within County right-of-way. Two small areas of the pump stations rehabilitation will require a new permanent sewer easement, which will be obtained prior to construction.

7. **Geotechnical report required when proposed in a geologically hazardous area**

A Geotechnical report prepared for the project is included with application package, as performed by Landau Associates.

CONCLUSIONS

1. The Hearing Examiner has review authority for this Shoreline Substantial Development Permit application under the *Kitsap County Code* (KCC), Sections 21.04.100, 22.500.050 and 22.500.100 (A, B and D).
2. Based on above analysis and findings, Staff recommends **approval** of the Shoreline Substantial Development Permit and Shoreline Conditional Use Permit, as detailed and conditioned.

Staff Conditions:

1. If any work is to be done below the ordinary high water mark, a Hydraulic Project Approval permit is required from the Washington Department of Fish and Wildlife.
2. Project work shall be subject to the conditions of the Washington Department of Fish and Wildlife Hydraulics Project Approval (HPA).
3. Shoreline construction activities shall be conducted in a manner such that private properties adjacent to the project area are not impacted.
4. All recommendations of the July 28, 2015 Geotechnical Report by Landau Associates, prepared for Kitsap County Department of Public Works Wastewater Division must be followed.
5. Upon final permit issuance, all construction for the project must commence within two years and be complete within five years. A one time one-year extension is available but only if requested on or before ninety days of original permit expiration. No exceptions are allowed unless provided for by law.
6. This project is located within a Critical Drainage area as defined in Title 12.28.020 of the Kitsap County Code. As the project will be located in its entirety with County Right-of-Way and secured easements, a Site Development Activity Permit (SDAP) will not be required.
7. Mitigation shall conform to the Technical Memorandum SMP Compliance Evaluation and Mitigation Plan, prepared by Landau and Associates, and dated January 11, 2016, shall guide all construction activities.

cc:

DCD File

Applicants: Kitsap County Public Works, Barbara Zaroff, bzaroff@co.kitsap.wa.us

Applicant's Representative: Steven Quarterman, Landau Associates

Washington Department of Ecology: Joe Burcar, jobu461@ecy.wa.gov

Washington Department of Fish and Wildlife: Chris Waldbillig, chris.waldbillig@dfw.wa.gov

Clerk of Hearing Examiner, Constance Blackburn

Staff Planner: Steve Heacock

DCD, Development Engineering

DCD, Fire

Kitsap County Health District

Tribe: Suquamish, Alison O'Sullivan, aosullivan@suquamish.nsn.us

Joe Burcar, Department of Ecology, Shorelines

Adjacent property owners: 800-foot radius

Interested parties of record