FINAL

King County Marine Habitat Report
Prepared in support of the Wastewater Treatment Division Habitat Conservation Plan and The Brightwater Marine Outfall Siting Study

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1.0 INTRODUCTION

The shores surrounding King County have a rich variety of habitats containing a great abundance and diversity of seashore life. The seashore habitats in this largely urbanized county include rocky shores with reefs, tide pools and boulders; sandy beaches exposed to light to moderately heavy surf; and quiet bays with substrate ranging from clean sand to black mud. In this setting, King County is in the planning stages of selecting a location for the construction of a new wastewater treatment facility, called Brightwater Treatment Facility, and a new marine outfall in northern King County or southern Snohomish County.

Prior to constructing the Brightwater Treatment Facility (herein referred to as Brightwater), conveyance system, and outfall, the County is preparing a Habitat Conservation Plan (HCP) under Section 10(a)(1)(B) of the Endangered Species Act. The HCP will be submitted to the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) as part of an application for an incidental take permit. The proposed permit would authorize impacts that may occur to species addressed in the HCP as a result of construction and operation of the north treatment facilities, thereby ensuring the project's compliance with the ESA. With the listing of chinook salmon and bull trout and the potential listing of other marine fish (e.g., certain rockfish species) and marine mammals in the Puget Sound region by the National Marine Fisheries Service (NMFS), it became apparent that a report documenting the state of marine habitats in King County was needed to assist in selection of a site for the marine outfall and preparation of the HCP.

This report is a result of a collaborative effort by the staff of Striplin Environmental Associates in Seattle, WA, Battelle Marine Sciences in Sequim, WA and King County Water and Land Division, Department of Natural Resources in Seattle, WA.

1.1 Purpose and Objectives

The primary purpose of the Marine Habitat Report (MHR) is to support the King County Wastewater Treatment Division (WTD) in preparation of its HCP by supplying information to the HCP Team on the species and types of marine habitats in the King County and southern Snohomish County region. The four objectives of the MHR are:

- Present brief life history information for the marine species proposed for coverage under the HCP (this includes species listed as threatened or endangered under the ESA and species that may be listed within the proposed 40-year HCP permit period);

- Document the marine habitats in King County and Southern Snohomish County that may be utilized by marine species proposed for coverage under the HCP;
- Document the distribution of marine species proposed for coverage in the HCP that inhabit King County and Southern Snohomish County; and
- Identify major data gaps in the distribution of species proposed for coverage in the HCP.

1.2 Description of the Study Area

The geographic area to be covered in the MHR extends from Mukilteo to the north to mid Vashon Island to the south. The east-west boundary extends from the supralittoral zone[1] on the eastern side of central Puget Sound to the King County line running through the middle of the central basin. The southern portion of the study area includes both the east and west shores of Vashon Island. The entire study area including the locations of wastewater treatment plant, combined sewer overflow (CSO) treatment plant, and CSO outfalls is presented in Figure 1-1. The study area has been further divided into three sub-areas based on north-south geography and the presence of wastewater discharges:

- Area 1. Brightwater Outfall Siting Area -- Extends from Mukilteo to Golden Gardens Park
- Area 2. WTD Existing Discharge Area -- Extends from the King County boundary to the northern tip of Vashon Island, and includes Elliot Bay
- Area 3. Vashon Island Area -- Extends from the northern tip of Vashon Island to roughly half way down the length of the island and includes both the eastern and western shores of the island.

These sub-areas are also shown in Figure 1-1.

1.3 Report Organization

The remaining sections of this report provide brief life history descriptions of the proposed covered species, describe the habitats and species distributions, and identify major data gaps. Specifically, Section 2 reviews the primary list of species and presents brief life history information, ecological role and environmental requirements for each, as well as describes the habitat types presented in the report. Sections 3, 4, and 5 discuss habitats, species distributions, and data gaps in the Brightwater Siting Area, the WTD Existing Discharge Area, and the Vashon Island Area, respectively. The report concludes in Section 6 with a synthesis and summary of all data collected for the report and

[1] The supralittoral zone is the area immediately above the intertidal zone and is often referred to as the "marine riparian" zone (see Section 2.7.1).

a discussion of major data gaps. All figures and tables presented in this report are found at the end of each section. Additional information on species diet and figures and tables on species distributions can be found in the report appendices.

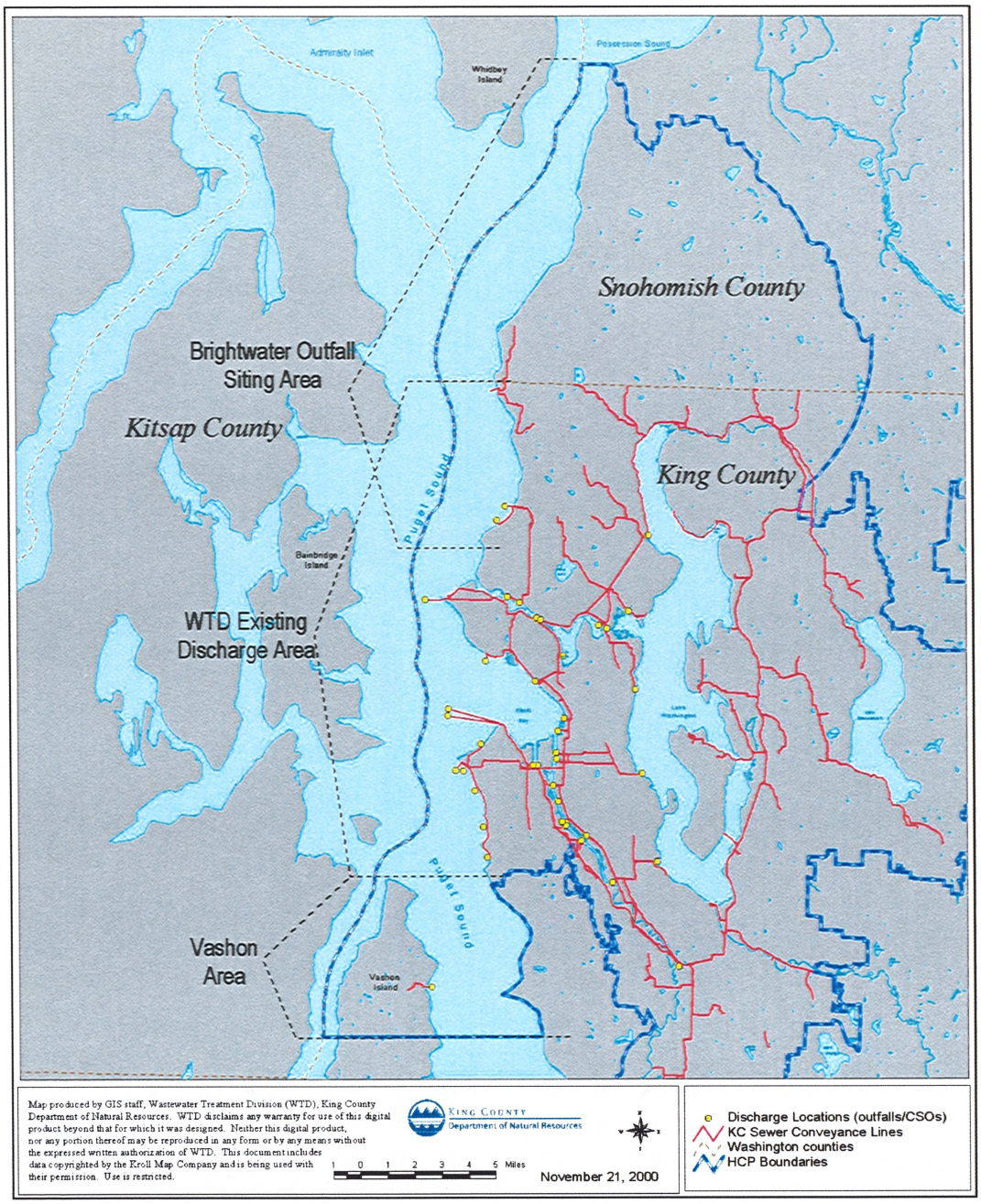

Figure 1-1. Habitat Conservation Plan Marine Study Area and three sub-areas discussed in the Marine Habitat Report.