

Jefferson County Clean Water District

PRIORITIZED WORK PLAN

FOR THE

STRAIT ACTION AREA

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1 ABBREVIATIONS, ACRONYMS AND SPECIAL TERMS USED

303d List	List of impaired and threatened waters required under the Clean Water Act
Ag	Agriculture, agricultural
BEACH	Beach Environmental Assessment, Communication, and Health
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
GIS	Geographic Information System
HAB	Harmful Algae Bloom
JCCD	Jefferson County Conservation District
JCPH	Jefferson County Public Health
JeffCOM911	Jefferson County 911 Communication Services
km	Kilometers
m	Meters
NHD	National Hydrography Dataset
OSS	Onsite Septic Systems
PIC	Pollution Identification and Correction
PSP	Puget Sound Partnership
USGS	United States Geological Survey
WQ	Water Quality

2 INTRODUCTION

The Jefferson County Clean Water District exists to protect water quality in eastern Jefferson County. A water quality monitoring plan for the District was completed in June, 2015 and describes the monitoring needed to achieve district goals (Jefferson County Public Health, 2015), and includes a summary of existing data. In addition, Jefferson County participates in a regional effort to protect water quality: the Hood Canal Regional Pollution Identification and Correction (PIC) project (www.hccc.wa.gov/content/pollution-identification-correction). This project has produced several plans and documents, including a Five-Year Priority Area Work Plan (Horowitz, et al., 2014). The Five-Year Priority Area Work Plan includes the portion of Jefferson County within the Puget Sound Partnership’s Hood Canal Action Area, but does not cover the second action area within the Clean Water District: the Strait of Juan de Fuca. This document is designed to close that gap and describe the high-priority work areas within the Clean Water District that drain to the Strait Action Area (Figure 1, Puget Sound Action Areas and Water Resources in the Clean Water District). This will provide complete coverage for the District and extend the work begun by the Hood Canal Regional PIC project.

2.1 BACKGROUND

The Strait Action Area includes the northern portion of Jefferson County from Discovery Bay to Point Wilson (see Figure 1, Puget Sound Action Areas and Water Resources in the Clean Water District). Including Protection Island, there are 35 miles (56 km) of shoreline in the Jefferson County portion of the action area. The following named streams drain to Discovery Bay, or are tributaries:

- Eagle Creek
- Contractors Creek
- Salmon Creek
- Snow Creek
- Trapper Creek
- Rixon Creek
- Andrews Creek

Many additional miles of unnamed streams are present. Crocker Lake, Sunset Lake and Moon Lake and the City Lake Reservoir are located in the action area. Chinese Gardens lagoon is a brackish lake within Fort Worden State Park in Port Townsend. The highest summit is 2,126 foot (648 m) Big Skidder Hill, which is located in the Snow Creek drainage basin.

The area is primarily rural. The northern part of the city of Port Townsend and the community of Gardiner are within the action area. Several local place names, some more historical than currently used, include Port Discovery, Maynard, Uncas, Discovery Junction, Fairmount, Woodmans, Adelma Beach, Tukey, Beckett Point, and Cape George. Highways 101, 20 and 104 traverse the area. Olympic National Forest lands border the southwestern part of the drainage, and Fort Worden State Park occupies the eastern edge at Point Wilson. Protection Island is a National Wildlife Refuge.

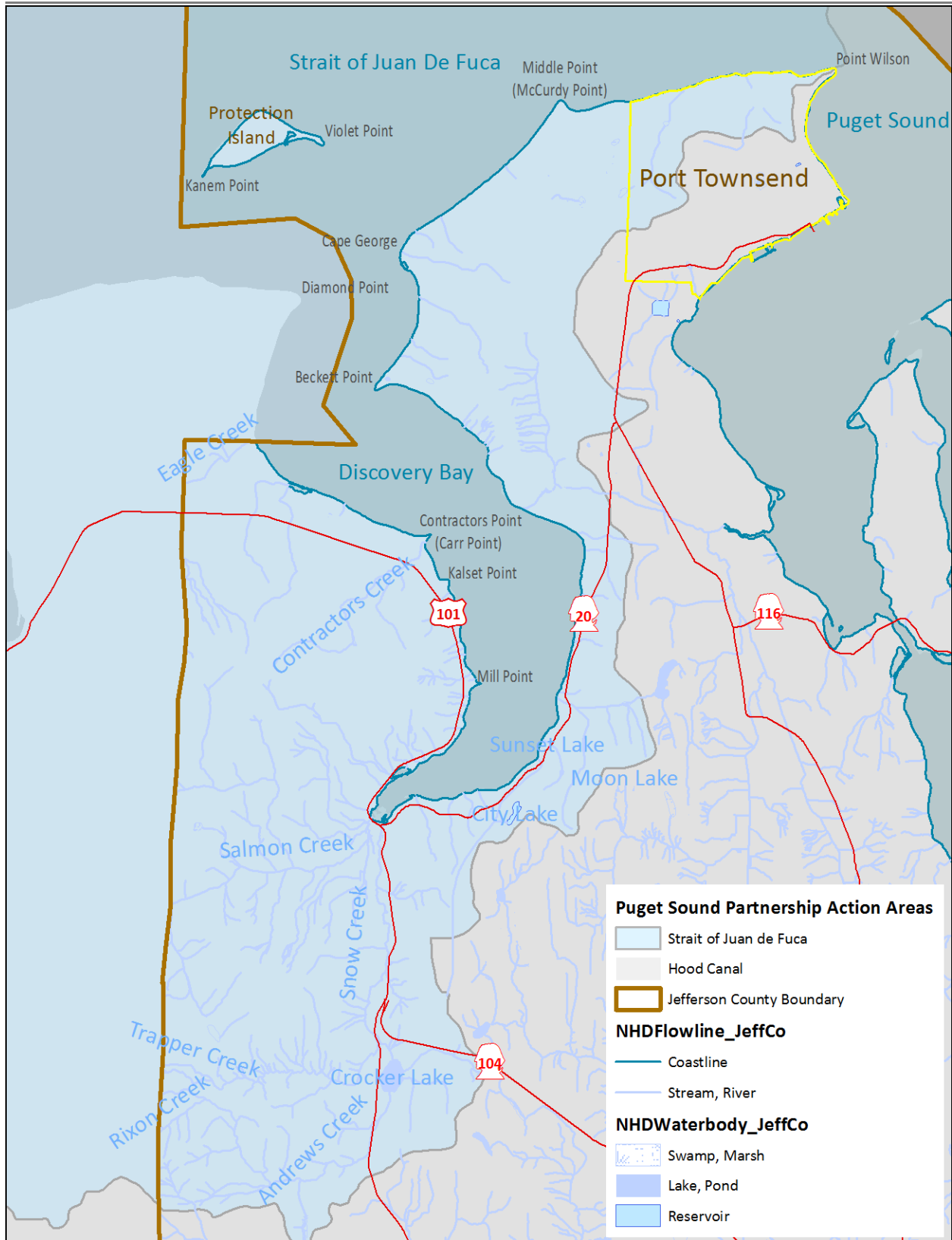


Figure 1, Puget Sound Action Areas and Water Resources in the Clean Water District

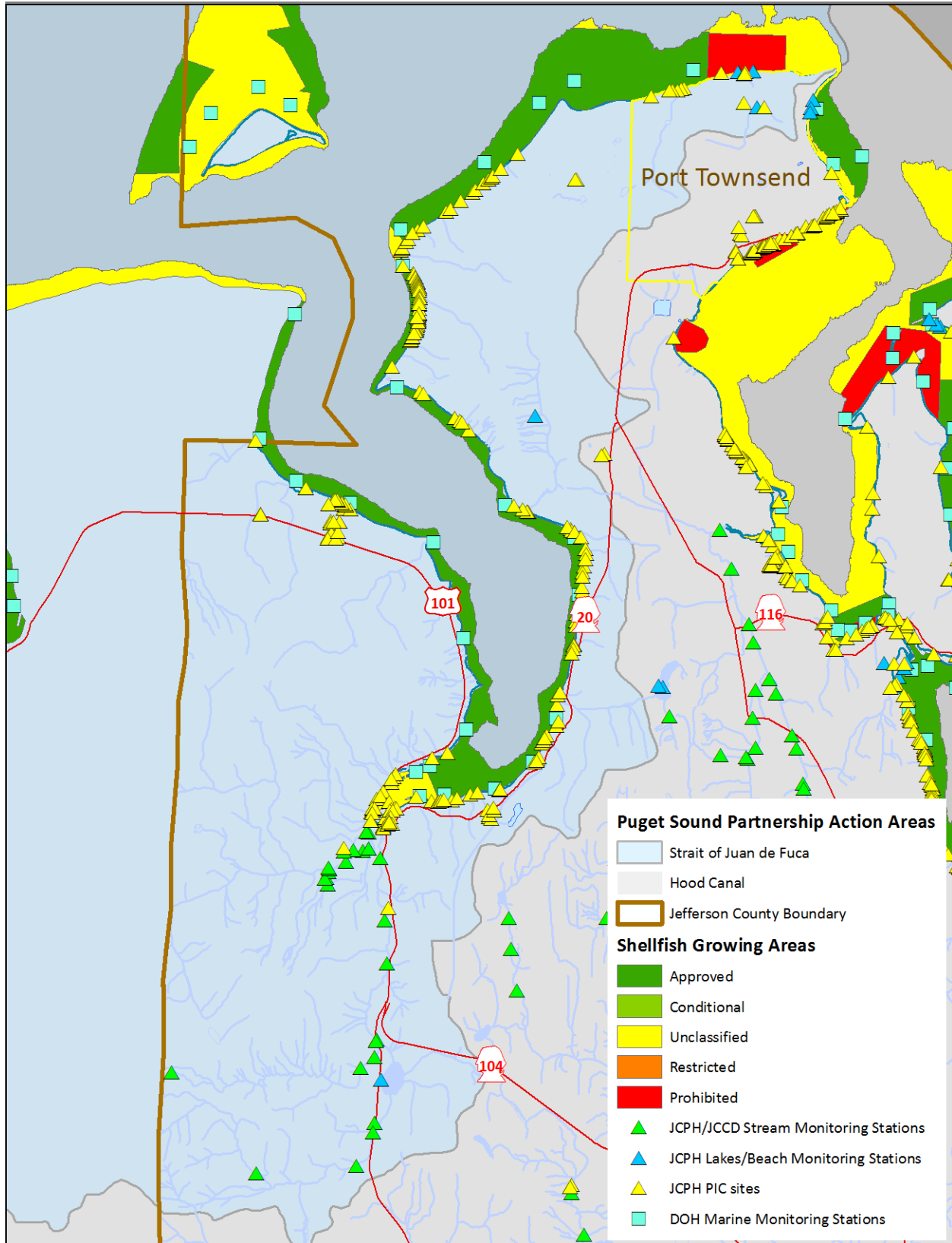


Figure 2, Clean Water District Shellfish Growing Areas and Monitoring Stations

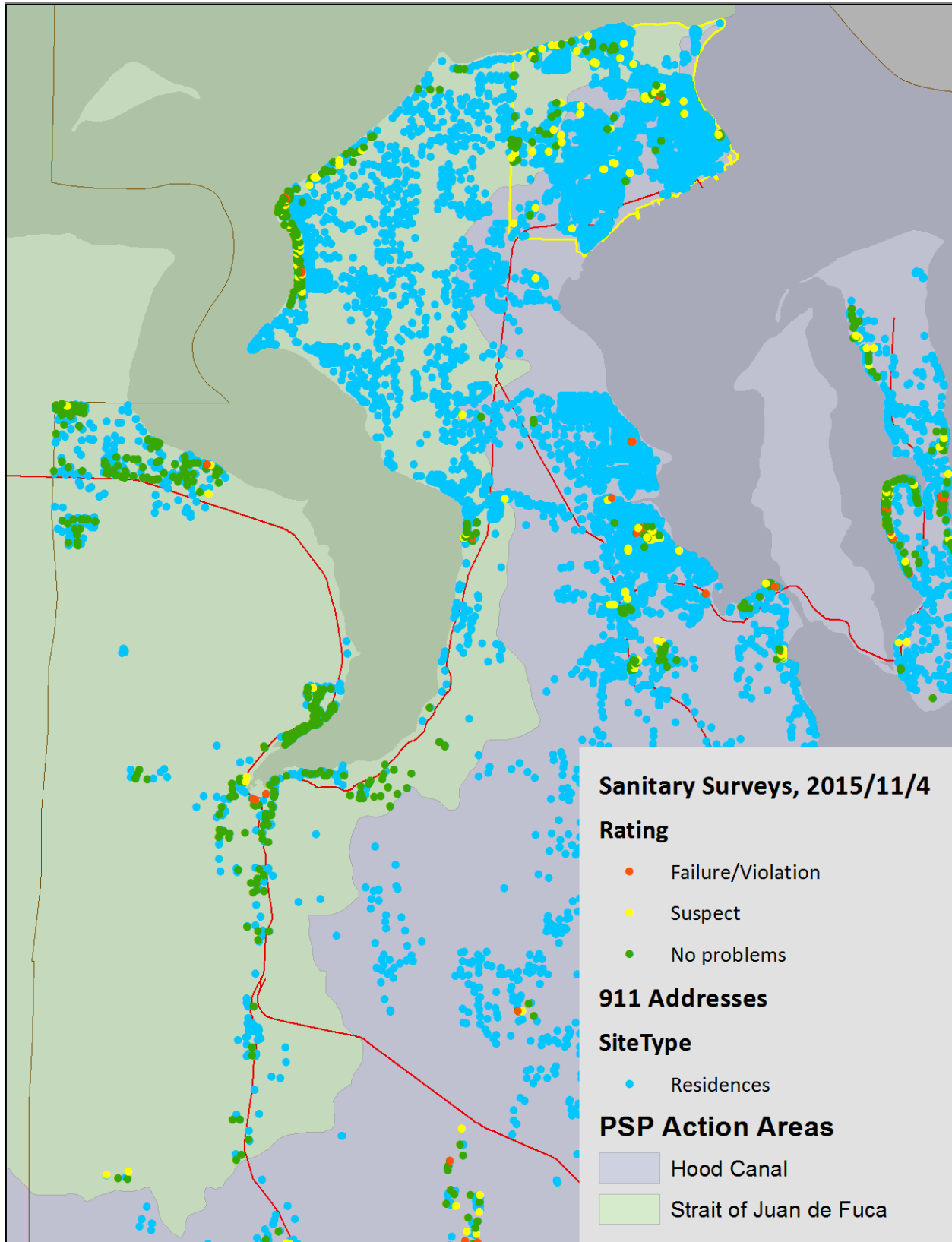


Figure 3, Sanitary Surveys and Residences

2.2 PRIORITIZATION CRITERIA

The Hood Canal Regional PIC project used a variety of information sources to create a draft list of work areas (Horowitz, et al., 2014). These sources include:

- Washington State Department of Health (DOH) Shellfish program data, particularly closure areas, threatened areas, and areas of concern;
- Washington State Department of Ecology BEACH program marine swimming beach closures;
- Local areas of concern identified by local jurisdictions;
- OSS GIS mapping data (Peterson, 2013).

A list of criteria was created in the work plan to rank the list for implementation (Horowitz, et al., 2014) and will be implemented to prioritize work in the Strait Action Area:

- Public health risk (human illness potential)*
- Demonstrated water quality problem (results exceed state water quality standard)
- Demonstrated habitat problem (low dissolved oxygen – nutrients, erosion, stormwater runoff, toxics, invasive weeds contributing to dissolved oxygen and/or temperature problems)
- Resource risk (threat to commercial and recreational resources – shellfish, swimming, fishing)
- Proposed project has multiple benefits
- Builds on existing program (resource constraints and capacity to proceed)
- Public involvement or awareness
- Fits funding constraints and/or criteria

*Key criteria

2.3 POLLUTION SOURCES

Potential and confirmed point and non-point sources of pollution are located in the action area. The City of Port Townsend wastewater treatment plant and outfall are located on North Beach within city limits. The treatment plant is regulated by an NPDES permit from Ecology and has an excellent record, however an aging outfall pipe has occasionally needed repairs. Stormwater outfalls to Chinese Gardens lagoon are not regularly monitored for pollution as Port Townsend is not a Phase 2 stormwater municipality. Two large onsite septic systems permitted by DOH are located on the west side of Discovery Bay. Both have had failures and repairs and little is known about the current operation and maintenance status. Approximately 2,500 residences are located in the Strait Action Area (from JeffCOM911 Address Points GIS data). According to Jefferson County's Permit Database, 2,300 finalized septic permits have been assigned to parcels in the action area. An unknown number of systems were installed prior to Jefferson County issuing permits for septic tanks, or are otherwise unpermitted. Small livestock and vegetable farms are known in the Salmon and Snow Creek basin.

3 PRIORITY WORK AREAS

The following list has been ranked by priority, both by headings and then within each heading.

3.1 SHORELINE

1. Gardiner 4 miles not previously monitored
2. Adema Beach 4.1 miles
3. Cape George 2.4 miles; 2 confirmed hot spots unresolved 2015
4. Middle Point 3.4 miles; 2 confirmed hot spots unresolved 2014
5. Fairmount-Maynard 5 miles
6. Crocker Lake fecal indicator bacteria
7. Crocker Lake OSS sanitary surveys
8. Crocker Lake nutrient sampling
9. Crocker Lake HAB & toxin monitoring

3.2 PROPERTY RESEARCH

1. OSS Sanitary Surveys: 625 surveys completed out of 2,500 residences. Neighborhoods ranked by highest proportion of unsurveyed OSS:
 - a. Adema Beach
 - b. Beckett Point
 - c. Cape George
 - d. Gardiner
 - e. Middle Point
 - f. Salmon & Snow
 - g. North Beach
 - h. Sunset & Moon Lakes
2. Agricultural Surveys – entire area
3. Prioritized list of ag BMPs – entire area
4. Ag BMP implementation of high priority sites

3.3 MARINE

1. Discovery Bay Profiles, including conventionals
2. North Beach Enterococcus monitoring; high hit 2015
3. Discovery Bay Sedimentation, turbidity, toxics sampling
4. Discovery Bay Nutrient monitoring
5. Discovery Bay Circulation
6. Discovery Bay HAB monitoring

3.4 STREAMS

1. Salmon & Snow Investigate areas failing fecal coliform standards
2. Salmon & Snow Fecal coliform monthly monitoring
3. Eagle Creek Fecal coliform monthly monitoring

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4. Contractors Creek Fecal coliform monthly monitoring
 5. Salmon & Snow Temperature data loggers
 6. Salmon & Snow Dissolved oxygen

3.5 STORMWATER

1. Chinese Gardens Storm events; inflow and outflow
2. Salmon & Snow Highway 101 & 20 area storm discharges