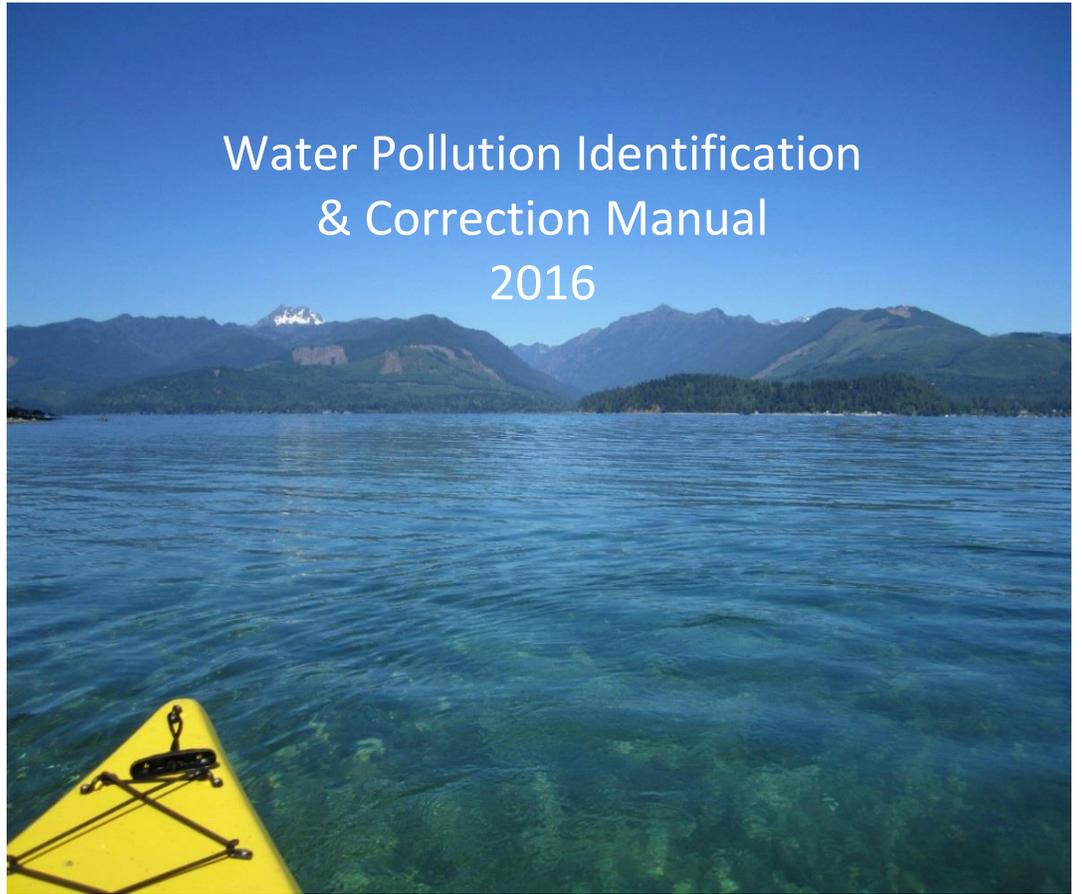


ENVIRONMENT

Water Pollution Identification & Correction Manual 2016



KITSAP PUBLIC
HEALTH DISTRICT

345 6th Street
Suite 300
Bremerton, WA 98337

360-337-5235 t.
360-337-5291 f.

kitsappublichealth.org



ACKNOWLEDGMENTS

The revised Pollution Source Identification and Correction: Protocol Manual has been updated by Kitsap Public Health's Pollution Identification and Correction staff.

This project was made possible through funding provided by the Kitsap County's Clean Water Kitsap Program which provides a stable funding source for Kitsap Public Health's Pollution Identification and Correction program. Additionally, the Washington State Department of Ecology has provided funding for a variety of projects through Centennial Clean Water Fund grants. Grant funding and program support has also been provided from the Washington State Department of Health and Region 10 of U.S. Environmental Protection Agency.

INTRODUCTION	6
OBJECTIVES.....	8
CHAPTER 1: PROJECT PREPARATION.....	9
Project Area Evaluation:.....	9
Information Sources for PIC Project Evaluations:	9
Conduct Initial Project Area Visit (a.k.a “ground truthing”):	10
Conduct an Evaluation of Water Quality Data:.....	10
Public Notification and Information:	10
Septic Sense Workshops:.....	11
Field Preparation and Safety	13
Handling Dogs	13
Field Equipment List	14
CHAPTER 2: SAMPLE COLLECTION & TESTING.....	15
Quality Assurance and Quality Control:.....	15
Collecting Water Samples:	15
Labeling and Recording Samples:	16
Transporting Samples:.....	16
Chain of Custody:	16
Dye Testing:	17
Checklist for Performing an Elution and Analysis of Charcoal packs	22
Sending Charcoal Packs to Ozark Underground Laboratory (OUL) Contract Laboratory:	24
Optical Brightener Procedure:.....	24
CHAPTER 3: CONDUCTING SHORELINE SURVEYS.....	26
Field Preparation Checklist:	26
Conducting the Shoreline Survey:.....	28
Collecting water samples:	28
Labeling and Recording Samples:	28
Transporting Samples:.....	29
Chain of Custody:	30
Sample Results and Data Organization:	30
Confirmation Sampling:.....	31
CHAPTER 4: PROPERTY INSPECTIONS	32

Property Parcel Inspection Preparation:.....	32
Property parcel inspections consist of:.....	32
Conducting the property inspection:	32
Property Access and Consent:.....	32
Site Entry and Searches:.....	32
Reasonable Expectation of Privacy:	32
Residence:	33
Curtilage:.....	33
No Trespassing Signs:.....	34
Open Fields:	34
Open View:.....	34
Plain View:.....	34
Implied Consent:	35
Door Hangers:	35
Meeting the owner/occupant:	36
Assessment of Non-OSS FC Pollution Sources (Pet Waste):.....	40
Assessment of Non-OSS FC Pollution Sources (Farms):	40
PIC property inspections involving farms:	41
Assessment of Non-OSS FC Pollution Sources (Wildlife):.....	42
Property Inspection Evaluation Tool:	44
CHAPTER 5: WATER QUALITY COMPLAINTS	44
Types of complaints:.....	44
Responding to Complaints:	45
Site Visit by PIC staff:	45
Assessment of OSS Performance:	46
Public Complaint Investigation:	48
Public Complaint Close Out:.....	48
Deficient Pumper Report Investigation:	49
Deficient Pumper Report Close Out:.....	49
PIC Inspections- During Project:.....	49
PIC Inspections- Project Close Out:.....	50

OSS Compliance Process:.....	50
Livestock Waste Compliance Process:	51
Recreational Vehicle Sewage Discharge:	51
Homeless Camp Complaint:	51
Storm Water Illicit Discharge Complaint or Referrals (Including Spills):	52
CHAPTER 6: ENFORCEMENT	53
Notice and Order to Correct Violation (NOCV):.....	53
Notice of Civil Infraction (Ticket):.....	54
Writing a Ticket:.....	55
Continuance:.....	57
Dismissal Order:.....	58
Search Warrants:	58
CHAPTER 7: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)	59
Sewer Evaluation:	59
CHAPTER 8: REPORTING	60
PIC Project Follow-up:	60
APPENDIX A: EXAMPLE OF PRESS RELEASE AND FACT SHEET	62
APPENDIX B: FIELD SAFETY PROTOCOL.....	64
APPENDIX C: FIELD EQUIPMENT LIST	70
APPENDIX D: EXAMPLE OF PARTICIPATION LETTER.....	72
APPENDIX E: POLLUTION IDENTIFICATION & CORRECTION (PIC) INSPECTION FORM.....	73
APPENDIX F: DATABASE ENTRY PROCEDURES.....	75
APPENDIX G: NOTICE AND ORDER TO CORRECT VIOLATION.....	86
APPENDIX H: EXAMPLE OF COMPLETED NOTICE OF CIVIL INFRACTION	88
APPENDIX I: HOTSPOT INVESTIGATION PROCEDURE.....	89

Pollution Source Identification and Correction: Protocol Manual

INTRODUCTION

Fecal coliform in surface water provides an early warning for determining whether land use, development and human activities are being managed to effectively protect public health and the environment.

Fecal waste from warm-blooded animals can contain pathogenic bacteria and viruses that cause human diseases such as shigellosis, campylobacter enteritis, viral gastroenteritis, giardiasis, and cryptosporidiosis. Fecal contamination of surface waters is caused by human and animal waste discharged or leaked to the ground or surface waters. During rain events, flowing surface water picks up pollutants, such as fecal waste, and transports them to local streams, bays, and lakes. Additionally, as impervious surfaces are increased in watersheds, pollutants are transported rapidly to receiving waters.

Shellfish beaches are an important resource in Kitsap County. Kitsap Public Health works in partnership with Washington State Department of Health (DOH) to protect and restore shellfish harvesting in Kitsap County.

The Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A Washington Administrative Code [WAC]; hereafter referred to as “water quality standards”), and the beach classification criteria set forth in Recreational Shellfish Beaches (Chapter 246-280 WAC) and Sanitary Control of Shellfish (Chapter 246-282 WAC) currently use surface water fecal coliform (FC) concentrations to determine whether or not surface waters and shellfish tissue are safe for human contact and consumption, respectively. Fecal coliform (FC) and *Escherichia coli* (EC) bacteria are indicators used to assess the presence and level of fecal waste in surface and ground waters.

Background

The Kitsap Public Health District has monitored major streams and marine waters for FC on a routine basis since 1996. This extensive monitoring program has resulted in the listing of many Kitsap County marine and freshwater bodies for FC pollution on Washington State’s 303(d) List of impaired or threatened waters. Elevated levels of fecal pollution are responsible for posting of selected streams with warning signs that guard against contact with the water. Additionally, documented FC pollution or the threat of pollution has caused the closure and restricted use of commercial shellfish beds in Burley Lagoon, Dyes Inlet, Hood Canal, Liberty Bay, Port Orchard Bay, Port Gamble Bay, Sinclair Inlet, and Yukon Harbor. Monitoring has also provided a feedback mechanism for water cleanup projects and has provided evidence of water quality improvements including removal of warning signs and upgrades of shellfish harvest areas.

FC pollution may come from point or nonpoint sources. Point sources like wastewater treatment plants are regulated by the Environmental Protection Agency’s (EPA) National Pollution Discharge Elimination System (NPDES) permitting program.

Nonpoint pollution is a combination of discharges from many activities on many land parcels and as such is more difficult to identify and control. The identification and correction of nonpoint pollution is primarily the responsibility of local jurisdictions in Washington State. The Kitsap County Surface and Storm Water Management Program (SSWM) was developed and implemented locally to provide a framework for organizing and funding surface water assessment, protection, and restoration efforts

related to nonpoint source pollution. SSWM program activities are carried out by Kitsap County Public Works, Kitsap County Health District (Kitsap Public Health), Kitsap Conservation District, Washington State University Kitsap Extension, and Kitsap County Department of Community Development.

Kitsap Public Health is the primary agency responsible for monitoring, identifying, and prioritizing nonpoint fecal pollution correction programs in Kitsap County. In response to the fecal pollution problem, Kitsap Public Health developed a SSWM-funded Pollution Identification and Correction (PIC) program, an Onsite Sewage System (OSS) Monitoring and Maintenance program, and a Water Protection Complaint Response program. These programs utilize existing local regulations and authority to address FC pollution sources and enforce correction when necessary. The programs incorporate a strong educational element to prevent future fecal pollution.

Kitsap Public Health developed the PIC program to prioritize and address water quality problem areas in Kitsap County. FC pollution problem areas are thoroughly assessed for land uses and ranked by water quality data and public accessibility. Door-to-door PIC inspections are conducted in top-priority areas to identify and correct fecal pollution sources. PIC inspectors provide free technical assistance to guide property owners through the process of correcting identified pollution sources. The inspection is designed to help property owners and residents prevent fecal pollution of surface waters and get the most life possible from their OSS investment.

Kitsap Public Health PIC projects utilize community participation by proactively educating owners and residents while identifying and correcting FC sources. The Kitsap PIC program has been responsible for performing FC source identification projects at the watershed and sub-watershed scale resulting in documented improved water quality in streams, lakes, marine waters as well as upgrades of shellfish harvest areas, including Dogfish creek, Burley Lagoon, Cedar Cove, Dyes Inlet, and Yukon Harbor.

Purpose

The purpose of this document is to explain in detail how Kitsap Public Health investigates and identifies major FC nonpoint pollution sources.

GOALS

The goals of the Pollution Identification and Correction (PIC) program are to:

- Assess fecal pollution of Kitsap County surface waters.
- Protect the public from waterborne illness related to fecal pollution of surface waters, storm water, and shellfish.
- Address or assist with federal, state and county water quality mandates as required.

OBJECTIVES

- Determine fecal coliform (FC) pollution levels in streams and marine waters.
- Determine fecal pollution water quality improvements and/or declines in Kitsap surface waters.
- Identify and correct FC pollution sources.
- Investigate citizen complaints and reports related to failing onsite sewage systems (OSS).
- Correct FC pollution sources pursuant to local OSS and solid waste regulations.
- Prevent failing OSS by promoting and providing education on the use of OSS to residents, the OSS industry, realtors, developers, builders, lenders, etc.
- Support financial options for Kitsap County residents to promote voluntary correction of failing onsite sewage systems.
- Assist Kitsap County with tracing and correcting storm water system illicit discharges or connections.
- Provide public education and advisories on water quality related health hazards.
- Assist Kitsap County with Federal Clean Water Act Section 303(d) compliance and implementation of associated Total Maximum Daily Load studies.
- Assist Kitsap County with response to Washington State Department of Health commercial shellfish harvest classification changes.
- Coordinate with other agencies to ensure that monitoring efforts are not duplicated.

Chapter 1: Project Preparation

Project Area Evaluation:

Project area evaluation is an important tool to gain a thorough understanding of an area. The steps of this evaluation include:

- ✓ Evaluate information related to the project area.
- ✓ Conduct an initial project area visit.
- ✓ Conduct an evaluation of water quality data.

Evaluate information related to the project area

Before visiting a project area, or conducting a parcel inspection, an evaluation of the project area shall be conducted to review available data and background information. The following table presents a list of information sources that may be used for this evaluation.

Information Sources for PIC Project Evaluations:

Information	Source(s)	Reference
Water quality data	Kitsap Public Health, Washington State Departments of Ecology and Health	www.ecy.wa.gov/water.html
PIC property inspections	Kitsap Public Health	PIC database
OSS Building Site Applications & Permits	Kitsap Public Health	Online RME
Farm inventories & parcel priority lists	Kitsap Conservation District	KCD.org
Farm violations & BMPs	Kitsap Public Health	PIC database
Project area soil conditions	<i>Soil Survey of Kitsap County Area, Washington</i> (USDA, September 1980)	<i>Soil Survey of Kitsap County Area, Washington</i> (USDA, September 1980)
Project area topography	USGS topography maps, Kitsap County ARC View/GIS data	
Complaint information	Kitsap Public Health, Kitsap County Department of Community Development and Public Works	Kitsap Public Health Complaint database Kitsap One
Property parcel information	Kitsap County Geographic Information System KPHD WEB GIS	http://www.kitsapgov.com/gis/
Aerial photographs	Google Earth	Google Earth software
Washington Coastal Atlas (aerial photos)	Department of Ecology	www.ecy.wa.gov/programs/sea/sma/atlas_home.html
Watershed Action Plans and characterizations	Kitsap Public Health	
Stormwater drainage patterns	Kitsap County and Jurisdiction Stormwater Utility	
Stormwater outfall maps	Jurisdiction Stormwater Utility	

Determine whether the project is grant funded. If it is, there will be a project scope of work and Quality Assurance Project Plan (QAPP). These documents specify the project components, commitments, timeline, field and laboratory methodologies.

Once sufficient background information is gathered, the information should be organized into project file(s) *e.g.*, property parcel information organized by road, water quality monitoring data, maps, project QAPP, grant, etc. This information will be needed during the project for the preparation of public notification, meetings, door-to-door surveys, press releases, and the final report.

Conduct Initial Project Area Visit (a.k.a “ground truthing”):

An initial project area visit should be conducted. It is used as a tool to determine the following:

- Confirm storm water drainage patterns of the PIC area.
- Identify surface waters (drainage in roadside ditches, pipe discharges, streams, and marine water) for FC “impact” monitoring to assist in identifying priority areas. This is conducted in coordination with other program monitoring activities.
- Determine project boundaries and note road segments to be inspected, along with property addresses.
- Look for potential fecal sources in the area, including pet or livestock waste, grease, and food waste.

Conduct an Evaluation of Water Quality Data:

Gather and evaluate available water quality monitoring data for the area to determine general areas with elevated FC or EC levels. Work with the project lead or program manager and consult the QAPP to determine which indicator organism to use for investigations. Water quality data is used to determine where water quality problem areas are located and to delineate and refine the project area.

Public Notification and Information:

Public notification is key to informing and engaging Kitsap County residents about PIC projects. After the office evaluation, initial project area visit, and water quality evaluation are complete, the public within the PIC boundary are notified of Kitsap Public Health's intent to conduct a PIC project.

Public notification is accomplished using the following resources and/or methods: hosting public meetings, press releases, direct mailings to households, door hangers, project fact sheets, articles in local news media and/or publications. The information presented should be direct, concise, and complete.

It should contain the following items:

- Why and where the PIC project is being conducted;
- Applicable water quality results;
- Who is doing the PIC project, and by what authority;
- How and when the PIC project be conducted;
- Possible sources of fecal pollution;
- Who to contact for answers to questions.

Developing the format and content of PIC project information and the choice of how to distribute the information to the public is made in consultation with the Field Supervisor or Program Manager. Specific information regarding public notification will also be found in a project’s QAPP (if applicable), e.g. the number of public meetings, workshops, development of Fact Sheets etc.

Examples of a Press Release and a fact sheet, are found in [Appendix A](#). These are also kept electronically and accessible to staff in the PIC Common directory. Typically, these documents are organized in folders based on project areas.

All press releases must comply with Kitsap Public Health’s press release policy, and must be approved by the Program manager or Field supervisor and the Public Information Officer prior to dissemination.

A short informational fact sheet about area water quality is an effective way to introduce and provide information to area residents about the project. Submit to field supervisor or program manager for approval.

Septic Sense Workshops:

Public meetings are held to launch a new project, provide an update on an existing project, and/or host an OSS Onsite Septic System workshop. Clean Water Kitsap partners work together to provide coordination for putting on Septic Sense workshops. The roles and/or tasks for each of the partners is presented in the table below.

Table 1 Septic Sense Workshop Partners’ roles

Partner	Role/Task	Comments/notes
Kitsap Public Works	Advertising Meeting set up and assist with facilitation Workshop evaluation	
WSU	Facility schedule and coordination of partners Meeting registration Assist with meeting set up	
KCD	Presentation and/or information at meeting	
KPHD	Lead for Project and Septic presentations Refreshments and supplies	

Public Meetings for Water Quality Projects

Public meetings to present information about water quality projects are done according to grant funded contract requirements of the project. The following table presents guidelines for hosting a water quality project public meeting.

Table 1. Guidelines for Public Meeting Preparation

Timing	Preparation Chore	Tips
1-2 months in advance of meeting	Choose a meeting location and make reservations Choose meeting time(s)	Find a comfortable meeting space within the project area. Review cost, seating capacity, available chairs and tables, audiovisual equipment access, and if setup will be needed or provided. Meeting times can vary with project areas. Some locations charge fees.
1 month in advance of meeting	Prepare Mailing List to send to residents in the project area	Prepare mailing list of properties in the project area. This will be submitted to Clerical for mailing postcards.
1 month in advance of meeting	If applicable, fill out and submit light refreshments form & prepare or obtain Ecology attendance form	Contact the Ecology grant administrator for these forms. Otherwise, prepare a Sign In sheet on Kitsap Public Health letterhead.
1 month in advance of meeting	Prepare maps to be used for presentation	Request maps from Kitsap Public Health staff trained in ArcView.
3 weeks in advance of meeting	Complete meeting notice mailer	Prepare postcard mailer, be sure to follow branding guidelines for format.
2 weeks in advance of meeting	Send postcard mailers to residents	Coordinate with Clerical staff to send mailers
1-2 weeks in advance	Press release to newspapers. Notify Board of Health and other key stakeholders	Submit draft presentation to program manager for review. Public Information Officer will also review and approve.
1 week in advance	Prepare presentation	Submit draft presentation to program manager/supervisor for review.
1 week in advance	Gather materials for tabletop displays and maps	
1 week in advance of meeting	Arrange light refreshments in accordance with grant policies	

GIS Maps and PowerPoint

Get help from experienced staff for any technical elements or software you may not be familiar with. Make sure to plan ahead. It's also helpful to make sure your documents and software are compatible with that used by other presenters if you're going to share resources. It is also helpful to ensure that the software is compatible with the equipment, e.g. laptop has updated software.

Meeting Supplies

It's helpful to have a plastic box dedicated to brochures and materials that you'll take to your public/project meetings. It is useful to gather supplies well in advance of the meeting so that items can be added to the box as they are ready. Some suggested supplies include:

Equipment	Supplies/Handout materials	Items for refreshments
Scotch Tape	Directional signs to meeting place and room	Coffee filters
Stapler	Audiovisual equipment	Coffee pot
Extension cord	Laser pointer	Creamer
Easels or tacks for directional signs	Business cards for speakers and other programs	Sugar
Projector screen	Brochures/Fact Sheets	Tea bags
	Sign-in sheets/Pens	Bottled water
	For speakers: Gum or mints, drinking water, cough drops	Napkins
		Spoons
		Tablecloth(s)

Field Preparation and Safety

Personal safety in the field is extremely important. Staff can also refer to the Field Safety Protocol as seen in [Appendix B](#).

Health District inspectors should always adhere to the guidelines herein when conducting field inspections and investigations. Refer to a description of property access and consent. Safety equipment/supplies that each field staff should carry includes; cell phone, pepper spray, dog treats, gloves, reflective vest, Kitsap Public Health identification badge, and business cards. A complete list of field equipment is found in [Appendix C](#).

Before setting out into the field for the initial project area visit or individual parcel inspections, it is essential to be mentally prepared, properly equipped, and organized.

Inform project lead and note field work area on electronic U Sign when before leaving for the field. Include estimated return time. Coordinate with other inspectors in the area. Inspectors are encouraged to ask another inspector to “ride along” if they are uncomfortable visiting a particular property alone or if they want another “set of eyes” to assess a possible problem or violation. However, there are certain circumstances where “ride alongs” are probably not necessary, including consecutive visits (with owner/renter permission) to a property undergoing a dye test, etc. Use your best professional judgment in determining where and when to ask for a “ride along” – safety is our first concern but we also need to consider financial impacts. Contact the project lead, field supervisor, or the program manager if you are unsure.

TIP: Park your vehicle in a manner that does not interfere with the movement of other vehicles and provides you with the opportunity for a quick exit.

Cut the interview short if the homeowner shows any signs of hostility. If an individual makes threats or threatening gestures towards you, leave the property immediately.

Do not inspect the property in this situation. Drive away and find a safe location to note the details on the survey form. Inform your project lead, field supervisor or program manager immediately.

Handling Dogs

Dogs can be a major threat in the field. Dog treats are an essential tool to make friends with dogs in a project area, but always carry pepper spray to protect yourself. Contact the field supervisor or program manager to arrange for the required training to use pepper spray.

When entering a property, look for signs of dogs e.g. barking, doghouses or leashes. Stay in the car when dogs are present to assess whether the dogs are friendly or aggressive.

If you do not immediately see a dog or dogs, stay near the car with the door open momentarily or rattle a fence or gate and/or call out your name and affiliation several times to draw attention to yourself and listen for dog barking. If you feel confident that there is no immediate threat, continue to follow the main path to the front door.

If there is a dog on the property, use your best professional judgment to decide if the dog is friendly or not. Be sure to observe postural characteristics of the dog, as they can often provide insight to the dog's behavioral tendencies. Contact the field supervisor or program manager to arrange for an online dog behavior course.

If the dog appears to be friendly, continue cautiously to the front door. Your own posture, such as never turning your back to the dog, can be used to decrease the odds of a bite. If the dog does not appear to be friendly, wait a few minutes to give the resident time to notice the dog barking and come to the door. If you do not feel comfortable with the dog present, ask the homeowner nicely if they could put the dog away. If the owner declines, note the address of the home, and if possible, the homeowner's name and contact information, and contact the homeowner/occupant by phone to schedule an appointment. You can also leave your business card or door hanger at the door or gate with the date and time you were there.

Field Equipment List

A list and description of the standard and specialized equipment necessary to conduct inspections and investigations is located in [Appendix C](#). Ordering new equipment and making repairs to existing equipment are handled through the field supervisor program manager. Report all instances of equipment breakage or loss as soon as possible.

Chapter 2: Sample collection & testing

Quality Assurance and Quality Control:

Procedures for the collection, labeling and transport of water samples shall follow the *Kitsap County Health District Water Quality Monitoring Plan*, also known as the *Trend Plan*. Details regarding the collection, labeling and transport of water samples is also described below. Project work is conducted pursuant to any required and approved Quality Assurance Project Plans (QAPP).

Collecting Water Samples:

Water sampling is conducted for trend monitoring, shoreline surveys, PIC and water quality complaint investigations, and other special projects. Samples are analyzed for either FC or E.coli bacteria depending on the sampling purpose, field conditions, and approved QAPPs. Wear nitrile gloves for protection when collecting samples. Two sets of gloves may be useful on rough shorelines or terrain. Take care not to contaminate the inside of the lid or bottle during the sampling process.

During shoreline surveys collect water samples from all flowing discharge points including storm water outfalls, yard drains, bulkhead drains, pipes, drainage ditches, seeps, and sheet flow. The method of collecting, labeling, and transporting samples is critical to ensure that sampling data is valid. To be representative, water samples should be collected from free falling surface water flow when possible to prevent sediments and surface bacteria affecting the results.

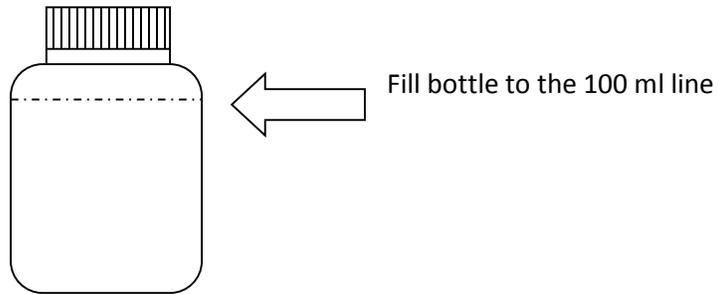


Use the “U” scoop method when sampling flowing surface waters.

- Reach out with the wand and slowly plunge the bottle straight down into the water, approximately to the middle of the water column, and scoop in a smooth, semicircular “U-shaped” motion back up to the surface.
- The scooping motion helps to ensure that the sample will not be biased with bacteria from the surface micro-layer.
- Take care not to scoop up any sediment in the sampling bottle. If this occurs, use a fresh bottle or empty the bottle, rinse it with clear water from the sampling site and resample.

It is important to leave some airspace in the bottle. If the bottle contains water above the 100ml line, slowly pour out the excess. Replace and tighten the cap, again taking care to avoid touching

the neck of the bottle and the inside of the cap. The bottle should be filled to the line shown below.



Record any notable characteristics that may indicate a human or animal fecal pollution source including: odors, temperature, matting, vegetative growth, laundry lint, food waste, animals, animal tracks, animal waste, and inhabited recreational vehicles.

Once the sample is collected, place the bottle in a cooler. Use ice packs and water baths in coolers as necessary, depending on ambient temperature to keep samples at or below 10 degrees Celsius (Holding time and temperature from *APHA Standard Methods*, 20th edition pg. 9-21), or per the QAPP for the specific project.

Wash hands and/or use hand sanitizer as soon as possible after sampling and before you eat.

Labeling and Recording Samples:

- Use a black permanent marker (or regular pen) to label the sample bottle with the sample identifier, date, and time the sample was collected.
- Clearly record the sample name, collection time, location, drainage size, pipe diameter, and pipe material (if applicable), and observations in the field notebook.
- Record detailed parcel-oriented sample descriptions in the field notebook so that outfalls can be re-sampled by different staff, if necessary. Record a digital picture and GPS coordinates at new sites.

Transporting Samples:

Water samples are transported in coolers with ice packs and water baths as necessary to meet the recommended temperature below 10 degrees Celsius (*APHA Standard Methods*).

Chain of Custody:

Water samples are analyzed at the contract laboratory. Following the collection of all water samples, a chain of custody form must be completed. Check the QAPP, or ask the project lead or supervisor to verify whether samples should be analyzed for FC or EC. A chain of custody form is also submitted when additional analytical sampling is needed, e.g. ammonia, nutrients etc.

Dye Testing:

Please see [Appendix I](#) for the detailed hotspot investigation procedure.

Inspectors conduct dye testing of residences in hotspot drainages when research and professional judgement indicates a potential fecal pollution source. Dye testing in a drainage is prioritized by proximity to the hot spot.

The following are a few factors that have the potential for probable cause:

- No records
- Permitted systems 25 years or older
- Proximity to contaminated drainage
- Potential cross-connection of effluent
- Standing water/saturated conditions near drain field with odors and/or high bacteria counts
- Uncorrected deficiencies in maintenance reports
- Unpermitted repairs

Kitsap Public Health evaluates drainages during both wet and dry seasons. Based on experience that many dye dry weather dye traces are negative, dye tests are typically conducted in wet conditions. Dry season dye tests are typically conducted when:

- Direct observation of drainage with high bacteria counts, grey/black matting, elevated NH₃ (≥ 0.30 mg/L)
- Onsite system appears to be within 25 feet of shoreline
- Standing water/saturated conditions near drain field with odors and/or high bacteria counts or ammonia counts

Always conduct a follow up dye trace in the wet season when a dry season dye trace is negative.

Properties with the potential for wet season problems are set up for a wet weather follow-up and a potential dye trace.

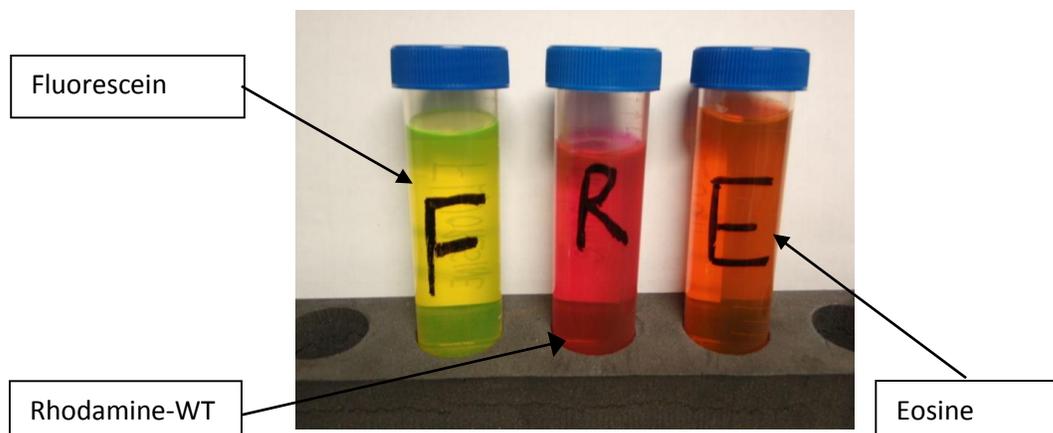
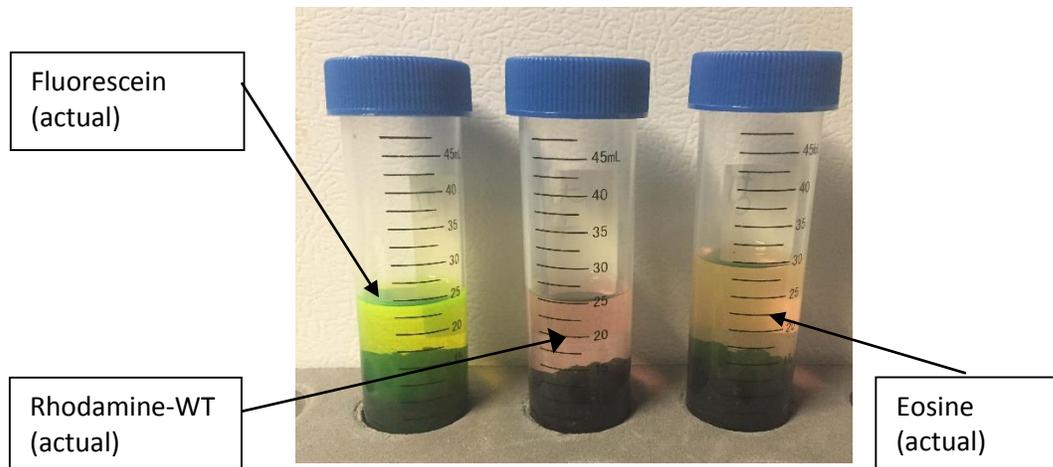
Dye Testing Procedures:

Kitsap Public Health utilizes methods developed by Dr. Tom Aley, of Ozark Underground Laboratories (OUL). Reference documentation regarding the procedures for the analysis of dye testing may be found at the OUL website, <http://ozarkundergroundlab.com>.

Kitsap Public Health purchases three fluorescent dyes from OUL for dye-testing OSS:

Fluorescein (a green-yellow dye), Rhodamine WT (a purple-red dye) and Eosine (a pink-green dye). By using three different colored dyes, dye testing a large survey area can be accomplished more efficiently since up to three homes can be dye tested simultaneously. When dye testing two homes concurrently, it is recommended to use Fluorescein and Rhodamine-WT because it is easier to differentiate for visual identification. This is due to the wavelength difference between Fl and Rh-WT.

Select dye in consultation with the project lead and/or program manager. Charcoal packs (packs) utilize activated charcoal to adsorb dye and are used to confirm a hydraulic connection between the OSS and the discharge point.



To meet the goals and objectives of the PIC project, dye testing shall be conducted in the sequence outlined below:

Dye Test Checklist:

Preparation

Mixing and Handling of Dye Tracers

Prior to handling dye, refer to the Material Safety Data Sheets provided in the laboratory for health and safety information.

Kitsap Public Health purchases dye mixing supplies from OUL and follows their mixing protocol. Fluorescein and Eosine dye are stored in dry-powdered form in one (1) pound containers and Rhodamine WT is stored in liquid form in one (1) pound containers. Do not move these dyes from their location until you are prepared to conduct dye mixing. Dye mixing instructions are specific to the type of dye being used, and are described below. Typically 1 to 2 staff will mix and stock all the dyes for use by the program.

Fluorescein Dye

While wearing proper protective equipment (e.g. gloves, safety glasses) mix 1 lb. fluorescein powder with 9,078 ml (2.4 gallons) of tap water. This will yield 18 bottles (500ml) for use in the field, and result in a 5% mixture.

Eosine Dye

While wearing proper protective equipment (e.g. gloves, safety glasses), mix 1 lb. of eosine powder with 6,052 ml (1.6 gallons) of tap water.

NOTE: In order to have a similar volume of eosine dye mixture e.g., 500 ml bottle, of dye for each mixture, 1.5 times more eosine is needed.

This will yield 12 bottles (500ml) for use in the field, and result in a 7.5% mixture.

Rhodamine WT

While wearing proper protective equipment (e.g. gloves, safety glasses) mix one 16 oz. bottle of RhWT with 4,085 ml (1.1 gallons) of tap water

This will yield 8 bottles (500ml) for use in the field, and result in a 10% mixture.

Each mixed dye is poured into a dedicated 500-milliliter. Nalgene™ bottles. Clearly mark each bottle with black permanent marker: FL for Fluorescein, Rh for Rhodamine, or Eo for Eosine. Dye pouring should occur in an outdoor location where any dye spills can be easily contained or cleaned up without public exposure or interference with dye tests in progress. Make a fresh batch of 1:10 bleach and water solution for decontamination.

Once poured, rinse the exterior of the 500-ml Nalgene bottle with a bleach solution to remove dye, then air dry or wipe with a disposable clean paper towel and place into a new resealable bag. Prevent cross-contamination by keeping the bags away from dye during the pouring and sealing process.

To prevent cross-contamination, the powdered and liquid dye is stored in the metal supply cabinet in the lab. Charcoal packs are stored in the metal supply cabinet located in the 3rd floor environmental health storage room.

Inspectors store dye bottles out of the sun in a dedicated and separate container from packs and other materials in their vehicles. Opaque, waterproof containers, such as plastic tubs, are excellent vessels for containing dye bottles.

Verify the absence of dye in the laboratory area where dye packets are eluted in November and March of each year as follows:

- Wipe the hood, interior and exterior, with paper towel wetted with alcohol.
- Add elution solution to the paper towel in a 50 ml conical vial.
- Observe for visual dye after one and 48 hours.
- Record the result in the elution notebook.
- Send the 50 ml conical vial with the paper towel/elution solution to OUL for non-visual range analysis.

If visual or non-visual dye is detected, the laboratory will be thoroughly cleaned and retested until visual and non-visual dye is absent from the samples. To prevent this from occurring, it is required that the hood and vent system be cleaned with bleach solution at least once per quarter.

Mixing and Handling of Elution Solution

Dye elution solution consists of 5% aqua ammonia and 95% isopropyl alcohol solution and sufficient potassium hydroxide flakes to saturate the solution. The isopropyl alcohol is 70% alcohol and 30% water. The aqua ammonia solution is 29% ammonia. The potassium hydroxide is added until a super-saturated layer is visible in the bottom of the container. This super-saturated layer is not used for elution.

The elution solution is used to release absorbed dye from charcoal packs. The proper laboratory procedures for the preparation of the elution solution includes:

__ Before handling chemicals, refer to the Material Safety Data Sheets provided in the laboratory for health and safety information.

__ Under the vented hood, wearing eye protection and gloves, measure 950 ml of isopropyl alcohol solution in the 1000 ml graduated cylinder and pour into the 1000-ml clear glass Erlenmeyer flask with rubber stopper used for mixing the solution.

__ Measure 50 ml of aqua ammonia into the 100 ml graduated cylinder and pour into the flask.

__ Potassium hydroxide flakes are added until a super-saturated layer is visible in the bottom of the flask. It is not necessary to add additional potassium hydroxide flakes if a super-saturated layer is already visible at the bottom of the flask.

__ Stir with a 25 ml pipette and keep the flask sealed to avoid evaporation. Elution solution is stored in the vented hood located in the laboratory.

__ Label the Erlenmeyer flask with the date the elution solution was mixed.

IMPORTANT NOTE: Avoid using the super-saturated layer when eluting charcoal.

Plan

__ Develop a plan in advance for dye testing. This should include the type of dye to be used, locations of packs, and how to secure and camouflage the packs. Project water quality improvements depend, in part, on the effectiveness of dye testing plans. Fluorescein is generally easier to see and is the least expensive. It has been shown that fluorescein may appear in tap water, or fluids leaked from vehicles will contain the color of certain dyes (antifreeze contains fluorescein and transmission fluid has a pink color similar to rhodamine). In areas with these potential sources, it is advisable to analyze the control packs before determining which dye to use. The inspector should consult with the project lead or Field Supervisor if they are unsure how to proceed.

Controls (Charcoal packs)

__ Start each site visit with charcoal placement to avoid dye cross contamination. When the charcoal placement is complete and all supplies are stored, change gloves prior to handling dye.

__ Use two charcoal packs to make up each sampler. Kitsap Health inspectors elute one charcoal pack and send the other pack for analysis.



Two charcoal packs

__ Place a control sample charcoal pack one week prior to introducing the dye to determine whether any of the dyes are present in the background. Map location of charcoal samplers in field notebook or on the PIC survey form.

__ The control should be placed in or beneath an outfall pipe, or an area that has shown elevated (FC or EC levels). In lakes, you may want to establish charcoal floats in priority areas where you plan to dye test. Contact Dr. Aley at OUL for site-specific recommendations. Wear personal protective equipment to protect yourself when placing charcoal packs.

__ Prior to introducing dye into the OSS, retrieve the controls and seal them into sterile plastic bags clearly labeled in black permanent marker with sampler address, location, and dates and times placed and retrieved. Do not use red marker.

__ Store retrieved charcoal packs away from dye supplies and out of the sun. A clean cooler and ice packs are used to transport the retrieved charcoal packs to the office. Store them in a dedicated freezer until elution is performed. The retrieved packs are stored and shipped frozen to prevent algal growth that interferes with dye identification.

__ After retrieving the controls, place another set of charcoal packs in the same location. Note the date and time the controls were retrieved and the new packs replaced on the PIC survey form.

__ Cover charcoal packs with a rock, board, or other object to prevent sun exposure, algae growth, and disturbance. Make sure, especially along marine shorelines or within creeks, that they are secured (i.e. heavy gauge wire, fishing line, cinder blocks, or stakes, washers, and/or cricket cage). Carefully describe and/or mark locations on the map and/or PIC survey form. Materials used to secure charcoal may only be re-used if the dye test is negative.

Dye Introduction

__ Wear gloves when handling or introducing dye. Change gloves before handling a second color dye. Dispose of gloves and used dye bottles in a manner that will prevent cross contamination of dye testing materials. For example, after introducing dye into fixtures in a house, place empty dye bottle along with gloves into the Ziploc bag that was used to store the dye bottle.

__ Note which dye you used on the PIC survey form. Before introducing dye, make sure the owner/occupant hasn't experienced any recent backups. Carefully introduce a total of 500 milliliters of the prepared dye solution equally into all toilets, the kitchen sink, and a laundry sink or washer discharge. Use a long funnel when accessing washer discharges to prevent spills. Funnels are not reused.

TIP: Flush the toilet first, before introducing dye, to be sure it is working properly!

__ After introducing the dye, flush the toilet twice, or more if necessary, to flush residual dye from the bowl. Clean up any splashes with toilet paper. Replace the dye bottle lid, place used gloves and bottle back into the resealable plastic bag, and securely close the bag. Keep used bottles away from all other dye testing supplies. Place used funnels and gloves in the zip-lock bag.

__ When you return to work, dispose of used gloves in the appropriate receptacle in the lab and return the used bottles in their plastic bags to the dedicated used-bottle storage area for reuse. Do not bring dye bottles into the office to prevent cross-contamination.

__ Retrieve the first set of dye-packs approximately one week after dye introduction using the procedures specified above for retrieving controls. Replace with another set of charcoal packs. Note the retrieval and replacement information on the survey form and/or field notebook and on the sterile storage bag. Elute the charcoal pack in the laboratory to determine the presence or absence of dye.

Checklist for Performing an Elution and Analysis of Charcoal packs

Charcoal packs should be eluted following the first week they are collected. There may or may not be visual dye, but if visual dye is present, the dye test can be stopped.

__ Wear latex gloves when eluting charcoal packs to determine presence/absence of dye.

__ Label a clean 50 ml plastic elution vial with charcoal sampler identification and date placed and retrieved.

__ Remove one of the charcoal packs from the sterile plastic bag for the elution. Keep the other sampler in the bag and return it to the freezer. This duplicate is stored in a dedicated freezer in Kitsap Health District's laboratory and sent for analysis when necessary.

__ Rinse the charcoal pack with de-chlorinated water from the spigot to the right side of the laboratory sink.

__ Using scissors, cut open the charcoal pack and transfer the charcoal into the 50 ml elution vial. The scissors are immersed in 1:10 bleach solution and rinsed with water before and after use. Rinse and store scissors open.

__ Turn on the vent in the laboratory hood.

__ Inside the laboratory hood, add the elution solution to the 50 ml elution vial containing the charcoal.

__ Add approximately 25 ml of elution solution to the vial. **Do not use the super-saturated layer.**

__ Tighten the vial cap firmly, mix for about 20 seconds and store in the dark with the cap side up to prevent leaks.

After one hour, observe the solution for the presence of dye. In a dark room, beam a non-fluorescent light source into the vial. Aim the light at 90 degrees to the viewing angle. Dye is most visible in the light beam. Note the results. Repeat observation 24 hours later and one week later, and note the results on the PIC survey form. In some cases, it is difficult to determine if dye is present, ask another PIC staff member to view the vial to help determine presence/absence of dye. If you have difficulty, discuss the observations with your supervisor.

Keep positive samples labeled and stored in a dedicated container in a darkened room or storage area. These stored samples are sorted quarterly, double-bagged, and set aside in the dedicated waste disposal locker in the lab when OSS repair is complete. Disposal occurs as needed by Kitsap Public Health's hazardous waste coordinator.

__ Retrieve the second and third set of charcoal samplers one week following placement using the procedures specified above.

__ Typically dye testing is conducted over a three-week period. However, if you suspect low water flow in the residence or intermittent failure, the dye test can be extended additional weeks by placing additional charcoal sets, as needed, on a weekly basis.

Interpreting Dye Test Results:

Positive Dye Test

A dye test is considered to be positive when there is either visual dye that appears at the property, e.g. surfacing in the drainfield, coming out of a pipe, bulkhead etc. OR when the charcoal pack is eluted and there is presence of visual dye in the elution vial.

Suspect Dye Test

A dye test is suspect, when there is no visual dye either at the property site, or in the elution vial, however, the laboratory analysis of the charcoal indicates a detectable level of dye. This level should be **10 times greater** than the concentration reported in the background sampler(s).

Negative Dye Test

A dye test is negative when there is no visual dye present either at the property, in the elution vial and the laboratory analysis indicates that dye was not detected in the sample(s).

Sending Charcoal Packs to Ozark Underground Laboratory (OUL) Contract Laboratory:

Charcoal packs are sent to OUL for spectrofluorometric analysis. Send charcoal pack with visual dye within 1 week of collection, and/or send a batch of charcoal packs at the end of the dye test, e.g. typically 3 weeks, but this may be extended based on conditions.

Send the duplicate charcoal sampler to OUL for analysis. Complete an OUL chain of custody form. These are available from OUL and a blank template is located in the PIC common directory under Ozark Laboratories. Place the chain of custody in a plastic bag and place that bag into a plastic bag with the charcoal samplers. Submit an electronic mailing request and confirming e-mail, fill out a work order form and clip to the charcoal package. Place the package into the 3rd floor environmental health freezer. The charcoal samplers are shipped with a cold pack and are scheduled to arrive the next business day. Expedited shipping prevents algae growth that could obscure dye results. You can also send eluted charcoal vials to OUL for analysis.

Several packs may be shipped at the same time. Send an advisory e-mail to the PIC team to consolidate shipments.

Optical Brightener Procedure:

Optical brightener testing is another tool used to assess drainages where greywater discharge is suspected. Optical brighteners are fluorescent white dyes found in laundry soaps and detergents that absorb ultraviolet light and emit visible blue light. They are removed by adsorption onto soil and organic materials. Recovery of optical brighteners indicates that greywater is being discharged and/or wastewater is not being adequately treated. This makes optical brighteners useful to trace wastewater and greywater discharges. Kitsap Public Health conducts optical brightener sampling in accordance with protocols developed by Ozark Underground Laboratories.

Optical brightener packs consist of cotton-test fabrics which have not been optically brightened. The packs adsorb optical brighteners present in laundry detergent and are used to indicate a greywater or sewage connection to the discharge point. Packs must be deployed as close as possible to the potential discharge in order to absorb the optical brighteners.

Store optical brightener packs in new re-sealable plastic bags isolated from potential sources of laundry soaps and detergents.

To perform optical brightener testing follow these steps:

- Wear disposable gloves when handling optical brightener pads.
- Place cotton packs in locations where either visual evidence indicates a discharge and/or locations where elevated water sample results were collected. Place packs in a location where they are not likely to be seen or hide them with rocks.

- Anchor the packs with sturdy copper, galvanized wire, or plastic garden ties to a large rock or brick, leaving at least an inch of space between the sampler and the anchor. Ensure they are placed in a location where they are well-exposed to the water flow. DO NOT USE iron wire, old galvanized wire, or metal stakes which may leave rust stains that could interfere with the analysis.
- Carefully describe, map, and/or mark cotton sampler locations, and record dates and times placed and retrieved on the PIC survey form.
- Retrieve optical brightener pads after one week of placement, briefly rinse in water flow, squeeze out excess water (do not wring), and place in new re-sealable plastic bag. Label bag with sampling station, date and time sampler was placed and recovered. Do not put any label or used anchoring wire inside the bag. Use a permanent black pen to label the bag.
- Refrigerate or freeze the optical brightener pads until shipment.

The pads do not need to be shipped overnight, but it is advisable to ship them so they arrive within a few business days. Include the optical brightener chain of custody form from OUL. This form is available from Ozark and is on the PIC common under Ozark Laboratory.

Chapter 3: Conducting Shoreline Surveys

A shoreline survey is the inventory and bacterial assessment of all flowing discharges to the project area. Most project areas that include a QAPP require both wet and dry weather shoreline surveys. Wet weather season surveys are conducted from Oct. 1 through April 30. Dry weather season surveys occur from May 1 through Sep 30.

Dry weather events can identify problems in areas where storm water masks FC sources or where residences are only occupied in the summer. Wet weather assessments can identify OSS failures caused by high seasonal groundwater and surface water drainage issues. Wet weather conditions are met when water is flowing off parcels and stormwater is flowing in roadside ditches or storm systems.

Check with the Project Lead and/or Program Manager if you have questions regarding any of these items. The checklist should be used to ensure staff are prepared for shoreline surveys and have gathered the necessary equipment and supplies. A complete equipment/supply list is found in [Appendix C](#).

Field Preparation Checklist:

___ Check tides (<http://www.protides.com/washington>) and weather conditions.

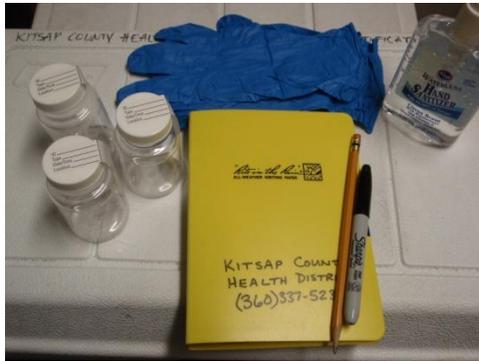
___ Determine access location(s) to shoreline and length of shoreline to be surveyed.

___ Get a partner. Determine whether you will need a shoreline survey partner and confirm with the project lead or program manager. Partners are strongly recommended when the area is unknown or unusually soggy, muddy or marshy. Always err on the side of caution, while using resources carefully and wisely. When working in pairs, park one vehicle at the “start” access point and one at the “end” point.

___ Estimate the number and type of samples to be collected. If previous sampling events have been performed, look in Web GIS or the Water Quality database to determine the number of samples on each section of shoreline. Check the monthly laboratory schedule (common Water Quality calendar) and add the number and type of samples you will be collecting. Become familiar with the sample holding time, and be sure that the samples will be delivered either personally or by the courier. The courier schedule is periodically updated and found in the PIC Common folder.

___ Gather field supplies:

- Personal protective equipment: boots, rain gear, hat, gloves, mudders (if needed)
- Sampling wand, bottles, cooler, ice packs, backpack in place of cooler (then use flexible ice packs)
- Field notebook pen(s) (a permanent marker, black and red if taking salinity) or pencil(s), wrist watch or stop watch
- GPS, camera, cell phone, extra set of batteries, salinity meter if taking salinity
- First Aid Kit & hand sanitizer
- Fact sheet about the project/shoreline area being surveyed, photolog with descriptions, coordinates, and pictures if available
- Business cards, identification badge
- Dog treats, pepper spray



Sample bottles, Field book, gloves and Hand sanitizer



Sampling wand with empty sample bottle

__ In the office, map the “start” and “end” access points at the shoreline. Visit these sites to determine accessibility. These points can be a public access area like a public boat launch, or a property parcel where consent has been granted to access the shoreline. You can access Kitsap County’s Assessor database and Washington State Department of Ecology’s shoreline aerial photos to determine potential access points.

__ Work out a sampling strategy and nomenclature system for labeling the samples ahead of time with the project lead.

There are several ways to name the sampling stations. It is important to choose carefully because you will need to track data collected from each sampling station over the course of the project. Examples from previous PIC shoreline surveys are shown in the following table.

Project Area	Naming Description	Sampling Station Identifier*
Colvos Passage	Colvos Passage abbreviated Col, area was not divided into sections, sample locations numbered	Col 1,2,3....
Jump off Joe/Hood Canal	Jump Off Joe Hood Canal 1 followed by sequential number	JHC1-1,2,3....
Shoreline Monitoring Program	Area name, e.g. Liberty Bay	#LB19

*There is a 6 character limit in the water quality database for station identifier.

NOTE: During an initial shoreline survey there will be XX number of stations. On a subsequent survey of the same area (typically during wet weather), additional flows may be observed. To keep the nomenclature constant, use a letter of the alphabet as an extension to the name.

For example, during a shoreline survey along Colvos passage, Col 1, and Col 2 three additional flows are observed. Name these new stations, Col 1A, Co 1B and Col1C etc.

Conducting the Shoreline Survey:

When you arrive at the “starting” access point, park your vehicle safely, so that it will not obstruct other traffic. Place your business card either on the dashboard or inside the driver’s side window, to provide contact information. Inspectors are responsible for knowing the rules for property access and consent.

Don’t forget your keys!!!

Proper technique for collecting, labeling, and transporting samples is critical to ensure that sampling data is valid. To be representative, water samples should be collected from freefalling surface water flow when possible. Sediments and surface bacteria can skew results.

Collecting water samples:

- Wear nitrile gloves. You may want to wear two pairs of gloves (or heavier duty gloves) when working on rough shorelines or terrain.
- Collect water samples from all flowing discharge points including storm water outfalls, yard drains, bulkhead drains, pipes, drainage ditches, seeps, and sheet flow.

NOTE: If necessary, a composite sample may be collected when there are multiple small discharges that appear to emanate from one parcel and/or are close together.

Sometimes discharges are too small to sample without capturing underlying sediment. This is not a significant problem - simply try to minimize the amount of sediment collected.

- Note any unusual odors, matting, vegetative growth, laundry lint, food waste, temperature, animal tracks, animal waste, or any other characteristics that may indicate a sewage or laundry source at or near the water sample.
- Wash hands as soon as possible after sampling and before you eat.

Labeling and Recording Samples:

- Use a black permanent marker (or regular pen) to label the 100 milliliter sample bottle with the sample identifier, and time the sample was collected on the label.
- Clearly record the sample name, collection time, location, drainage size, pipe diameter, and pipe material (if applicable) in the field notebook.
- Record detailed parcel-oriented sample descriptions in the field notebook so that outfalls can be resampled by different staff, if necessary.
- Note any characteristics that will help distinguish the property when accessed from upland so that the outfall can be easily found for resampling and the associated property address can be identified, if necessary.
- Record latitude and longitude of the discharge with a GPS unit and take digital photographs.
- Photographs are helpful for re-identification of sample stations during subsequent surveys.
- Generally, one partner will collect the water sample and the other will take the photo and record field notes and GPS coordinates.
- Enter the sample information in the field notebook.
- Print the Project Name at the top of the page, the start/end locations, include the date, staff initials and the weather and tide conditions. An example of the field notebook entry is shown below:

- Some QAPP's will require salinity to be noted at sample sites where salt water may be impacting the drainage. For sample sites that have a salinity >10, the salinity should be noted in the field notebook, and a red marker should be used to label the sample bottle. A separate chain of custody will also be used for samples >10 salinity and marked for MARINE water.

SAMPLE ENTRY IN FIELD NOTEBOOK

Hood Canal Shoreline Survey Staff Initials DATE
 Weather conditions, e.g. Rain, Temp 50F, wind S at 10 mph
 Start: Address and/or public access and approximate distance

Sample ID	Time	Latitude(optional)	Longitude(optional)	Description	Comments
HC 1	10:15	xx.xxxxx	xx.xxxxx	6 in black flex in bulkhead	Matting at base of bulkhead
HC 2	10:25	xx.xxxxx	xx.xxxxx	Beach seep	Raccoon tracks/ Salinity 16
HC 3	10:43	xx.xxxxx	xx.xxxxx	4 in PVC pipe under dock	Suds
HC 3R	10:43	xx.xxxxx	xx.xxxxx		

REMEMBER: A **replicate** water sample (or duplicate sample) should be collected for every 10th sample. Include the letter **R** at the end of the sample identifier to distinguish it as the replicate. Look at the QAPP for the project if additional samples need to be collected.

NOTE: If 10th sample is extremely low, collect your duplicate sample and the next possible flow.

- Record the GPS coordinates at the sampling location. Enter the sample identifier into the GPS unit. The coordinates will also be recorded in the water quality database when the results arrive. Entering the sampling station to the GPS also facilitates relocating the sample site on subsequent shoreline surveys.
- Take a photograph of the sampling location. Be sure to include a distinguishing feature in the area that will help identify the location, e.g. for example if the sample location is a beach seep next to a house, be sure to include a portion of the house in the photograph. In some instances more than one photo may be necessary. If the flow is hard to see in the photo, or a beach seep, use the sampling wand in the picture to point at the flow.

Transporting Samples:

When water samples are collected they should be transported in coolers or backpacks with ice packs. The recommended temperature, according to *APHA Standards Method* is 10 degrees Celsius. Place the samples in this designated refrigerator and attach the completed chain of custody form to the front of the refrigerator. You can also deliver the samples directly to the contract laboratory if it is more convenient.

Chain of Custody:

Water samples are analyzed at the contract laboratory. Following the collection of all water samples, a chain of custody form must be completed. Check with the Program manager and/or Quality Assurance Project Plan to verify whether samples should be analyzed for FC or EC. A chain of custody form is also submitted when additional analytical sampling is needed, *e.g.* ammonia, nutrients, etc. Use separate forms for marine/fresh water, and EC/FC samples.

Sample Results and Data Organization:

Water quality sample results are reported by the contract laboratory and sent to staff electronically and via hard copy. Sample results will be reported according to the turnaround time checked on the chain of custody, and can range from 24, 48 or 96 hrs.

Water quality sample results are entered into the Water Quality Database. The Water Quality database is a Microsoft Access database developed by Kitsap Public Health Information Technology and water quality staff. Water quality data entry procedures are found in [APPENDIX F](#) and the PIC Common directory. An example from the data entry page of the water quality database is shown below.

Figure 1. Water quality database entry page for shoreline survey results

WATER QUALITY KITSAP COUNTY **ENTER OR EDIT VISIT** **ACTIONS**

Category: Shoreline (dropdown) Event: Shore (dropdown) Yukon/Manchester Shoreline-Fuel Depot to Haida-approx 60 degrees F, wind NE at 5 mph, sunny, no rain in last 72 hours (dropdown)
 Visit date: 05/18/2015 Staff 1: KJ (dropdown) Notes: Tides: High Tide 04:50 11.6, Low Tide 11:42 -2.4
 Result date: 05/19/2015 Staff 2: KB (dropdown)

Station	Time	Type	Conf. of	E.coli	Notes	Tide	Dup
X #YM1	10:07	Regular		37.9			<input type="checkbox"/>
X #YM2	10:08	Regular		0.5			<input type="checkbox"/>
X #YM3	10:10	Regular		0.5			<input type="checkbox"/>
X #YM4	10:12	Regular		1.0			<input type="checkbox"/>
X #YM5	10:13	Regular		2.0			<input type="checkbox"/>
X #YM6	10:14	Regular		0.5			<input type="checkbox"/>
X #YM7	10:16	Regular		0.5			<input type="checkbox"/>
X #YM8	10:18	Regular		0.5			<input type="checkbox"/>
X #YM10A	10:31	Regular		0.5			<input type="checkbox"/>
X #YM11	10:36	Regular		1.0			<input type="checkbox"/>
X #YM13A	11:00	Regular		0.5			<input type="checkbox"/>
X #YM14	11:02	Regular		0.5			<input type="checkbox"/>
X #YM16	11:04	Regular		144.0			<input type="checkbox"/>
X #YM17	11:07	Regular		6.3			<input type="checkbox"/>
X #YM17	11:07	Regular		1.0			<input checked="" type="checkbox"/>
X #YM19	11:16	Regular		0.5			<input type="checkbox"/>
X #YM20	11:18	Regular		0.5			<input type="checkbox"/>
X #YM21	11:23	Regular		0.5			<input type="checkbox"/>

Cancel QA Completed

Water quality data for monitoring of lakes, beaches, marine monitoring, stream trend monitoring, and shoreline surveys are entered into this database.

Confirmation Sampling:

Refer to the QAPP to determine what FC/100ml or EC/100ml levels require confirmation samples. When the FC or EC levels exceed the threshold, they shall be re-sampled two times to confirm whether or not they may be categorized as “hot-spots.” When the calculated geometric mean of three samples from a discharge is greater than the FC or EC levels specified in the QAPP, it is considered a “hot spot” and needs further investigation.

Re-sampling should occur as soon as possible. Samples must be collected within the same sampling season, e.g. if the samples were collected as part of a wet weather event, then confirmation samples must also be collected during the wet season. **IT IS ESPECIALLY IMPORTANT TO GET OUT TO DRY WEATHER HOT SPOTS AS SOON AS POSSIBLE BECAUSE THEY MAY DRY UP.** Work with the project lead or program manager if you have questions. This is required because a discharge can be a “hot spot” during the dry season, or during the wet season, or during both seasons.

Discharges determined to be “hot spots” are investigated for potential fecal sources. It is recommended to rank the “hot spots” according to geometric mean values, those with the highest GMV should be investigated first, etc. An investigation package (or file folder) is assembled for each hot spot, including drainage tracking, segment sampling when applicable, and building and OSS records for nearby residences. It is very useful to make individual folders for each hot spot and color code them for wet and dry weather so that the inspector can collect and organize all the data and activities conducted related to this hot spot. Photos and maps of the hot spot drainage should also be included in this folder. This also facilitates the transfer of hot spot investigations to other inspectors, when needed.

Potential fecal pollution sources are evaluated and identified through property surveys, and segment (or impact) sampling using the FC Hot Spot Response Process that follows. This applies to both shoreline and stream sampling.

Chapter 4: Property Inspections

Property Parcel Inspection Preparation:

PIC staff coordinate with support staff to prepare PIC inspection forms, assessor records, OSS records (which include the septic permit, Building Site Application, and Record of Construction), applicable monitoring and maintenance (M&M) records, and other correspondence for each individual property parcel in the project area before the property inspections.

In some cases, project areas include residential properties served by sewer. Sewer billing departments can confirm properties served by sewer. Inspectors may make a courtesy site visit to sewer properties and let them know about the FC pollution problem and potential sources. Look for potential FC sources including sewage leaks, pet and livestock waste, and grease and food waste.

Property parcel inspections consist of:

- Contacting the property owner/occupant to conduct the informational interview.
- Obtaining access and consent to perform a field inspection of the property including an inspection of the onsite septic system and animal waste management practices.
- Evaluating discharges leaving the property during wet weather conditions.
- Making any site specific recommendations to reduce stress to the onsite septic system.

Conducting the property inspection:

Kitsap Public Health inspectors must follow the Property Access and Consent Policy when visiting a property. This policy follows:

Property Access and Consent:

Site Entry and Searches:

While conducting inspections, Health District inspectors must enter private property. Because the state and federal constitutions prohibit unreasonable searches, inspectors must decide whether they may enter a particular property to conduct an inspection. There are no blanket rules regarding allowable searches. In all cases, an inspection can occur only after obtaining consent from a responsible party (owner or tenant), or by making observations from a location where the inspector may legally be without consent. To assist you in determining whether you may enter a property some basic constitutional doctrines are listed below:

Reasonable Expectation of Privacy:

There are two components to a reasonable expectation of privacy. The first is a subjective component: Does the person have a subjective expectation of privacy in a particular object or location? The second is

an objective component: Is this expectation one that society recognizes as reasonable? Generally, a person has a reasonable expectation of privacy in his home, in the area immediately adjacent to the home, and in areas where he/she has taken steps to exclude the public and shield the area from the public's view.

Residence:

A person always has a reasonable expectation of privacy in his/her home. You may not enter a person's home, except with the resident's consent.

Curtilage:

The land immediately surrounding and associated with the home, i.e., that area associated with the intimate activity of a home and the privacies of life. Curtilage receives the highest level of protection under both the federal and state constitutions. You may not enter the curtilage without a resident's consent, except as explained below. To help determine if an area is within the curtilage, answer these questions:

Q: How close is the area you want to inspect to the house?

A: *The closer the area you want to inspect is to the house, the more likely it will be considered within the curtilage.*

Q: Is there a fence or other enclosure that surrounds the house *and* the area you want to inspect?

A: *A fence that surrounds the house suggests the limits of the curtilage. Accordingly, where a house is situated on a standard lot and the lot is fenced, that is the limit of the curtilage. On a larger piece of property there may be a fence around the perimeter of the property, and an inner fence enclosing the house. In that case, the interior fence would indicate the limits of the curtilage. A clearing or maintained area has the same effect. Thus, on a larger piece of property that is forested, the cleared area surrounding the house would indicate the limits of the curtilage.*

Q: What is the area you want to inspect used for?

A: *The concept of the curtilage is to protect those activities normally associated with the home and the privacies of life. Thus, if an area near the house is used for family or personal activities (e.g., play area, patio, garage), then it is probably within the curtilage. However, if the area is used for activities not associated with home life, especially illegal activities, then it probably will not be considered within the curtilage. You may use evidence you observe from the road or a neighbor's property, or information a neighbor gives you, to determine if an area is being used for an activity associated with the home or some other activity.*

Q: Has the resident taken any steps to protect the area you want to inspect from observation of passersby?

A: *If a fence -- especially a sight-obstructing fence -- or hedge shields the view of the house from the street and neighboring properties, then the area within the fence or hedge will probably be considered within the curtilage.*

Q: Can an inspector ever enter the curtilage?

A: *Yes. You may enter the curtilage to contact the resident. In doing so, however, you may use only a recognizable access route, such as a driveway, walkway, or path. Approach the house as any reasonably respectful citizen would. Normally, you should not enter a side or back yard. You may, however, call out or try to get someone's attention if you see or hear something that leads you to believe the resident is in a side or back yard.*

Other factors to consider when conducting an inspection of private property:

No Trespassing Signs:

A "No Trespassing" or "No Solicitors" sign does not prohibit you from approaching a residence using a recognized access route for the purpose of contacting the resident.

Open Fields:

Areas that are outside the curtilage are considered "open fields" and do not always receive the same high level of constitutional protection that the curtilage does. In an urban area, you may not find any open fields. In outlying areas, however, you are likely to encounter them. An open field doesn't need to be either "open" or a "field." It could be a thickly wooded area or a beach. Generally, an open field is any unoccupied or undeveloped area outside the curtilage.

In many instances, you will be able to enter open fields without the permission of the owner. However, you need to consider whether the owner has manifested an "expectation of privacy" in the area you want to enter. Some manifestations of an expectation of privacy are: 1) a long driveway; 2) "No Trespassing" signs; 3) fences, especially sight-obstructing fences, or maintained hedges; 4) a locked gate; or 5) the area cannot be seen from a road or neighboring property.

Each situation is different, so it is not possible to provide a blanket rule for entering open fields. It may be best to consult with a supervisor before entering.

Open View:

If you are in a place you may legally be, such as a roadway, public property, a neighboring property that you have permission to be on, or are approaching the residence via a recognized access route, then you can base an enforcement action on anything you can see from that vantage point. Accordingly, if a person allows you in his/her backyard, and you can see illegally stored solid waste on the neighbor's patio, you can write a notice and order to correct the violation or a notice of civil infraction, based on what you can see from the neighbor's property. As long as you remain on the property you have permission to be on, you can climb a ladder to see over a fence, or use binoculars. You may take photographs from a place you may legally be.

Plain View:

The plain view doctrine applies when you have entered a property with the resident's consent. The plain view doctrine allows you to use anything that you see inadvertently as you walk through the area. The object must be in plain view; you may not move anything. You may not remove a lid on a trash container

to see inside. Plain view works the same way when the resident has given you permission to look around. If you want to see inside or under something, ask the resident if it's okay.

Implied Consent:

An inspector obtains valid consent to inspect when he or she asks the resident for permission to conduct an inspection and receives an affirmative response through words or action. An inspector need not inform a person of his/her right to refuse an inspection but, if the person asks whether he/she may refuse, the inspector must tell the person that he/she may refuse.

Statements such as "I'm going to look around," or "I have to inspect the property," should be avoided. A person who submits to an inspection after such a statement has not given his/her consent to the inspection and a court could suppress anything that is found during the inspection.

Although Health District inspectors have the legal right to access a property marked "No Trespassing," PIC inspectors offer a higher level of respect to the property owner by leaving a door hanger at a gate or fence post. Bring plastic bags and rubber bands to secure door hangers especially in windy or wet weather. Do not place door hangers in or on mailboxes. Mailboxes are legally reserved for U.S. Postal Service only.

When conducting the property inspection, it is very important that the inspector be confident, cordial, well-organized, and professional. The job of inspecting private properties to identify pollution sources is much easier when the public perceives the inspector as an objective and trustworthy professional. Developing a good relationship and trust with the owner/occupant is the key to a successful survey.

When approaching a property, it is recommended to call out a friendly greeting and enter a property along the main access route to the front door. Following no response at the front door, it is also acceptable to follow the main access route to the back door. Call out a greeting in case someone is working outside and knock on a side or back door, provided this does not infringe on the curtilage of the property.

Field equipment and/or supplies that PIC staff should have when surveying should include at a minimum; identification badge, door hangers, pen, digital camera, field book, pepper spray, dog treats, nitrile gloves, sample bottles, dye, charcoal packs and hand sanitizer.

BE SAFE: Do not proceed to the property if the situation appears to be unsafe, or you feel uncomfortable. Coordinate a return visit with a co-worker, the Field Supervisor, or the Program Manager.

Door Hangers:

When property owners/occupants are not home, inspectors leave door hangers with a brief description for the purpose of the visit and their contact information. The door hangers used at Kitsap Public Health are pre-printed with the following text:



TIP: It is recommended that inspectors staple their business cards to the bottom portion of the door hanger. This saves time, & provides complete contact information.

Keep track of address, location, and contact information for properties that have received door hangers. PIC inspectors should make three attempts to contact each property owner/occupant by door hangers left at the door. One of these attempts should be on a Saturday. Note dates and results of contact attempts on the PIC inspection form, or when responding to complaints the information should be entered on the complaint form.

After the three attempts have been made to contact the resident with no response from them, a letter is sent to the property owner. An example of this letter may be found in [Appendix D](#).

Meeting the owner/occupant:

If the owner or occupant (must be over 18) is there, provide a brief introduction about your visit, whether it be the reasons for the PIC project, the problem alleged in a public complaint, or deficiencies noted in the certified pumpers or maintenance specialists report.

The PIC inspection form includes a checklist of topics that the inspector should address when performing the property inspection for a PIC project. Using this form, provide the owner or occupant with a copy of their OSS records (when available). This is used to provide an overview of their system. Ask whether they have been experiencing problems with odors, soggy spots, or water backing up into the house. Make site-specific suggestions to protect their OSS investment (i.e. conserve water, route surface or ground water away from OSS components, reduce waste strength, do not use harmful chemicals, and prevent physical damage to the system like driving on storing heavy equipment on the drainfield).

It is important that the inspector walk over the drainfield during PIC project inspections since this will enable the inspector to assess its condition. Use this as an opportunity to educate the owner/occupant about the signs of septic system problems/failure, as well as what a properly functioning drainfield should look like.

The purpose for the PIC property inspection is to provide education to the owner/occupant about their septic system including an inspection of the OSS (walk over the drainfield to assess its condition and rate the system based on this inspection). Inspectors use their best judgment regarding access to the drainfield, in some situations if it is heavily overgrown with dense vegetation such as blackberry bushes, they may not be able to assess the drainfield and should note this on the PIC inspection form.

During the property inspection, PIC staff should also assess other land use practices during their conversation with the owner/occupant, *e.g.* pet waste disposal, if livestock are present, how manure is managed, the use of fertilizers, solid and hazardous materials storage, composting and any other practices that could impact surface waters.

This is a good time to identify whether the property is upland, streamside, on a marine shoreline, drains to stormwater systems, or has potential FC sources. The information from the property inspection should be recorded on the PIC inspection form. Following the inspection, PIC staff will assign a rating to the OSS. Table 2 provides the inspection status criteria for the inspection and table 3 provides the criteria for rating the onsite septic system. Figure 2 shows the drop down tabs for both Inspection Status and OSS rating.

The screenshot shows a web-based form with the following sections:

- Project Information: _NO: 012301-1-060-2002, Address: NO ADDRESS FOUND, Zip: [blank]
- Project Area: [dropdown menu], Remove button, Priority: [dropdown menu], WQ Station: [dropdown menu]
- Mail Section: Copy Site Address to Mail button, Mail Address, Mail City, Mail State (WA), Mail Zip
- Property Details: Occupancy Type, System Type, Approval Date, Max Daily Flow (gal), #Bedrooms, Marine Shoreline, Fresh Shoreline, Upland
- Property related comments: [text area]
- Table with columns: Survey Date, Status, Inspection Status, OSS Rating, Farm Rating, Last Pump, FollowUp Insp Due, FollowUp For. The 'Inspection Status' and 'OSS Rating' columns are circled in blue.
- Additional fields: FC Source identified, Date, FC Source corrected, Date, FU Completed, FU Notes.

Figure 2. Drop down tabs for Inspection Status and OSS Rating

Table 2. Criteria for inspection status

Rating Classification	Criteria for Meeting Classification
Assigned	Property has been assigned to staff member to survey
Completed	Education materials and inspection of tank and drainfield area has been completed
Denied Access	<p>If homeowner expresses any of these:</p> <ul style="list-style-type: none"> • Get off my land • Don't walk my drainfield • I am not interested
Did Not Participate	<p>Staff visited property three times and left door hangers (two times during the work week, once on a Saturday) with no response. Letter sent requesting a visit with the homeowner with no response.</p>
Other	<p>Examples: Staff is unable to walk drainfield but gave educational materials to homeowner</p>
PCI (Property Conveyance Inspection)	Enter any PCI that has been completed within each staff's project area into the PIC database.
Vacant	Enter into PIC database if staff attempted to survey a home but the home is unoccupied.

Table 3. Criteria for rating OSS inspection results

Rating Classification	Criteria for Meeting Classification	Action
No Apparent Problems	<ul style="list-style-type: none"> • Completed/signed Sewage Disposal Permit on file at Health District, or provided by owner at time of inspection and entered into our systems by support staff. • No illegal repairs or alterations have been performed on OSS. • All applicable setbacks and conditions in effect at the time of permitting are in place. 	None
No Records	<ul style="list-style-type: none"> • No completed/signed Sewage Disposal Permit on file at the Health District, or in possession of the owner/occupant. • No Concern, Suspect or Failure conditions were observed. 	None
Concern	<p>Concerns include, but are not limited to:</p> <ul style="list-style-type: none"> • System with no records and drainfield less than 50 feet from surface waters or wells • Improper use of designated reserve area • Vehicular traffic and/or pavement on OSS components • Roof drains or other drainage/infiltration systems potentially impacting the OSS • Unpermitted expansion or modification of existing structure(s), or addition of new structures, or recreational vehicle connections, that impacts the OSS • Unpermitted work conducted on the OSS • Excavation or excess fill within the OSS area, or a cut down slope of the OSS that has the potential to impact the performance of the OSS. 	<ul style="list-style-type: none"> • For unpermitted alterations, expansions, repairs, connections or new construction, consult with Program Manager regarding enforcement options. • No Logger flag without Program Manager approval
Suspect	<ul style="list-style-type: none"> • Drainfield area is saturated. • Collected water sample results from bulkhead drains, curtain drains, or other pipes or seeps, at or above 500 FC/100 ml (or 406 EC/100ml) and a positive non visual dye test confirmed by Ozark Underground Laboratories 	<ul style="list-style-type: none"> • Mail Suspect Letter • Follow up with wet season dye trace

	<ul style="list-style-type: none"> Collected water sample results from bulkhead drains, curtain drains, or other pipes or seeps, less than 500 FC/100 ml (or 406 EC/100ml) and positive visual dye-test. 	<ul style="list-style-type: none"> Flag Logger (Other)
Failure	<ul style="list-style-type: none"> Sewage on the surface of the ground Sewage discharged directly to surface water or upon the surface of the ground unless the discharge is under permit from WA DOE. Sewage backing up into, or not draining out of a structure caused by slow soil absorption of septic tank effluent. Sewage leaking from a septic tank, pump tank, holding tank, or collection system. Any component of an onsite sewage system or public sewer connection found to be broken, in disrepair, or not functioning as intended. Inadequately treated sewage effluent contaminating ground or surface water. Collected water sample result from bulkhead drains, curtain drains, or other pipes or seeps, at or above 500 FC/100 ml (or 406 EC/100ml) and positive visual dye-test results. Cesspools or seepage pits where evidence of ground water or surface water quality degradation exists, or inadequately treated effluent contaminating ground or surface water Non-compliance with standards stipulated on the permit, with the regulations in effect at the time the system was approved for use, or with the regulations in effect at the time the structure was constructed or modified. Straight discharge (greywater or blackwater) from any indoor plumbing, including recreational vehicles, is observed and documented 	<ul style="list-style-type: none"> Enforcement Flag Logger (Failure)

Assessment of Non-OSS FC Pollution Sources (Pet Waste):

State and local regulations require that pet waste not be discarded in areas where it may pollute surface or ground water. Kitsap County’s solid waste regulations require that pet owners pick up pet waste at least weekly, or more often as necessary, double bag, and dispose in a sealed trash container. During PIC property inspections, staff review the proper disposal of pet waste with owners (as it applies). A pet waste brochure is also available to provide to residents.

Assessment of Non-OSS FC Pollution Sources (Farms):

Kitsap Public Health’s solid waste regulations require that “ animal manure shall not be deposited, or allowed to accumulate, in any ditch, gulch, ravine, river, stream, lake, pond, marine water or upon the

surface of the ground, or on any highway or road right of way, where it may become a nuisance or menace to health or pollution of water.” Animal waste includes manure from livestock.

Kitsap Public Health has an interlocal agreement and memorandum of understanding for agricultural and livestock sites with the Kitsap Conservation District (KCD). KCD often works as a partner in PIC projects. They can conduct an agricultural inventory and generate a list of high priority farms for investigation. KCD offers and provides free technical assistance for animal waste management and other agricultural challenges. KCD is a great information source for best management practice cost shares and ideas for livestock and mud management.

It is recommended to start agricultural PIC inspections early in a project since the investigation and correction can be time consuming and challenging.

PIC property inspections involving farms:

When performing PIC inspections involving agricultural properties follow the same procedure as described in conducting the property inspection section and add the following items:

__Walk the property parcel boundaries to identify, map, and sample any flowing surface waters that leave the property.

__Photograph potential fecal pollution sources to the sampling points such as:

- Accumulated animal waste (pets and livestock);
- Non-vegetated, heavily used or muddy pastures or animal holding areas draining to surface waters;
- Animals with uncontrolled access to surface waters;
- Discharge pipes or ditches;
- Stormwater systems; and
- Inadequate grease or food waste management which can attract wildlife.



__Include a sketch on the PIC form, with a map showing the sampling locations. Include information in the map or PIC form regarding surface waters marine water, lakes and ponds, streams, wetlands, and storm water originating on or running through or contiguous to the parcel; outfall material and diameter; number and locations of animals or birds at time of inspection; animal waste observed; Curtain drains or outfalls to surface water; stormwater system components; stream access points for livestock; fencing.

__Collect three (3) water samples from the same location(s) on different days to best represent field conditions. Sampling during wet weather conditions is recommended. When the geometric mean value (GMV) for these samples is equal to, or exceeds 200 FC /100 ml or 160 EC/100ml across the property, source correction will be needed.

__Inform the owner/resident of the fecal pollution and ask if a KCD staff member can contact them to help them develop and implement a waste management plan. Document this information on the PIC inspection form.

__In the event the owner/resident refuses assistance from the Kitsap Conservation District, and/or does not want to address/correct the fecal pollution issue, PIC staff will need to enforce Kitsap County BOH Solid Waste Regulations by issuing a Notice and Order to Correct Violation.

Assessment of Non-OSS FC Pollution Sources (Wildlife):

Wildlife can be a serious FC source, especially in areas where outdoor pet feeding occurs. PIC staff should inform residents about this issue, and encourage them to keep sources of food inaccessible to wildlife. For example, during a routine shoreline “hotspot” investigation, PIC staff found a large raccoon latrine adjacent to a shellfish growing area. Feeding pet dogs and cats outside also attracts raccoons and other wildlife which can add to the problem.

Investigate discharges at least three times, ideally within a one-month period, from a property where human activity is attracting wildlife. Look for grease and food waste management or evidence of feeding. The property owner/occupant may choose to work with KCD to mitigate fecal pollution sources.

The information from the property inspection, including the rating is then entered into the PIC database. An example of the PIC inspection form is found in [Appendix E](#).

The PIC database was developed to track PIC inspections and associated information. All properties in the project area should be selected for that project in the PIC database at the beginning of the project for tracking purposes. Completed inspections should be entered into the database as soon as possible. The database is a powerful tool that provides information necessary for quarterly and annual reporting. Procedures for entering information in the PIC database are found in [Appendix F](#).

The following figures provide illustrations of a data entry page from the PIC database, as well as an example of one of the report forms available from the database.

Figure 3. PIC inspection database entry page

Thursday, December 23, 2010

POLLUTION IDENTIFICATION AND CORRECTION

Owner: Owner Phone: SEWER:
 Address: Zip:

Project Area: Priority:

Mail To	Copy Site Address to Mail	Mail Address	Mail City	Mail State	Mail Zip
<input type="text" value="FERRIS TIM J & NOREEN L"/>	<input type="checkbox"/>	<input type="text" value="10632 SE CISCO RD"/>	<input type="text" value="Port Orchard"/>	<input type="text" value="WA"/>	<input type="text" value="98367"/>

Occupancy Type	System Type	Records on file	#Bedrooms	OSS Design Flow (GPD)	Marine Shoreline	Fresh Shoreline	Upland
<input type="text" value="Single Family"/>	<input type="text" value="Standard Gravity"/>	<input type="checkbox"/>	<input type="text" value="4"/>	<input type="text" value="480"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Property related comments

Survey Date	Staff	Inspection Status	OSS Rating	Farm Rating	Last Pump	FollowUp Insp Due	FollowUp For	Completed?
<input type="text" value="11/12/10"/>	<input type="text" value="EC"/>	<input type="text" value="Completed"/>	<input type="text" value="No records"/>	<input type="text" value="NA"/>	<input type="text" value="2008"/>	<input type="text"/>	<input type="text" value="marine sampling"/>	<input checked="" type="checkbox"/>
Type of failure: <input type="text"/> Repaired? <input type="checkbox"/> Type of repair: <input type="text"/>								
<input type="text" value="*"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>
Type of failure: <input type="text"/> Repaired? <input type="checkbox"/> Type of repair: <input type="text"/>								

[Link to Kitsap County Parcel Search](#) v. 100222.9

Figure 4. PIC database OSS failure report

OSS FAILURE REPORT for the period of 01/01/12 through 12/31/12

	Failure Type										Repair Type												
	Surf	Struc	Disch into water	Disch to surf	Disch to gnd	Illicit con. storm coll.	On-con surf/ gnd washing	Sewer in RV	Grwyw	Other Sew	None Entro	Total	New At s/s	New g/w s/s	Minor repair	Temp. repair	Com to sewer	Phased repair	Struc. v. resto	None Entro	Same Year Repr	Total	
Bainbridge Island/ Shoreline	0	2	8	1	2	2	0	1	0	0	14	Bainbridge Island/ Shoreline	4	0	2	0	0	0	0	0	8	8	14
Burley/Minter Shoreline	2	1	0	0	0	0	0	0	0	0	3	Burley/Minter Shoreline	0	2	0	0	0	0	0	0	1	3	3
Colvos/EPA Prospect Point shoreline	0	0	0	1	0	1	0	0	0	0	2	Colvos/EPA Prospect Point shoreline	0	0	0	0	0	0	0	0	2	0	2
Dyes Inlet	1	0	0	0	0	0	0	0	0	0	1	Dyes Inlet	0	0	0	0	0	0	0	0	1	0	1
Ostion Bay Creek	1	0	0	0	0	0	0	0	0	0	1	Ostion Bay Creek	0	0	0	0	0	0	0	0	1	0	1
Hood Canal/EPA shoreline	0	0	1	0	0	0	0	0	0	0	1	Hood Canal/EPA shoreline	0	0	0	0	0	0	0	0	1	0	1
Kingsdon/EPA shoreline	0	0	0	0	0	1	0	0	0	0	1	Kingsdon/EPA shoreline	0	0	0	0	0	0	0	0	1	0	1
Liberty Bay Big Scandis	4	0	1	2	0	1	0	0	1	0	9	Liberty Bay Big Scandis	2	0	4	0	0	0	0	0	3	5	9
Danels Creek	0	0	0	1	0	0	0	0	0	0	1	Danels Creek	0	0	1	0	0	0	0	0	1	1	2
Dogfish Creek	0	0	0	1	0	0	0	0	0	0	1	Dogfish Creek	0	0	1	0	0	0	0	0	1	1	1

Property Inspection Evaluation Tool:

Property inspection effectiveness can be evaluated to assess the knowledge gained, behavior change, and perceived value of the property inspection. One to two weeks after the property inspection, the PIC staff sends a prepaid follow-up inspection postcard, containing approximately five questions, to the property owner/occupant. Coordinate printing and postage with the project lead and clerical staff. The number of postcards needed will depend upon the number of PIC inspections planned. Returned postcards are delivered to the project lead. Results are compiled in a spreadsheet and are reported at the conclusion of the project.

Chapter 5: Water Quality Complaints

PIC staff are responsible for responding to water quality complaints. These complaints are prioritized based on the immediate impact to public health. The response to these complaints will vary depending upon their severity and complexity. PIC staff also coordinate the response with other Kitsap Public Health staff, particularly staff in the Onsite Sewage System Repair and Solid and Hazardous Waste programs. A list of the types of complaints PIC staff respond to and the associated response follows.

Types of complaints:

- Onsite septic system (OSS) failure
- Other connection to municipal storm water system (illicit discharge)
- Deficient OSS Pumping report
- Livestock waste
- Sewage from recreational vehicles (RV)
- Sewage from side sewer
- Sewage odors
- Other Water quality issues, e.g. boat waste, direct sewage to surface waters

Responding to Complaints:

PIC staff or other Kitsap Public Health staff may receive a call from the public regarding a water quality complaint. Using the Kitsap Public Health Complaint form (brown), fill out the following information:

- Date and time
- Stamp with memo number
- Caller's name and telephone number; ask the complainant if they wish to remain anonymous. If the complainant indicates that they wish to remain anonymous, and/or indicates that disclosure of their name may endanger their life, physical safety, or property, check the "YES" box following the question "DO YOU WANT TO REMAIN CONFIDENTIAL?" on the complaint form.
- The name and location/address of the violator (if known)
- Statement of the problem; include the location of the problem and request information about access
- Directions to the place of the problem/incident

Site Visit by PIC staff:

Once the necessary information is gathered regarding a complaint, PIC staff will visit the property to assess the situation. Visits should be conducted as soon as possible, however the response time will vary depending upon the type of problem, *e.g.* immediate visit for spills to surface waters.

When responding to a complaint, and other issues are observed at the property, such as solid waste, junk vehicles, boats, or recreational vehicles, consult with the Solid and Hazardous Waste (SHW) program staff. SHW staff has access to the Washington's Department of Licensing system to get vehicle registration information from automobile and boat license numbers. This can be helpful to determine the registered owner's name and phone number, if this information is not readily available from the property records.

Field equipment and/or supplies that PIC staff should have when responding to complaints include at a minimum; identification badge, door hangers, pen, digital camera, field book, pepper spray, dog treats, nitrile gloves, sample bottles, dye, charcoal packs and hand sanitizer.

When conducting a complaint investigation and approaching a property, use good judgment and consider your safety first and foremost.

BE SAFE: Do not proceed to the property if the situation appears to be unsafe, or you feel uncomfortable. Coordinate a return visit with a co-worker, the Field Supervisor, or the Program Manager.

If there does not appear to be a safety concern, call out a friendly greeting and enter the property along the main access route to the front door. Following no response at the front door, it is also acceptable to follow the main access route to a side or back door, provided this does not infringe on the curtilage of the property.

Meet with the owner/occupant to assess the situation. Provide records or other information gathered prior to visiting the site as necessary. It is important to take photographs to document observations, and to document the conditions at the property. Record these observations on the complaint form.

When PIC staff encounter properties with surfacing effluent, or other surface water flows that may be sources of fecal bacteria, a water sample should be collected.

When the sample(s) equals or exceeds 500 FC/100ml (or 400 EC/100ml) the owner/occupant should be notified. Depending upon the situation, the following actions may be taken:

Initial water sample results >500FC, or > 400 EC and.....	Action following initial water sample
Suspect OSS failure	Conduct a dye test to confirm a failing OSS.
Sewage from recreational vehicles (RV)	Issue a Notice and Order to Correct Violation.
Sewage from side sewer	Issue a Notice and Order to Correct Violation letter. Notify the public sewer purveyor.
Sewage odors	If suspect source is from OSS, conduct dye test. If source not evident, collect two confirmation samples.

NOTE: If consent is not given to perform a dye test then a search warrant may be obtained. However, PIC staff must contact the Program Manager before taking any action regarding a search warrant (see chapter 6 Enforcement).

If the owner or occupant is not home, leave a door hanger with your business card, the date and time, and a brief description regarding the purpose for your visit.

TIP: Conduct a visual inspection of public access areas, when approaching or leaving a property to identify potential FC sources, and take a photo. Document your observations on the complaint form.

Assessment of OSS Performance:

If there are OSS records for the property, use the records to help identify the location of the OSS components. If there are no permit records, check the parcel assessor’s building information for the residence date. Kitsap’s sewage regulations were originally developed in 1961. OSS records will not be available for properties that pre-date these regulations.

You can ask the owner/occupant if they know the location of the septic system and whether a permit was obtained. Ask the owner/occupant for the name of previous owners. This may be helpful in locating records.

If OSS information is unavailable, locate the system by doing the following:

- Look for very lush, green grass growing in obvious stripes. Stripes generally indicate the location of drainfield laterals. Other indicators that may show the location of a drainfield include depressions, dead or dying grass, or no grass growth at all.
- Locate the plumbing vent pipe on the roof to identify where the plumbing leaves the house. Generally, the largest of these pipes is often directly above the point where the wastewater

drain passes through the foundation. The drain location can also be determined by observing a clean-out or the house plumbing may be visible through a crawl space or basement.

- The septic tank is usually down-gradient of the house, near the kitchen and bathrooms, in a straight line from the plumbing about five to ten feet from the foundation. The drainfield is usually in a direct line down slope from the septic tank.
- Review the sewage disposal permit, as-built and plot plan with the owner/occupant to identify the likely locations of the system components. Check for and note any changes since the OSS was installed. Check the distance between components and surface water, drainage ditches, curtain drains, wells, and other structures both on the subject property and properties adjacent. Check to see if the dedicated reserve area and associated setbacks have been maintained. Look for any non-conforming conditions in the drainfield and reserve areas such as parking, driving, building, burning, or pasturing livestock.
- Observe the topography of the site to determine drainage of the property and whether surface water flows towards OSS components. Pay particular attention to the location and daylight of curtain drains. Drainage or transport lines may cross-connect septic effluent to surface waters. Curtain drains do not function as designed when the outlet is plugged.
- If the house is near a slope, channel, lake, or marine shoreline, look for drainage pipes or other discharges. Draw a rough sketch of the discharge location and photograph if possible. If pipes are flowing, ask the property owner/occupant for consent to take a water sample and note the date, discharge type and size, and any unusual features on the inspection form. If pipes are not flowing, ask the owner/occupant if you may sample during wet weather.
- Evaluate the area over the septic tank, pump chamber (if applicable), and drainfield area with a walk-over/visual assessment. Check the tank area for signs of overflow. Check to ensure that roof drains are diverted away from the tank area.

The following may be used to identify symptoms of a failing drainfield:

Hydraulic Failure: effluent ponding or breakout. The presence of lush green grass over the drainfield area can be evidence of upward capillary movement of water. Lush green vegetation associated with wet, soggy, soil is indicative of an OSS failure. Collect a sample of any standing or flowing water in the drainfield area or down gradient of the drainfield area. You may need to collect samples when the residents are using water. Note any animal or bird waste present in the drainfield area.

Odors: noticeable sewage odor emanating from the OSS area may be an indication of failure but must be distinguished from decaying vegetation odor. **Odor alone is not sufficient to determine a failure.** Odor can be caused by normal OSS venting or unusual wind conditions.

Damage: observe any indications of damage that may have occurred either before, during, or after the OSS was installed. Examples of damage to the OSS are soil removal, new or widened road cuts, landscaping (including rock walls and other cut banks in or near the drainfield area); patio installation, driveway construction, structures over the OSS, excessive soil backfilling over the OSS, or ruts caused by vehicular traffic or livestock.

Unusual Surface Features: features such as eroded soils, evidence of digging, soil settling depressions, or added features such as sand, bark, or rock over the top of the drainfield area.

Greywater Discharge: ask the property owner/occupant if all kitchen sink, laundry and bathroom sink and shower water goes into the septic tank. Walk all the way around the house to look for discharges. Laundry soap/bleach odors, clothing fibers and lint associated with a pipe discharge indicates a greywater discharge. Collect a sample if possible and take a photograph. Greywater can have high levels of fecal and other bacterial pollution. State and local regulations do not allow it to be disposed of on the ground surface or to surface or ground waters. Documented greywater discharges must be connected to the interior house plumbing. If this is not possible, it must be connected to the sewer pipe before it enters the septic tank. A follow-up dye test can be conducted to determine OSS functional status. Optical brightener testing is a tool that can identify some laundry discharges.

Dye Testing: dye testing is a tool used in association with water sample results to confirm a failing OSS. Kitsap Public Health uses methods and materials developed by Dr. Tom Aley, Ozark Underground Laboratories. Dye testing should only be used when the preponderance of the evidence you've collected suggests that a test is necessary, such as high bacteria counts, sewage odor, and visual signs of sewage.

Optical Brighteners: optical brightener sampling can be conducted to screen for wastewater and suspected greywater discharges. Optical brightener tracing is used in association with water sample results to determine whether laundry wash water is discharging to surface waters. Kitsap Public Health uses methods developed by Dr. Tom Aley, Ozark Underground Laboratories.

Public Complaint Investigation:

- If you personally receive a public OSS or water quality complaint, stamp brown form with memo number and enter into complaint database. Note, the Food & Living Environment Program is lead on complaints related to lake algae, swimmer's itch, swimmer safety, marine beaches, recreational shellfish, etc. shellfish, etc. Forward those complaints to Food & Living Environment Program Manager.
- After assignment of a public onsite sewage or water quality complaint, check Logger DB and ORME for any new information on the property in question. This includes repair related submittals, follow up pumper reports, RME work activity, etc.
- Attempt field inspection within four (4) calendar days of assignment.
- If Inspection Status is *Denied Access*, or if OSS Rating is *Concern, Suspect or Failure*, enter "Other" flag in Logger DB – if necessary, add additional detail in Comments section below.
- If you confirm an OSS failure or livestock waste violation, check "Confirmed Violation" in Complaints DB, and proceed to the OSS and Livestock Waste Compliance processes outlined below.
- If you confirm turbid runoff from an active construction site, notify KC DCD or the applicable City DCD and request they investigate. We have no regulatory authority related to construction side runoff.

Public Complaint Close Out:

- After OSS repairs or livestock waste BMP's have been installed, update Complaints DB and deactivate Logger DB flag.

- Review complaint notes to ensure they are accurate and sufficient for future inspectors to understand your findings.
- Remove any extraneous paperwork from the file including copies of existing OSS records, Assessor data sheets, etc.
- Place in Field Supervisor's mail box for final QA, scanning and filing. OSS complaints are scanned, whereas water quality complaints are filed in the Complaint Investigation files (organized by watershed) in the Program Manager's office.

Deficient Pumper Report Investigation:

- After assignment of a deficient pumper report, check Logger DB and ORME for any new information on the property in question. This includes repair related submittals, follow up pumper reports, ORME work activity, etc. If the system in question is alternative, return the complaint form to the PIC Program Manager as PIC does not inspect deficient reports for alternative systems. If the house is noted as vacant and pumped for home sale, return the complaint form to PIC Program Manager as PIC does not inspect in this situation.
- Attempt field inspection within six (6) calendar days of assignment. If assignment date needs to be changed, please see PIC Program Manager. Do not change the assignment date on your own.
- If Inspection Status is *Denied Access*, or if OSS Rating is *Concern, Suspect or Failure*, enter this in ORME "Other Activities."
- Enter brief summary of site visit in ORME "Other Activities."
- If you confirm an OSS failure, check "Confirmed Violation" box in Complaints DB and enter NOV in ORME "Other Activities."
- Proceed to Compliance process outlined below.

Deficient Pumper Report Close Out:

- After OSS repairs installed, update Complaints DB and deactivate Logger DB flag. Enter appropriate "Other Activities" in ORME indicating correction.
- Review complaint notes to ensure they are accurate and sufficient for future inspectors to understand your findings.
- Remove any extraneous paperwork from the file including copies of existing OSS records, Assessor data sheets, etc.
- Place in Field Supervisor's mail box for final QA.
- Field Supervisor completes QA and forwards to Clerical staff for scanning and filing.

PIC Inspections- During Project:

- Recommend checking Logger DB and ORME for more current reports or recent work activity. Consult with OSS O&M staff if needed.

- Record detailed inspection notes on the PIC inspection form, add page 2 of complaint form if you need more space. Stick with the facts of the case (this is a public record). Notes in PIC DB are in short hand; only enough info so the reader can understand your findings.
- Enter completed inspections into PIC DB per Appendix E of Manual of Protocol. If you confirm an OSS failure or livestock waste violation, update the PIC DB and proceed to Compliance process below.
- If Inspection Status is *Denied Access*, or if OSS Rating is *Concern, Suspect or Failure*, enter “Other” flag in Logger DB. If necessary, add additional detail in Comments section below
- After OSS repairs or livestock waste BMP’s have been installed, update PIC DB and deactivate “other” Logger DB flag
- File in project three ringed binder

PIC Inspections- Project Close Out:

- When the project is complete (report is done and final billing processed), complete the following:
 - Remove and recycle any PIC forms marked *Vacant*.
 - Prepare remaining forms for scanning by removing any extraneous paperwork from the file, including copies of existing OSS records, Assessor data sheets, etc.
 - Meet with EH Support Staff Supervisor to arrange scanning of the files.
 - When scanning is complete, remove and recycle any forms rated as No Apparent Problems, unless a dye trace was conducted on the OSS. Remove and recycle any No Records inspection with no drawing.
 - Meet with OSS Support Staff Supervisor to arrange filing. Currently, PIC inspection forms can be located in Field Supervisor’s office.

OSS Compliance Process:

- If you confirm an OSS failure, meet with Program Manager to review the collected evidence and discuss next steps.
- If NOCV required, submit to Program Manager for review before mailing certified and regular mail.
- If you are not able to get compliance with your order, consult with Program Manager before you proceed with enforcement including citation, vacate orders, etc.
- Remember that you have the following authority in regards to OSS mitigation and repair:

When complaints include non-OSS fecal pollution sources PIC staff should refer to the Kitsap County Board of Health Ordinance Number 2010-1, “Solid Waste Regulations,” effective July 6, 2010.

Examples of enforceable solid waste violations include, but are not limited to, uncontrolled run-off from manure piles, pasture areas, heavy use areas, and other areas where manure is inadequately managed. Agricultural and livestock fecal pollution sources in Kitsap County are often corrected through an Interlocal Agreement and Memorandum of Understanding with Kitsap Conservation District concerning investigation and correction procedures for livestock waste handling violations.

If you are unsure if the violation(s) meet the criteria of a solid waste violation consult the project lead or program manager.

Livestock Waste Compliance Process:

- If you confirm a livestock waste violation, meet with Program Manager to review the collected evidence and discuss next steps.
- Investigation steps are listed in the memorandum mentioned below.
- Compliance is guided by the “Memorandum of Understanding between Kitsap Public Health District and Kitsap Conservation District Concerning Investigation and Correction Procedures for Livestock Waste Handling Violations.”

Recreational Vehicle Sewage Discharge:

- Attempt field inspection within four (4) calendar days of assignment.
- If sewage discharge is verified:
 - Require immediate removal of the discharge pipe and closing of on board sewage tank valve.
 - Require clean-up of the affected area. Sand and/or lime application is the usual approach.
 - Require portable waste water tank and written plan for properly and regularly removing its contents.
 - Inform property owner and/or occupant that Kitsap County Code does not allow recreational vehicles to be occupied as living units.
 - Perform follow up inspection within 7 days to verify that sewage and/or garbage are properly containerized and managed.
 - Provide them with letter that states our requirements for sewage and garbage management, state that Kitsap County Code does not allow recreational vehicles to be occupied as living units, and that they need to transition into an RV park, move into the home on the property (if there is one), or seek housing assistance.
 - Notify DCD Code Enforcement by email or phone.
 - Close out complaint and place in Field Supervisor’s mail box. If a sewage discharge was confirmed and then eliminated, check “Confirmed Violation” and “Violation Abated.” These complaints are not scanned, but are instead filed in the Sewage Spill Report files (WQP-H) in Program Managers office.

Homeless Camp Complaint:

- SHW Program is lead. Perform joint site visit with the area inspector. (Protocol currently being developed)

Storm Water Illicit Discharge Complaint or Referrals (Including Spills):

- Within unincorporated Kitsap County, follow the [Kitsap Public Health District/Kitsap County Public Works Storm Water Illicit Detection and Correction Protocol](#)

CONTACT KITSAP ONE

- Within City limits, contact NPDES Storm Water Permit Leads and coordinate.

Poulsbo:

Anja Hart

360-394-9753

360-779-4078

ahart@cityofpoulsbo.com

Port Orchard:

Andrea Archer Parsons

360-876-4991 ext. 135

aarcher@cityofportorchard.us

Bainbridge:

Stormwater manager (position vacant as of May 2016)

360-303-3466

206-842-2016

Bremerton:

Chance Berthiaume

360-473-5920 Bremerton Customer Response

360-473-5929 Desk

360-981-0598 Cell

Chance.Berthiaume@ci.bremerton.wa.us

*A Ticket (Citation) may be issued immediately when there is threat to public health from a deliberate release of sewage onto the surface of the ground or to the water observed by the inspector, or when the conditions of the Notice and Order to Correct Violation have not been met. Refer to Chapter 6 Enforcement for details.

Chapter 6: Enforcement

Notice and Order to Correct Violation (NOCV):

PIC staff will write and issue a Notice and Order to Correct Violation (NOCV) letter when:

- There is a confirmed OSS failure
- There is an illicit connection to stormwater
- There is sewage being discharged from a recreational vehicle
- OR any other water quality issue that warrants this letter

The enforcement procedure and content of an NOCV must conform to items described in Section 19 of the Kitsap County Board of Health Ordinance 2008A-01 (Jun 2011) "Onsite Sewage System and General Sewage Sanitation Regulations", and/or Section 950(5) of the "Solid Waste Regulations". Staff should check to make sure they are following the most recent version of applicable regulations.

An example of an NOCV letter is provided in [Appendix G](#). Examples of standard enforcement letters (NOCV), which cite the most commonly used regulations are located in the PIC common directory. (\PIC Common\Regulations and Enforcement\PIC Program Enforcement Templates) Some of the common compliance measures within the "Onsite Sewage System and General Sewage Sanitation Regulations" include:

Surfacing sewage:

- Section 6.B.2 "sewage shall not be discharged to the surface of the ground"
- Section 6.D "correction of insanitary or nuisance conditions"

Non-permitted OSS:

- Section 6.B.3 "sewage shall not be discharged into an onsite sewage system installed, repaired, or maintained in violation of these regulations."

Trailer added to OSS

- Section 6.B.3 "sewage shall not be discharged into an onsite sewage system installed, repaired, or maintained in violation of these regulations."

Greywater discharge:

- Section 6.B.2 "sewage shall not be discharged to the surface of the ground"

Bootleg OSS: (use one or more of these):

- Section 6.E "Plans Review and Approval Required"
- Section 6.F "Installation Permit, Inspection, and Approval Required"
- Section 6.J "installer certification required"

Failure to Follow NOCV:

- Section 19.B.2.g "Enforcement of Order" It is not necessary to prove the septic system is still failing in order to use this citation. An inspector may also use this if the sewage flow has stopped, but we have not been informed, or repair work was done without an approved repair design, and/or no certified septic contractor has been involved.

For a failing OSS, the NOCV requires the owner/operator to contact a licensed designer or professional engineer within an appropriate time period. This is typically 30 days, although a 7 or 14-day time period may be used for imminent health threats. PIC staff may issue a pump-out order for properties with failing OSS as part of the NOCV. A pump-out order means that the tank is pumped as often as is necessary to keep sewage off the surface of the ground and/or from backing up into the residence. The owner/occupants are required to conserve water to prevent untreated sewage from surfacing and flowing into surface, ground, or storm water.

The NOCV must be served on the person to whom it is directed by mailing the order via certified and regular mail to such person at his/her last known address. We can also deliver it in person.

After the deadline specified in the written notice has been reached, the status of the violation must be determined. If a violation still exists, other enforcement options may be appropriate. Under normal circumstances, failure to comply with an NOCV is followed by a Notice of Civil Infraction (ticket).

Notice of Civil Infraction (Ticket):

The notice of civil infraction procedures, also known as the “ticket writing” procedures, are referenced in Section 19(4)(2) of the onsite sewage regulations and Section 950(6)(b) of the solid waste regulations and described in Chapter 7.80 Revised Code of Washington (RCW), Civil Infractions. An example of a completed ticket is provided in [Appendix H](#).

In most cases, tickets are issued following failure to comply with the NOCV. However, an NOCV is not required prior to issuing a ticket. A ticket can be issued to a defendant during the initial site inspection or any other time the inspector has reasonable cause to believe that the person has violated the regulations.

Writing a Ticket:

2811 MICRO DATA OLYMPIA (360) 570-8400

INFRACTION TRAFFIC **NON-TRAFFIC I 202728**

IN THE DISTRICT MUNICIPAL COURT OF KITSAP COUNTY, WASHINGTON
 STATE OF WASHINGTON PLAINTIFF VS. NAMED DEFENDANT
 COUNTY OF KITSAP HEALTH DISTRICT
 CITY/TOWN OF

LEA ORI #: WAO180000 COURT ORI #: WAO18013J

THE UNDERSIGNED CERTIFIES AND SAYS THAT IN THE STATE OF WASHINGTON

DRIVER'S LICENSE NO. STATE EXPIRES PHOTO I.D. ON PERSON YES NO

NAME: LAST FIRST MIDDLE

ADDRESS IF NEW ADDRESS
 PASSENGER LOCATION

CITY STATE ZIP CODE EMPLOYER

DATE OF BIRTH RACE SEX HEIGHT WEIGHT EYES HAIR

RESIDENTIAL PHONE NO. CELL / PAGER NO. WORK PHONE NO.

VIOLATION DATE MONTH DAY YEAR TIME INTERPRETER NEEDED

ON OR ABOUT CITY / COUNTY OF

DID OPERATE THE FOLLOWING VEHICLE/MOTOR VEHICLE ON A PUBLIC HIGHWAY AND

VEHICLE LICENSE NO. STATE EXPIRES VEH. YR. MAKE MODEL STYLE COLOR

TRAILER #1 LICENSE NO. STATE EXPIRES TR. YR. TRAILER #2 LICENSE NO. STATE EXPIRES TR. YR.

OWNER/COMPANY # OTHER THAN DRIVER

ADDRESS CITY STATE ZIP CODE

ACCIDENT COMMERCIAL YES HAZARD YES EXEMPT FARM FIRE
 NO NR R I F VEHICLE NO PLACARD NO VEHICLE R.V. OTHER

DID THEN AND THERE COMMIT EACH OF THE FOLLOWING OFFENSES

1. VIOLATION/STATUTE CODE VEHICLE SPEED IN A ZONE SMO TRICE AIRCRAFT

2. VIOLA

3. VIOLATION/STATUTE CODE

Example: KCBOH Ordinance 2008A-01, Section 6.F "Installing septic system without approved permit"

RELATED # PENALTY U.S. \$ DATE ISSUED

WITHOUT ADMITTING TO HAVING COMMITTED EACH OF THE ABOVE OFFENSES, BY SIGNING THIS DOCUMENT I ACKNOWLEDGE RECEIPT OF THIS NOTICE OF INFRACTION AND PROMISE TO RESPOND AS DIRECTED ON THIS NOTICE.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF WASHINGTON THAT I HAVE ISSUED THIS ON THE DATE AND AT THE LOCATION ABOVE THAT I HAVE PROBABLE CAUSE TO BELIEVE THE ABOVE NAMED PERSON HAS COMMITTED THE ABOVE OFFENSE(S), AND MY REPORT WRITTEN ON THE BACK OF THIS DOCUMENT IS CORRECTED TO THIS INFRACTION IS TRUE AND CORRECT.

OFFICER #

DEFENDANT'S SIGNATURE

INFRACTION

INF.	RESPONSE	DISPOSITION	PENALTY	SUSPENDED	SUB-TOTAL	FNDG/JDGT DATE
1	C NC	C NC D P DF	\$	\$	\$	ABSTRACT MILD TO OLYMPIA
2	C NC	C NC D P DF	\$	\$	\$	
3	C NC	C NC D P DF	\$	\$	\$	
TOTAL COSTS \$						

WASHINGTON UNIFORM COURT DOCKET - COURT COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - DOL COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - DEFENDANT COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - LEA COPY January 2003

✓ Check "Non-Traffic"
 ✓ "County of Kitsap Health District"

Complete as much information as available. Be sure it is accurate.

The time can be more than one day, as in 10/5-9/2015

DO NOT FILL IN THIS BOX

Include the Kitsap County Board of Health Ordinance and associated sections regarding the violation(s).

- ✓ Cite Ordinance, section, and description
- ✓ Include the Penalty
- ✓ Date Issued
- ✓ Your name
- ✓ Inspector number
- ✓ Your signature

If writing a second citation for the same violation, put the first citation # here.

IT IS IMPORTANT TO COMPLETELY AND ACCURATELY FILL OUT INFORMATION WHEN WRITING A TICKET. The following is a list of all the information that must be completed:

- Check the following boxes on the top portion of the ticket: “NON-TRAFFIC,” and “COUNTY OF KITSAP HEALTH DISTRICT.”
- In the spaces provided, complete as much information about the defendant as possible.
 - The defendant’s name and address are required at a minimum.
 - If the defendant is present while you are writing the ticket, request to see his/her driver’s license or state identification card. Confirm that the information is current and copy to the ticket.
 - The residential phone number is needed to notify the defendant of a change in the court date or time.
- Indicate the infraction DATE in the space provided below the personal information. The time of all infractions should be noted in military time. (i.e. 15:30) (a colon is not needed for military time)
- Indicate the LOCATION of the infraction. This could be an address or tax account number. When written in this space, the term “situs” indicates that the infraction occurred at the defendant’s address as listed on the top of the ticket.
- DO NOT complete any of the information in the large box (motor vehicle section) in the center of the ticket.
- In the next section, describe the specific section(s) of the regulations violated and provide a brief narrative describing the infraction.
- Indicate the penalty amount in the “PENALTY” box. The penalty for one infraction is \$524.00. The penalty for two infractions is \$1048.00. When a second ticket is issued, it should not be done until after a judgment has been reached on the first. If a violation remains after a judgment has been reached on a second ticket, consult with a program manager on how to proceed with the case.
- Indicate the date the infraction was written in the “DATE ISSUED” box. The ticket should be written as soon as possible after the infraction has been observed (and/or as necessary after an infraction has not been corrected as required).
- Sign your name in the “OFFICER” box and write your officer number next to your name.
- If the defendant is present when the ticket is written, show them the ticket and explain why the ticket is being issued. The response instructions are explained on the back of the defendant’s (green) copy. Review each of these options with the defendant. If the defendant refuses to sign or is not present when the ticket is written, the inspector may write the word “INVESTIGATION” in the signature box.
- DO NOT complete the “ABSTRACT OF JUDGMENT” section of the ticket.

- Provide a narrative of case events under “Officer Report”, on the reverse side of the top white “Court Copy”, and then sign it on the bottom. This narrative is the only testimony the court will see from the inspector if he/she is not present for a hearing. Keep it short, and to the point, using a bulleted list if that helps summarize. The general guideline for completing this section is to be thorough enough to describe and prove your case. Include a description of all infractions observed in your narrative, even though you may have written the ticket for only one or two. If the ticket is completed at the site, the narrative may be completed after returning to the office. For complex cases, the inspector can attach a word document and photo summary if necessary to adequately explain the situation.
- When completed, the copy of the ticket with the narrative will be forwarded to the court. The inspector should make a photocopy of the front and back of the top “Court Copy” for their records. IMPORTANT: The inspector must never give legal advice to the defendant or attempt to predict what the District Court judge will do if the case goes to court. The inspector may explain the meaning of “contested”, “mitigated”, and payment options.

Route copies of the completed ticket as follows:

- Top 3 forms to District Court
- Photocopy the front and back of the top “Court Copy” that contains the narrative and keep with the Inspector’s file
- Retain the last white copy for the Inspector’s file

The court’s copies must be filed in District Court within 48 hours of writing the ticket, excluding Saturdays, Sundays and holidays. The inspector should attach a business card and note to the court’s copies requesting notification of the court date and location. Court copies should be delivered in person to the District Court at 614 Division Street, MS-25, Port Orchard, Washington.

When a ticket is issued, the defendant has 15 days to respond to the court. Instructions for this response are on the back of the defendant’s copy (green form).

Additional questions about filling out the ticket should be directed to an experienced staff member or the program manager.

Continuance:

Prior to granting a continuance, giving the defendant more time to correct the problem, request that the judge finds the original citation as “committed”.

Dismissal Order:

The defendant should be informed that the ticket can be dismissed by the inspector if the infraction is corrected prior to the court date (when one has been requested). The court can evaluate reduced fee requests as appropriate. To dismiss a case, complete and sign a “Motion, Certification, and Order to Dismiss” form (Dismissal Order). The Dismissal Order is then forwarded to the Prosecuting Attorney’s Office, Civil Division, to be signed. The inspector or Deputy Prosecuting Attorney must then forward the signed Dismissal Order to the court for the judge to sign. A copy of the Dismissal Order must also be sent to the defendant after all appropriate signatures are obtained. This process should begin a minimum of one week prior to a hearing date. The inspector may also verbally request dismissal during a hearing.

The inspector may dismiss any ticket pending against a first time violator if the violator complies with Health District’s NOCV prior to the court date. A Stipulated Order can be filed with the court prior to the court date, where the defendant agrees that the violation was committed and agrees to a set of required conditions.

Search Warrants:

It may be necessary to obtain an administrative search warrant to conduct a dye test of an on-site septic system (OSS) if data shows the OSS may be polluting fresh or marine waters of the state. Administrative search warrants to address suspected OSS failures are only used after all other options are exhausted. The decision to pursue an administrative search warrant will be made in coordination with the Program Manager, Environmental Health Director, the Health Officer, and the Kitsap County Prosecuting Attorney’s Office.

Chapter 7: Illicit Discharge Detection and Elimination (IDDE)

Stormwater drainage systems are constructed in developed areas to reduce localized flooding and provide limited water quality treatment. Drainage systems include roads, ditches, ponds, pipes, swales, catch basins, and underground facilities. These systems provide a rapid pathway for pollutants to be transported to receiving waters.

Kitsap County and cities are required in their National Pollution Discharge and Elimination System (NPDES) Phase II Stormwater Permit to assess the outfalls discharging to receiving waters for non-stormwater connections and discharges. FC or EC sampling of dry weather flowing stormwater outfalls is one of the components of the assessment program. This is commonly called the Illicit Discharge Detection and Elimination (IDDE Program).

FC contamination in stormwater drainage system flows come from two sources: 1) flowing contaminated water from paved areas or 2) fecal contaminated sediments in the storm facilities. These pollutants, both discharges and sediments, are carried to local receiving waters causing significant impacts. Recent studies show that unmaintained stormwater systems build up excessive sediments, transport the fecal contaminated sediments during intense storm events downstream to receiving waters, and reduce the designed storm event storage capacity of the facilities. Reduced storage capacity limits the water quality benefits of these facilities.

Kitsap Public Health initiated stormwater pollution source identification and correction in 2007 in partnership with Kitsap County Public Works. Emphasis is placed on inter-agency partnership to educate property owners and businesses about stormwater system maintenance, Best Management Practices (BMPs) to reduce FC sources, and illicit connections.

Commercial property PIC inspections are conducted in coordination with the stormwater utility. The inspection focuses on stormwater system maintenance, clean runoff areas, and the presence of illicit connections or business practices causing illicit discharges. Property owners are given an informational packet showing their stormwater facilities, maintenance requirements for those facilities, and BMPs to prevent illicit discharges.

Dye testing is a useful tool used to confirm illicit connections from building floor drains and to confirm corrections.

Sewer Evaluation:

Some areas are served by older sewer collection systems that are beyond their functional lifespan. These areas can be further challenged by surface, ground, and storm waters. Kitsap Public Health will conduct sewer investigations, in partnership with sewer utilities, pursuant to the IDDE Manual and the U.S. Environmental Protection Agency handbook "Sewer System Infrastructure Analysis and Rehabilitation," 1991.

Effective evaluation of sewer infrastructure includes, but is not limited to:

- Evaluating existing infrastructure maps, review existing maps, or creating new maps.
- FC /EC data needs to be collected from drainage segments to determine areas with fecal pollution.
- Ammonia and optical brightener sampling can be used to indicate sewage leaks when located near the source.
- IDDE dry weather screening can also be useful to determine sewer infrastructure integrity.
- The sewer utility can conduct an infiltration and inflow analysis that may include side sewer lateral issues.
- Other investigation tools include dye testing, video inspection, smoke testing, etc.

Sewer lines experiencing infiltration during high groundwater conditions, especially those that are pressurized, can potentially leak sewage during low groundwater conditions. Sewer infrastructure problems need to be addressed by the sewer utility but can be investigated in partnership with Kitsap Public Health.

Chapter 8: Reporting

PIC project reporting is part of Kitsap Public Health's semi-annual and annual Clean Water Kitsap* stormwater program reports. The program manager and field supervisor are responsible for submitting these reports.

Grant funded PIC projects also having reporting requirements. The frequency for reporting will be specified in the grant contract, but generally, reports are required on a quarterly basis throughout the duration of a project. The format and/or elements to be included for regular reports are specified by the agency requiring the report. Check with the project lead or program manager for details.

Project leads are responsible for ensuring that reports are submitted to the funding agency per the contract. When several staff are involved in working on a project, the project lead needs to solicit input from staff regarding their activities so that they can compile the report. Project leads should send the report to the field supervisor for review and submission.

A final and comprehensive report detailing the project scope, methods, results, conclusions, and recommendations of a PIC project is prepared at the end of the project.

Develop a timeline for the submission of the final report, e.g. collection of all data, completion of data analysis, draft report, submission of the draft report to PIC staff for peer review, and submission of the draft report to the field supervisor and program manager. Incorporate comments/changes as needed and re-submit to program manager for final review. The report will be sent to funding agency for approval then released to project partners and posted on the website.

PIC Project Follow-up:

A comprehensive follow-up program for non-participating properties is essential to maintain and build the trust and associated cooperation of the community. Non-participating properties are evaluated by analyzing water quality data to determine whether there is a seasonal or rainfall pattern to elevated fecal results. Areas are evaluated by sampling any surface water entering and leaving the property. Wet weather and conditions are useful for identifying OSS failures due to seasonal high water table, surface water intrusion, and transports surfacing sewage to discharge points. Dry weather and conditions are

used for identifying direct discharges or seeps that may be masked by rain or illicit discharges into storm waters.

Vacant property parcels, those with OSS systems categorized as suspect (see **Table 3**), and parcels classified as high or medium priority (see **Table 4**) should be flagged in Kitsap Public Health's Logger database for follow-up during any future permit submissions.

APPENDIX A: Example of Press Release and Fact Sheet

News Release

FOR IMMEDIATE RELEASE
February 3, 2011

CONTACT: Name of Inspector
(360) 337-xxxx

Health District to Kick Off Shellfish Restoration & Protection Project and offer Onsite Septic System workshop

Indianola- The Kitsap County Health District will hold a public meeting on Wednesday February 9th, 2011, from 7:00 p.m. to 8:30 p.m., at the Indianola Clubhouse, 20446 Indianola Road, Indianola. The purpose for the meeting is to present information about the Shellfish Restoration and Protection project and provide education about septic systems.

The goal for the project is to restore and protect shellfish growing areas by identifying and correcting sources of fecal pollution through a routine shoreline monitoring program. Attendees will also learn about septic systems and what they can do to help maximize the life of their systems. A wide variety of printed information will be available, including Health District homeowner's manuals for septic systems. Kitsap Conservation District staff will also be present to share information about best management practices for livestock waste, and rain gardens. Water conservation items, such as low-flow shower heads will also be made available upon request.

The Health District will be working with the Kitsap Conservation District, Kitsap County Surface and Stormwater Management Program, to conduct this project which is being funded through a grant by the Environmental Protection Agency.

For more information, please contact (name of inspector) at (360) 337-xxxx or (email)

EXAMPLE OF FACT SHEET

ENVIRONMENT

NUTRIENT REDUCTION PROJECT: LAKE SYMINGTON & BIG BEEF CREEK PROTECTING PUBLIC HEALTH AND IMPROVING WATER QUALITY

PROJECT GOALS:

The goals for this project are to reduce fecal bacteria and nutrients to improve water quality in Lake Symington and Big Beef creek. Our Pollution Identification and Correction (PIC) program staff will do this by identifying and correcting sources of fecal and nutrient pollution that impact the lake and creek. Fecal pollution comes from human or animal waste and contains pathogens that can make people sick.

WHAT WE WILL DO:

- Collect water samples to test water quality of the lake and creek. When water samples show high levels of fecal or nutrient pollution, we'll work to locate the sources of the pollution.
- When sources of pollution are identified work with residents to correct these sources.
- Contact property owners to meet on their property to provide information about their septic systems and do an inspection of the system.
- Educate residents about the septic systems and land use practices, such as natural landscaping, that protect water quality and public health.
- Ensure property owners correct failing septic systems by providing financial assistance through the Craft 3 septic loan program.

SOME COMMON SOURCES OF FECAL POLLUTION:



Failing septic systems



Animal waste runoff



Faulty sewer or stormwater systems



345 6th Street
Suite 300
Bremerton, WA 98337

360-337-5235 t.
360-337-5291 f.

kitsappublichealth.org

APPENDIX B: Field safety protocol

KITSAP PUBLIC HEALTH DISTRICT WATER PIC PROGRAM FIELD SAFETY PROTOCOL

OBJECTIVE:

To provide PIC program field staff with protocols that will enable them to have the training and equipment needed to work safely and protect themselves in the field.

RATIONALE:

Employee safety is the number one concern to PIC Management and the Health District. Delineating a protocol that deals with basic safety in the field is a necessary part to keeping staff safe. This protocol won't cover every situation but will be adapted and added to over time to ensure we are dealing with "real time" issues.

PROTOCOL:

Field Inspection/Field Visit Preparation

The key to a safe field inspection is preparation. The amount of preparation will depend on the kind of inspection being done. Preparation may include obtaining required training, familiarity and application of related policies and procedures, confirming or acquiring additional information, and gathering necessary supplies, equipment, and protective clothing.

1. Training (ALL PIC FIELD STAFF)

Field staff training includes the following:

- Harassment and Discrimination Prevention
- First Aid/CPR/AED
- Basic Seamanship
- Probationary field training including sample collection/handling, moving over/through difficult terrain, operating and working on a boat, etc.
- Dog Safety
- Site Entry and Search (curtilage)
- Pepper Spray (training required if you are carrying in field)
- Dealing with combative people
- Risk communication
- *Basic Self Defense (would like to add and make standard for all field personnel)*

Other training will be periodically provided. Staff is encouraged to recommend any other training opportunities or needs which would improve field safety.

2. Applicable Policies and Procedures

Staff should become familiar with KPHD policies and procedures (and amendments). They are located on the ANET for review.

3. Supplies and Equipment

KPHD will provide all required items, and the optional items if you so choose:

- KPHD identification badge (required)
- KPHD business cards (required)
- Cell phone/emergency contact phone numbers (required)
- Appropriate PPE including field boots, latex gloves, etc. (required)
- Appropriate educational materials (required)
- Dog biscuits (optional)
- Dog bite sticks (optional)
- Pepper spray and holder (optional, training required)
- Metal Note Book (optional)

4. Field Clothing and Personal Protective Equipment

Appropriate attire for conducting field activities is required. In some cases basic PPE is necessary. Dress appropriately for the weather. Wear clothes that make it easy for you to move fast, and are suitable for the type of encounters that may arise such as berry bushes, muddy sites, and other obstacles. For stream monitoring and shoreline surveys it is highly recommended you wear boots with good ankle support as the topography may be somewhat uneven. Good traction and water proof material is also highly suggested. KPHD will reimburse (see policy on ANET) you if you need to purchase new field boots. It is also recommended that rain gear be included in your PPE as work occurs year round and in adverse weather conditions. Again, the district will reimburse (see policy on A-NET) for these purchases and different employees prefer different types of equipment.

- ANSI rated safety toe and/or pierce resistant field boots are required at all times when working in the field.
- Lifejackets are required to be available in the boat per US Coast Guard regulations. One life jacket per person is required.

5. Site Visit Procedures

Doubling Up with another staff person:

In the following situations, we require you to “double up”:

- When operating a Health District boat
- When conducting shoreline surveys (confirmations are solo)
- Inspection of homeless camps (with SHW Lead)
- Inspection of recreational vehicle complaints
- Inspection of properties with “dangerous persons” flags including Washington DOC “Halfway Houses”
- Inspection of properties in close proximity to a registered sex offender. These can be located here (<http://www.icrimewatch.net/index.php?AgencyID=54474>)



KITSAP COUNTY Sheriff

Sheriff Gary Simpson

Search for Offenders in your area | Register for Email Alerts | Safety Tips | Links | Contact

Offender Search

In your area | Name | City | Non-compliant

Use this search to view all published offenders within a specified radius of your home, business, school or other desired address. > [How searches work](#)

Address: *

City: *

State: *

Zip: *

Zip Plus:

Offender Address Type: Home Addresses

* Denotes required field

Other Search Options

> [Click here](#) to list all published offenders registered with this agency.

> [Click here](#) to search by name or other options.

Receive Email Alerts

Click [here](#) to register to receive an email alert whenever a published offender registers within the selected radius of your desired addresses.

Experiencing Problems?

Click [here](#) if you are experiencing technical problems or need assistance using this site.

[Home](#) | [View Presentation](#) | [Search for Offenders in your area](#) | [Register for Email Alerts](#) | [Safety Tips](#) | [Links](#) | [Contact](#) | [Unsubscribe from Email Alerts](#)

In the following situations, we suggest you “double up”:

- Entering a home to conduct a dye trace
- Inspecting properties with “no trespassing” signs where the house is not visible from the road

In the following situations, you may “double up”:

- When site conditions make you uncomfortable

Plan Ahead:

Before conducting a site visit, it is highly recommended that staff gather all relevant information about the property that is being visited. Check available databases to see if there are any prior complaints or information that might be of use. Often times other field staff will put comments in the database addressing if there are dangerous people or animals on the site. A more detailed review of historic cases may be warranted if previous violations are identified. If you feel the need to check with the Kitsap County Sheriff's Office about potential safety concerns about a property, or if you need an escort, please contact the Program Manager or Field Supervisor to make the appropriate contacts. It is important to list all pertinent information on the inspection form. This may include information you find while preparing for the inspection.

Carry only what's needed:

Take only the items you will need for your site visit. Women should conceal their purse securely in the vehicle or trunk. Have the materials organized and ready to go in a briefcase or other carrying device.

Approaching the dwelling/building:

Minimize the time you sit in the car and prepare materials. Do your preparation away from the dwelling if you can. As you near the structure you can announce your presence by saying “Hello, Kitsap Public Health.....” This will alert the owner/occupants if they are outside that you are approaching and alert any dogs that might be loose or in the yard. If no one responds proceed to the front door. Knock and ring the doorbell while announcing yourself. Step back from the door while waiting to make sure there is a comfortable distance between you and the door. Have your ID badge visible and a business card. When the door opens introduce yourself, hand them your business card, state why you are there, and ask if they are available to talk for a few minutes. If they say “yes” then proceed with your business. Be concise in conveying information. Answer questions and offer to call with information if you don't have the answers. If they say “no” ask if there is a better time to come back or if a phone call would be better.

Leaving the visit:

When the visit is done thank the person for allowing you to interview them. Gather all your belongings. Have your car keys ready in your hand. Try not to sit at the property and take notes or make calls. Try to leave immediately and go to a safe place to jot down site visit details you were not able to write down during the visit.

6. Dealing with hostile people or animals:

If at any time during your site visit you feel uncomfortable, you are threatened, or the person becomes hostile LEAVE IMMEDIATELY. DO NOT ENGAGE IN CONFRONTATION. Go to a safe place. Contact your manager or field supervisor to report the incident. If you are attacked or threatened you have the right to defend yourself. How you choose to defend yourself will depend on the circumstances of the assault and your abilities. If you have been assaulted, and you're able to get to a safe place, call 911.

Reporting an emergency to 9-1-1

- Briefly state the nature of the emergency
- Let the dispatcher ask the questions
- Be prepared with the address or cross street where help is needed
- Stay on the line until advised to hang up

If the person will not let you leave the property the use of defensive OC (pepper) spray is authorized. If you encounter a hostile animal on the property or feel an attack is imminent leave the property immediately and notify your manager or field supervisor. If the animal is not allowing you to leave and the owner/occupant is unwilling or unable to provide assistance, the use of defensive pepper spray is authorized. After the spray is discharged leave the property and notify your manager or field supervisor.

Leaving the Field for Home, or After Hour / Weekend Work

Staff must notify the Program Manager and Field Supervisor ahead of time with an email or text. After completing the work, staff must send email or text that they are finished and on their way home. This includes returning from a boat run, if returning to the office later than close of business (4:30 pm).

Unexpected violence can occur at any time. You can significantly reduce the chance of being a victim by being aware of your surroundings at all times.

APPENDIX C: Field Equipment List

Sampling/Testing Equipment

- 100ml sterile plastic water sample bottles.** Used to collect water samples for FC or EC analysis.
- Sample wand.** Telescoping wand used to collect water samples.
- Cooler with ice and/or ice pack(s).** Used to store samples until delivered to lab.
- Digital camera.** Used to document violations/items of interest. All inspectors are issued a digital camera in the Pollution Identification and Correction Program.
- GPS unit;** used for shoreline surveys, trend and impact monitoring.
- Dye tracers.** Ready-for-use individual liquid dye mixtures in 500 ml Nalgene® bottles stored separately from other PIC supplies in a water proof container. Used to dye-test OSS.
- Charcoal packs.** Used during dye tests to “catch” dye. Packs are available in the storage cabinet located in the office and in a separate location from the dye tracers.
- Whirl-Pak™ bags.** Used for storage of individual control and dye packs retrieved from sampling sites.
- Water proof markers, e.g. “Sharpie”.** Used to write on water sampling bottles for identification purposes.
- Rubber bands and plastic bags.** Used to post and protect written materials left for property owners/occupants.
- Butane Torch.** Used to “flame-off” spigots to prior to collecting drinking water samples.

Required Paperwork

- OSS permit records.** Used to assist inspectors locate the OSS on a specific property.
- OSS operation and maintenance records.** Used to determine if the alternative OSS on the property has been properly maintained through the monitoring and maintenance program.
- PIC inspection form.** Used to record needed information regarding the property being inspected.
- PIC door hanger.** Used to inform area residents that a Health Inspector visited that property, and to provide information regarding the purpose of this visit.
- Home Owners Guide to On-site Sewage Systems.** Used to provide basic information about various types of onsite sewage systems, and what home owners/occupants should do to maintain these systems.
- Onsite Sewage System Repair brochure.** Used to assist residents with failing OSS.
- “Rite-in-the-Rain” notebook.** Used to map sampling locations.

Safety Equipment

- Kitsap Public Health District identification badge.** Used to identify yourself to property owners. Badges are issued to the inspector.
- Kitsap Public Health Business card.** Used in conjunction with badge to identify yourself to property owners. Cards are issued to the inspector.
- Cellular phone.** Inspectors are issued a cellular phone for use while conducting Health District business, or they may use a personal cell phone.
- Pepper spray.** Used for self-defense. Inspectors are trained annually in the use of pepper spray. Pepper spray containers are issued by the Health District after completion of the training.

Dog Stick.

Disposable latex gloves. Used to protect an inspector from pathogenic organisms that are associated with sewage.

Personal Protective clothing includes; steel toe or safety toe boots and rain gear (jacket and rain pants). These items are provided to staff according to the Collective Bargaining Agreement.

Hand-wipes/sanitizer. Used to clean hands. Always use a hand-wipe after collecting water samples or charcoal packs.

Chlorine bleach solution. Used for cleaning-up spilled dye. Wear gloves while handling.

APPENDIX D: Example of participation letter

Date

Name of property owner

Address of property

RE: Burley Lagoon Watershed Project – (address)

Dear Mr. and Mrs. _____,

The Kitsap Public Health District has been working on a project to reduce fecal pollution in the Burley Lagoon and Burley and Bear Creeks. Fecal bacteria are present in human and animal waste and can contain disease-causing organisms, posing a public health threat. High levels of fecal bacteria were found in the freshwater that flows into Burley Lagoon. Kitsap Public Health has been tasked to locate and correct the sources. There are many sources of this bacteria including; septic systems, pet waste, runoff from livestock, sewer systems, and wildlife.

The project involves working with property owners and residents to give septic system permit records and site-specific tips on how to prolong the life of the systems. Careful use and maintenance can help you get the most life possible from your septic system. For your convenience, I am available anytime during the day, the late afternoon, early evening, or on weekends by prior arrangement.

Please contact me to schedule an appointment, (360) 337-xxxx (8:00-4:30 pm Mon-Fri).

Sincerely,

Name of inspector

Environmental Health Specialist

Water Pollution Identification and Correction Program

Kitsap Public Health District

[Email of inspector](#)

APPENDIX E: Pollution Identification & Correction (PIC) Inspection Form

TAX ID:

PROJECT AREA	ADDRESS
OWNER NAME	PHONE
OCCUPANT NAME	

PROPERTY SURVEY INFORMATION:

<u>Occupancy type</u> ___ Commercial ___ Single family ___ Multi-family	<u>System type</u> ___ Standard gravity ___ Pressure ___ Drip irrigation ___ Glendon ___ Other _____ ___ M & M contract	<u>Records on file</u> ___ BSA ___ Permit ___ As built	<u>#Bedrooms</u>	___ Marine shoreline ___ Fresh shoreline ___ Upland <u>Distance to OSS</u>
<u>Survey date(s)</u>	<u>Staff</u>	<u>OSS rating</u>	<u>Farm rating</u>	<u>Date last pumping</u>
<u>Roof drains</u> ___ OK ___ needs improvement	<u>Curtain drains</u> ___ OK ___ needs improvement	<u>Bulkhead drains</u> ___ OK ___ needs improvement	<u>Pets present</u> (# and type)	<u>Livestock present</u> (# and type)

Animal waste management: ___ OK ___ Needs improvement ___ Violation

Notes/Comments on OSS and/or other property conditions

OSS EDUCATION CHECKLIST:

- ___ Water usage: (Hydraulic Loading, Plumbing leaks, laundry, use of low flow fixtures, runoff, sprinklers)
- ___ Waste strength: (Use of Additives, Chemical drain cleaners Bleach, Fabric softener, Meds, Fats/Oils/Greases)
- ___ Physical damage: (Driving over drainfield, bldgs/structures, heavy equipment etc.)
- ___ Inspect system regularly (pump/inspect frequency, warning signs of failing OSS)
- ___ Educational materials provided circle 1 or more (Fact Sheet, OSS manual, Repair brochure, Pet waste)

ANIMAL WASTE CHECKLIST:

- Pet waste
- Manure from livestock
- Referral to Kitsap Conservation District _____

Complete the Following:

In the box below, indicate sources/areas of animal waste, surface water flows, locations of OSS and where samples/dye tests were collected/placed on the property. For consistency, indicate distances and directions on the drawing (Not To Scale).

Notes: _____

Dye Test Date:			Dye Used:									
Location Number	Control (BAC)			Pack Week #1 (F1)			Pack Week #2 (F2)			Pack Week #3 (F3)		
	Placed	Retrieved	Result	Placed	Retrieved	Result	Placed	Retrieved	Result	Placed	Retrieved	Result
1												
2												
3												

WATER SAMPLE DATA:		(FC per 100mL)		
Water Sample Taken:	Date: _____	Inspector: _____	Result: _____	Location: _____
Water Sample Taken:	Date: _____	Inspector: _____	Result: _____	Location: _____
Water Sample Taken:	Date: _____	Inspector: _____	Result: _____	Location: _____
Water Sample Taken:	Date: _____	Inspector: _____	Result: _____	Location: _____

APPENDIX F: Database entry procedures

PIC database entry:

Open the PIC database. It will appear as shown below:

Monday, August 30, 2010

POLLUTION IDENTIFICATION AND CORRECTION

RP_ACCOUNT_ID: 1162288 Owner: KAUFMAN STEVEN C & YONG M Owner Phone: SEWER: Y
ACC_NO: 252401-4-046-2006 Address: 2601 SE MILE HILL DR Zip: 98366

Project Area: [Dropdown] Remove from Project Area Priority: [Dropdown]

Mail To: [Text] Copy Site Address to Mail Mail Address: [Text] Mail City: [Text] Mail State: WA Mail Zip: [Text]

Occupancy Type: [Dropdown] System Type: [Dropdown] Records on file: [Text] #Bedrooms: [Text] OSS Design Flow (GPD): [Text] Marine Shoreline: [Text] Fresh Shoreline: [Text] Upland: [Text]

Property related comments: [Text Area]

Survey Date: [Text] Staff: [Text] Inspection Status: [Dropdown] OSS Rating: [Text] Term Rating: [Text] Last Pump FollowUp: [Text] Intra Due: [Text] FollowUp For: [Text] Completed?: [Text]

Type of failure: [Text] Repaired? [Text] Type of repair: [Text]

[Link to Kitsap County Parcel Search](#) v. 1100227.0

At the top right corner, there are 4 icons; Select a form; Select a Report; Search; Access internet.

Choose the **Search icon (binoculars)** and type in the address of the property surveyed. (If you do not have a site address, you can also search on Tax ID, Owner Name, RP account, or Project Area.)

Monday, August 30, 2010

POLLUTION IDENTIFICATION AND CORRECTION

RP_ACCOUNT_ID: 1162288 Owner: KAUFMAN STEVEN C & YONG M Owner Phone: SEWER: Y Search
ACC_NO: 252401-4-046-2006 Address: 2601 SE MILE HILL DR Zip: 98366

Project Area: [Dropdown] Remove from Project Area Priority: [Dropdown]

Mail To: [Text] Copy Site Address to Mail Mail Address: [Text] Mail City: [Text] Mail State: WA Mail Zip: [Text]

Occupancy Type: [Dropdown] System Type: [Dropdown] Records on file: [Text] #Bedrooms: [Text] OSS Design Flow (GPD): [Text] Marine Shoreline: [Text] Fresh Shoreline: [Text] Upland: [Text]

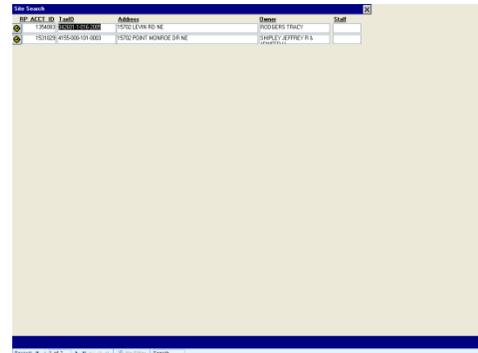
Property related comments: [Text Area]

Survey Date: [Text] Staff: [Text] Inspection Status: [Dropdown] OSS Rating: [Text] Term Rating: [Text] Last Pump FollowUp: [Text] Intra Due: [Text] FollowUp For: [Text] Completed?: [Text]

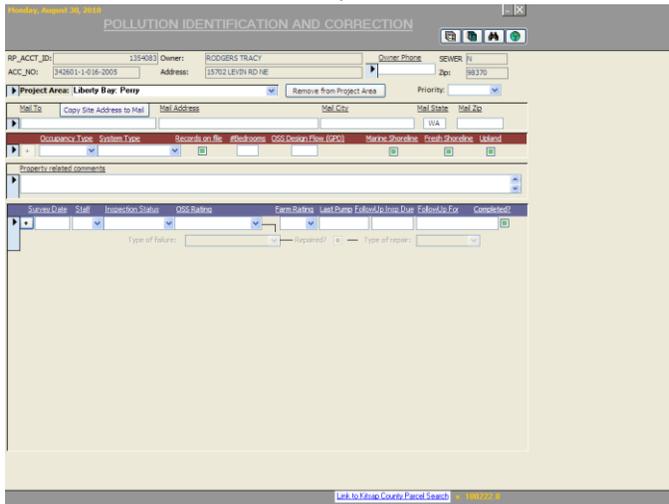
Type of failure: [Text] Repaired? [Text] Type of repair: [Text]

[Link to Kitsap County Parcel Search](#) v. 1100227.0

Enter the information for your search criteria, e.g. house number, then OK. If there is more than one address with the same house number you will see a list as shown below:
 To select the property of interest, click on the yellow arrow.



The PIC database is linked to the Kitsap County LIS system. The Owner name, RP_Acct_ID, Acct_No and Address are automatically populated into the PIC database. This information appears at the top of the screen, and in the shaded cells. Information in shaded cells cannot be altered. Information can be added to cells that are white/blank.



DATA ENTRY FIELDS & INSTRUCTIONS:

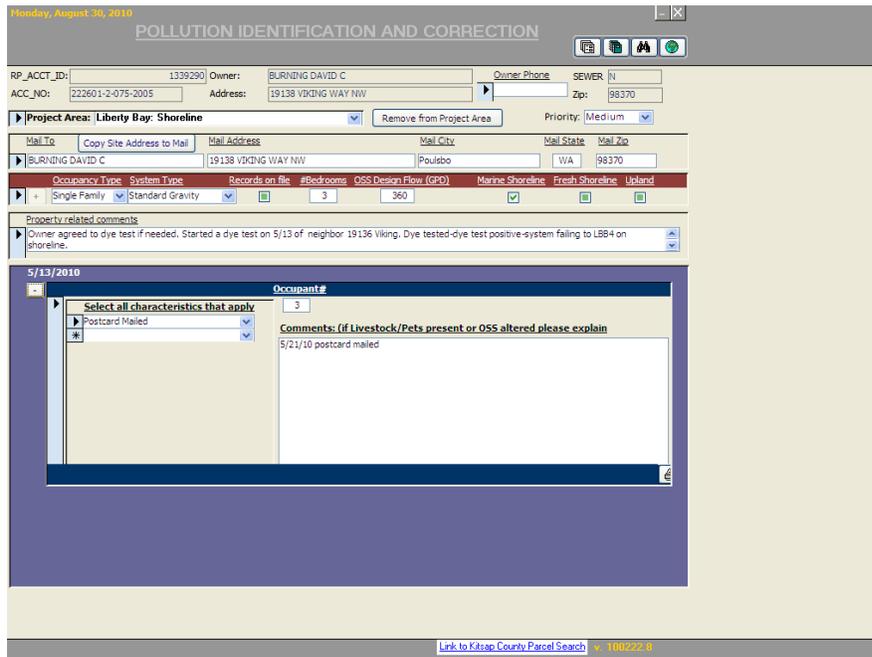
- Owner’s Phone:** Add the owner’s telephone number, (if available).
- Project Area:** Select the Project Area for the property you surveyed from the drop down menu. This is REQUIRED!!! If you do not see the area in the list contact the Project Lead, OR, you can add an area to the Project Area list. To add an area, click on the Select a form icon, go to Project Area, scroll down to the bottom of the list and select the water body, then type in the area to be added to this water body.
- Copy Site Address to Mail:** If the site address is the same as the mailing address, click on the copy button. It will auto fill the fields. If the mailing address is NOT the same, simply type it into the “Mail to” cells.
- Occupancy Type:** Use the drop down menu to choose the occupancy type. The choices include: Commercial, Community, Multi-family or Single family.

5. **System Type:** Use the drop down menu to choose the system type. The choices include; alternative, cesspool, holding tank, pit privy, pump to gravity, seepage bed, sewer, standard gravity, unknown.
6. **Records on File:** If records are on file, CHECK this box. If there are no records, do not check the box.
7. **#Bedrooms:** Type in the number of bedrooms.
8. **OSS Design Flow:** Type in the design flow, based on 120 GPD per bedroom *e.g.* 3 bedrooms = $120 \times 3 = 360$ GPD
9. **Marine shoreline:** Check if applicable.
10. **Fresh shoreline:** Check if applicable.
11. **Upland:** Check if applicable.
12. **Property Related Comments:** Type in pertinent property related comments, *e.g.* property is vacation home, there are 7 people living in this 3 bedroom home, cars observed parked on reserve etc.
13. **Survey Date:** Type in the date the survey was completed.
14. **Staff:** Select your initials from the drop down menu.
15. **Inspection Status:** Select the inspection status from the drop down menu. The choices include: Assigned, Completed, Denied Access, Did Not Participate, Vacant.
NOTE: If a property is VACANT do not add an OSS rating.
16. Using the "Assigned" status may be chosen at the beginning of and/or during a project, to Assign properties to staff for tracking purposes.
17. **OSS Rating:** Select the OSS rating from the drop down menu. The choices include: Failure, Failure-grey, No Apparent Problems, No Records, Non-Conforming, Suspect. **NOTE:** if the property is Vacant do not assign an OSS rating. This is a required field.
18. **Farm Rating:** If the property is a Farm, select a rating from the drop down menu. The choices are: High, Medium, Low, NA.
19. **Last Pump Out:** Type in the date of the last pump out for the system, if available.
20. **Follow up Inspection Due:** Type in a date, if you plan on doing some follow up for the property.
21. **Follow Up For:** Type in the reason for the follow up.
22. **Completed:** When follow up is complete, CHECK this box.

GO BACK TO THE BEGINNING OF THE DATA ENTRY LINE THAT STARTS WITH SURVEY DATE TO CONTINUE ENTERING INFORMATION.

Click on the arrow. 

THEN click on the + It will expand the page to show the following:



Occupant #: Type in the number of occupants. Be sure to do this FIRST, otherwise you will not be able to enter in the characteristics, or comments.

Select all characteristics that apply: Select all that apply from the drop down menu. The choices include; dye test, livestock present, OSS altered since install, Pets present, Postcard mailed, WC Distributed (water conservation kit).

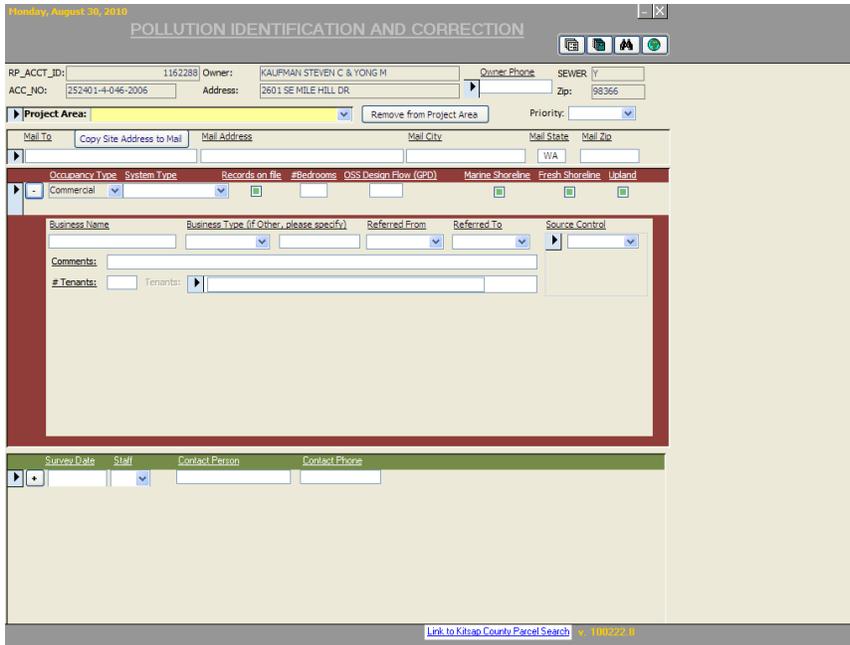
Comments (if livestock/pets present or OSS altered please explain): Type in comments as applicable, e.g. 4 camels, 3 dogs, 2 cats and a partridge in a pear tree...

When you are finished entering data, click on the box with the — sign. This will minimize the screen.

FOR COMMERCIAL PROPERTY INSPECTIONS

Follow the DATA ENTRY steps # 1-6 stated previously.
Click on the arrow. 

THEN click on the  It will expand the page to show the following:



Monday, August 30, 2010

POLLUTION IDENTIFICATION AND CORRECTION

RP_ACCT_ID: 1162288 Owner: KAUFMAN STEVEN C & YONG M Owner Phone: SEWER: Y
ACC_NO: 252401-4-046-2006 Address: 2601 SE MILE HILL DR Zip: 98366

Project Area: [Dropdown] Remove from Project Area Priority: [Dropdown]

Mail To: [Dropdown] Copy Site Address to Mail Mail Address: [Text] Mail City: [Text] Mail State: [Text] Mail Zip: [Text]

Occupancy Type: [Dropdown] System Type: [Dropdown] Records on file: [Text] #Bedrooms: [Text] OSS Design Flow (GPD): [Text] Marine Shoreline: [Text] Fresh Shoreline: [Text] Upload: [Text]

Business Name: [Text] Business Type (if Other, please specify): [Dropdown] Referred From: [Dropdown] Referred To: [Dropdown] Source Control: [Dropdown]

Comments: [Text Area]

Tenants: [Text] Tenants: [Text]

Survey Date	Staff	Contact Person	Contact Phone
[Text]	[Dropdown]	[Text]	[Text]

[Link to Kitsap County Parcel Search](#) vs. 188300.0

DATA ENTRY FIELDS:

1. **Business Name:** Type in the name of the business
2. **Business Type** (if Other, specify): Select the type of business from the drop down menu. The choices include: Automotive, Dry Cleaners, Food, Manufacturing, Medical/Dental, Nursery, Other, Retail.
3. **Referred From:** Select the jurisdiction from the drop down menu.
4. **Referred To:** Select the jurisdiction from the drop down menu.
5. **Source Control:** Select the type of source control from the drop down menu. The choices are: bio-swale, catch basin, O/W sep (oil/water separator), Other, pond, vaults.
6. **Comments:** Type in pertinent comments about the business/property inspection.
7. **# Tenants:** Type in the number of tenants.
8. **Tenants:** This feature is NOT active (as of 8/30/10). IT is working on this.
9. **Survey Date:** Enter the survey date (MM/DD/YYYY)
10. **Staff:** Select staff initials from drop down menu.
11. **Contact Person:** Type in the name of the business contact person.
12. **Contact Phone:** Type in the telephone number.

Click on the arrow. 

THEN click on the  It will expand the page to show the following:

DATA ENTRY FIELDS:

NOTES: Type in notes about the property as needed.

Stormwater Rating: Select the rating from the drop down menu. The choices are Deficient, Illicit Discharge or No Apparent Problem.

Type of Deficiency: Select the type of deficiency (if applicable).

Illicit Discharge: Select the type of illicit discharge (if applicable).

Discharge Corrected: Check this box, when the discharge has been corrected.

When all the data has been entered, you can enter another property by selecting the search function (binocular icon), or simply close the program to end. The information will be saved automatically.

Water Quality database entry procedures:

Importing electronic data files from the Contract Laboratory.

A new section has been added to the chain of custody form. If the box is checked to “send data electronically”, results for each sampling event should be sent to the person listed in the “Results to:”. The data will be sent in an Excel file via email, which must be saved to the following directory: PIC Common\Electronic Sampling Data.

To import data from the Excel file into the Water Quality database, use the following steps.

1. Save the Excel file to the applicable project or program file in the PIC common.
 - a. Rename the excel tab to Sheet1 (no space between the word and number).
 - b. Save As .xlsx file then proceed to WQ dbase to import the data.
- A. Open the Water Quality database.
- B. At the top of the data entry form, enter the field data information beginning with Date and Staff, and Notes.
- C. Select SAVE.

- D. Select Import Data from the drop down in the Actions tab.
- E. Select the file to import.

General procedures for manually entering new data

- A. Trend monitoring data, PIC impact data and Shoreline survey data are entered into the WQ database. Complaint investigation sampling data generally is not included.
- B. New data will be entered and filed by date in the current water year (October 1 to September 30) file location in the main WQ files. The monitoring data is filed by monitoring area and type of water (fresh or marine), which are grouped as follows:

FRESH WATER Monitoring areas and associated watersheds

Central	Dyes Inlet, Port Orchard / Burke Bay
North	Upper Hood Canal, Foulweather Bluff/Appletree Cove, and Liberty Bay/Miller Bay
Southeast	Sinclair Inlet, partial Colvos Passage/Yukon Harbor
Southwest	Upper Hood Canal, Burley/Minter, Coulter Creek/Rock Creek, partial Colvos Passage/Yukon Harbor and Tahuyeh/Union Rivers

MARINE WATER Monitoring areas and associated watersheds

Upper Hood Canal	Monitored by DOH
East marine	Liberty Bay/Miller Bay & Port Orchard/Burke Bay & Colvos/Yukon
Dyes/Sinclair	Dyes and Sinclair Inlets

- B. Open the database - the default screen is the Stream Data Entry Mode.
- C. Using the tabs at the top left of the screen, select the appropriate matrix (i.e. Marine, Stream, Shoreline etc.)

Fresh Water

- A. Enter the field data information beginning with “date” and “staff”. The date format is: MM/DD/YEAR. If you enter a visit date that is identical to an existing visit date in the database, the program will ask if you are sure you want to proceed with this entry. This occurs to prevent duplicate entries of the same data. Click on the drop down lists next to the “staff” fields to select the appropriate staff member who collected the samples.
- B. In the fresh water data entry process, if you enter a visit date that is identical to an existing visit date in the database the program will ask if you are sure you want to proceed with this entry. This occurs to prevent duplicate entries of the same data. Ensure that the data you are entering is not already in the database.
- C. Enter the noted weather conditions or other field information from the field notebook in the notes field.

- D. Enter or select the station from the pull down list. The database will only allow data to be entered for stations that are activated in the database. If the sampled station is not shown, it needs to be either activated or added to the 'Stations' table.
- E. Specify the type of sampling event. Enter either "trend" or "PIC" in the event field. The default value is "trend".
- F. Enter the time, using the 24 hr. clock format (i.e., 14:00 for 2:00 PM), you must enter a "0" at the beginning of the field for times prior to 12:00 PM. (i.e. 09:00)
- G. Enter the "FC" values for the entire event prior to entering the data for the other sample parameters.
- H. Fecal coliform (FC) values:
Prior to January 2010, all FC samples were analyzed using the MPN method.
This data was entered as follows:
For any FC value reported as < 2, enter as '1' in database.
For any FC value reported as ≥ 1600 , enter as '1601'.
For other results, enter actual reported value.

After January 2010, FC samples were analyzed using membrane filtration (MF), and the data is entered as follows:

For STREAM data: (with 1/10 dilution)
For any result reported as <10 FC/100ml, enter '4'.
For any result reported as ≥ 2000 , enter '2001'.
For other results, or those beyond 2000, enter actual reported value.

For MARINE data: (with no dilution)
For any value reported as < 1 FC/100ml, enter '0.5'
For any value reported as ≥ 200 , enter '201'.
For other results, or those beyond 200, enter actual reported value.
- I. Duplicate samples – check the "Dup" box in the shaded column next to time after selecting the Station ID. The same time as the duplicated sample will automatically be entered. An FC value must be entered in the database for the duplicate sample, there is no need to add any of the associated conventional parameter data for the duplicate station entry.
- J. For sampling events where there are **no results** for a parameter you must assume that the parameter was not monitored and leave the field blank.
- K. If a mistake is made and you wish to delete a complete record, click in the gray column to the left of the Station and press the delete key. If you begin to enter a Station and then do not complete the entry, the database will give you an error message about a null value in the field. Click "OK" on the error message and then hit the "Esc" key to move out of the field.

- L. Once all Station, time, and FC values are entered, move to the first Station entered and begin entering the other parameter data associated with each Station. One decimal place (i.e., 10.1) is used for each value and either the Tab key, Return key, or the mouse can be used to move from field to field. When moving to the next Station, the database will provide an error message if any of the parameter values are outside the accepted range of values for the parameter.
- M. The “TDS” column is left blank as this data is no longer collected by the Health District.
- N. Proceed to the QA/QC section on Page 5.

Marine Water (DOH data also)

- A. Using the tabs at the top left of the screen, select the marine matrix.
- B. Follow the same data entry procedures as fresh water. Additional marine water data entry procedures are listed below.
- C. In the tide table at the top of the entry screen, enter the high and low tide information in the tide table, using the 24 hour time format (i.e., 14:00 for 2:00 PM). This information will be found on the first page of the copied field notes or in the local tide tables. As there are two high and low tides each day, enter the values for the tides that occurred closest to the sampling event.
- D. Although unlikely when entering marine water data, specify the type of sampling event. Enter either “trend” or “PIC” in the event field.
- E. DOH data entry: DOH submits marine water monitoring data to the Health District for use in trend analysis for the Upper Hood Canal and Colvos Passage areas.
- F. For marine monitoring, salinity, temperature and pH will be entered.
- G. During the sample value entry, click on the pull down menu in the “Tide Cycle” column for entering the appropriate tide. Flood tides are tides moving from low to high, ebb tides are tides moving from high to low, and slack tides are either peak low or peak high tides. Tides are considered slack tides for 45 minutes on either side of a high or low tide.
- H. Proceed to the QA/QC section on Page 5.

Lake – Swimming Beach

- A. Select the “Lake – Swimming Beach” tab to open the data entry screen.
- B. In the swimming beach data entry process, if you enter a visit date that is identical to an existing visit date in the database the program will ask if you are sure you want to proceed

with this entry. This occurs to prevent duplicate entries of the same data. Ensure that the data you are entering is not already in the database.

- C. For all of the data, “beach” will be the type of sampling event that will be selected.
- D. Follow the same data entry procedures as marine and fresh water, note that only time and E. Coli values will be entered. The swimming beach samples are typically collected at sites with similar station names, so pay careful attention as the station ID is entered .
- E. Proceed to the QA/QC section on Page 5.

Shoreline Surveys

- A. Prior to entering shoreline survey sample results, the station identifier has to be entered into the WQ database. Item 5.D describes how to enter a new station. If the station already exists continue to step B.
- B. In the fresh water data entry process, if you enter a visit date that is identical to an existing visit date in the database the program will ask if you are sure you want to proceed with this entry. This occurs to prevent duplicate entries of the same data. Ensure that the data you are entering is not already in the database.
- C. Enter the noted weather conditions or other field information from the field notebook in the notes field.
- D. Enter or select the station from the pull down list. The database will only allow data to be entered for stations that are activated in the database. If the sampled station is not shown, it needs to be either activated or added to the ‘Stations’ table
- E. Specify the type of sampling event. Enter “PIC” for shoreline surveys.
- F. Enter the time, using the 24 hr. clock format (i.e., 14:00 for 2:00 PM), you must enter a “0” at the beginning of the field for times prior to 12:00 (i.e., 09:00).
- G. Enter the “FC” OR “EC” values for the entire event prior to entering the data for the other sample parameters.

Fecal coliform (FC) values:

For freshwater data: (with 1/10 dilution)

For any result reported as <10 FC/100ml, enter ‘4’.

For any result reported as \geq 2000, enter ‘2001’.

E. coli (EC values)

For freshwater data :(no dilution)

For any result reported as < 1 EC/100 ml, enter ‘0.5’

For any result reported as < 10 EC/100 ml, enter ‘4’

For any result reported as > 2419 EC/100 ml, enter **'2420'**

Shoreline survey Confirmation sampling. When entering confirmation sample results from shoreline survey, you must associate the confirmation with the date the original sample was taken. Check the box for "confirmation" and enter the date in the next field that the original sample was collected, i.e. 02/24/2011. This will associate the confirmation sample with the date the original sample was collected, and then calculate the geometric mean for that station.

Editing Existing Data

- A. Select the desired matrix (marine, fresh, shoreline, lake – swimming beach) to make the necessary editing changes.
- B. To edit existing data click on the "Data Entry Mode" drop down button and select "Edit a Specific Visit". Select the date of the visit to edit using the pull down list in the left field below the "Edit a Specific Visit" field. Sampling dates are listed chronologically with the most recent events listed last.
- C. If a range of dates must be edited, select the second date in the field to the right of the first date field mentioned in Step B above. When the records appear after the date selections, they will be ordered by the date and the record buttons above the data entry area must be used to scroll through the selected records.

Database QA/QC

- A. Once all the data has been entered for the sampling event, select QA form from the drop down Actions menu.
- B. Compare the printed data report to that information on the lab data report and in the field notebook pages.
- C. Note all discrepancies on the printed QA/QC report and return to the database to make the appropriate edits. If necessary, print the newly corrected data report.
- D. Once the data comparison is complete and any necessary edits have been performed, check the "QA Completed" box in the database at the bottom of the visit entry screen.
- E. On the printed report, note the initials of the person who entered the data and quality control checked the data, and the date that they occurred. List comments, especially what edits may have been performed, as needed.
- F. Put the field notes, the database report (edited copy if necessary), and the original lab data report together. These are then filed in the main files.

APPENDIX G: Notice and Order to Correct Violation

SENT REGULAR AND CERTIFIED MAIL

DATE
ADDRESSEE

RE: SEPTIC SYSTEM FAILURE AT ADDRESS, TAX ID XXXXXXXXXX

Dear

A violation of Kitsap County Board of Health Ordinance 2008-01 "Onsite Sewage System and General Sewage Sanitation Regulations" has been identified at the above referenced property owned or occupied by you.

On **SPECIFIC DATE**, an authorized representative of the Health Officer determined that sewage effluent was discharging onto the surface of the ground from the above referenced property. This determination was made by visual observation of the sewage on the ground and subsequent testing of a sample from the discharge. Discharging sewage effluent to the surface of the ground or to waters of the State violates the following provisions of said regulations:

2008-01 Sections 6.B.2 - "Discharge of Sewage Effluent"; and
2008A-01 Section 6.C, 6.D - "Insanitary Conditions"

The Health District hereby gives you notice to correct the violations identified above within **thirty days** of receiving this notice by doing the following:

Immediately prevent sewage from discharging to the ground surface and becoming a public health nuisance. To protect public health, hire a licensed designer to evaluate the system as soon as possible. STATE ANY OTHER ITEMS/ACTIONS THE OWNER NEEDS TO TAKE

By SPECIFIC DATE; Submit a building site application developed by an Onsite Wastewater Treatment Designer licensed under Chapter 18.210 RCW, or a Professional Engineer licensed under Chapter 18.43 RCW, and;

Obtain a Sewage Disposal Permit from the Health District pursuant of Section 6.F of said regulations.

Failure to comply with this notice and order to correct violation will result in the issuance of a civil infraction notice to you pursuant to section 19.B of said regulations. The civil infraction notice may result in a fine of up to \$524.00 per violation per day to be assessed to you.

Please note that pursuant to Section 20.A. of the above regulations that any person aggrieved by the contents of a notice and order to correct violation issued under this regulation, or by any inspection or enforcement action conducted by the Health District under this regulation, may submit a completed application for appeal with the applicable fee to the Health Officer within 10 business days of the action appealed.

Please call me at (360) 337-xxxx, Monday through Friday from 8 a.m. to 4:30 p.m. if you have any questions or comments regarding this matter.

Sincerely,

Name, Title of Inspector
Pollution Identification and Correction Program

APPENDIX H: Example of completed Notice of Civil Infraction

2811 MICRO DATA OLYMPIA (360) 570-8400

INFRACTION TRAFFIC **NON-TRAFFIC I 202728**

IN THE DISTRICT MUNICIPAL COURT OF KITSAP COUNTY, WASHINGTON
 STATE OF WASHINGTON, PLAINTIFF VS. NAMED DEFENDANT
 COUNTY OF KITSAP HEALTH DISTRICT
 CITY/TOWN OF _____

LEA OR # : WA0180000 COURT OR # : WA018013J

THE UNDERSIGNED CERTIFIES AND SAYS THAT IN THE STATE OF WASHINGTON

DRIVER'S LICENSE NO. _____ STATE _____ EXPIRES _____ PHOTO I.D. ON PERSON YES NO

NAME: LAST DOE FIRST JOHN MIDDLE _____

ADDRESS 123 MAIN ST IF NEW ADDRESS PASSENGER

CITY POULSBRO STATE WA ZIP CODE 98370 EMPLOYER _____ LOCATION _____

DATE OF BIRTH _____ RACE _____ SEX _____ HEIGHT _____ WEIGHT _____ EYES _____ HAIR _____

RESIDENTIAL PHONE NO. _____ CELL / PAGER NO. _____ WORK PHONE NO. _____

VIOLATION DATE MONTH 02 DAY 01 YEAR 2011 TIME 13:10 INTERPRETER NEEDED LANG. _____

ON OR ABOUT _____ AT LOCATION 123 MAIN ST CITY / COUNTY OF POULSBRO KITSAP

DID OPERATE THE FOLLOWING VEHICLE/MOTOR VEHICLE ON A PUBLIC HIGHWAY AND

VEHICLE LICENSE NO. _____ STATE _____ EXPIRES _____ VEH. YR. _____ MAKE _____ MODEL _____ STYLE _____ COLOR _____

TRAILER #1 LICENSE NO. _____ STATE _____ EXPIRES _____ TR. YR. _____ TRAILER #2 LICENSE NO. _____ STATE _____ EXPIRES _____ TR. YR. _____

OWNER/COMPANY IF OTHER THAN DRIVER _____

ADDRESS _____ CITY _____ STATE _____ ZIP CODE _____

ACCIDENT NO. _____ COMMERCIAL YES NO HAZARD YES NO EXEMPT FARM FIRE OTHER

DID THEN AND THERE COMMIT EACH OF THE FOLLOWING OFFENSES

1. VIOLATION/STATUTE CODE KCHD ORDINANCE 2008-1 VEHICLE SPEED _____ IN A _____ ZONE _____ SIMD RACE AIRCRAFT

SECTION 6.B.2 "DISCHARGE OF SEWAGE"

2. VIOLATION/STATUTE CODE SECTION 6.D "UNSATURARY CONDITIONS"

3. VIOLATION/STATUTE CODE _____

RELATED # _____ PENALTY U.S. \$ 524.00 DATE ISSUED 02/03/11

WITHOUT ADMITTING TO HAVING COMMITTED EACH OF THE ABOVE OFFENSE(S), BY SIGNING THIS DOCUMENT I ACKNOWLEDGE RECEIPT OF THIS NOTICE OF INFRACTION AND PROMISE TO RESPOND AS DIRECTED ON THIS NOTICE.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF WASHINGTON THAT I HAVE ISSUED THIS ON THE DATE AND AT THE LOCATION ABOVE, THAT I HAVE PROBABLE CAUSE TO BELIEVE THE ABOVE NAMED PERSON COMMITTED THE ABOVE OFFENSE(S), AND MY REPORT WRITTEN ON THE BACK OF THIS DOCUMENT OR ATTACHED TO THIS INFRACTION IS TRUE AND CORRECT.

OFFICER EVA CRIM 23

INVESTIGATION DEFENDANT'S SIGNATURE [Signature]

INFRACTION

INF	RESPONSE	DISPOSITION	PENALTY	SUSPENDED	SUB-TOTAL	FIND/GUDGT DATE
1	C NC	C NC D P DF	\$	\$	\$	ABSTRACT MLD TO OLYMPIA
2	C NC	C NC D P DF	\$	\$	\$	
3	C NC	C NC D P DF	\$	\$	\$	
TOTAL COSTS \$						

WASHINGTON UNIFORM COURT DOCKET - COURT COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - DOL COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - DEFENDANT COPY January 2003
 WASHINGTON UNIFORM COURT DOCKET - LEA COPY January 2003

On the reverse side of the ticket there is space for the Officer Report. This is the section that should be used to provide a narrative of case events. Include a description of all infractions observed in the narrative, even though the ticket was written for only one or two.

For example:

- Jan. 17, 2011. Site visit to property. Observed surfacing effluent, took water sample from drainfield area, and conducted dye test.
 - Jan. 18, 2011 Results from water sample = 2419 fecal coliform/100ml. Conducted second site visit, and observed dye. Due to positive water sample and positive dye test, confirmed failing septic system. Sent NOCV to property owner.
 - Jan 18, 2011 Spoke to property owner and instructed them to have OSS pumped immediately, cover the area with lime and sand, conserve water. OSS needs to be repaired by Jan 31, 2011.
- Feb. 1, 2011 Site visit, owner has not taken any action to repair the OSS. Observed surfacing effluent. Issued citation.

APPENDIX I: Hotspot Investigation Procedure

Table 1: Shoreline Hot Spot Investigation Process

STEP 1	Confirm “hot spot” during dry or wet season by collecting a minimum of three samples for GMV calculation
STEP 2	Conduct reconnaissance of area upland of “hot spot” to assess drainage and potential segment sample sites, number of homes, proximity to drainage, presence of livestock, etc.
STEP 3	Create map of “hot spot” investigation area based on site evaluation. All properties included must have potential to pollute the drainage.
STEP 4	<p>Develop list of properties that need inspection. Note that properties with livestock that have potential to pollute may be inspected irrespective of OSS priority.</p> <ul style="list-style-type: none"> • If # homes is ≤ 10 in the investigation area, review onsite sewage system (OSS) records for all homes. Review Table 2 below, and develop a list of properties to inspect. • If # homes is > 10 homes in the investigation area, conduct segment sampling (if practical). Collect minimum 3 sampling events and calculate geometric mean for each segment. Note that segment sampling must occur during the same season that “hot spot” was proved. <ul style="list-style-type: none"> ✓ If drainage is “hot” throughout, conduct OSS record search for all homes and develop a list of properties to inspect based on Table 2. ✓ If drainage is not “hot” throughout, conduct OSS record search for all homes within the “hot” segments, then develop a list of properties to inspect based on Table 2.
STEP 5	Inspect all properties on your list. Conduct dye traces pursuant to procedure

Table 2: Property Inspection Prioritization Matrix

PRIORITY 1	<p>Homes that have <u>all of</u> the following characteristics:</p> <ul style="list-style-type: none"> • No OSS permit records • Unsatisfactory maintenance history and/or history of public complaints • Living unit is <100 feet from “hot spot” drainage <p>Farm ranked by KCD as High or Medium priority:</p> <ul style="list-style-type: none"> • High priority has visual evidence of high probability of contaminated runoff due to topography. • Medium priority has pasture in poor conditions with some reason to believe degraded conditions are seasonal or could get worse seasonally.
PRIORITY 2	<p>Homes that have <u>all of</u> the following characteristics:</p> <ul style="list-style-type: none"> • No OSS permit records • Home is ≥ 25 years old • No history of OSS service • Living unit is <100 feet from “hot spot” drainage
PRIORITY 3	<p>Homes that have <u>all of</u> the following characteristics:</p> <ul style="list-style-type: none"> • No OSS permit records • Home is 15 – 24 years old • No history of OSS service • Living unit is ≥ 100 feet from “hot spot” drainage
PRIORITY 4	<p>Homes that have <u>all of</u> the following characteristics:</p> <ul style="list-style-type: none"> • Gravity OSS with permit records • OSS is ≥ 25 years old • OSS is < 100 feet from “hot spot” drainage
PRIORITY 5	All other gravity OSS with permit records.
PRIORITY 6	Permitted Alternative OSS with multiple deficient inspections
PRIORITY 7	Permitted Alternative OSS with satisfactory maintenance history.

Dye Testing:

Inspectors use field and office review, as well as best professional judgement, to determine which residences to dye test in a hotspot drainage. The age of the OSS, its proximity to the drainage, and/or the existence of potential or actual conveyance are key factors to evaluate. Dye traces will be conducted in accordance with Table 3: Dye Trace Matrix.

Table 3: Dye Trace Matrix

<p>REQUIRED <i>(See PM for exception)</i></p>	<ul style="list-style-type: none"> • No OSS records, and one or more living units are setback < 100 feet from surface waters. • A drain pipe on, or just off, the property with a permitted OSS that has odors, grey/black matting, and/or high bacteria counts. • A storm water structure on the property, or just off the property, with a permitted OSS that has evidence of illicit sewage discharge or connection.
<p>RECOMMENDED <i>(Inspector discretion)</i></p>	<ul style="list-style-type: none"> • No OSS records, and living units are >100 setback from surface waters. • Permitted gravity systems with evidence of unpermitted repairs, and drainfield is <100 setback. • Permitted gravity systems that have a history of deficient pumper reports, and drainfield is <100 setback. • Permitted gravity systems that are 25 years or older, and drainfield is <100 setback. • Permitted alternative systems with a history of deficient maintenance reports, and drainfield component is <100 setback.
<p>OPTIONAL</p>	<ul style="list-style-type: none"> • All other OSS with factors indicating any probability of failure

And remember:

- Always conduct a follow up dye trace in the wet season when a dry season dye trace is negative, or is suspect.
- Properties inspected during the dry season that have potential for wet season problems set up for a wet weather follow-up and a potential dye trace.