

**KITSAP PUBLIC HEALTH BOARD
AGENDA**

March 3, 2015
1:45 p.m. to 2:45 p.m.
Norm Dicks Government Center
First Floor Chambers
Bremerton, WA

- | | | |
|-----------|----|--|
| 1:45 p.m. | 1. | Minutes, February 3, 2015 |
| 1:46 p.m. | 2. | Consent Items and Contract Updates: See Consent Agenda Agreement Summary, Warrant and EFT Registers, and Contracts Signed Report |
| 1:48 p.m. | 3. | Public Comment |
| 1:53 p.m. | 4. | Health Officer's Report / Administrator's Report |

DISCUSSION ITEMS:

- | | | |
|-----------|----|---|
| 2:00 p.m. | 5. | Health District 2015 Legislative Priorities Update
<i>Scott Daniels, Administrator</i> |
| 2:10 p.m. | 6. | Evidence-Based Practices Update

A. Shellfish Protection and Restoration Project
<i>Eva Crim, Pollution Identification and Correction Program</i>

B. Nurse Family Partnership Program
<i>Katie Eilers, Healthy Communities Program</i> |

ADJOURN:

- | | | |
|-----------|----|---------|
| 2:45 p.m. | 7. | Adjourn |
|-----------|----|---------|

KITSAP PUBLIC HEALTH BOARD

**Regular Meeting
February 3, 2015**

The meeting was called to order by the Board Chair, Commissioner Robert Gelder, at 1:49 p.m.

MINUTES

Commissioner Garrido moved and Mayor Lent seconded the motion to approve the minutes for the January 6, 2015 regular meeting. The motion was approved unanimously.

CONSENT AGENDA

The contracts on the consent agenda included:

- 1347 Kitsap County, *Clean Water Kitsap*
- 1343 Washington State Health Care Authority, *Medicaid Administrative MATCH*
- 1313 Kitsap County, *Derelict Vessel Prevention Program*

Mayor Erickson moved and Commissioner Garrido seconded the motion to approve the consent agenda, including the contracts update and Warrant and Electronic Funds Transfer Register. The motion was approved unanimously.

PUBLIC COMMENT

There was no public comment.

HEALTH OFFICER'S REPORT/ADMINISTRATOR'S REPORT

Susan Turner, MD, Health Officer, informed the Board that the community is having a Pertussis outbreak and that the Health District has begun asking for the public's help to control it and to especially protect infants, the group that is of highest risk of severe infection and even death. She stated that there are an elevated number of cases in other areas of the state. In 2014, there were 36 cases of Pertussis in Kitsap County and 34 of those cases have occurred since June. There were 14 cases in December alone and in January there have already been 25 as of today. In the two days prior to today's Board meeting, 14 additional cases were reported indicating more individuals are being identified. The number of cases in Kitsap County thus far in this outbreak is 74. In 2012, there was an outbreak, with 94 cases of pertussis reported in the County. There have been no deaths from Pertussis in Kitsap County over the last 25 years.

Dr. Turner stated that the Health District is having frequent team meetings to address the high number of Pertussis cases and to respond to situations where people pose a risk. In mid-January, a provider letter was sent out, and a parent letter was forwarded to the Bainbridge Island and North Kitsap School Districts. Another letter is currently being prepared to send to medical providers, the Olympic Educational Services District (OESD), and all of the schools in the County. A toolkit prepared by the Health District will be provided by the school districts to parents of children who are sent home for coughing. The toolkit includes a note to bring back to school when their physician releases them to return to school. Anyone with Pertussis needs five days of treatment before coming back to school or work. A Health District prepared letter is also being sent to all childcare providers urging them to be sure vaccinations are up to date.

Dr. Turner also noted that the Health District is working collaboratively with stakeholders who serve infants and pregnant women. The District's website has been updated with current information for the media and providers. The District is doing a lot to step up and respond to the outbreak and Dr. Turner has been in contact with neighboring jurisdictional health officers so that they are aware of the Kitsap County situation. Pertussis can begin like a common cold with symptoms including runny nose, low grade fever and cough. The District is asking the public to avoid settings where sick people congregate, and to ensure that family members and child care providers have up to date vaccinations. Anyone exposed to someone with Pertussis should see a physician for preventive treatment. If symptoms develop, stay home, and cover coughs, call your physician, and wear a mask if asked. They should not return to school or work until cleared by the physician.

Dr. Turner stated that influenza seems to have passed its peak. Kitsap County has experienced five deaths from influenza this flu season, all deaths occurring in older individuals. The Washington State Lab and University of Washington Lab both indicate a decline in influenza testing and positive tests. However, the Respiratory Syncytial Virus findings are still increasing and the Cold Virus is still hanging in there. The number of deaths across the State from influenza is comparable to last flu season's death rate, with 81 occurring this year versus 79 during last year's flu season.

Scott Daniels, Administrator, stated that last year the District talked to the Board about the development of the Olympic Community of Health (OCOH), the healthcare reform effort to bring stakeholders together in the county and across the state to address the Triple Aim of improved healthcare, improved health outcomes and lower healthcare costs. Recently the Health District was awarded a \$100,000 grant from the Washington State Health Care Authority to help pay for the OCOH's work in 2015. Hiring a Project Manager is the first priority. Mr. Daniels asked the Board to refer to him anyone who might be qualified and interested in the position.

Secondly, Mr. Daniels mentioned that the District's Public Health Accreditation Board (PHAB) site visit will be next week. If successfully accredited, the District will be the second local health jurisdiction in the state to be accredited. Only the Spokane Regional Health District has been accredited to date. He reminded the Board that the PHAB site visit team will be meeting with Board members Commissioner Gelder, Mayor Erickson, and Mayor Lent, next Wednesday from 10:30-11:30 a.m. in the District's Sinclair Room. Commissioner Garrido will serve as an alternate if one of the other Board members cannot attend this meeting.

Mr. Daniels confirmed a Health District orientation meeting with Commissioner Wolfe on February 24 at the Commissioner's office. The District's Executive Leadership Team will attend and conduct the orientation.

Lastly, Mr. Daniels mentioned a Board member's concern that the Board packets are too lengthy and that the Board does not have sufficient time to review the materials prior to Board meetings. As a solution, he proposed to instead provide the Board with two packets, the first containing a short written summary of the consent agenda contracts rather than including them in their entirety in the main packet, and also include in that packet the main discussion and action item documents. The second packet would include the lengthy consent agenda contracts and financial

documents. This would require that the two packets be sent as separate PDFs and links. Also, Mr. Daniels stated that the Health District will make every effort to get the Board packet out sooner. Daniels then asked the Board if they had any other recommendations. The Board agreed to try this approach and modify if needed.

Commissioner Wolfe asked why there is only one other Health District in the state accredited and what will an accreditation mean for the District? Daniels stated that several other health jurisdictions are in the process. The main benefit is that it ensures that we are providing services in the most effective and efficient way. Accreditation also has the potential to improve funding for the District, especially federal funding. He stated that the Health District has learned a lot going through the process and it has assured us that we are really good at what we do, and we take pride in that.

RESOLUTION 2015-02: A RESOLUTION AUTHORIZING KITSAP PUBLIC UTILITY DISTRICT NO. 1 TO OPERATE AND MAINTAIN THE PORT GAMBLE LARGE ON-SITE SEWAGE SYSTEM

Commissioner Gelder reminded the Board that this topic was introduced at the last Board meeting and at that meeting the Board had requested additional information before taking action on the resolution. That information was received a couple weeks ago. The task today is to go through that information and ask Mr. Keith Grellner, Environmental Health Division Director, any questions to make sure the Board is well as informed so they can make a decision on the resolution today.

Mr. Grellner referred to the resolution included in the packet that would authorize Kitsap Public Utility District (KPUD) to operate and maintain the Port Gamble Large Onsite Sewage System (LOSS) which is in its early design phase. He stated that Bob Hunter, General Manager of KPUD, was attending today's meeting to answer any questions. Mr. Grellner then asked the Board to adopt the resolution. Commissioner Gelder called for questions. Mayor Erickson asked if the plant is located on private property. Mr. Grellner introduced Bob Hunter, General Manager of KPUD, who clarified that it is on Olympic Property Group (OPG) land in Port Gamble. Mayor Erickson then asked for clarification of the relation between Mason Public Utility District (MPUD) and KPUD. Mr. Hunter stated that KPUD has a Memorandum of Understanding (MOU) with MPUD that allows them to initially take ownership of the infrastructure. He explained that KPUD would then take ownership of that when KPUD gets sewer authority. MPUD is the interim owner. Mayor Erickson asked if the size of the plant means there will not be more than 350 houses in Port Gamble. Mr. Hunter stated that it is currently being designed to serve the existing properties there and it will have the ability to add more capacity to serve at the maximum vested level allotted for Port Gamble.

Mayor Lent moved and Commissioner Wolfe seconded the motion to approve Resolution 2015-02: Authorizing Kitsap Public Utility District No. 1 to operate and maintain the Port Gamble large on-site sewage system. The motion was approved unanimously.

HARRISON MEDICAL CENTER COMMUNITY HEALTHCARE ADVISORY GROUP

Dr. Turner mentioned that in May 2014, Harrison Medical Center (HMC) announced that its Board of Directors was considering consolidating acute hospital care services from Bremerton to its campus in Silverdale. Late last year, HMC convened an advisory group to make recommendations to the HMC Board of Directors about what ambulatory services should remain in Bremerton and how the existing property should be repurposed. That advisory group consists of many community healthcare leaders. HMC has chosen not to share that list. There have been three meetings thus far, but the meeting content is also not being shared at this point. Dr. Turner said that Katie Eilers and Scott Daniels attended the initial meetings and that she attended the last meeting and will continue to attend with Katie Eilers. At the next meeting, the advisory group will be discussing the priorities for services that might remain or be needed in Bremerton once the hospital closes. Once the Board publicly announces their decisions, there will be an opportunity for public comment. Dr. Turner wanted to make the Board aware that the Health District is engaged in this discussion. Mayor Erickson asked what the timeline is for the build-out in Silverdale to occur. Dr. Turner said she was not aware of the timeline. She said she did invite one of the hospital representatives to come do a presentation to the Board; however, the representative declined until the HMC Board of Directors have completed the process. Dr. Turner will keep the Board updated as information is shared.

WORKPLACE WELLNESS POLICY DEVELOPMENT

Mr. Daniels introduced the topic and expressed his happiness to talk to the Board about policy related issues. He stated that the District has created draft Wellness Policies and a Guidebook to help Board members, and other agencies and businesses in the County, adopt in their own jurisdictions and workplaces. The policies address breastfeeding, physical activity, healthy eating, and tobacco use. He stated that the District would be glad to come to Board members' offices and talk with their Human Resources staff to help explain what these Wellness Policies are all about and to assist with their implementation. Mr. Daniels next introduced Yolanda Fong, RN, Public Health Nurse Supervisor, Healthy Communities/Chronic Disease Prevention.

Ms. Fong shared that chronic disease issues in our communities are the leading cause of death. Chronic disease is often caused by factors such as poor nutrition, inactivity and tobacco use. She stated that, at the Health District, chronic disease prevention work is focused on reducing the risk factors to help improve health. Chronic diseases are long-term and incurable, and include heart disease, asthma, diabetes, and cancer, among others. Workplaces have the ability to help impact health at multiple levels: individual, organizational, and in the community. At the individual level, a person spends fifty-four percent of awake time at work. At the organizational level, businesses are impacted by the health of their employees in direct costs for medical care or indirect costs such as lower productivity, higher rates of disability, and worker compensation claims. Ms. Fong stated that eighty percent of employed Kitsap residents work in Kitsap County, so workplace interventions are community interventions as well. She explained that a Workplace Wellness Policy is a formal written rule that clarifies expectations of management and staff. A policy can help to enhance workplace wellness programs by providing guiding principles for activities that reflect organizational values. The draft Workplace Wellness Policies developed by the District have gone through legal review and are currently being reviewed by the District's

union and staff. Once the policies are finalized, they will be added to the guidebook and it will be ready for other community organizations to use. The District wants to allow people to make healthy choices. She then asked for any questions.

Commissioner Gelder stated that the guides and tables are great and commented on the phenomenal work.

Commissioner Matthes stated that he supports only the tobacco policy, but asked why the policy reads “All district buildings are designated tobacco-free outside the area of 50 feet” when the state law is 25 feet. He suggested that the policy be 25 feet to be consistent with state law. Commissioner Matthes stated his concern with the employee acknowledgment that reads, “I have received this policy and my signature below signifies that I accept and will abide by the policy”. He felt that it sounded too strict.

Mr. Daniels addressed the tobacco policy with regards to the 50 feet limit. He stated it is a requirement established by the Norm Dicks Government Center Condo Association adopted by all tenants of the building.

Mayor Lent next shared a new City of Bremerton parks sign to be installed at 38 city parks. The sign asks for voluntary no smoking in the parks. The sign was developed with the assistance of the Health District.

Mr. Daniels commented on the healthy eating policy. He stated that the policy is focused on the food that the District purchases for meetings and made available in the office. He clarified that staff can bring any type of food they want for personal use. In the case of the healthy eating policy, the acknowledgement is meant for those who are buying food for meetings and District events.

Commissioner Garrido stated she really appreciates the fresh fruit and water provided by the District at today’s meeting.

Mayor Erickson stated that she has encouraged their wellness committee to buy fresh fruit and have it available. It will go a long way to help people be more happy and healthy in the community.

Dr. Turner, commented on Mayor Matthes’ concern of the healthy food acknowledgment. She stated she understands his concerns. She mentioned that the District was very careful to allow for personal freedom and provide guidelines for nurturing the workplace and not limit people’s personal actions. She stated the acknowledgement is uniform and used for other District policies. She that the District is open to any ideas to help the policy accentuate personal freedom as well as improve the nutritional environment.

Commissioner Gelder thanked Ms. Fong.

ADJOURN

There was no further business; the meeting was adjourned at 2:41 p.m.

Robert Gelder, Chair
Kitsap Public Health Board

Scott Daniels
Administrator

Board Members Present: *Council Member Sarah Blossom; Commissioner Charlotte Garrido; Commissioner Rob Gelder; Mayor Patty Lent; Mayor Tim Matthes; Mayor Becky Erickson; Commissioner Edward Wolfe.*

Staff Present: *Karen Bevers, Communications Coordinator/Public Information Officer; Karen Boysen-Knapp, Healthy Communities Specialist, Chronic Disease Prevention Program; Scott Daniels, Administrator; Susan Turner, Health Officer; Kerry Dobbelaere, Program Manager 2, Clinical Services Program; Katie Eilers, Assistant Director, Community Health Division; Yolanda Fong, Public Health Nurse Supervisor, Chronic Disease Prevention Program; Kathy Greco, Confidential Secretary, Administration; Keith Grellner, Director, Environmental Health Division; Leslie Hopkins, Program Coordinator 2, Administration; Nicola Marsden-Haug, Epidemiologist 2, Administration; Suzanne Plemmons, Director, Community Health Division; Shelley Rose, Public Health Educator, In-Person Assister Program; Danielle Schaeffner, Health Specialist 1, Built Environment/Chronic Disease Prevention Program; Pat Degracia, Public Health Educator, In-Person Assister Program; Stuart Whitford, Program Manager, Pollution Identification and Correction Program; Siri Kushner, Epidemiologist 2, Administration; Ruth Westergaard, Community Liaison, Public Health Emergency Preparedness and Response Program; Dana Brainerd, Public Health Nurse, Clinical Services Program; Megan Sater, KPHD Intern.*

Public Present: *Monte Levine, self; Robert Hunter, Kitsap Public Utility District.*

MEMO

To: Kitsap Public Health Board

From: Scott Daniels, Administrator

Date: February 25, 2015

Re: Update on 2015 Kitsap Public Health District Legislative Priorities

At the Board's March 3, 2015 meeting, I will provide the Board with a brief update on the Kitsap Public Health District's Legislative Priorities for the 2015 State legislative session. The District's proposed 2015 legislative priorities are:

1. Establishing Statutory Clarity for Pharmaceutical Prescribing and Dispensing by Local Public Health Jurisdictions.
2. Adverse Childhood Experiences (ACEs) Resolution.
3. E-Cigarette Legislation.
4. Protecting Puget Sound through Funding and Implementing Local Onsite Sewage Program Management Plans.
5. Supporting Efforts to Provide State Funding for Local Public Health Jurisdictions.
6. Biotoxin Testing for Diarrhetic Shellfish Poisoning.
7. Establishing Authority for Local Public Health Districts in Washington State to Act as Their Own Fiscal Agents.

The attached memo provides more detailed information on the priorities. The District's priorities include the five priorities (Priorities 1 through 5 above) adopted by the Washington State Association of Local Public Health Officials in their 2015 Legislative Agenda, a sixth priority (Priority 6 above) included in the Washington State Department of Health's 2015 Request Legislative Agenda, and a seventh priority (Priority 7 above) previously approved by the Board for the 2014 legislative session.

Kitsap Public Health District
Legislative Priorities for the 2015 State Legislative Session

Approved by the Kitsap Public Health Board through Resolution 2015-01
January 6, 2015

1. Statutory Clarity for Pharmaceutical Prescribing and Dispensing by Local Public Health Jurisdictions.

Description: State legislation is needed to establish statutory clarity for current practices allowing public health nurses to provide communicable disease and family planning vaccines and medications to patients in a timely manner using standard protocols established by the Health Officer. Timely dispensing of pharmaceuticals to patients, i.e., at the time of their visit, is an important component in achieving the public health goals of prevention, early detection, and swift response to communicable and infectious disease and other health threats. This will prevent more disease and more unintended pregnancies than approaches that delay access to pharmaceuticals and risk treatment failure due to lack of patient follow-through and patients never beginning treatment. This was a Kitsap Public Health District legislative priority in 2014.

2. Adverse Childhood Experiences (ACEs) Resolution.

Description: The goal of this resolution is to provide education and elevate awareness, at the legislative level, around the issue of adverse childhood experiences (ACEs). The resolution will ask that the Legislature strive to reduce children's exposure to adverse childhood experiences, address the impacts of those experiences, and invest in preventative health, mental health, and other wellness interventions. The resolution would serve as a tool to support other ACEs/early intervention efforts across the state.

3. E-Cigarette Legislation.

Description: The use of electronic nicotine delivery systems, known as vaping, is increasing rapidly and the District is concerned when the growing market includes children. Vapor products are currently still not subject to federal regulation and are minimally regulated by our state. Product advertising uses themes similar to those used cigarette manufacturers used before their advertising was restricted. Candy-like flavors appeal to children. Another concern is the increase in poison center calls for e-cig-related illnesses, many involving young children. Legislation would regulate the marketing and sales of e-cigarettes and vaping products in Washington State and create a license fee and tax structure for these products. The District supports designating a portion of any revenue generated (through the taxation of e-cigarettes and vaping products) as a reinvestment into Washington State's local public health system.

4. Protecting Puget Sound through Funding and Implementing Local Onsite Sewage Program Management Plans.

Description: Legislation will be proposed to ensure adequate funding and resources for the 12 Puget Sound Counties to maintain adequate onsite septic programs as mandated by state law (RCW 70.118A). Proposed legislation includes the following provisions at this time:

- Specify that local boards of health collect a minimum annual fee of \$30 per on-site sewage system for the purpose of implementing the state mandated local onsite sewage system plan.
- Provide that local boards of health may contract with county treasurers to collect the fee on the property tax statement.
- Direct the State Board of Health to adopt rules for minimum on-site sewage program requirements.
- Authorize the Washington State Department of Health and counties to consult with the State Department of Ecology on creating a low-interest loan program for onsite sewage system improvements by owners.

5. Support Efforts to Provide State Funding for Local Public Health Jurisdictions.

Description: Possible funding activities and initiatives may include:

- Maintain current funding levels for the Public Health Assistance Account ("Public Health Block Grant").
- Strongly support the Washington State Department of Health's request for the State to made additional investments in State and local communicable disease work.
- Support reinvestments in the local public health system from new sources, including support for efforts to provide a portion of revenues generated as a result of taxing e-cigarettes, other vaping products, and marijuana.

6. Biotxin Testing for Diarrhetic Shellfish Poisoning

Description: Biotxin data is used to ensure shellfish harvest areas are healthy and produce safe shellfish for human consumption. Emerging biotoxins such as diarrhetic shellfish poisoning require increased sampling and testing and current State funding is being exhausted. Legislation will authorize an increase in a shellfish license surcharge that currently supports testing for toxins.

7. Authority for public health districts in Washington State to act as their own fiscal agents.

Description: Under current State law, a health district lacks authority to act as its own fiscal agent. For health districts, this means that a County government must act as the district's banker, resulting in duplication of effort and time constraints that reduce financial efficiency and effectiveness for health districts. By granting authority to some special-purpose districts, but not to health districts, the Legislature has implicitly denied the authority to health districts. The Legislature needs to amend RCW 70.46.080 to authorize, but not mandate, health districts to act as their own fiscal agent and thereby increase efficiency in a time of scarce resources. This was a Kitsap Public Health District legislative priority in 2014.

MEMO

To: Kitsap Public Health Board
From: Eva Crim, Environmental Health Specialist 3
Water Pollution Identification & Correction Program
Date: February 24, 2015
Re: EPA Shellfish Restoration and Protection Project

The attached fact sheet presents highlights of the Shellfish Restoration and Protection Project, a four-year water quality project completed by Kitsap Public Health's Water Pollution Identification and Correction Program on December 31, 2014. The full report is also attached.

We will present a short informational PowerPoint on the project to the Board at its March 4, 2015 meeting. No action by the Board is needed; the agenda topic is informational only.

2010-2014 SHELLFISH RESTORATION & PROTECTION PROJECT PROTECTING PUBLIC HEALTH AND IMPROVING WATER QUALITY

BACKGROUND:

In 2010 Kitsap Public Health's Water Pollution Identification & Correction program was awarded a **\$997,000** grant from the U.S. Environmental Protection Agency to conduct the Shellfish Restoration & Protection project.

Overall goal of the project was to restore and protect both shellfish growing areas & public health by conducting a large shoreline monitoring program.

PROJECT GOALS:

- Achieve an increase in harvestable shellfish growing areas.
- Obtain sustainable funding for a routine shoreline monitoring program.
- Achieve measurable improvements in water quality in at least 50% of streams and marine waters.
- Increase public education and awareness of water quality and shellfish protection.
- Increase participation in a local Community Shellfish farm.

PROJECT ACCOMPLISHMENTS:

- Shellfish growing area upgrade of 30 acres in Colvos Passage.
- Received sustainable funding from Clean Water Kitsap to conduct shoreline program in unincorporated Kitsap County.
- Improvements in water quality of 58% streams and marine waters.
- Increased participation in Community Shellfish farm (from 13 to 59 families!).
- Completed 558 property inspections.
- Identified and corrected 56 failing onsite septic systems.



KITSAP PUBLIC
HEALTH DISTRICT

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FINAL PROJECT REPORT LOCATED AT:

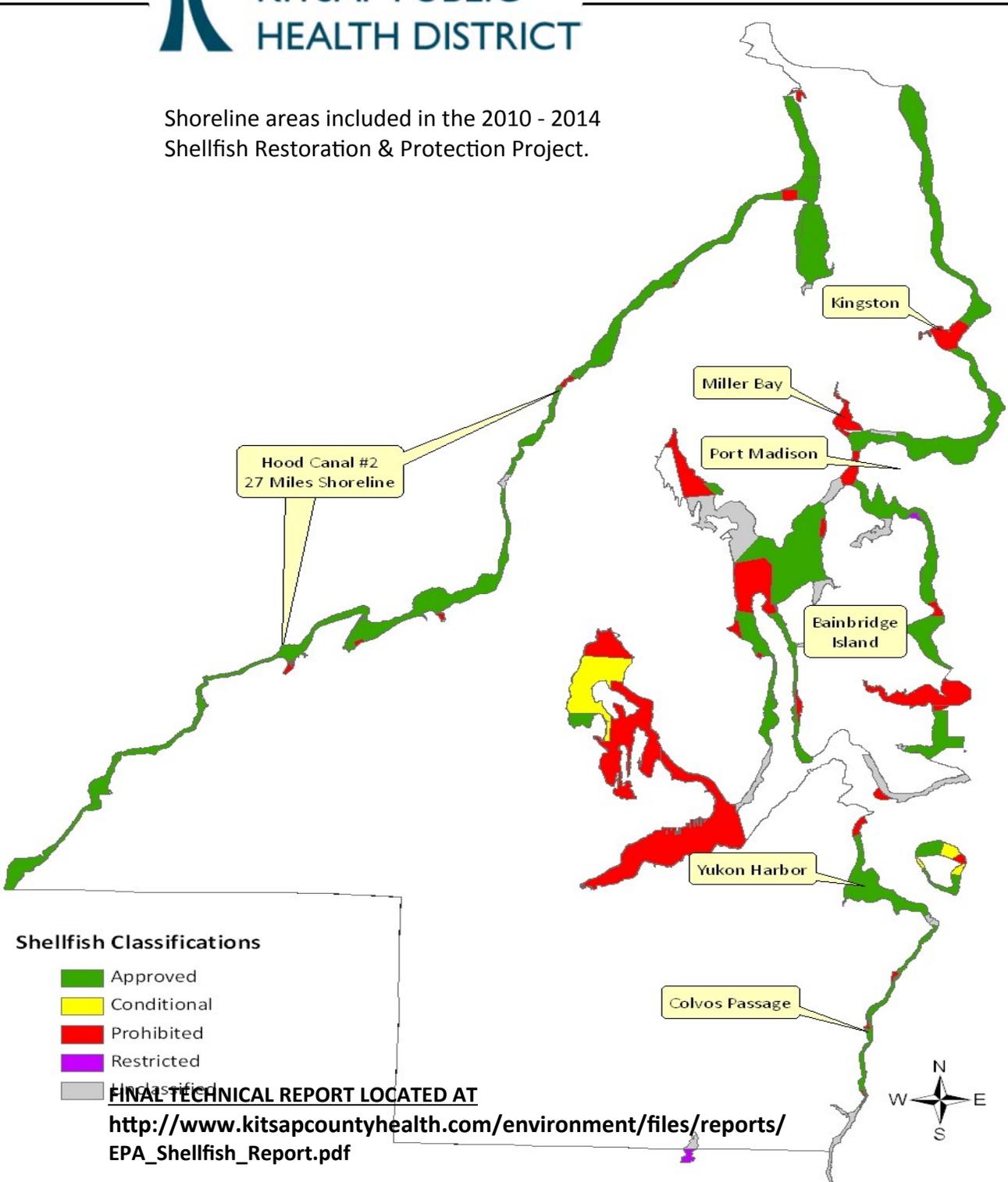
http://www.kitsapcountyhealth.com/environment/files/reports/EPA_Shellfish_Report.pdf





KITSAP PUBLIC HEALTH DISTRICT

Shoreline areas included in the 2010 - 2014 Shellfish Restoration & Protection Project.



Shellfish Restoration & Protection Project: Kitsap Public Health District

EPA Grant #POJ09501-2

06/01/ 2010 – 12/31/2014



Eva Crim, MPH, RS

Environmental Health Specialist 3



Acknowledgement

The author would like to thank Kitsap Public Health District Pollution Identification and Correction program staff, the U.S. Environmental Protection Agency, the Puget Sound Restoration Fund, and Clean Water Kitsap for their assistance and support in completing the Shellfish Restoration & Protection Project.

This project has been funded wholly or in part by the United State Environmental Protection Agency under assistance agreement PO-00J09501-1 to Kitsap Public Health District. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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EXECUTIVE SUMMARY

In 2010 Kitsap Public Health District received a grant from the US Environmental Protection Agency to conduct the Shellfish Restoration and Protection Project. Clean Water Kitsap¹ provided matching funds for this grant. The purpose for the project was to restore and protect shellfish growing areas throughout Kitsap County by conducting a comprehensive shoreline survey. It was also to demonstrate our proven, on-the-ground approach, to investigate and correct sources of fecal pollution. The goals for this project were to:

- Achieve an increase in harvestable shellfish growing areas
- Obtain sustainable funding to establish a routine shoreline monitoring program
- Achieve measureable improvements in water quality in at least 50% of targeted fresh and marine waters
- Increase education and awareness of water quality and shellfish protection
- Achieve sustained participation in a local community shellfish farm

Kitsap Public Health successfully completed the project by meeting the goals and objectives set forth in the grant contract and work plan. Shoreline surveys were conducted in all project areas and expanded on Bainbridge Island to include more shoreline areas on the Island than initially proposed (Figure 1.)

An increase in harvestable shellfish growing areas was achieved. This occurred in Fragaria, Prospect Point, and Wilson creek drainages along Colvos Passage (located in southeastern Kitsap County) with an upgrade of 30.1 acres. There was also a small upgrade of 1.2 acres in the Holly area on Hood Canal. The Washington State Department of Health (DOH) is in the process of conducting monitoring in the currently prohibited area of Miller Bay, in response to a shellfish harvest application that was received during this project. This could result in an upgrade of 270 acres. Kitsap Public Health's shoreline survey information and the results from this project will be used by DOH to support this upgrade.

As a result of the successful completion of this project, Kitsap Public Health received sustainable funding from Clean Water Kitsap to establish an ongoing shoreline monitoring program. All classified shoreline growing areas in Kitsap County will be surveyed on a 4 year rotational basis, thereby enabling Kitsap Public Health to proactively address fecal water pollution sources on a more targeted and frequent basis. This shoreline monitoring program

¹ Stormwater management fees from unincorporated Kitsap County fund a unique multiagency program managed by Kitsap County Public Works and programs implemented by Public Works Stormwater Division, Kitsap Public Health District, Kitsap Conservation District and Washington State University Extension Kitsap.

will be conducted in accordance with the shoreline monitoring plan approved by the Washington State Department of Ecology. (KPHD Shoreline Monitoring Plan 2013).

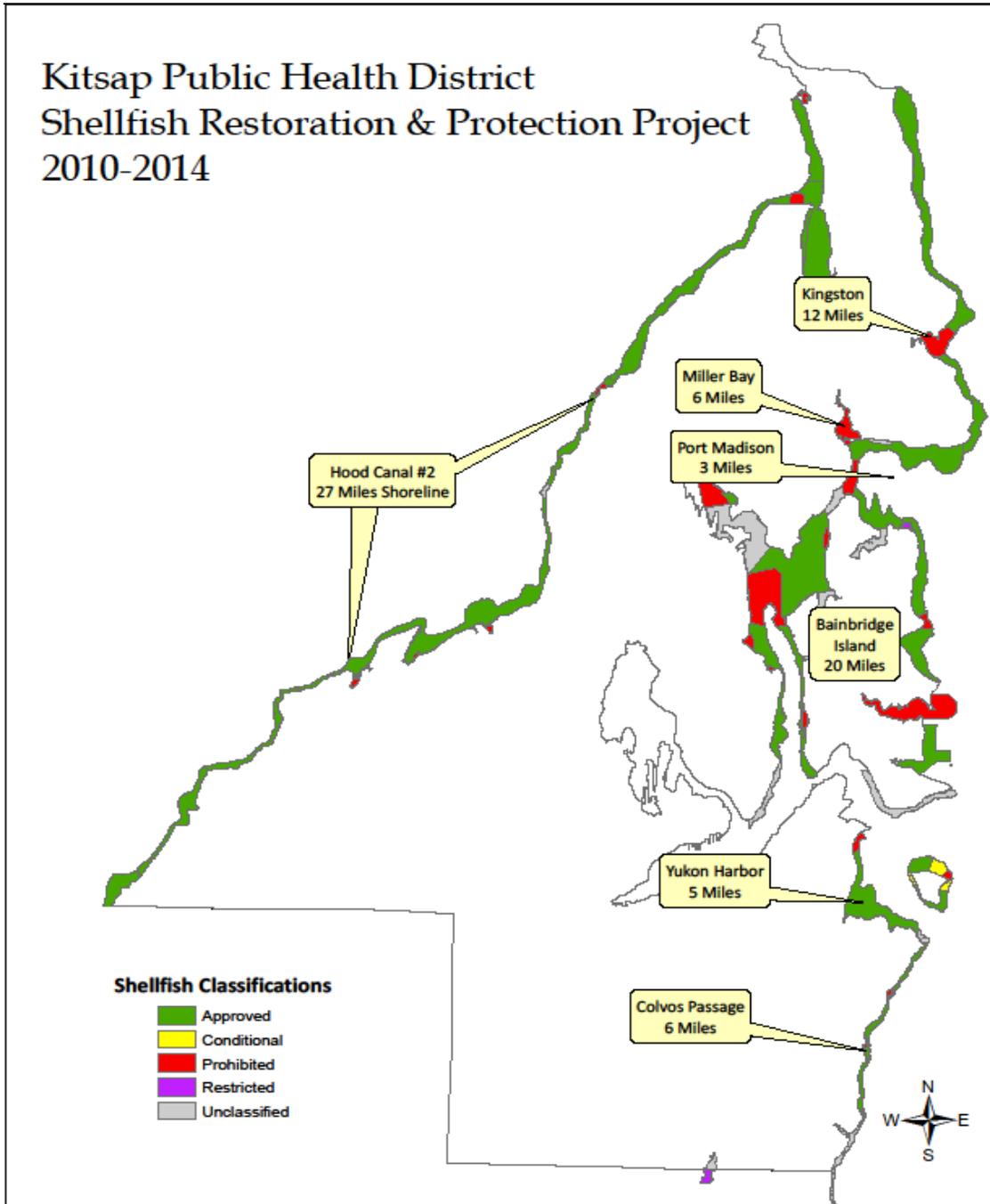
This ongoing shoreline monitoring program will also enhance coordination with the DOH. Kitsap Public Health will continue to notify DOH of potential fecal pollution sources to marine waters and subsequent identification and correction of these sources. We will also continue to provide additional information to DOH to assist with the agency's shellfish growing area reports.

Kitsap Public Health completed 558 property inspections during this project (which exceeded our target of 115 inspections). There were 126 shoreline hot spots identified and investigated, with 56 onsite septic system failures identified. These septic system failures have either been corrected or are in the process of being corrected.

Kitsap Public Health has been conducting pollution identification and correction (PIC) projects since 1996. On average there has been an onsite septic system failure rate of 7% (found during property inspections, public complaints and shoreline investigations). Since this project focused on tracking sources from shoreline "hot spots" the onsite septic system failure rate was higher at 10%. This demonstrated the effectiveness of using a more targeted approach.

We also worked with the Puget Sound Restoration Fund (PSRF) to provide education and outreach related to increasing participation in the Port Madison Community Shellfish Farm. PSRF exceeded their goal for participation in the farm from 13 families in 2010 to 59 families in 2013. Educational materials and information was provided throughout the community raising the level of awareness regarding the importance of water quality and shellfish protection.

Figure 1. Project areas



SUMMARY OF OUTPUTS

The following tasks were accomplished during the Shellfish Restoration and Protection Project. They are presented according to the objectives described in both the grant agreement and work plan and in response to the format requested by EPA.

TASK ACCOMPLISHMENTS

Objective #1 : To implement a targeted program to clean up “Prohibited” and “Closed” shellfish growing areas, and protect “Approved” growing areas with a routine shoreline monitoring program that locates FC “hot spots” and tracks the source(s).

Kitsap Public Health met this objective by completing the following tasks:

Shoreline monitoring surveys were performed according to an Approved Quality Assurance Project Plan. Water pollution source identification and correction was completed according to our approved Pollution Identification and Correction Protocol Manual.

Shoreline monitoring was completed in the “Approved” and “Prohibited” shellfish growing areas listed in the grant application and shown in Table 1. Shoreline miles on Bainbridge Island were expanded compared to the original estimates to ensure all Approved shoreline growing areas were assessed. Source identification on Bainbridge Island was also expanded to include follow up work in Agate Pass and Crystal Springs, with approval from our grant officer. Table 1 presents a summary of the areas included in the shoreline monitoring surveys completed during this project.

Property information was gathered using GIS and Kitsap Public Health records to conduct source investigations and complete targeted property inspections in areas impacting shellfish growing areas.

There were **126** confirmed “hot spots” identified during the project, and all have been investigated. **109** hot spot investigations have been concluded. All sampling data collected during four shoreline surveys were submitted to EPA’s STORET system. These data were also entered into the PIC water quality database and used for tracking and reporting purposes.

When hot spot sources were identified and corrected, such as failing onsite septic systems, faulty stormwater systems, or changes in behavior regarding removal of pet waste, or when wildlife was determined to be the source the hot spot investigation was concluded. Some hot spots related to failing septic systems will be concluded when the new systems are installed. All identified failing septic systems were placed under enforcement during this project. Table 2 presents a summary of these hot spots.

Table 1. Shoreline survey segments completed 2012-2014

Growing Area	Growing area designation	Description	Approximate Mileage	Dates completed
Bainbridge Island (Port Madison, Port Blakely)	Approved	All Bainbridge shoreline excluding Pt. Monroe, Eagle Harbor & Rich Passage. Segments along Agate Pass and Crystal Springs were added in 2013	22	2012-2014
Blake Island	Approved/Prohibited	Perimeter of island	3	2012 summer only
Colvos Passage	Prohibited	Wilson Creek	0.6	2011-2012
Colvos Passage	Prohibited	Fragaria	1.0	2011-2012
Colvos Passage	Prohibited	Prospect Point	1.0	2011-2012
Colvos Passage	Approved	From Kitsap county line to Manchester	7	2011-2012
Hood Canal 2,4 & 5	Approved (including prohibited areas at Seabeck marina, Big Beef creek, Ioka and Bangor)	Kitsap/Mason County line north to and including Bangor submarine base	27	2012-2013
Kingston	Approved	Marina north to Point No Point and marina south to Pt Jefferson	14	2012-2013
Miller Bay	Prohibited	Entire bay	6	2011-2012
Port Madison	Approved	Kitsap County (Indianola & Suquamish)	3	2011-2013
Yukon Harbor	Approved	Entire harbor	5	2012-2013

Table 2. Shoreline “hot spots”²

Growing area	Hot spots identified and investigated	Hot spot investigations concluded	Results/comments of hot spot investigations
Bainbridge Island (entire shoreline (excluded segments; Eagle Harbor, Pt Monroe and Rich Passage)	49	42	21 OSS failures (corrected or under enforcement for correction) 4 sites were in Pt White area of Rich Passage;(most properties on sewer) 17 no human sources found, sources likely due to wildlife (and/or in a few cases flows stopped). 7 sites were lower priority and not investigated.
Colvos Passage	16	15	8 OSS failures (all corrected) 2 sources due to wildlife 5 investigated and found that flows either stopped, or subsequent resampling was low 1 OSS is suspect and under investigation
Hood Canal 2, 4 & 5	20	20	8 OSS failures (corrected or under enforcement) 1 storm water system replaced 1 source due to wildlife feeding, when the practice stopped follow up samples were below threshold 10 investigated no human sources found (5 of these all included dye tracing with negative results)
Kingston	4	4	3 OSS failures (all corrected) 1 was due to wildlife
Miller Bay	6	5	2 OSS failures (both corrected) 1 source found to be directly due to pet waste, owners started to dispose of pet waste correctly, follow up water samples were below bacteria threshold. 1 site stopped flowing & 1 property was vacated 1 property is still under investigation
<u>Port Madison;</u> Indianola Suquamish	7	6	All hot spots were investigated, no human sources found and/or flows stopped. 1 site remains under investigation pending dye trace results.
Yukon Harbor	24	17	11 OSS failures (all corrected) 3 sources were attributed to wildlife 3 properties were vacated 7 unresolved; will be re-surveyed in 2015 as part of shoreline monitoring program
Total	126	109	

² When Geometric mean of three water samples > 160 E.coli/100 ml the sample is classified as a “hot spot”

There were four shoreline surveys conducted during this project. Two of these were conducted during wet- weather months (between October-April), and two were completed in dry- weather months (May-Sept) in each of the shoreline sections shown in Table 1. All shoreline monitoring was completed during the timeline identified in the work plan, e.g. 2010-2014.

There were 558 property inspections completed for the project. The tasks associated with objective #1 included the compilation of property information utilizing GIS and Kitsap Public Health records to assess onsite septic systems. Property inspections also included a review of land practices specific to the site, e.g. management of livestock waste, pet waste, stormwater drainage patterns, and inspection of onsite sewage systems.

Table 3 presents findings from these property inspections. The total number of completed inspections by area, along with associated onsite septic system ratings are shown in the table.

Of 558 properties inspected, 361 OSS were functioning to design standards and received a rating of No Apparent Problem. 141 OSS were rated as either Suspect, Concern or No Records. 56 systems were found failing (~10% failure rate). Of all failing systems, 91% (51), have either been repaired or are in the process of being repaired.

The failure rates of onsite septic systems were higher in more developed residential areas, e.g. Bainbridge Island (20%) compared to the Hood Canal area which is more rural (8%). An exception was noted along the Kingston shoreline which is more rural than Bainbridge Island and similar to Hood Canal. Along the Kingston shoreline, five onsite septic system failures were found to be associated with shoreline hot spots. The failure rate here was higher than normal at 41%, however this may be due to the fact that only twelve properties were inspected. In other shoreline areas, there were more hot spots found and more properties inspected. Many of the systems found to be failing were 25-year or older systems.

Table 3. OSS Ratings for Completed Property Inspections

Growing area	Total Inspections	# of Failures	OSS failure rate	Suspect	No Apparent Problems	Concern	No Records	Denied Access
<u>Colvos Passage:</u>								
Fragaria	25	1		1	20	1	3	0
Prospect Pt	20	2		0	17	0	1	0
Wilson Creek	5	1		0	4	0	0	0
Shoreline	27	4		0	13	5	5	0
<i>Area subtotal</i>	<i>77</i>	<i>8</i>	<i>10%</i>					
Yukon Harbor	91	11	12%	11	45	2	22	5
<u>Miller Bay Shoreline</u>	47	2	2%	3	31	1	10	2
Miller Bay Estates (upland)	70	0		0	67	1	2	3
<u>Port Madison; Grover's Creek</u>	61	1	1.5%	2	41	6	11	3
<u>Bainbridge Island</u> (excluding; Eagle Harbor, Pt Munroe and Rich Passage)	107	21	20%	3	61	6	16	1
Hood Canal 2,4 & 5	93	8	9%	5	56	7	17	0
Kingston	12	5	41%	0	6	1	0	1
Grand Totals	558	56	10%	25	361	29	87	15

The following definitions for onsite septic system ratings include:

SUSPECT. When one or more of the following conditions apply: drain field is saturated; water sample results from bulkhead drains, curtain drains or other pipes or seeps at or above 500 FC/100 ml or 406 EC/100 ml and a positive non-visual dye test confirmed by Ozark underground laboratories; water sample results are less than 500 FC/100 ml or 406 EC/ml and positive visual dye test. A follow up wet season dye trace will be conducted and a suspect letter will be mailed to the owner.

CONCERN. This includes; system with no records and drainfield less than 50 ft. from surface waters or wells, improper use of designated reserve area, vehicular traffic and/or pavement on OSS components, roof drains or other drainage impacting OSS, unpermitted expansion or modification that affects OSS, unpermitted work conducted on the OSS, excavation or excess fill within OSS area, or a cut, down slope of the OSS that has potential to impact performance. In cases where there are unpermitted alterations, expansions, repairs etc., PIC staff consult with the Program Manager regarding enforcement options.

Kitsap Public Health's Trend monitoring program includes regularly scheduled monitoring of freshwater streams and marine waters. The annual water quality report presents short and long term trends, including issuing public health advisories. This report is most commonly made available via the website with hard copies provided to stakeholders and the public upon request.

According to the 2013-2014 water quality report there were water quality improvements realized in several streams located in the various project areas. Five of 16 (31%) of monitored streams showed statistically significant improvements in water quality, with the remaining 69% showing stationary trends. There were no streams with worsening trends.

In marine waters there were three of eleven stations (27%) that showed improvements in water quality trends.

Colvos Passage/Yukon Harbor showed three of five monitored streams with improving water quality trends these included; Wilson, Salmonberry, and Olalla. Two of ten marine stations sampled showed significantly improving trends with others remaining stationary.

In Miller Bay, two of four freshwater streams sampled, Cowling and Indianola, showed improving water quality trends with Grover's and Kitsap creeks remaining stationary. There is one marine station monitored in Miller Bay which showed an improving water quality trend.

In the Hood Canal area of the project (Holly north to the Bangor submarine base) all seven freshwater streams showed stationary water quality trends. These included Big Anderson, Big Beef, Boyce, Little Anderson, Big Anderson, Seabeck and Stavis. Marine water quality analyses

were performed by DOH and provided to Kitsap Public Health for our report. Their data showed that all marine stations located in the project area, with the exception of Little Anderson Creek, had stationary water quality trends.

Objective # 2: *To improve coordination with DOH regarding response to potential fecal pollution sources affecting shellfish growing areas and investigate sources identified in the DOH annual sanitary survey of shellfish growing areas.*

Information is provided regarding shoreline hot spots reported to DOH in the “Commercial Shellfish Growing Area- Kitsap DOH Impact List” in Table 4. DOH updated this list in November 2014 on the status of sites. Notifications were made to DOH when drainages with elevated fecal bacteria counts were directly impacting approved shellfish growing areas and pollution sources were confirmed. Temporary closures were issued by DOH. The PIC program staff notified property owners in the affected areas. Following source corrections and sampling, DOH was notified and the temporary closures were removed and the area re-opened.

Coordination efforts between Kitsap county and municipalities regarding storm water systems were conducted throughout the project.

Data was shared with stakeholders, including DOH, EPA, Ecology and the public. A mid project summary report was posted to the KPHD website as called for in the work plan.

Table 4. Commercial Shellfish Growing Area - Kitsap Impact List- WSDOH Update 11-19-14

Growing Area	Address / Tax Account	Description	Corrective Actions	Status
Colvos Passage		Prospect Point	Shoreline survey conducted, 2 failures repaired	<u>CLOSURE REMOVED</u> 12.2 acres upgraded
Colvos Passage		Fragaria		<u>CLOSURE REMOVED</u> 17.9 acres upgraded
Colvos Passage		Cove Lane		Under Investigation
Dyes Inlet	7474 Chico Way & 7534 Chico Way	Failing OSS	7474 corrected, 7534 transferred to OSS Repair on 1/21/14	Request removal of closure, both properties now connected to public sewer. <u>CLOSURE REMOVED</u>
Hood Canal 1	Mouth of Kinman	Contaminated stream		1/21/14. Email Ann Harvey with last three water years of data. Repair completed at 28502 State Highway 3, Poulsbo. Request removal of closure. <u>CLOSURE REMOVED</u>
Hood Canal 1	Mouth of Lofall	Contaminated stream		Under Investigation
Hood Canal 1	Mouth of Vinland	Contaminated stream		Under Investigation
Kingston	Site 1	Contaminated drainage		Request removal of closure zone. All samples collected since 7/16/2008 have ranged from <1 - 170 (EC & FC). Also, all inputs to wetland have been sampled, sample results range from <1 - 18 EC. 2/25/14. . <u>DOH REQUESTING ADDITIONAL DATA: 4-6 SAMPLES TAKEN WITHIN A ONE YEAR PERIOD.</u>
Kingston	Site 32	Contaminated drainage		6/2/2014 Submitted email to Amy Jorgenson at DOH requesting removal of closure zone. <u>DOH REQUESTING ADDITIONAL DATA: 4-6 SAMPLES TAKEN WITHIN A ONE YEAR PERIOD.</u>
Kingston	Site 52	Contaminated drainage		6/2/2014 Submitted email to Amy Jorgenson at DOH requesting removal of closure zone.

				<u>DOH REQUESTING ADDITIONAL DATA: 4-6 SAMPLES TAKEN WITHIN A ONE YEAR PERIOD.</u>
Port Madison	Tax ID# 112502-4-207- 2003 Parcel# 1292416	Failing OSS is discharging sewage to beach	Repaired 8/19/14 (11488 Logg Rd. NE, Bainbridge)	Request removal of closure, new system installed and permitted as of 8/19/2014 <u>CLOSURE TO BE REMOVED</u>
Port Orchard Passage	Tax ID #1642545 47.61171/122. 59603	Failing OSS	Vacant – house burned down (5408 Illahee Rd NE)	Request removal of closure - new system installed and permitted as of 8/18/2014 <u>CLOSURE TO BE REMOVED</u>
Port Orchard Passage	GPS:47.64734,- 122.61166	Contaminated Drainage UP03/DOH 051	9295 Illahee Rd	Under Investigation
Port Orchard Passage	GPS:47.63837,- 122.60134	Contaminated Drainage UP23/DOH 345	8022 Illahee Rd	Under Investigation
Port Orchard Passage	GPS:47.63798,- 122.59952	Contaminated Drainage UP24/DOH 344	8002 Illahee Rd	Under Investigation
Port Orchard Passage	14737 Sandy Hook	Contaminated Drainage		Request removal of closure. Five samples collected between 11/8 and 11/20/13 for E.coli (Collilert) analysis. Geometric mean was 71.86 EC/100 ml. <u>DOH REQUESTING ADDITIONAL DATA: 4-6 SAMPLES TAKEN WITHIN A ONE YEAR PERIOD.</u>
Lemolo Cove	16905 Lemolo Shore Drive	Failing OSS		Request removal of closure. This house has been connected to public sewer as of 10/8/2014. <u>CLOSURE TO BE REMOVED</u>
Bainbridge Island	Tax ID# 172502302720 09	Failing OSS	9649 Olympus Beach Road	Case in litigation, Owner in process of hiring designer
Bainbridge Island	9240 Ferncliff	Failing OSS	Phased Repair and remediation	Repair pending

Objective # 3: *To connect residents with healthy shellfish growing areas through the establishment of a Port Madison Community Shellfish Farm.*

The tasks to meet this objective included collaborating with the Puget Sound Restoration Fund (PSRF) to launch and expand the Port Madison Community Shellfish farm. From September 2010 through May 2013 the Puget Sound Restoration Fund completed numerous activities. A summary of these follow:

- Established a “community support aquaculture (CSA) program” as part of the Port Madison Community Shellfish Farm. Membership increased over the course of the project from 13 families in 2010 to 59 in 2013.
- Involved 232 volunteers in the farm who contributed 660.5 hours during the grant period. Activities included seeding, processing and harvesting oysters, see Figure 2.
- Hosted PSRF’s annual seed sale for local shellfish gardeners in 2011, 2012 and 2013.
- Designed and distributed 590 handouts to Port Madison watershed residents about the farm, highlighting watershed information and providing incentives for clean water actions.
- Distributed free oysters to 5 homeowners who had their septic systems inspected and/or pumped.
- Distributed dog bones with pet waste bags and “scoop the poop” information at several locations on Bainbridge Island.
- Staffed several local events to provide information about the community shellfish farm and importance of water quality, such as the Town & Country Earth Day Festival (in 2012 and 2013) that included a shellfish identification game, dog bones, poop scoop bags and a watershed model.
- Educated Planning Commission about the benefits of shellfish and shellfish gardening in terms of providing both natural filtration and homeowner incentives.

Figure 2. Port Madison Community Shellfish Farm activities

Many, many thanks to Kitsap Public Health District and the Environmental Protection Agency for supporting the Port Madison Community Shellfish Farm.



2010 farm installation



Fall, 2010 harvest



2011 volunteer training and harvests



2012 seeding with Aspect Consulting and 2013 spring harvest

Objective #4: *To ensure correction of failing onsite sewage systems by providing financial assistance to qualified Kitsap County residents through the Shorebank Septic Loan Program.*

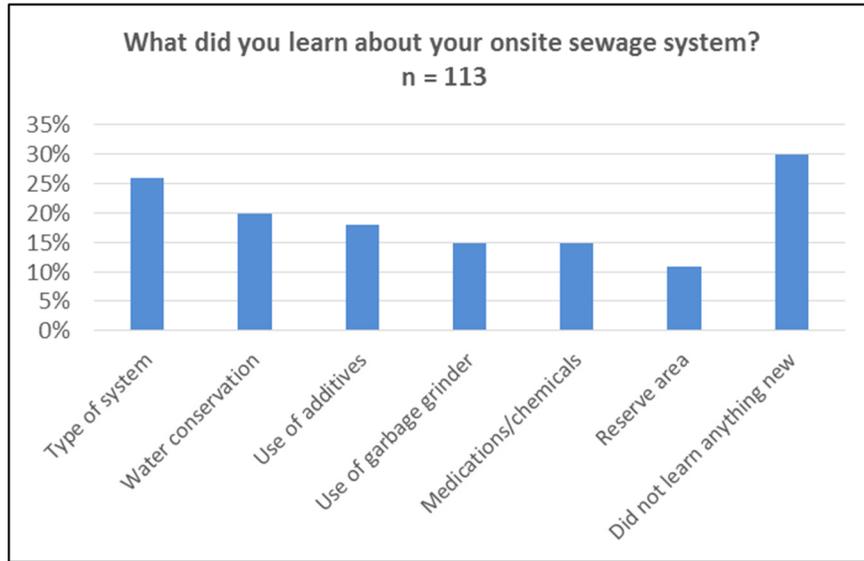
The septic loan program provides resources to residents throughout Kitsap County as well as around Puget Sound. When this project began the program was called the Shorebank Septic Loan Program. In 2011 the program's name was changed to CRAFT3.

This objective and its associated tasks were not completed because residents with failing onsite septic systems chose not to utilize the CRAFT3 septic loan program. The contract with CRAFT3 for this project was cancelled and the funds transferred (via contract amendment) to Objective 1 (Task 1 in the contract). The funding was utilized to conduct investigations of hot spots, identify sources and implement actions to correct these sources.

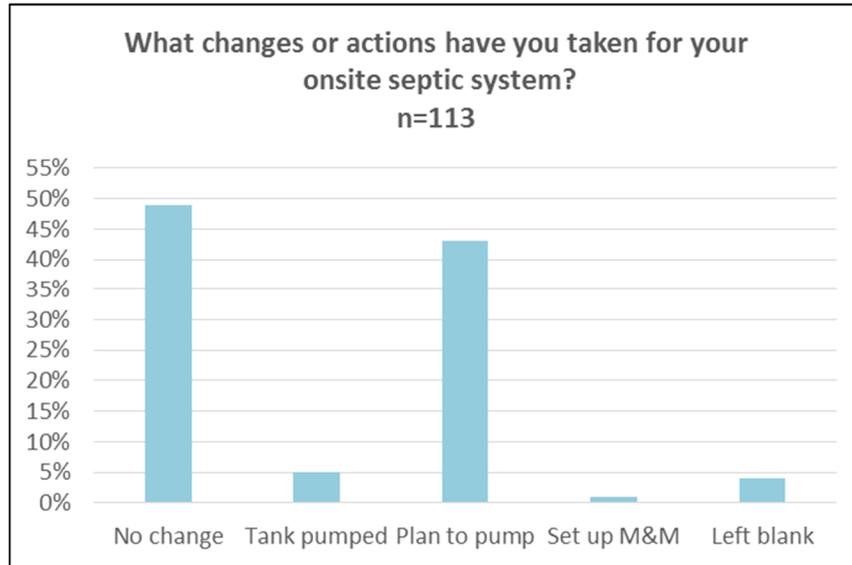
Objective #5: *To provide education to residents regarding sustainable land use practices for the protection of water quality that impact shellfish growing areas.*

There were 558 property inspections completed during the project. PIC staff distributed Fact Sheets, Homeowner's Septic System manuals, pet waste management information and other related brochures. PIC staff also provided residents with their specific onsite septic system records (e.g. sewage permits, as-built drawings etc.). These records are used as a training and outreach tool to assist residents in understanding their type of system, verify its location and help them recognize signs of septic system problems.

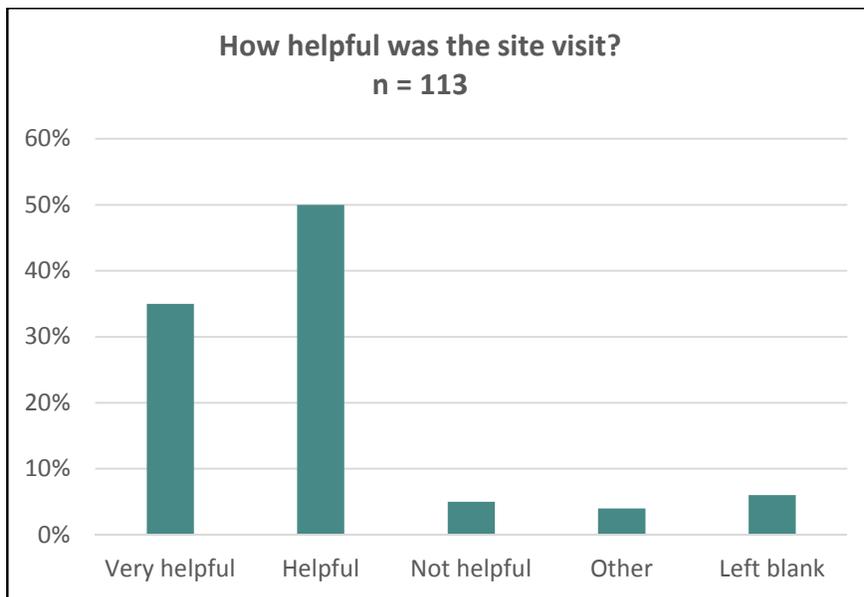
Following most property inspections, a mail-in postcard survey was sent to residents. Properties found to have failing septic systems or other potential water pollution sources did not receive a mail-in survey. There were 255 postcards mailed and 113 completed surveys received for a response rate of 45%. The following charts show the results from each question in the survey. 70% of respondents indicated that they learned something about their septic system as a result of the visit while approximately 30% stated they did not learn anything new. For septic system owners approximately 45% indicated they would have their tanks pumped within 3-5 years. 85% of respondents found the site visits to be either very helpful or helpful.



KCD = Kitsap Conservation District



M & M = OSS monitoring and maintenance contract



In addition to the responses above, there were 42 written comments included in the surveys.

A summary of these written comments are shown below.

Appreciation	Specific information/aspect of visit	Other comments
14 written comments included statements of "Thank You" to naming specific staff and commenting positively on their knowledge and expertise.	24 written comments that included statements regarding either information or aspect of the visit, e.g "shellfish restoration, information", "saving the Hood Canal" "how to handle pet waste" "the drawing of the septic drain field" etc.	4 written comments that included: "been on septic for 40 yrs. self-educated" " did not receive septic records" "not helpful" "records were for neighbors system not mine"

There were four onsite septic system workshops held at the beginning of the project per the contract agreement. The workshops were used to also launch the project and inform residents about the goals and objectives, as well as provide them with information about septic systems. Workshops were held at the north, central and southern parts of the County due to the wide area covered for this project to encourage participation.

Numerous presentations were made during the project to a variety of stakeholders. In 2011 a presentation about the project was made to the US Inspector General of EPA. This presentation also included information about Kitsap's PIC program.

Presentations were also made to the Kitsap Board of Health, the City Council of Bainbridge Island, and a local community group, the Friends of Miller Bay. During the Fall 2014 a presentation was made at a DOH sponsored PIC workshop. This workshop provided us with an opportunity to share the results of this project with our peers from other Puget Sound counties and

REFLECTIONS ON PROJECT

Kitsap Public Health District demonstrated the ability to successfully complete shoreline surveys of over 90 miles during this project. This was repeated four times, twice during wet weather months and twice during dry weather months. As a result we were able to obtain sustainable funding from Clean Water Kitsap to support an ongoing shoreline monitoring program. This funding was approved at the end of 2013, with the Shoreline Monitoring program initiated in 2014. The goal for the shoreline monitoring program is to cover all classified shellfish growing areas in unincorporated Kitsap on a four year rotational basis. This will enable us to proactively work to identify and correct sources of fecal water pollution impacting public health and the environment.

Another success of this project was the upgrade of shellfish growing areas. This project resulted in the upgrade of 30.1 acres in Colvos Passage, (12.2 acres Prospect Point and 17.9 acres at Fragaria).

There were many lessons learned during the project. One of these regarded the septic loan program. We discovered that it was not utilized to the level we had anticipated. The contract with the septic loan program was cancelled and the funds transferred to the task for conducting pollution source identification and correction. This transfer enabled us to conduct more field work which was necessary since we did not anticipate finding the large number of hot spots.

Additionally we learned that there were few shoreline properties with livestock and none of them were causing identifiable pollution problems. Consequently, the contract with the Kitsap Conversation District for BMPs was not needed. The contract was cancelled and the funds transferred to conducting PIC activities.

The property inspection follow-up mail-in survey response rate was 45%. The responses were helpful in providing us with an understanding about what residents learned during the site visit and what changes they might make as a result of the visit. The surveys were anonymous so in retrospect it would have been helpful to have had contact information to follow up with those residents indicating they would make changes to their behavior like having their septic tanks pumped. Future projects that include mail in surveys will be re-designed to include this element so we can follow up on changes in behaviors and/or actions.

Another lesson learned regarded the outcome of shellfish growing area upgrades. The logic model (shown in Table 5), shows our anticipated outcome to “upgrade 50% of the 9 miles of Prohibited areas to Approved.” In hindsight this outcome should have been stated in terms of acres rather than miles since acreage is the unit used by the Washington State Department of Health. Additionally the timeframe for shellfish growing areas upgrades is dictated by DOH’s process which can take more than 2 years following their receipt of a commercial harvest request. Therefore our outcome was overly ambitious for the timeframe of this project.

For example, DOH received a harvest request for Miller Bay in 2012, however the collection of marine samples will not be completed by the conclusion of this grant in December 2014. The information from our Miller Bay shoreline survey, including results from property inspections, will be provided to DOH to assist them with their assessment for the upgrade. DOH has informed us that 270 acres in Miller Bay may be upgraded when they complete their assessment.

Kitsap Public Health's shoreline monitoring program will not include the City of Bainbridge Island since Clean Water Kitsap stormwater management fees only apply to areas located in unincorporated Kitsap County. Bainbridge Island has its own water quality program which does not include shoreline surveys. Our recommendation, as a result of the findings from this project, is for the City of Bainbridge Island to fund a shoreline monitoring program. If needed Kitsap Public Health could provide assistance in coordinating pollution identification and correction activities.

Kitsap Public Health's PIC program was able to secure sustainable funding from Clean Water Kitsap to establish an ongoing shoreline monitoring program. This will enable us to proactively address fecal water pollution sources potentially impacting classified shellfish growing areas on a more frequent basis. This will also enhance coordination with DOH by notifying them of problem areas, source identification and corrections. Additionally our shoreline monitoring plan document is available to other jurisdictions in Puget Sound.

Table 5. Kitsap Public Health Shellfish Restoration & Protection LOGIC MODEL

Activities	Outputs	Outcomes	<i>PROJECT ACCOMPLISHMENTS</i>
<p>Implement a routine shoreline monitoring program to assess the impact of development and land use that affect Approved shellfish growing areas.</p> <p>Coordinate response to potential fecal pollution sources affecting shellfish growing areas with the WA State Department of Health.</p> <p>Implement targeted shoreline monitoring and stream monitoring program in priority areas that affect Prohibited and/or closed shellfish growing areas.</p> <p>Investigate potential fecal pollution sources. Implement corrective actions.</p> <p>Provide financial resources to residents through the Shorebank Septic Loan for the repair of OSS.</p> <p>Provide education to residents regarding sustainable land use practices for the protection of water quality, and sustainability of shellfish growing areas.</p>	<p>Shoreline survey report including monitoring data, identification and correction of FC sources.</p> <p>Written report of water quality trend and impact sampling analysis before and after the project.</p> <p>Property survey report describing land use practices OSS ratings, number of repaired and/or replaced systems. Repair 100% of identified failing OSS.</p> <p>Report of agricultural properties that implemented best management practices.</p> <p>Complete a survey following door to door property visits to measure the impact of education and behavior change regarding land use and protection of water quality. Achieve a response rate of 45%.</p> <p>Establishment of community shellfish farm.</p>	<ol style="list-style-type: none"> 1. Water quality improvements that result in an increase in harvestable shellfish growing areas. Upgrade 50% of the 9 miles of Prohibited areas to Approved. 2. Establishment of routine shoreline monitoring program to ensure protection of 100% of Approved growing areas (60 miles). 3. Measurable improvements in water quality in at least 50% of targeted fresh and marine waters included in this project. 4. Ensure adequacy or improvements in sustainable land use practices to protect surface water from fecal pollution sources for 80% of the properties visited during the project. 5. Ensure adequacy or improvement of best management practices for livestock waste for 80% of the agricultural properties visited during the project. 6. A 30% increase in education and awareness of shellfish growing areas and water quality. 7. Sustained participation in local community shellfish farm. 	<ol style="list-style-type: none"> 1. 30.1 acres upgraded along Colvos Passage (12.2 acres Prospect Point and 17.9 acres Fragaria) 2. Sustainable funding received for establishment of routine shoreline monitoring program (SMP). SMP initiated in 2014 (to include 90 miles). 3. Water quality improvements in 58% of targeted fresh and marine waters in the project. (31% improvement in streams, 27% improvement in marine waters). 4. Improvements in land use practices e.g. failing onsite septic systems were made. 55 failing systems identified, 100% have either been repaired or are in the process of being repaired. 5. Not applicable. See discussion in "Reflections on Project" section. 6. To measure education and awareness a follow up PIC inspection survey was mailed to residents. 45% response rate received. 7. Community shellfish farm was increased from approximately 13 families to 59 families, and sustained.

MEMO

To: Kitsap Public Health Board
From: Suzanne Plemmons, RN, MN, PHCNS-BC, Community Health Director
Date: February 25, 2015
Re: Nurse Family Partnership Program Report

Nurse-Family Partnership (NFP) is an evidence-based, community health program that serves low-income women pregnant with their first child. Each vulnerable new mom is partnered with a registered nurse early in her pregnancy and receives ongoing nurse home visits. It is a life-transforming partnership, for the mom and her child. Nurse-Family Partnership helps families — and the communities they live in — become stronger while saving money for state, local and federal governments.

NFP's goals are as follows:

1. Improve pregnancy outcomes by helping women engage in good preventive health practices, including thorough prenatal care from their healthcare providers, improving their diets, and reducing their use of cigarettes, alcohol and illegal substances.
2. Improve child health and development by helping parents provide responsible and competent care.
3. Improve the economic self-sufficiency of the family by helping parents develop a vision for their own future, plan future pregnancies, continue their education and find work.

Kitsap Public Health District implemented NFP in Kitsap County in July 2012 as part of a regional team working with Jefferson County Public Health and the Port Gamble S'Klallam Tribe, and with the support of our non-profit partner, Healthy Start Kitsap.

Our presentation to the Board at your March 3rd meeting will include an overview of NFP, outcomes of the program to date, plans for the future, and a client success story from one of our NFP nurses. The attached brochure provides a brief overview of NFP. No Board action on this agenda item is needed at this time.

A life-changing program that combines compassion with science.

For an at-risk young woman who's not prepared to care for a child, a new baby can mean the onset—or continuation—of poverty, conflict, and despair.

Nurse-Family Partnership's breakthrough solution: Provide expectant mothers with a relationship they can count on. A committed and compassionate nurse makes regular home visits over 30 months, from before birth until the baby is age two.

But Nurse-Family Partnership isn't just a heartfelt social program. More than 30 years of randomized, controlled trials show that families who participate in the Nurse-Family Partnership model fare better: less incidence of drug and alcohol abuse, better employment for the moms, and better performance in school by the kids. A program that seems so intuitively right is also scientifically sound.

It's about changing lives



For more information or to find a location near you:
www.nursefamilypartnership.org
Toll-free 866-864-5226



Nurse-Family Partnership Program Goals

Goal 1

Improve pregnancy outcomes by helping women engage in good preventive health practices, including obtaining thorough prenatal care from their healthcare providers, improving their diet, and reducing their use of cigarettes, alcohol, and illegal substances.

Goal 2

Improve child health and development by helping parents provide responsible and competent care for their children.

Goal 3

Improve the economic self-sufficiency of the family by helping parents develop a vision for their own future, plan future pregnancies, continue their education, and find work.

Why low-income, first-time mothers?

When a young woman becomes pregnant before she's ready to take care of a child, the risk factors for the entire family escalate. She may have a family background of low wages, welfare, or worse—a pattern that, without intervention, she may be fated to repeat.

Why nurses?

Nurses can reach a vulnerable family in ways that others can't. For a low-income young woman at risk, a nurse is a trusted, respected, and accessible figure. A nurse brings specialized healthcare knowledge and can spend time with her clients. She approaches them without value judgments or a personal agenda. And as the three randomized, controlled trials show, this relationship of trust makes a measurable difference for the whole family.

Nurse-Family Partnership is an evidence-based community health program with three decades of research proving it works. At its heart, the program empowers women to change their families' lives for the better.

Family outcomes that have been shown in one or more of the Nurse-Family Partnership randomized, controlled trials include:

48% reduction in child abuse and neglect

56% reduction in emergency room visits for accidents and poisonings

59% reduction in arrest of children at age 15

67% reduction in behavioral and intellectual problems in children at age six

72% fewer conviction of mothers when children are at age 15

The RAND Corporation found a net benefit to society of \$34,148* per high-risk family served, equating to a \$5.70 return per dollar invested in Nurse-Family Partnership.

*2005 Analysis



“Terrible things can be prevented and good things can be made to happen with the involvement of nurses with these families early in their lives.”

David Olds, PhD, Professor of Pediatrics
University of Colorado
Founder, Nurse-Family Partnership



“There isn't a program like us. We help a girl change into a woman and a mother. It's like a metamorphosis.”

Nicole Hoffman, a Nurse-Family Partnership
Nurse Home Visitor



Leaders from across all sectors are recognizing the tremendous value of Nurse-Family Partnership, a nurse-led, evidence-based home visitation program. You can help bring this successful, cost-effective model to more communities than ever before. Your support can help strengthen families, babies, communities—and the future.

It's about changing lives—for generations.
Please join us.

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