

**WHATCOM COUNTY COUNCIL
SURFACE WATER
WORK SESSION**

July 19, 2016

DISTRIBUTED TO

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**ALL COUNCIL MEMBERS
WHATCOM COUNTY COUNCIL**

**WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT**

JON HUTCHINGS
Director



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MEMORANDUM

TO: The Honorable Jack Louws, Whatcom County Executive, and
Honorable Members of the Whatcom County Council

THROUGH: Jon Hutchings, Director

FROM: Gary S. Stoyka, Natural Resources Program Manager

DATE: July 11, 2016

RE: July 19, 2016 Council Surface Water Work Session

Please refer to the proposed agenda below for the next Surface Water Work Session. Additional supporting documents may be distributed at or before the meeting.

AGENDA

Date:	Tuesday, July 19, 2016		
Time:	10:30 a.m. to 12:30 p.m.		
Place:	Civic Center Garden Level Conference Room		
Time	Topic	Council Action Requested	Background Information Attached
10:30 AM – 11:00 AM	1. Joint Board/Planning Unit/CWSP update 2. Water Resources Planning Strategy	Discussion	None
11:00 AM – 11:45 AM	Overview of Flood and Stormwater Budgets	Discussion	None
11:45 AM – 12:30 PM	Improvements to the Lake Whatcom Homeowners Incentive Program	Discussion	HIP background material

If you have questions, please feel free to call me at (360) 778-6218.

cc: Mike McFarlane	Joe Rutan	Paula Harris	John Wolpers	Mike Donahue
Remy McConnell	Jeff Hegedus	John Thompson	Kraig Olason	Erika Douglas
Tyler Schroeder	Josh Fleischmann	Karen Frakes	Jennifer Schneider	Jill Nixon
Sue Blake	Kirk Christensen	Dana Brown-Davis	Atina Casas	Cathy Craver
George Boggs	Roland Middleton	Lonni Cummings	Kristi Felbinger	Mark Personius
Ryan Ericson				

Memo

To: The Honorable Jack Louws, Whatcom County Executive, and Honorable Members of the Whatcom County Council

From: Gary S. Stoyka, Natural Resources Program Manager

Date: July 11, 2016

Re: Lake Whatcom Homeowner Incentive Program Background Information

Background and Purpose

The Lake Whatcom Homeowner Incentive Program (HIP) is a joint Whatcom County- City of Bellingham program that provides technical assistance and cost share incentives for Lake Whatcom watershed residents to install phosphorus-reducing Best Management Practices (BMPs). HIP was developed as a pilot program from 2011-2015 with funding from the Washington State Department of Ecology. The HIP 1 program, as established with grant funding, is continuing in 2016 with other city and county funding sources.

The city and county have been working for more than a year to develop an improved HIP program (HIP 2) that incorporates input from former participants and partners. HIP 2 is scheduled to begin in 2017. The purpose of discussion at the July Surface Water Work Session is to inform council members of proposed program changes that have policy implications and provide an opportunity for discussion.

As background for this discussion, the following materials are included in the meeting packet:

- Lake Whatcom Homeowner Incentive Program 2011-2015 Final Report—this is the final grant report for Washington State Department of Ecology. It provides a good overview of the HIP 1 program design and accomplishments. This information was also provided at the March 23, 2016 Lake Whatcom Joint Councils and Commission Meeting.
- Presentation (and meeting summary) on HIP 2 program design given to the Lake Whatcom Policy Group on April 25, 2016.
- Presentation (and meeting summary) on HIP 2 proposed improvements and changes given to the Lake Whatcom Policy Group on May 23, 2016.
- Meeting summary from the June 13, 2016 Lake Whatcom Policy Group.

Lake Whatcom Homeowner Incentive Program
City of Bellingham and Whatcom County Public Works Departments
Grant Number #G1100173

January 2011-June 2015

Final Total Project Cost: \$690,000

Final Ecology Grant or Loan Contribution: \$500,000

Project Description

The Lake Whatcom Homeowner Incentive Program (HIP) was a pilot program launched to promote homeowner stewardship of water quality within a phosphorus-limited watershed. The HIP provided technical assistance and financial incentives to homeowners to facilitate the design, permitting, and construction of phosphorus-reducing Best Management Practices (BMPs). These projects were retrofits of existing developed areas and consisted of reforestation, infiltration, runoff treatment, permeable paving, and rainwater reuse BMPs, and various combinations of these.

The incentives were available for a four-year period and advertised to approximately 1000 eligible residences. More than 250 homeowners requested an on-site visit, and approximately 150 of these completed retrofit projects within the grant period.

City of Bellingham and Whatcom County staff provided technical assistance including design guidance, permit facilitation, construction oversight, and material specifications. Of the total project cost, 80% was spent directly on reimbursements to homeowners for eligible expenses.



HIP bioretention system with a personal touch. Installed 2012



HIP permeable paver driveway in use. Installed 2013.

Project Accomplishments

A total of 153 retrofit projects, installing 362 individual best management practices, were funded by the HIP pilot grant. These projects addressed runoff from more than 20 acres of developed site area and reduced phosphorus loading to Lake Whatcom by approximately 19lbs. of P per year.

These projects also included stormwater retrofits for two elementary schools in the watershed and one shared alleyway adjacent to a number of participating homeowners' lots.

In-depth geotechnical explorations, coordinated outreach efforts, multiple workshops for homeowners and contractors, and project inspections were also completed using the grant funding.

The initial goals of the program, to install 550 BMPs on the 250 lots, were not met. The initial goal assumed that each BMP would cost, on average, \$1,000. Instead, the BMPs averaged around \$1,500 each. This is, however, a positive for the watershed as this represents the installation of more complex BMPs, which reduced phosphorus more than less complex options. On average, participating homeowners addressed more phosphorus per lot than expected.

Water Quality and Environmental Outcomes

More than 20 acres of development addressed using Phosphorus-reducing BMPs. This equates to more than 78 residential lots (of 1000) completely retrofit to be phosphorus-neutral.

More than 19 lbs. of Phosphorus (per year) retained on private properties and not discharged to Lake Whatcom.

More than 8,400,000 gallons of phosphorus-laden runoff per year prevented, treated, infiltrated, or captured.

8,628 Northwest native plants and 3,073 cubic yards of low-phosphorus soil amendments and mulch installed to replace lawn areas in the watershed.

7.4 acres of new native forested areas created within the watershed

13.1 acres of developed area retrofit to match forested hydrology through infiltration and detention.

21,000 square feet of residential pavement converted to permeable paving systems.

51,000 square feet of roof area diverted into rainwater harvesting systems for re-use and dispersion.

The Next Step for Continued Success

The restoration of water quality in the Lake Whatcom Watershed is a major undertaking which is projected to take up to 50 years to complete. The City of Bellingham and Whatcom County are implementing robust capital facility retrofits which could manage up to 75% of the excess phosphorus (currently around 3,000 lbs. annually) entering the Lake. However, this is only part of the proposed restoration strategy. The remaining 25% of excess phosphorus will need to be dealt with on private properties, by actions of the homeowners living there.

This pilot program gave great insights into the motivations and barriers of homeowners living in the targeted areas of the watershed. Our next step is to expand the program to the entire watershed. Budgeting for a long-term funding strategy to propel the residential retrofitting program into the future is underway. Audience research, exit interviews, focus groups, and surveys are planned for the near term, with the intention of rolling out a fully-functional, evolved version of this program in early 2016. In the interim, the City of Bellingham and Whatcom County are funding a transitional program that follows the structure of the pilot program very closely. The work will continue with shared funding between the City of Bellingham and Whatcom County, through the Lake Whatcom Management Program, through the next five year work plan and likely beyond.

Development regulations will require homeowners to maintain functionality of their systems in order to stay in compliance with code. Municipal inspectors will provide oversight and education toward this end in future years.

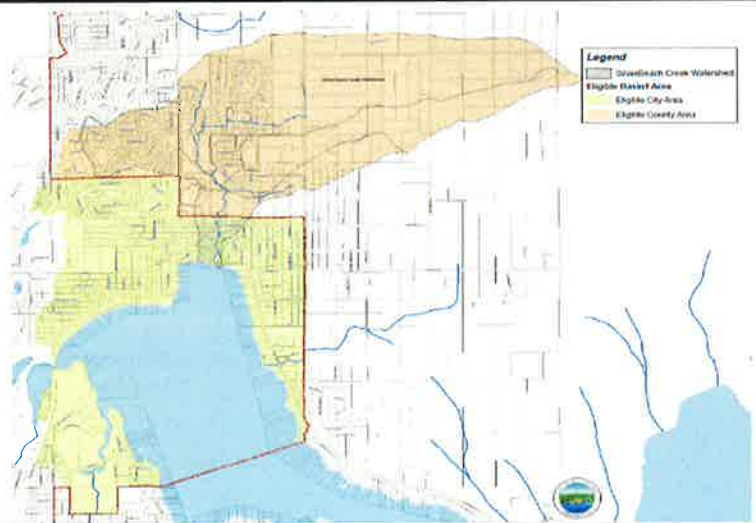
Recipient Contact Information

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HIP-eligible areas, by jurisdiction. The red line is the City of Bellingham City Limits. Next generation of program will apply to entire watershed (not shown).

OVERVIEW DESCRIPTION OF PROJECT:

The Lake Whatcom Watershed Homeowner Incentive Program (HIP) was intended to address excess phosphorus entering Lake Whatcom via stormwater runoff from private properties. The purpose of HIP was to provide technical and financial assistance to homeowners to complete watershed-friendly stormwater retrofits using approved best management practices for phosphorus reduction and removal. Phosphorus reduction BMPs included replacing lawn areas with naturalized landscaping (reforestation), restoring eroding slopes and disturbed areas, removing impervious surface, and creating forested buffers around streams, ditches, and shorelines. Phosphorus removal BMPs supported through the HIP included infiltration systems, treatment devices, rainwater harvesting and reuse, bioretention, rock-filled trenches, and permeable pavement.

HIP participants were eligible for free technical assistance, project design, permitting, and construction management from HIP staff. Reimbursements for eligible project expenses were provided on a sliding scale, where improving up to 30% of the property qualified for up to \$1,000 in reimbursement and improvement to 92% of the property was eligible for \$6,000.

Summary and detail of all project expenses, by project and category, were recorded in the HIP Calculations spreadsheet provided as part of the document hand-off at the completion of HIP.

OUTCOME:

The project engaged more than 250 homeowners and resulted in the completion of approximately 150 unique projects and 350 best management practices. Completed projects reduce phosphorus loading in runoff by an estimated 19lbs. per year. Approximately 20 acres of developed private property were retrofit to meet forested hydrology or replace phosphorus sources (lawn) with phosphorus sinks (forested landscapes).

Lessons learned from this portion of the project are many and, for the most part, are very specific to environmental conditions, regulatory structure, land-use, and BMP effectiveness within this particular geographic area. Other specific lessons learned were derived from one-on-one interactions with homeowners and contractors, and apply mostly to attitudes and willingness of homeowners in the watershed.

In preparing for interviews, surveys, evaluation, and design for the next version of the program, the City's HIP staff developed a long (12+ page) document listing the themes, anecdotes, and lessons learned from the staff's perspective. This document is helpful for development of concepts, but is not by any means a scientific document. Therefore, the City doesn't recommend the use of this document for any meaningful analysis and we remain hesitant regarding the utility of this information. We hope to, however, confirm these themes through our research and release a final lessons learned report. Currently, this long list is in draft format and will be finalized once the research is complete, to reflect the data gathered in the surveys. The City will provide this fact-checked document to Ecology at that point. However, if other jurisdictions would be interested in reviewing our working draft, we would be more than happy to share, and to make ourselves available to provide technical support to similar programs.

WHAT ARE THE WATER QUALITY BENEFITS?

Table 1: HIP Outcomes and Project Summary Measureable Metrics				
Properties Retrofit	Number	122		
Adjacent ROW Areas Retrofit	Number	31		
Total Projects Completed	Number	153		
BMPs Installed	Number	362	3.0	BMPs per project
Low-Phosphorus Mulch Replacing Lawn	CY	3,073		
Native Plants Installed	Plant	8,628	1270	plants per acre
Lawn Converted to Forest	SF	220,869	5.07	AC
Traditional Landscape Converted to Forest	SF	99,182	2.28	AC
Area Treated (60% assumed efficiency)	SF	117,565	2.70	AC
Impervious Surface Dispersed or ReUsed	SF	51,682	1.19	AC
Area Infiltrated (95% average efficiency)	SF	401,334	9.21	AC
	TOTAL	890,632	20.45	AC
Calculations Accounting for Inefficiencies of BMPs, Normalizing Results				
100% Effective Forested Areas Created	SF	296,047	6.80	AC
100% Effective Forest Hydrology Matched	SF	464,727	10.67	AC
Total Area of Effective Full Mitigation	SF	760,774	17.46	AC
Summary Calculations				
Phosphorus Removed	Lbs/Yr	19.37		
Flow Removed	Gal/Yr	8,411,590		
Average Lots Removed	Lots	78	10,057	SF Average Lot

Table 2: HIP Best Management Practices Installed, 2011-2014	
BMP Specific Types	#
Native Planting	131
Infiltration Trench	66
Rainwater Harvesting and ReUse	40
Permeable Paving	30
Impervious Surface Removal	18
Bioretention	17
Eroding Slope Mitigation	12
Impervious Surface Dispersion	12
Sand Filter	11
Invasive Species Removal	11
Riparian Buffer Planting	4
Vegetated Berm	4
Shoreline Restoration	3
Sheet Flow Dispersion	1
Compost-Amended Soil Installation	1
Media Filter Drain	1
TOTAL	362

Table 3: HIP BMP Cost and Project Effectiveness Analysis, Installed BMPs

BMP Classes	# BMPS	Lbs P Mgmt	Cost	Cost/Lb	Cost/BMP	Cost/Managed Acre	P-reduction /acre	Effectiveness Factor	Acres to equal 1lb P removal	Cost/Treated Acre
Reforestation	194	7.70	\$232,046.12	\$30,116.95	\$1,196.11	\$31,582.25	85%	0.94	1.1	\$33,440.02
Infiltration	113	9.93	\$357,747.73	\$36,019.70	\$3,165.91	\$38,829.23	90%	1.00	1.0	\$38,829.23
Treatment	15	0.86	\$47,488.64	\$55,392.23	\$3,165.91	\$17,595.42	45%	0.50	2.0	\$35,190.83
Rainwater Re-use	40	0.96	\$36,546.13	\$38,098.68	\$913.65	\$30,802.78	25%	0.28	3.6	\$110,890.01
TOTAL	362	19.45	\$673,828.62	\$34,638.09	\$1,861.41	\$32,956.34				

Table 4: Project-specific reimbursable items

Native Planting Projects					
Landscape Design	Native Plants		Mulch	Planting Materials	Planting Labor
\$4,701.05	\$45,212.26		\$77,858.28	\$21,992.65	\$52,216.54
Infiltration or Treatment Projects					
Drain Rock/Sand	Permeable Paving	Pipe and Fittings	Filter Fabric	Excavation Labor	Equipment
\$71,017.12	\$38,057.55	\$17,610.66	\$4,804.85	\$181,686.38	\$73,672.23
Miscellaneous and Other					
Rainwater Tanks	TESC	Delivery	Haul Away	Sales Tax	
\$11,353.19	\$6,068.43	\$11,653.14	\$6,881.04	\$48,564.47	
Totals					
Total Reimbursable	Total Reimbursed		Total Cost	Remaining To Award	
\$673,349.84	\$535,755.55		\$731,825.57	-\$55,089.55	

DELIVERABLES;

All education and outreach and technical assistance documents created as part of the project were included in the information transferred to Ecology via file transfer. These documents include:

1. Example site plans showing project (and BMP) designs that can be used for templates.
2. Education and outreach materials intended to garner interest in the program and
3. Education and outreach materials intended to train homeowners about the program and their individual project
4. BMP design checklists and guidance for contractors and homeowners
5. Materials developed for workshops, public presentations, and cooperative training events.

Trainings and Outreach

Table 5: HIP Trainings and Public Outreach Summary		
Date	Event Title	# of Attendees
7/8/2010	Silver Beach Neighborhood Association Meeting	40
9/24/2010	Sustainable Landscape Tour	18
3/10/2011	Silver Beach Elementary Parent-Teacher Organization Meeting	10
7/6/2011	Silver Beach Creekside Meeting	10
7/12/2011	Lake Whatcom Rain Garden Workshop	20
1/26/2012	Silver Shores Homeowners Association Annual Meeting	8
2/9/2012	Silver Beach Neighborhood Association Meeting	40
9/11/2012	Gardening Green Lake Whatcom Presentation	18
10/19/2012	Make a Difference Day Rain Garden Planting - Geneva	80
3/15/2013	The Dirt on Low Impact Development	30
3/28/2013	HIP Suppliers Workshop	10
6/1/2013	Lake Whatcom Rain Garden Tour	35
6/1/2013	Watershed-Friendly Project Expo	65
8/19/2013	International Low Impact Development Symposium	80
11/8/2013	Silver Beach Elementary Students "Friday Club"	20
11/15/2013	Silver Beach Elementary Rain Garden Planting Party	60
1/31/2014	Silver Shores Homeowners Association Annual Meeting	8
2/13/2014	Silver Beach Neighborhood Association Meeting	5
3/15/2014	Lake Whatcom Solutions Workshop	80
3/20/2014	Sightline Stormwater Learning Cohort Presentation	20
3/24/2014	Whatcom Conservation District Native Plant Sale Table	10
6/12/2014	Peter's Street Trail ROW Planting Party	60
	TOTAL	727 people

Table 6: Documentation of Effort, Site Visits		
Site Visits, One-on-one (or one-on-two) Outreach		
Type of Contact	Year	Number
Introductory Site Visit	2010	42
	2011	52
	2012	29
	2013	44
	2014	40
Follow-Up Site Visit	2010	28
	2011	71
	2012	48
	2013	58
	2014	68
Construction Assistance	2010	0
	2011	15
	2012	16
	2013	34
	2014	28
Inspection/ Reimbursement	2010	1
	2011	19
	2012	26
	2013	57
	2014	58
Total		734 visits
Annual Average		147

EVALUATION:

In mid-spring to early summer 2015, the City of Bellingham completed an in-depth survey through a consultant (PRR, Inc.) to evaluate the program. The completed report and recommendations are included in the documents submitted to Ecology at the completion of the project.

FOLLOW-UP:

This program will continue as a locally-funded project, cooperatively implemented and funded by the City of Bellingham and Whatcom County. We are currently undertaking a robust research project to evaluate the ways to improve the program to reach more participants, incentivize a higher level of participation, and expand to additional areas around the Lake. This research is focusing on three target audiences, shoreline properties, properties with at least 10,000ft² of impervious surface, and those with at least 5,000ft² of lawn. These types of properties represent not only the biggest impact to the Lake, but especially in the case of the shoreline residences, are

in locations that otherwise would not be able to be captured in municipal stormwater systems. The combination of projects on these target lots and large-scale capital improvements in applicable areas is expected to be the primary approach to restoring water quality in Lake Whatcom and meeting the aggressive goals of the Lake Whatcom Total Maximum Daily Load (TMDL) response plan.

Upon completion of two large-scale surveys, the City and County will hold focus groups to test messaging and develop outreach materials. Once completed, this information will expressly drive the development of a new generation of residential retrofit programs, likely with multiple levels of participation and varying incentive structures intended to maximize the benefit of projects while minimizing the barriers.

Homeowner Incentive Program

By the numbers; Program Totals (2011-2015)

283 site visits requested and completed

450+ residents engaged in project development

241 projects designed and queued for construction

180 projects completed within the grant period

422 Best Management Practices (BMPs) for phosphorus reduction installed

8.53 acres of lawn and traditional landscape converted to forest

3,468 cubic yards of low-phosphorus mulch spread

10,069 native plants installed to replace lawn

10.27 acres of development infiltrated to match forested hydrology

21.53 pounds of phosphorus reduction achieved (per year)

9,448,670 gallons of runoff reduction achieved (per year)

\$39,595 per pound of phosphorus reduction (71% of this was reimbursed, on average)

Homeowner Incentive Program: Progress by Program Year

Year	Site visits	Projects Complete	BMPs	Pounds P removed	Gallons of flow removed	Reimbursements
2011	104	16	33	2.23	1,121,380	\$47,459.90
2012	50	19	41	2.00	732,770	\$54,699.01
2013	42	48	111	6.08	3,289,612	\$141,589.62
2014	49	69	176	8.97	3,242,648	\$290,396.62
2015	38	28	61	2.25	1,062,260	\$75,526.31
Total	283	180	422	21.53	9,448,670	\$609,641.46
Reimbursable Expenses Submitted¹						\$782,587.46
Total Project Costs²						\$852,471.54

1 = Reimbursement amount tied to scale of project. This is the amount that would be reimbursed if there were no cap/sliding scale.

2 = Labor charges were 75% reimbursable and total reimbursement was capped. This is the amount that would be reimbursed if there were no cap/sliding scale and 100% of labor costs were reimbursed.



Lake Whatcom Policy Group

April 25, 2016 Meeting

Brief Digest of Presentations and Discussion

Policy Group members in attendance: Carl Weimer (Whatcom County Council); Bruce Ford (Lake Whatcom Water and Sewer District Board); Larry Brown (Sudden Valley Community Association). Other Council or Board members present: Todd Citron, Curtis Casey (Lake Whatcom Water and Sewer District Board).

1. Review of Ecology's published Water Quality Improvement Report and Implementation Strategy (Total Phosphorus and Bacteria Total Maximum Daily Loads - TMDL)

Staff provided an overview of the Implementation Strategy document that was submitted in 2014 by the Washington State Department of Ecology (DOE) to the Environmental Protection Agency (EPA) for review, and which is now approved. There are few changes between the strategy as submitted and the one approved by EPA, other than corrections of some minor data errors. A major focus of the strategy is low dissolved oxygen and phosphorus loading in the watershed. The document also includes targets for E. Coli. There are two milestones for this year, both in October. A preliminary implementation plan is due. The jurisdictions will submit a schedule that would reach the required Total Maximum Daily Load (TMDL) targets in 50 years at a total cost estimated at \$100 million, or \$2 million per year. An alternative schedule that would achieve the plan faster, with corresponding additional spending, may also be included. Local intent is to accelerate achievement of milestones by using grant receipts to speed up the work. Also in October of this year, each jurisdiction will send specifics of how their respective planned activities will meet this schedule.

A detailed implementation plan is due to DOE in 2017. This will cover a 10 year time horizon and contain milestones for completing various activities. Enforcement of the TMDL plan and its milestones will occur through the mechanism of the National Pollution Discharge Elimination System (NPDES), which is a federal permit for local jurisdictions to release stormwater. Meeting the requirement of the TMDL and associated milestones will be a condition for remaining in compliance with the permit. Permits are five years long, and two NPDES cycles will span each 10 year TMDL implementation cycle. The next NPDES permit starts in August 2018.

The TMDL implementation plan will build off of local Lake Whatcom program plans that are already being implemented to achieve phosphorus reduction and other goals. The timelines of the 5 year TMDL implementation cycles and the local 5 year plans are not in synch. This does not present a problem as it allows revision of local plans in anticipation of required changes. Local plans also include program areas not in the TMDL, such as recreation and aquatic invasive species control.

From 2018 through 2023 implementation will begin, along with additional modeling work. As the lake response model for the TMDL is improved, that may allow for the recalibration of targets. The strategy document reflects a model based on 2003 data. This has been adjusted to reflect additional development since then in setting the phosphorus

reduction targets. A recalibration will be completed by 2018 that will incorporate additional information on lake circulation and runoff, among other things.

There will be four additional ten year cycles for implementation. The mix of activities to achieve compliance will need to shift over time. For example, as opportunities for large scale capital facilities dwindle, effort will shift toward retrofitting existing properties or to smaller stormwater control projects.

2. Results of Homeowner Incentive Program (HIP) Research

The City commissioned a series of research activities to evaluate and improve the Homeowner Incentive Program (HIP). Research included phone and on-line surveys, focus groups, and qualitative research involving program staff. The ultimate goal is a redesign for the next phase of the program. The redesign will take into account the lessons learned from the first four years of HIP, and the barriers, benefits, and motivators of the new target audience (large lawn and shoreline properties in both the City and County portions of the watershed). County properties will be a target for the next phase, as will properties that abut various streams. One reason for the shoreline property focus is that it is not possible to develop public stormwater treatment facilities for these properties since they drain right to the lake. Topics explored in the research include program messaging, permitting process, attitudes regarding Lake Whatcom, and business engagement (landscape designers and contractors).

Phone and on-line surveys of program participants were conducted, as were three focus groups. All of the focus groups discussed barriers to participation as well as motivators, with the second and third groups also providing feedback on outreach materials. The focus groups consisted of members of the target audience, with the last group being composed solely of shoreline area residents. Some findings of the research to date include:

- Existing resources are not adequate to sustain the program given its current design
- There is a need to target participants with properties having the largest phosphorus contribution (e.g. large lawn and shoreline)
- Additional up-front work with contractors and designers will ensure that projects are buildable
- There is a need to simplify program materials and the permitting process
- Cost is a barrier to participants
- Motivators to participation include reimbursement, support from staff, and landscape improvements
- Potential participants want control over selecting a project designer and contractor.

A revised program will be piloted and fine-tuned before it is implemented more broadly. This topic will come back to the Policy Group for additional discussion with a focus on obtaining feedback on future program design.

3. Septic issues in the watershed

Representatives and consultants of the Lake Whatcom Water and Sewer District presented information on a septic project they are considering. Residents with existing septic systems have approached the District with an interest in hooking up to sewer service. The District has identified one particular area on the eastern part of the lake along Northshore Road where service could be extended to existing properties. These properties have neither water nor sewer service, and many are located directly on the lake shore. About half of these properties are on wells, with the remainder likely drawing their water directly from the lake. The cost-benefit analysis of Lake Whatcom measures conducted by Ch2M Hill indicated that conversion of septic ranked 8th highest in cost-benefit ratio. Case studies have shown that failing septic systems elsewhere have caused pollution in some instances, such as in Whitefish Lake in Montana and the Spokane River. Locally, vacation rentals on Lake Whatcom may result in more people than existing septic systems are designed to handle.

To extend septic, the state Growth Management Act (GMA) allows for two pathways. One is creation of a Limited Area of More Intense Rural Development (LAMIRD). This path can be justified if most of an area was developed before 1990. In this instance, 54 out of 98 residential properties were developed before that date. There are an additional 28 buildable properties in the zone under consideration. Second, there can be a health and safety exemption, especially if systems are failing and there is pollution.

According to preliminary analysis, there are a wide variety of septic system types in the zone. According to County Health Department staff, some of these would not be allowed to be built under current standards. Out of 94 systems inspected since 2009, 20 were inspected by homeowners. The County inspection program allows homeowners to self-inspect systems under some circumstances, but quality control audits indicate that about 10 percent of participants do not complete the work they say they will. Conversely, if septic systems are properly designed and maintained they do not present a pollution problem. The current inspection program is focused on other areas with pollution issues, such as Drayton Harbor and Portage Bay.

Research techniques to identify septic pollution and its sources are improving. One approach tracks optical brighteners used in detergents in the water, with follow-up sampling done to further narrow down sources. The District has issued an RFQ to seek out firms with appropriate expertise for this type of research.

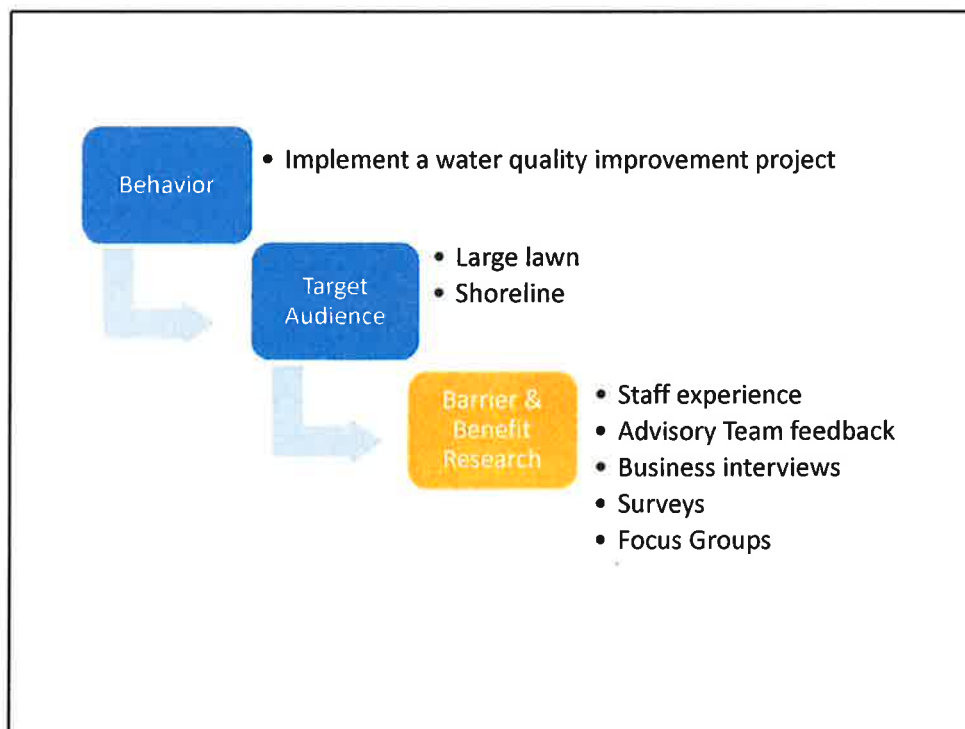
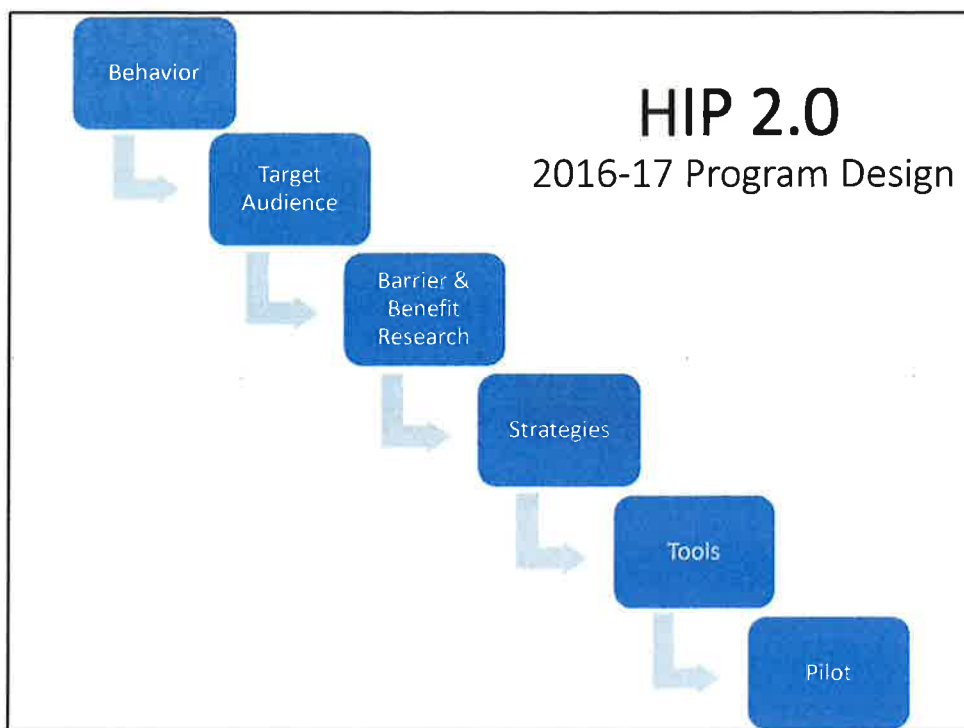
The District wishes to partner with the County and other jurisdictions for future research. The County Department of Health will assist but does not have the resources for water sampling.

4. Topics for next meeting

Program options for the Homeowner Incentive Program will be discussed at the next meeting.

Upcoming Meetings:

Lake Whatcom Policy Group, May 23, 2016, 3:00 PM, Fireplace Room, 625 Halleck Street.



Barrier & Benefit Research

- Staff experience
- Advisory Team feedback
- Business interviews
- Surveys
- Focus Groups

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Survey Profiles

- **Phone Survey**

Participants in HIP.

Mid-program adjustments where permissible under grant.

- **Follow-up Survey**

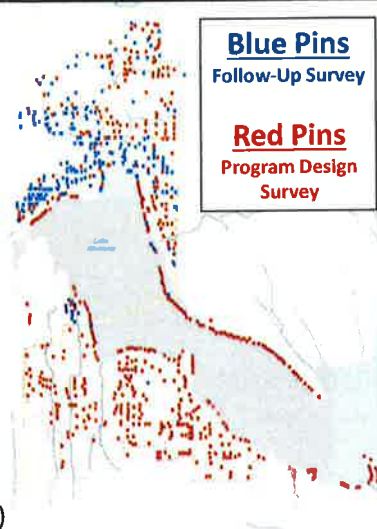
Residents that participated in HIP.

Feedback, effectiveness, level of concern, level of support, barriers, motivators.

- **Program Design Survey**

Residents that live on high-impact lot types (e.g. large lawns, shorelines, large impervious surfaces) – target audience.

Level of concern, support, awareness, preferences, barriers and motivators.



Barrier & Benefit Research

- Staff experience
- Advisory Team feedback
- Business interviews
- Surveys
- **Focus Groups**

Focus Groups Profile

- FG #1

High-priority property owners in both City and County portion of watershed, located in both upland and shoreline areas.

Explored general barriers and motivators to potentially participating in the HIP.

- FG #2

High-priority property owners in both City and County portion of watershed, located in both upland and shoreline areas.

Barriers and motivators, and specifically sought feedback on draft program materials.

- FG #3

Shoreline only residents.

Barriers and motivators, and specifically sought feedback on draft program materials.

Barrier & Benefit Research Summary

Staff Experience

- Existing HIP resources and process not adequate to meet demand nor sustainable.
- Targeting and refining offerings will lead to best bang-for-buck, reduce effort on low-reward/high-cost options, maximize available funds.
- Contractors and Designers who are not informed about program produce non-permittable, non-functional designs and projects that sometimes contain components that violate codes.

Advisory Team Feedback

- Create online interface for interested HIP participants
- Create new, simplified incentive structure
- Simplify outreach materials

Barrier & Benefit Research Summary

Business Interviews

- Contractors and designers report confusion and frustration from homeowners when project doesn't meet particular aesthetic or fall within budget.
- Confusion with incentive dollars.

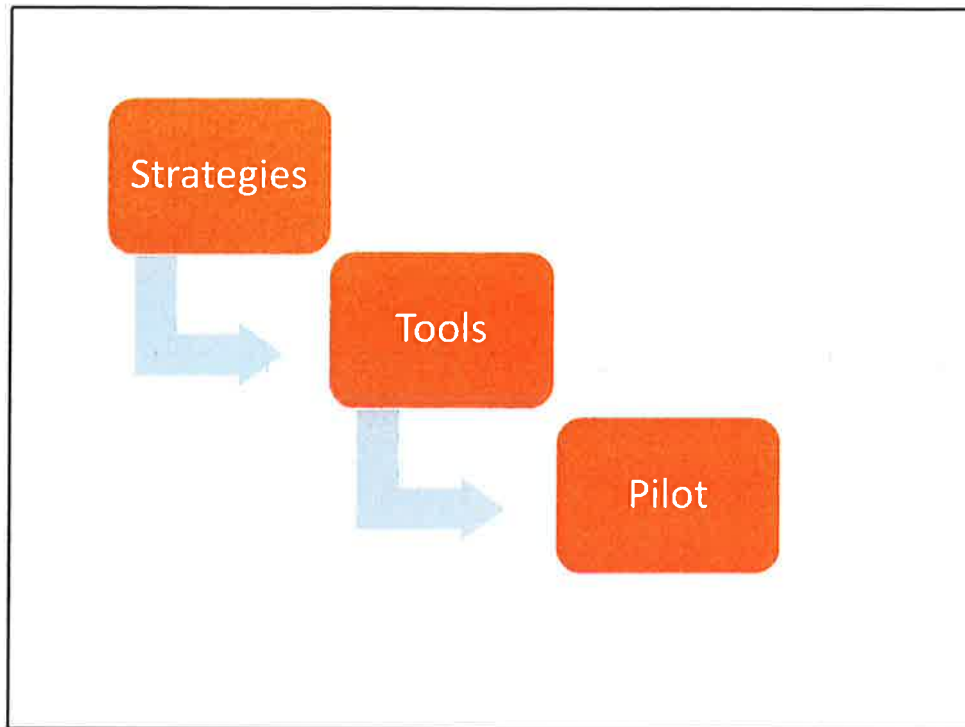
Surveys

- Cost of improvement projects is a barrier—this was reason for both property owners that did implement projects and those that didn't.
- Biggest motivators for implementing a project are financial reimbursement, information on how to make changes, and water quality impacts on family health, fish & wildlife.
- Biggest benefit was increased knowledge, support from HIP staff, improved landscaping.

Barrier & Benefit Research Summary

Focus Groups

- Protecting & enjoying Lake Whatcom is important to residents.
- Grass is an important feature that residents want in their yards.
- Residents are leery of government programs.
- Program options that allow them control over their own yards, choice, and less government intervention were the most preferred.



Strategies

- Staff incorporating B&B results to revise
 - Outreach
 - Messaging
 - Permitting
- Input needed from LWPG group on
 - Reimbursement
 - New program name?



Lake Whatcom Policy Group

May 23, 2016 Meeting

Brief Digest of Presentations and Discussion

Policy Group members in attendance: Carl Weimer, Todd Donovan (Whatcom County Council); Bruce Ford (Lake Whatcom Water and Sewer District Board); Dan Hammill (Bellingham City Council); Larry Brown (Sudden Valley Community Association). Other Council or Board members present: Todd Citron, Curtis Casey (Lake Whatcom Water and Sewer District Board); Michael Lilliquist, April Barker (Bellingham City Council).

1. Program options for the Homeowner Incentive Program

This topic was a follow-up to last month's presentation on research to identify ways to improve the Homeowner Incentive Program (HIP). Staff provided a brief recap of HIP 1, the current program: It was a voluntary program; it was focused on Basin 1, primarily City of Bellingham properties; subsidies were based on percent of property treated, not on the square footage of the area treated to remove phosphorus. Cumulatively from 2011 through 2015, the program conducted 283 site visits, and 180 homeowners completed projects involving a total of 422 phosphorus control best practices. This year is a transition year, with properties participating in retrofits under the original program structure, but in 2017 new program features will be implemented. These new features are informed by the results of an extensive research project involving documentation of staff experience, information from focus groups and surveys of participants and prospective participants, consultation with businesses, and discussion with an advisory team. Research revealed barriers to program participation as well as benefits to the public of various approaches. Common barriers include site suitability, concern over allowed designs, cost to the homeowner, permitting or construction complexity, distrust of government, and confusing messaging.

Major changes for the next phase of the program include an expansion of the program to also include properties draining to Basin 2 of the lake, with properties in County jurisdiction now making up the majority of properties to be treated. The program will have two tiers, with the largest incentives available to properties removing the greatest amount of phosphorus -- properties directly facing the lake; those that drain directly into creeks; and, those with large lawns. Highest priority properties -- Tier 1 - will have an incentive tied to the square footage of areas treated, with larger treatments garnering higher levels of subsidy. Many of these properties cannot be treated with public stormwater systems because of their location. A second tier of properties will be allowed to participate under parameters similar to the current program.

Outreach and communications about the program will shift from staff to a community partner, not yet selected. This will free up staff time and shift communications toward a trusted messenger already familiar to lake residents. Design and construction contractors will also provide information about the program. There will also be an expansion of available contractors, and staff will create a list of approved contractors to assist with quality control. Templates of approved project designs will also be created. The number of phosphorus control practices sanctioned under the program will be reduced to those that have the largest potential for phosphorus control, and are easy to understand, communicate, design, and permit. Broad categories of treatment include the following: native landscaping; pollution filters; dispersion of stormwater onto property; and, shoreline solutions. The proposed incentive is \$1 per square foot of land that is treated for

phosphorus removal.

Tier 1 includes one-quarter of all properties, but those properties contain half of the phosphorus needing to be controlled. Targeted properties include an estimated 265 shoreline properties, 189 creekside properties, and 197 large-lawn properties.

For final program design, staff are requesting feedback from policymakers on the following:

- What should the final incentive amount be?
- Should there be a cap on subsidies per property?
- What should the maintenance and inspection requirements for treated properties be?

Policy Group members and staff discussed these program changes. It was mentioned that property owners may be leery of future monitoring requirements, but this will be a requirement to meet the Department of Ecology's TMDL. In addition, since public dollars are going to these projects there needs to be a guarantee that they will remain effective in removing phosphorus.

A cost-benefit analysis conducted by Ch2M Hill indicated that homeowner retrofits are among the most cost-effective programs. However, right now, the costs of future monitoring are not built into the project budget. This will need to be further detailed to understand the full costs of the program. Also, policymakers need information on expected budgeted dollars, including an expanded County contribution, before they can discuss incentive payments and caps.

Policy makers also discussed whether there should be some social incentive built into the program, including for those who participate voluntarily and do not request a subsidy. The current design assumes that people only make changes to contain phosphorus because they are being paid to do so. Also, it was noted that the jurisdictions could require that certain levels of controls be achieved on every property. Right now, there are monetary incentives to participate, but in the future these may not be available.

Staff will bring back specific program options and associated cost information to the next meeting of the Policy Group. Staff will also brief the individual legislative bodies of the jurisdictions.

2. Phosphorus and Stormwater Mitigation Methods for Sudden Valley Residential Lots

In 2013, Whatcom County adopted the Lake Whatcom Watershed Overlay District (WCC 20.51.420), and in that declared that new development must not result in any increase in phosphorus flowing into the lake. The portion of the code setting out the overlay district also allowed the Sudden Valley Community Association to propose ways of achieving this standard on individual and community-owned properties, subject to approval by Whatcom County. Sudden Valley has retained Wilson Engineering to develop a manual from which homeowners and/or their contractors can select appropriate, pre-engineered solutions to achieve phosphorus neutrality. These plans do not require an engineer's stamp but must still be approved and permitted by the County. The County is currently considering entering into a Memorandum of Agreement with the Association that would approve these methods of achieving phosphorus control. Some properties, such as those with very steep slopes, may not qualify for these approaches and will require engineered methods.

Development in Sudden Valley currently has some characteristics that assist with phosphorus control. These include open space requirements for individual lots,

stormwater detention pits, and green belts and parks that help disperse runoff. Undeveloped areas have increased as a result of the Association's density reduction program, which reduced 4,400 developable properties to 3,100. The community is also proceeding with its own stormwater control measures, including a forestry management plan, phosphorus management at the golf course, and maintenance of roads and culverts.

One example of an approved template for treatment is a dispersion system underneath permeable pavement on a driveway. A spreadsheet will be made available to calculate whether specific methods on specific properties will achieve the required level of phosphorus control. Sudden Valley common properties can also be used as areas for dispersion, and groups of residents can petition the Sudden Valley board to be allowed to complete a project encompassing more than one property to achieve necessary levels of control. An annual inspection form will be required of homeowners each fall, to be collected by Sudden Valley, which will provide copies to Whatcom County. The proposed memorandum and accompanying methods will be presented to the County Council in June for possible approval.

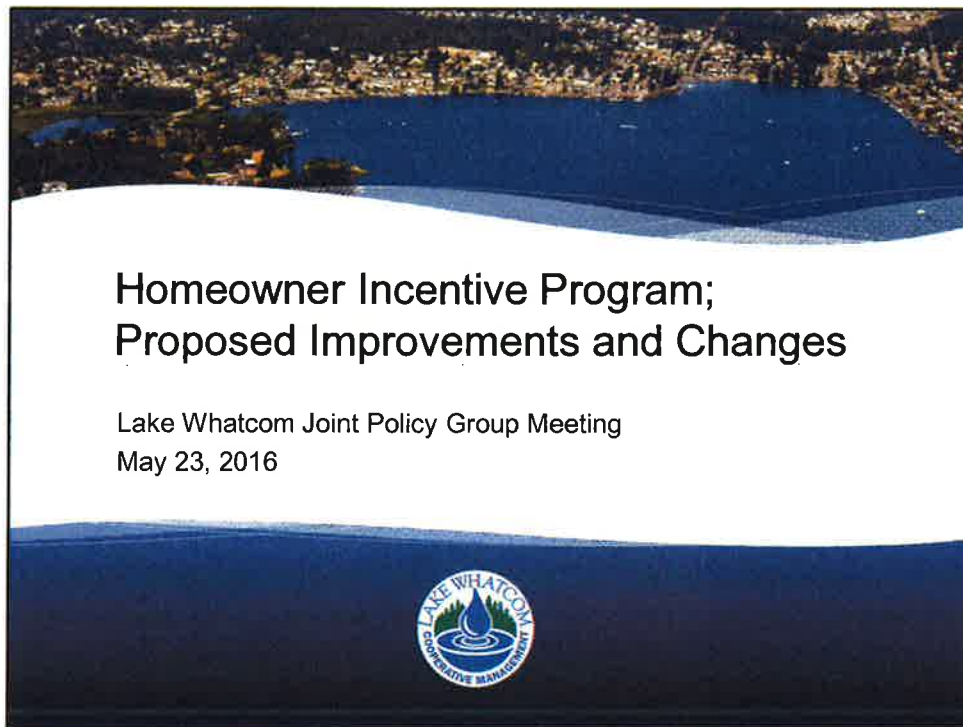
3. Topics for next meeting

The following topics will be discussed at next month's meeting:

- Specific program design options for HIP
- Update on the Transfer of Development Rights (TDR) program
- Presentation of annual Residential Build-Out report

Upcoming Meetings:

Lake Whatcom Policy Group, June 13, 2016, 3:00 PM, Fireplace Room, 625 Halleck Street.



Introductions

Eli Mackiewicz, Engineering Technician
City of Bellingham – Natural Resources
emackiewicz@cob.org

Ingrid Enschede, Education and Outreach Program Specialist
Whatcom County – Natural Resources
iensched@co.whatcom.wa.us

Anitra Accetturo, Program Coordinator
City of Bellingham – Natural Resources
aaccetturo@cob.org

Outline

- Background
- Proposed Program Changes
 - Questions
- Policy Group Guidance Discussion

3

Homeowner Incentive Program (HIP 1)

A Primer

Who : Owners of single-family homes in Lake Whatcom Watershed

What : Technical and financial support toward watershed-friendly projects

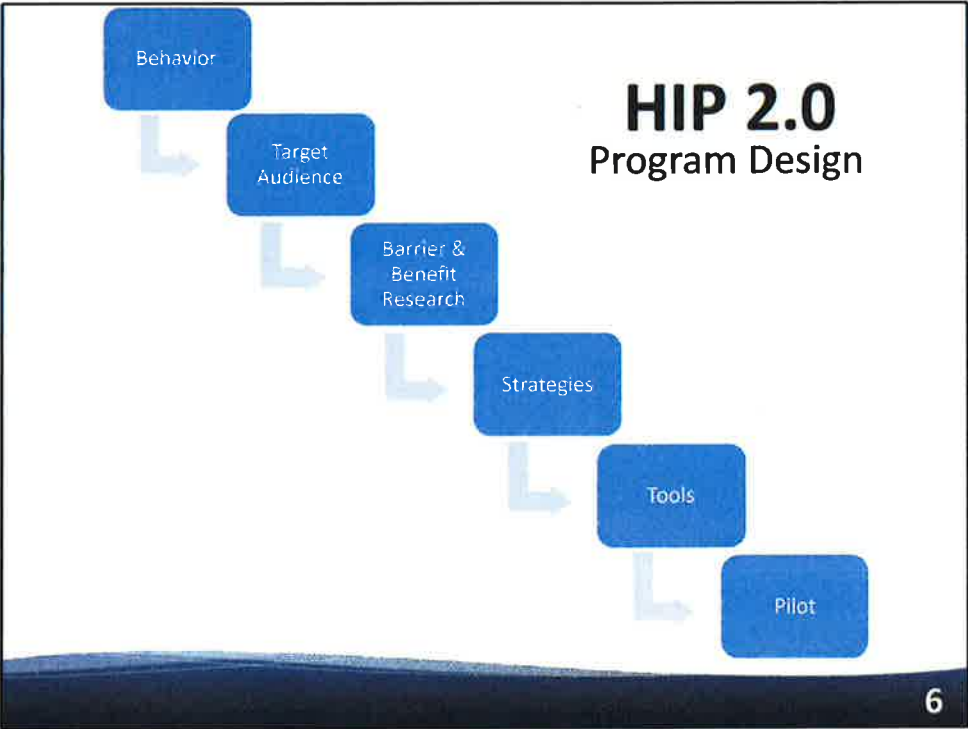
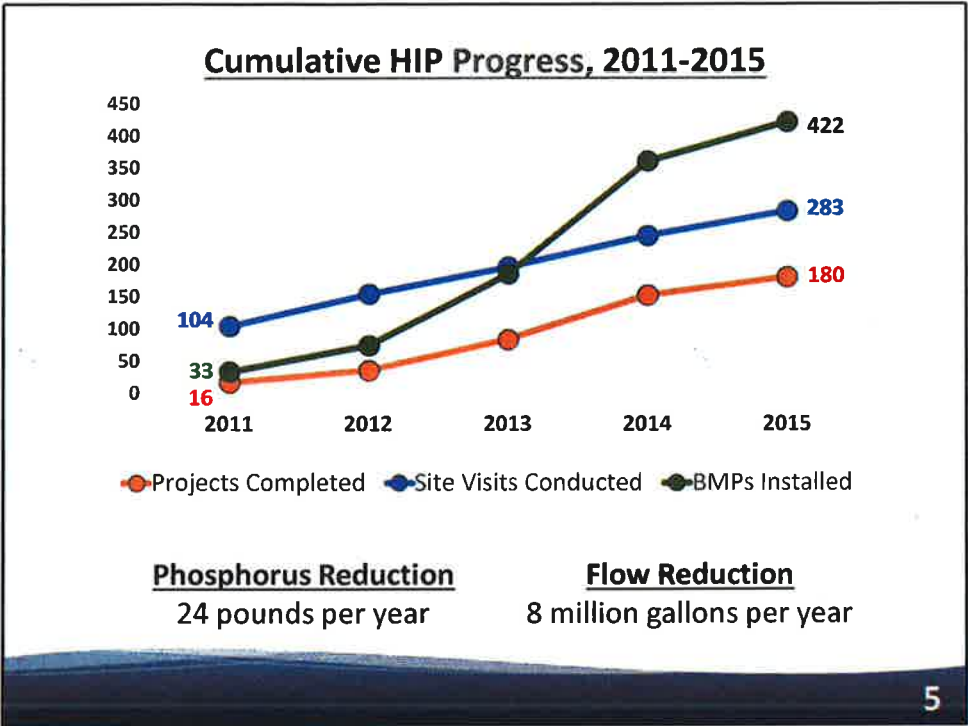
Where : City and County Areas in Basin 1 of Lake Whatcom Watershed

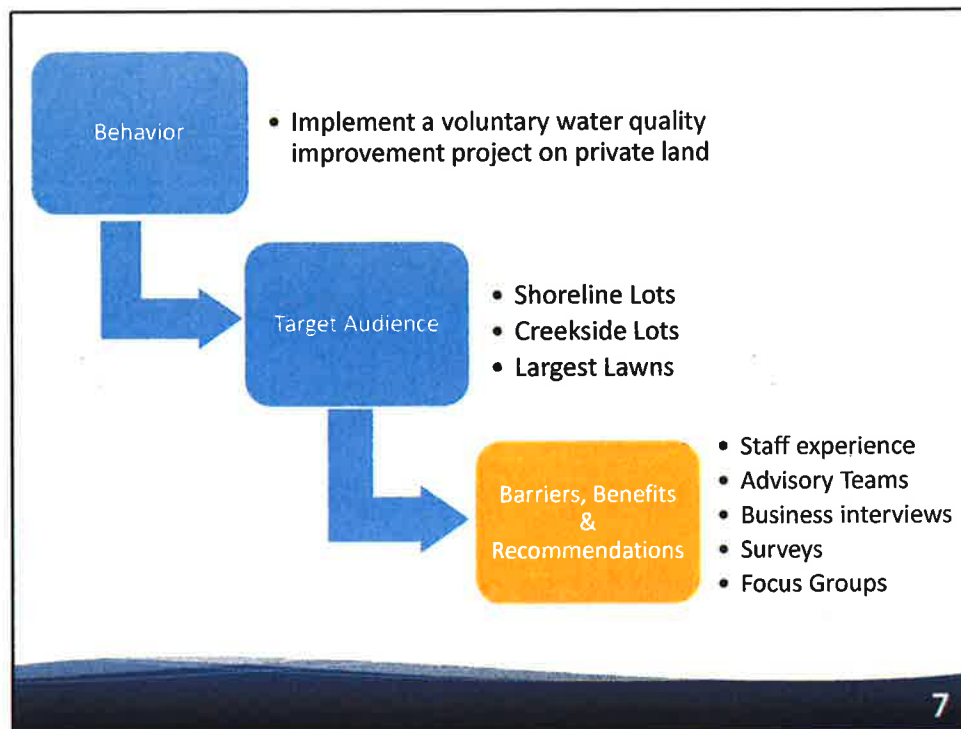
When : January, 2011 – Current (2016 is transition year)

Why : To achieve voluntary water quality improvements on private properties

How : That's a long and detailed story for another time...

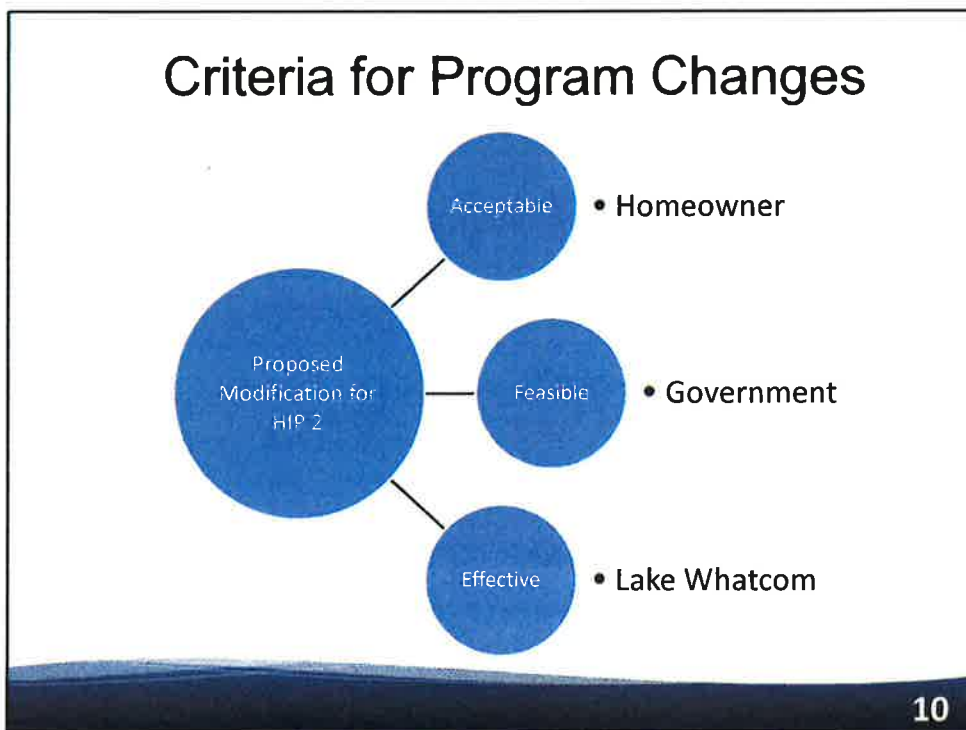
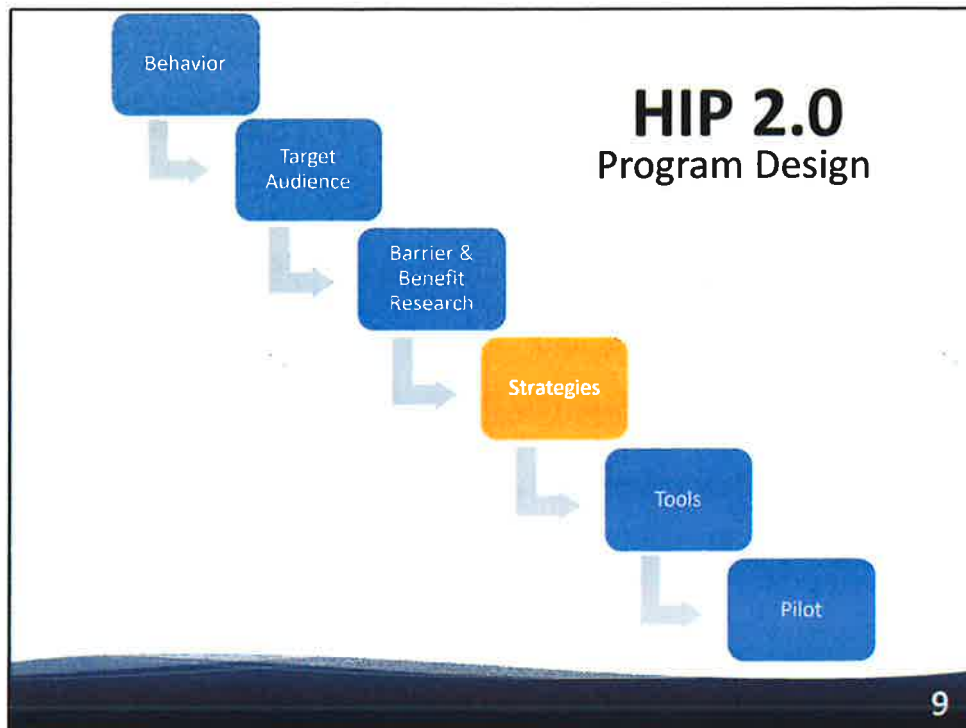
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Common Barriers

- Site Suitability
 - Project Acceptance
 - Cost
 - Permitting Complexity
 - Construction Complexity
 - Distrust of Government
 - Messaging
- 8



Proposed Program Changes

1. Expand Program to New Areas
2. Change Messenger ("Face" of HIP)
3. Simplify Projects
4. Certify Private Designers/Contractors
5. Focus Incentive on Highest Impact
6. Revise Incentive Structure

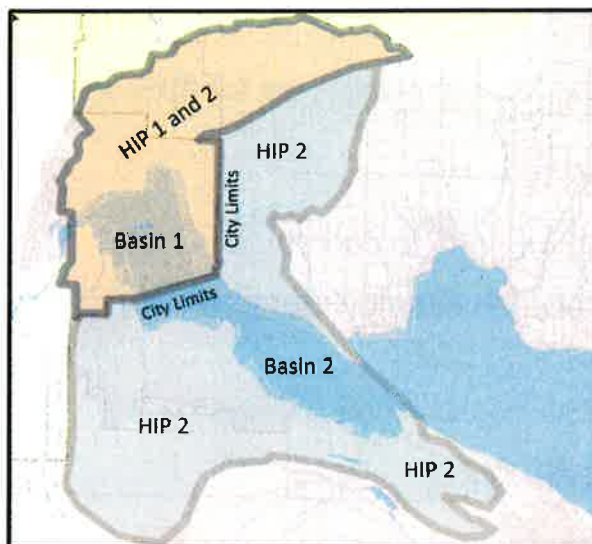
11

Change #1 – Expand Program

- Enlarge geographic boundaries to increase number of eligible participants
- Post-grant, program has expanded to all Basin 1 and Basin 2 areas

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Map 1: HIP 1 Area vs HIP 2 Area



HIP 1 (2011-2015)

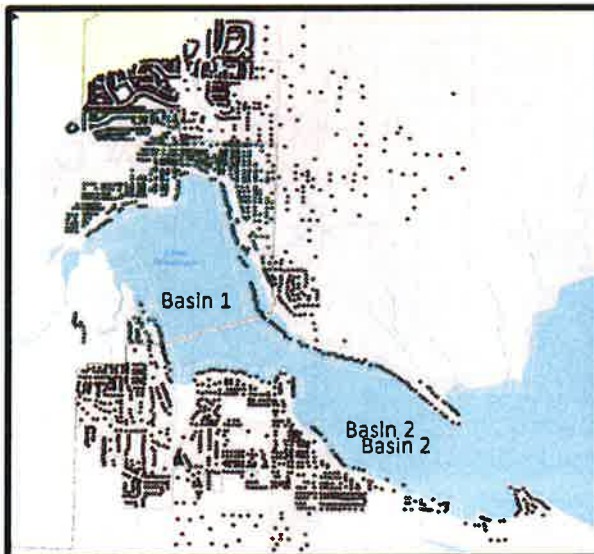
1,300 eligible properties
Basin 1 Only
800 City + 500 in County

HIP 2

2,600 eligible properties
Basins 1 and 2
800 City + 1,800 in County

13

Map 2: Single Family Homes by Jurisdiction – Basins 1 and 2



City (All Basin 1)

818 Single-Family Homes

County (B1 and B2)

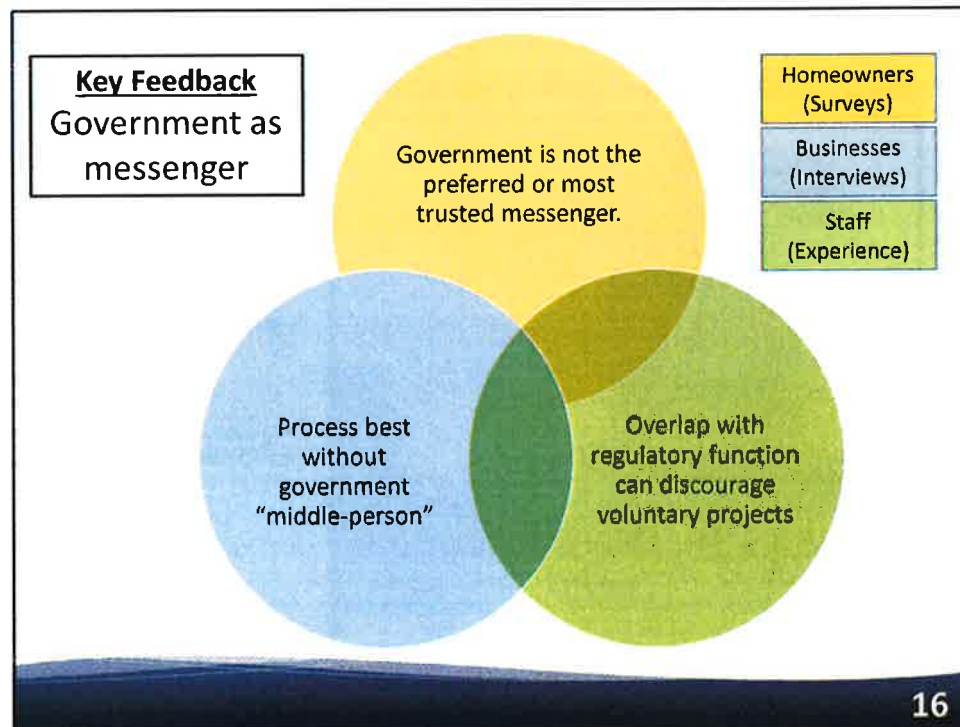
1,810 Single-Family Homes

14

Change #2 – Third-Party Messenger

- Currently, communications account for 40% of staff time invested in HIP
- Contract with third-party to coordinate connections between homeowner, government, designers, and contractors.
 - The “face” of the program would no longer be government staff member.

15



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How much do you trust the following organizations when it comes to getting information about how home improvement projects can help protect the water quality in Lake Whatcom?

	Don't know		1 - would not trust at all		2		3		4		5		6		7 - would trust completely	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
WSU Extension Master Gardeners	49	28%	21	6.7%	11	3.5%	15	4.2%	32	18%	53	17%	77	25%	57	19%
Sustainable Connections	86	32%	35	12%	15	5.8%	9	3.1%	17	6.8%	51	18%	48	17%	47	16%
Building Industry Association of Whatcom County	79	23%	43	18%	36	12%	41	15%	64	18%	31	10%	20	6.5%	21	6.3%
Whatcom County	40	13%	41	13%	23	7.4%	31	10%	62	20%	89	19%	35	11%	18	5.8%
City of Bellevue	36	13%	51	17%	20	6.5%	33	11%	55	18%	90	16%	36	12%	11	3.4%
Whatcom Conservation District	62	11%	40	14%	19	6.3%	15	4.9%	42	14%	43	14%	56	16%	72	13%
Nooksack Salmon Enhancement Association	31	2.7%	34	11%	21	6.3%	15	5.2%	41	13%	58	17%	29	11%	48	16%
Local colleges	19	13%	55	13%	22	7.3%	13	5.0%	50	17%	41	14%	59	18%	26	8.2%
Homeowner Incentive Program	30	10%	27	5.2%	11	3.7%	11	3.4%	38	12%	51	17%	42	14%	33	11%

1 in 3 respondents rate trust in City/County as "3" or lower.

17

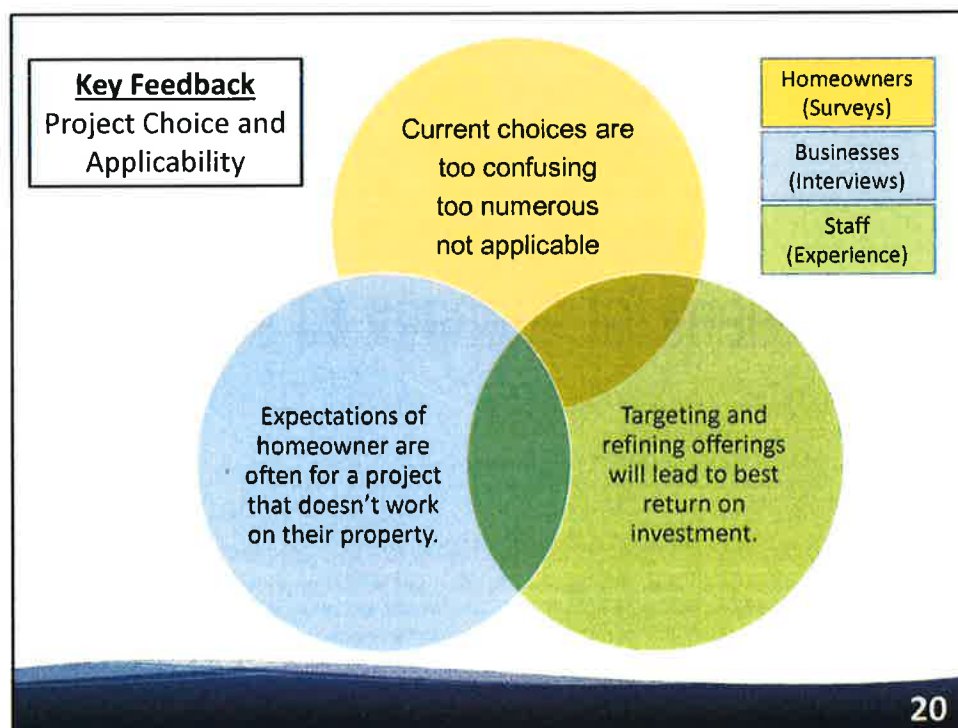
Questions for changes #1 and #2?

18

Change #3 – Streamline Best Management Practices (BMPs)

- Simplifying choices results in better communication and increased understanding (and buy-in)
- Many BMPs can result in phosphorus reductions, but some are much more effective
- Very expensive BMPs that don't reduce P by much result in low Return on Investment (ROI)

19



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Streamline BMP Categories

BMP Specific Types
Native Planting
Infiltration Trench
Rainwater Harvesting and Re-Use
Permeable Paving
Impervious Surface Removal
Bioretention
Eroding Slope Mitigation
Impervious Surface Dispersion
Sand Filter
Invasive Species Removal
Riparian Buffer Planting
Vegetated Berm
Shoreline Restoration
Sheet Flow Dispersion
Compost-Amended Soil Installation
Media Filter Drain

- Native Landscaping
- Pollution Filters
- Natural Drainage (Dispersion)
- Shoreline Solutions

21

Streamline BMP Categories

BMP Specific Types
Native Planting
Infiltration Trench
Rainwater Harvesting and Re-Use
Permeable Paving
Impervious Surface Removal
Bioretention
Eroding Slope Mitigation
Impervious Surface Dispersion
Sand Filter
Invasive Species Removal
Riparian Buffer Planting
Vegetated Berm
Shoreline Restoration
Sheet Flow Dispersion
Compost-Amended Soil Installation
Media Filter Drain

Native Landscaping



22

Streamline BMP Categories

BMP Specific Types
Native Planting
Infiltration Trench
Rainwater Harvesting and Re-Use
Permeable Paving
Impervious Surface Removal
Bioretention
Eroding Slope Mitigation
Impervious Surface Dispersion
Sand Filter
Invasive Species Removal
Riparian Buffer Planting
Vegetated Berm
Shoreline Restoration
Sheet Flow Dispersion
Compost-Amended Soil Installation
Media Filter Drain

Pollution filters



23

Streamline BMP Categories

BMP Specific Types
Native Planting
Infiltration Trench
Rainwater Harvesting and Re-Use
Permeable Paving
Impervious Surface Removal
Bioretention
Eroding Slope Mitigation
Impervious Surface Dispersion
Sand Filter
Invasive Species Removal
Riparian Buffer Planting
Vegetated Berm
Shoreline Restoration
Sheet Flow Dispersion
Compost-Amended Soil Installation
Media Filter Drain

Natural drainage



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Streamline BMP Categories

BMP Specific Types
Native Planting
Infiltration Trench
Rainwater Harvesting and Re-Use
Permeable Paving
Impervious Surface Removal
Bioretention
Eroding Slope Mitigation
Impervious Surface Dispersion
Sand Filter
Invasive Species Removal
Riparian Buffer Planting
Vegetated Berm
Shoreline Restoration
Sheet Flow Dispersion
Compost-Amended Soil Installation
Media Filter Drain

Shoreline Solutions

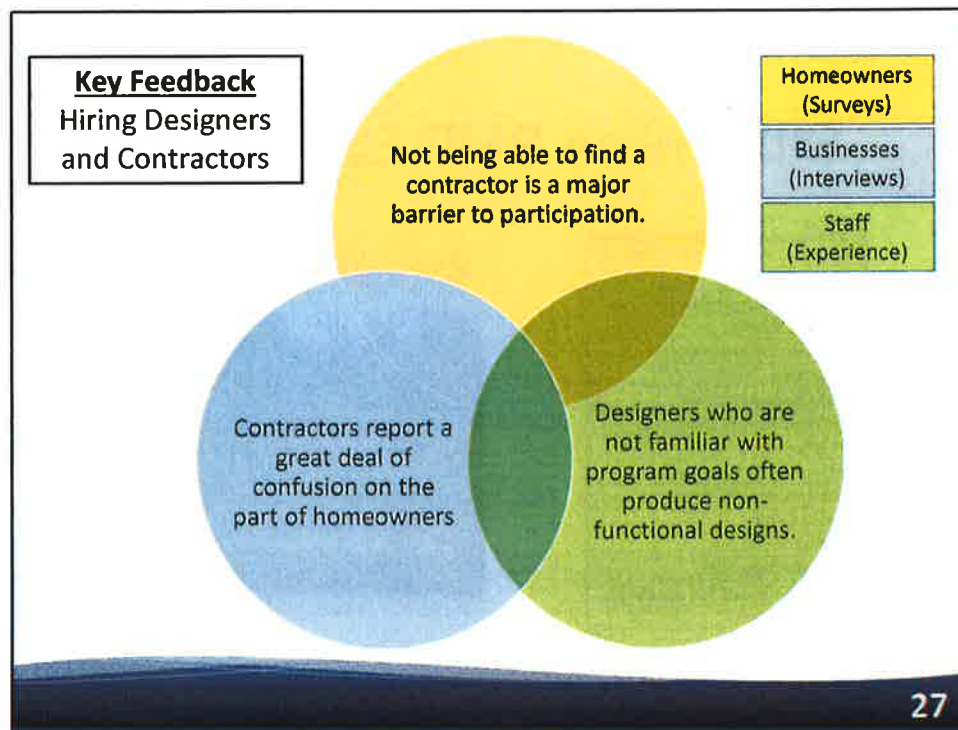


25

Change #4 – Certify Professionals

- Design, permitting, and construction management represented 40% of staff time invested in HIP 1
- Professionals could market the program to customers if given the right tools and training

26



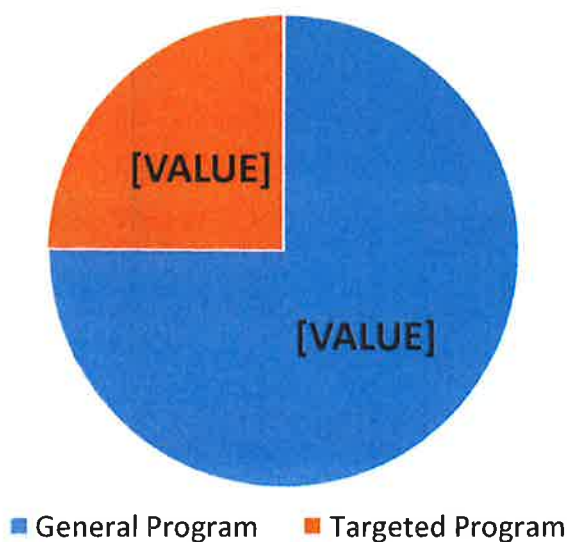
Questions for changes #3 and #4?

Change #5 – Prioritize Properties

- Lots differ in the way, and scale, in which they impact water quality
- Limited resources should be focused on best return on investment
- Facilitating large-scale projects on priority properties necessitates a higher level-of-service than in HIP 1

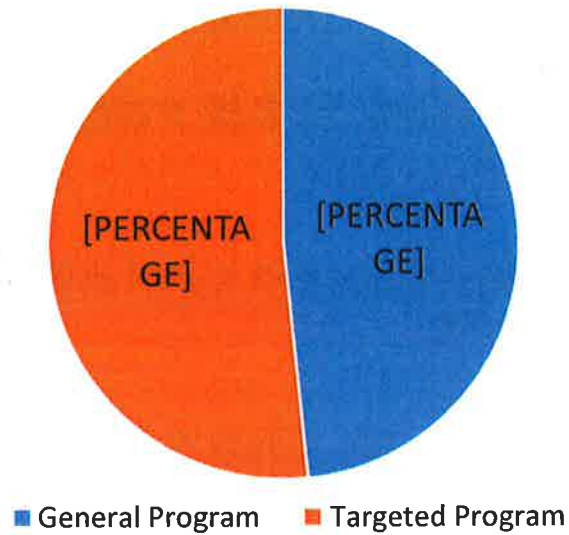
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Total Number of Properties in Basins 1 & 2



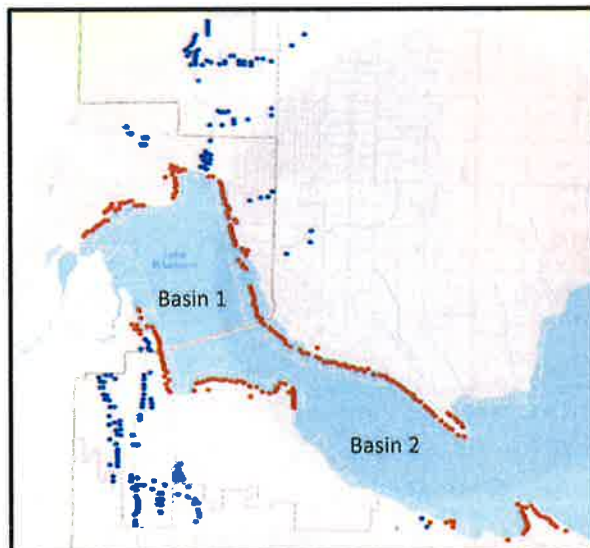
30

Phosphorus Impact of Targeted Properties



31

Map 3: Focus on Shoreline and Creekside Properties



Red Dots

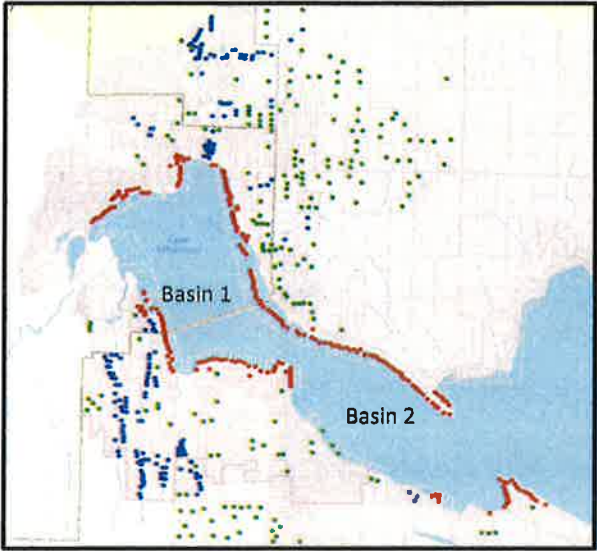
265 Shoreline Properties
~70 developed acres

Blue Dots

189 Creekside Lots
~60 developed acres

32

Map 4: Full Target (High-Priority) Audience

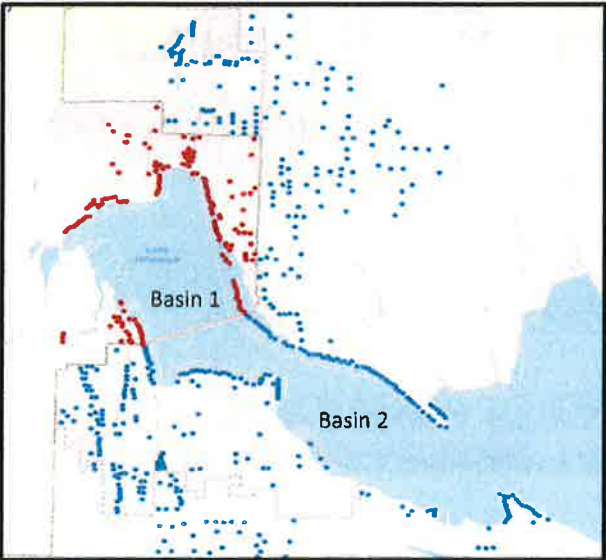


Green Dots

197 "Large Lawn" Properties
($>10,000\text{ft}^2$ lawn area)

~200 developed acres
Capital treatment $<30\%$

Map 5: City Target vs County Target



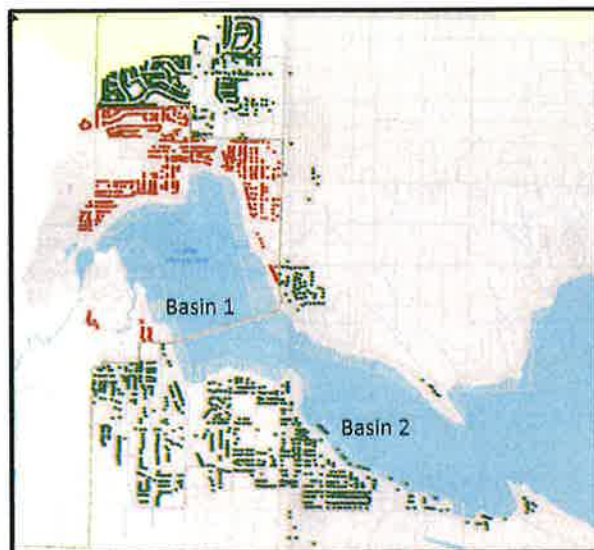
Inside City Limits

175 High-priority properties

In County Areas

480 High-priority properties

Map 6: General Program

**Inside City Limits**

640 Other Properties

In County Areas

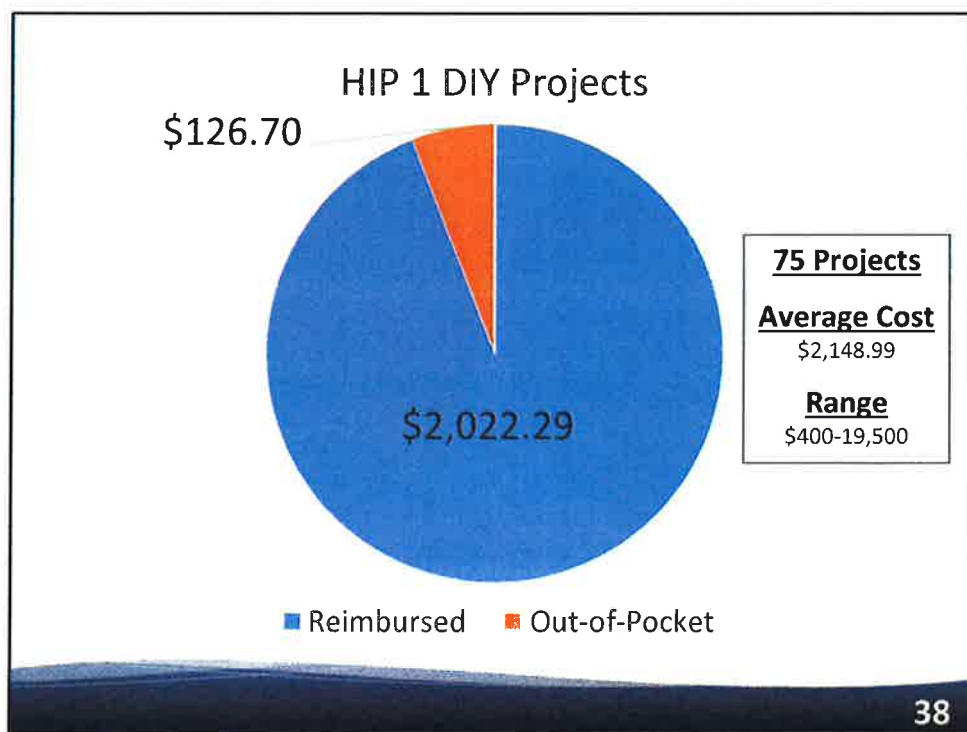
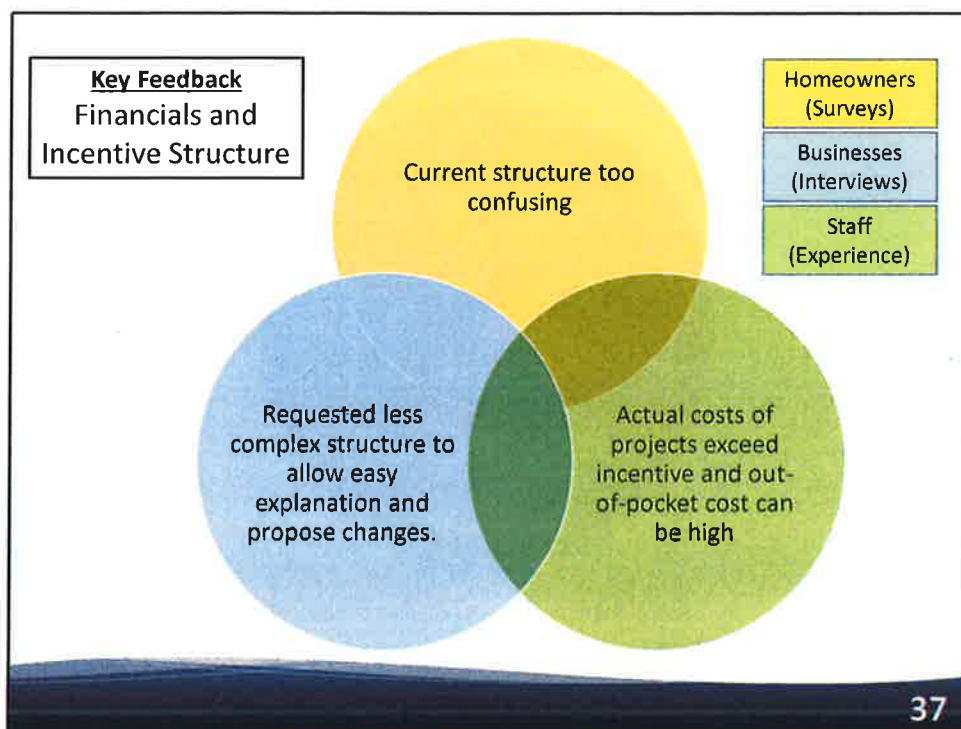
1,330 Other Properties

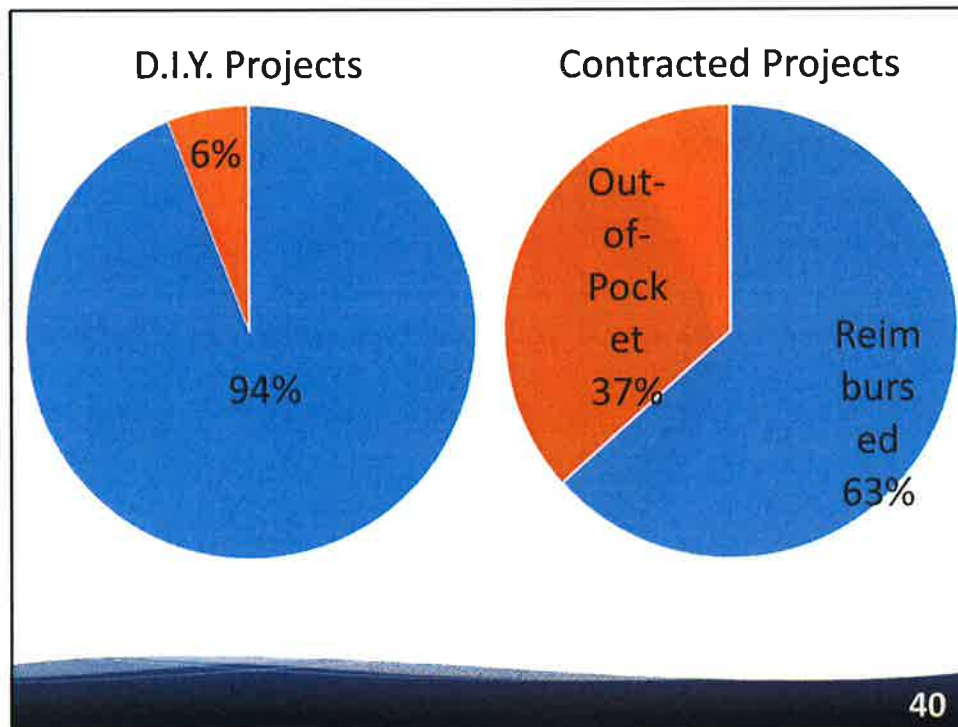
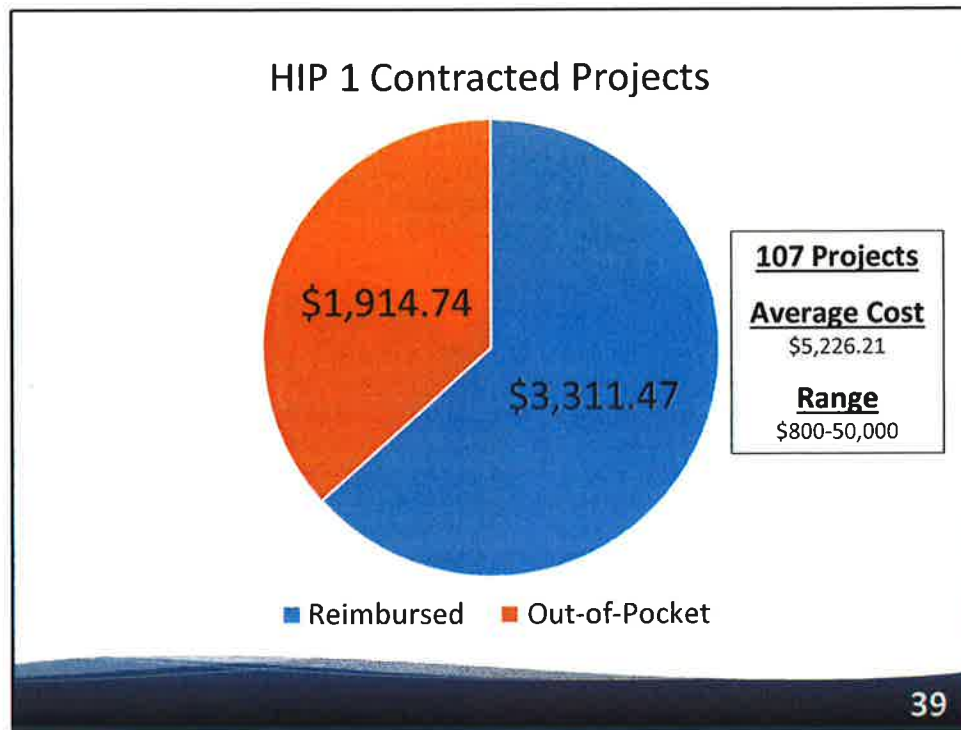
35

Change #6 – Revise Incentive

- More than 80% of survey respondents indicated that cost of project was #1 barrier
- Incentive structure was based on % of property improved, without consideration of size
- Clearer incentive can be more accurately explained to homeowners, designers, contractors, and the public

36





Propose \$1 per square foot

By Mean (HIP 1 Cost)

D.I.Y. Projects

\$0.70/sf

Contracted Projects

\$1.30/sf

Average

\$1.00/sf

By Pound of P

Cost of HIP 1 per LbP

~~\$39,500/lbP~~

Annual P Load per Acre

~~1.08 lbP/ac/yr~~

Square Feet per Acre

43,560ft²

\$/ft² = \$0.98

41

Policy Group Decisions

- Consider increasing incentive amount (quantity of projects vs. quality of projects)
- Determine cap (if any) of individual awards
- Discuss maintenance and documentation requirements / enforcement

42

Contact

Presented by:

Clare Fogelsong, City of Bellingham – Natural Resources, cfogelsong@cob.org

Renee LaCroix, City of Bellingham – Natural Resources, rlacroix@cob.org

Gary Stoyka, Whatcom County – Natural Resources, GStoyka@co.whatcom.wa.us





Lake Whatcom Policy Group

June 13, 2016 Meeting

Brief Digest of Presentations and Discussion

Policy Group members in attendance: Carl Weimer (Whatcom County Council); Bruce Ford (Lake Whatcom Water and Sewer District Board); Dan Hammill (Bellingham City Council). Other Council or Board members present: Todd Citron (Lake Whatcom Water and Sewer District Board); April Barker (Bellingham City Council).

1. Specific program design options for the Homeowner Incentive Program (HIP)

Staff provided context to the HIP program and reviewed recent discussions. Efforts to respond to the TMDL and reduce the phosphorus load entering the lake include development regulations, outreach and education, land acquisition and two types of stormwater projects. Stormwater capital projects are built on public land with public dollars, and HIP projects are built on privately owned properties with a public and private cost share strategy. Both capital projects and HIP projects have the same objective of reducing the phosphorus entering the lake.

The first version of the program (HIP 1) was grant funded and operated in a concentrated geographical area on the north end of the lake. The program sought broad homeowner participation, and treated all phosphorus reduction measures equally. Homeowners were expected to make financial contributions to projects, with costs reimbursed after completion up to the \$6000 per property limit. Most of the design work was provided by program staff and there were no formal mechanisms to monitor future performance of projects, although permits require the landowner to maintain the function of any systems or measures.

HIP 2 will build on HIP 1 but differs in several respects. The new program will expand to include large areas of Basin 2, which is mostly in the County. Staff will have more of a coordination role rather than a design role, and there will be expanded involvement of private contractors in design and construction. Quality control will be maintained via design standards and permitting requirements. A more formal method of assuring long-term maintenance and performance of completed projects will be developed. There will be more outreach, and monetary incentives will be enhanced. The program will be limited according to project budget, and staff and contractor capacity.

Staff presented program design options. One issue is whether to have a per-parcel monetary cap on investments. Without a cap, a few large projects could exhaust the annual project budget. Conversely, allowing larger projects could result in the development of projects that provide for the most cost-effective phosphorus reduction. Homeowner financial contribution requirements will effectively result in limits on project size in most instances. Staff are also discussing a minimum threshold of project size to ensure that resources are not wasted in numerous small projects. In addition, the program will have a more formal mechanism for ensuring maintenance of project performance going forward.

Staff recommend that the program have no size cap but should have a minimum project threshold of treating 25% of a property. The 25% threshold could be met by one or two projects, e.g. a driveway draining into a rain garden. Required cost-sharing by the homeowner should be toward the low end, or approximately 10% of total project costs. Reducing cost sharing to 10% would require a reimbursement of approximately \$1.30 per

square foot, on average. Assurances will include access to properties for periodic inspections and a required schedule for maintenance. A specific maintenance agreement will be created for each project.

Annual budgets for the revised HIP program are still being determined but the need to hit a 50 year target for retrofits to meet Department of Ecology's TMDL requirements will help set the annual total. The County is expected to increase its contribution as more of the program activity shifts outside of the City limits. A County Council member is interested in a discussion of requiring phosphorus control measures sometime in the future, and this change could create an incentive toward participation in the current voluntary, incentivized program. There will also be discussions about creating a County stormwater utility that could support the homeowner costs of participating.

Access for periodic inspections would be mandatory to ensure that the public's investment is preserved and is crucial for the Department of Ecology to credit this work toward the TMDL phosphorus reduction goals. Staff have not estimated ongoing maintenance costs for completed residential projects. Maintenance could be performed by the homeowner, an outside contractor, or by the City or County. Requiring homeowner responsibility for future maintenance costs could balance out the large public subsidy proposed for the new program. Additional discussions about final program options and budgets will occur at the various legislative bodies, and a work session will be scheduled soon for the County Council Natural Resources Committee.

2. Presentation of annual Lake Whatcom Residential Build-Out Report

Staff presented the findings of the Lake Whatcom Watershed Annual Build-out Analysis Report. This report is produced every year using the same methodology. It is a gross analysis and uses zoning and parcel size to estimate potential residential capacity. It does not adjust for specific factors such as critical areas that might affect the development potential of particular parcels. Given various factors such as critical areas, steep slopes, or odd lot sizes, about 10% of all lots may be difficult to develop. On the other hand, if lots are consolidated and replatted, additional lots could become available for development.

Any residential lot with \$10,000 or more in value of improvements is considered developed, otherwise it is considered vacant. The analysis looks only at residential lots and removes from the analysis all public lands and anything zoned commercial, including forestry.

There are approximately 17,000 developed residential units across the watershed with the potential for about 1,700 more. Most of the potential units are either in Sudden Valley (648) or in the rural watershed (697), with very few potential units in the City or its UGA. The size of developable lots varies according to location. Most City lots are zoned at one unit per 7,200 square feet whereas lots in the County are commonly zoned for one residential unit per five acres. There has been a slowdown in development since 2010, with a one-year spike in the rural zone during the 2014-2015 period resulting from the conversion of recreational lots into cabins at Wildwood Resort.

3. Update on the Transfer of Development Rights (TDR) program

This program was developed to reduce development potential in the Lake Whatcom watershed by allowing development rights to residential units to be transferred out of the watershed into receiving zones, providing for more dense development in the receiving areas. For example, there is a receiving zone near the north end of the City near Telegraph road, and in several areas of the County, including Birch Bay and in the

Bellingham Urban Growth Area. In practice, very few development rights have been transferred because there has not been enough demand by developers for higher density in the receiving zones. Only one or two developers have utilized the program.

The City has purchased a number of development rights through the land acquisition program, and only a few of these have been extinguished. These could be sold if a market develops, although the City would not want to saturate the market if private demand for development rights becomes established. There is also a purchase of development rights program, and this program has been used to move developable units out of agricultural areas.

The County Council has inserted a new policy in their draft Comprehensive Plan calling for the establishment of a multijurisdictional advisory committee, including the cities, to meet and see if it is possible to restructure and reinvigorate the TDR program.

Upcoming Meetings:

Lake Whatcom Policy Group, July 18, 2016, 3:00 PM, Fireplace Room, 625 Halleck Street.