
NRCS National Water Quality Initiative (NWQI)
Outreach Plan:
Tenmile Watershed



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August, 2018



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EXECUTIVE SUMMARY

The following report is a supplemental document in support of the NRCS National Water Quality Initiative Watershed Assessment completed for the Tenmile Watershed (WCD, 2017), which can be found online at <http://www.whatcomcd.org/tenmile>. The watershed assessment was an exercise in characterizing the physical and land use characteristics of the Tenmile Watershed, and identifying the areas that have the greatest potential for nutrient (nitrogen and phosphorous), sediment, and/or pathogen impacts to water quality (potential *critical source areas*).

The following outreach plan documents specific actions that have occurred to-date to develop and Outreach and Implementation Strategy in the Tenmile Watershed, including a comprehensive social indicator survey of land users in the watershed, landowner focus groups, stakeholder collaboration meetings, and inventories of partner organizations, programs, and resources within the Tenmile Watershed and Whatcom County. This outreach plan identifies strategies and techniques to encourage conservation management practices that reduce the potential impacts to water quality identified in the watershed assessment.

The watershed assessment and outreach plan follow the NRCS 9 Steps of Planning:

1. Identifying the pollutants of concern in the watershed
2. Determining the water quality objectives of the watershed
3. Inventory resources by collecting watershed data
4. Analyze the data via modeling to identify critical source areas
5. Formulate alternatives by suggesting various conservation practices
6. Evaluate/model the impact of different conservation practices on water quality pollutants
7. Work with partners on decision on plans of action for the watershed
8. Implement the Outreach and Implementation plan in the watershed
9. Evaluate the effectiveness of the plan and adapt as necessary to achieve water quality goals

The watershed assessment addresses Steps 1-5. This outreach plan phase of the project addresses Steps 7-8, with Steps 5 and 9 being long-term objectives of the project to be conducted by local partners indelibly.

For more detail on the general process for development of a watershed assessment plan, see the NRCS National Planning Procedures Handbook (NPPH), Subpart F: Area-wise Conservation Planning (NPPH Part 600.50 B. (2)).

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A. BACKGROUND

1. Watershed Planning for the Tenmile Watershed

In 2017, a NWQI Watershed Assessment was developed as a collaboration between Whatcom Conservation District (WCD) and Washington State Natural Resource Conservation Service (NRCS) to identify potential critical source areas (or CSAs) for strategic implementation of land conservation practices for water quality (WCD, 2017). Prior to the watershed assessment, WCD and NRCS conservation practice and plan implementation had been based on landowner engagement, opportunity, and/or regulatory response. A watershed level evaluation had not been performed to create a targeted and strategic outreach effort to focus on both high risk land uses for water quality and the landowners with highest potential of practice adoption.

This 2017 watershed assessment provided a means to identify all land uses in the Tenmile Watershed (HUC-12 watershed level) as well as potential pollution from nitrogen, phosphorous, sediment, and pathogens to surface waters, and the relative effectiveness of different conservation practices to affect water quality improvement. The results of the watershed assessment have been used to develop the outreach plan described in this report. The NRCS National Water Quality Initiative Watershed Assessment completed for the Tenmile Watershed, can be found online at <http://www.whatcomcd.org/tenmile>.

2. Principles of Community Outreach

The key to increasing participation in water quality improvement efforts is to gain an understanding of the community, their association with water quality, how they value that resource and the barriers to adopting behaviors that benefit water quality. Additionally, characterizing the communication channels, who influences adoption of practices, and how information is best disseminated are some primary elements that should be understood for success of a watershed plan. (McKenzie-Mohr, 2011). Yet, this research alone cannot build an effective outreach strategy, involving the community in all aspects of this process helps to inform and develop place-based solutions to meet conservation goals.

Conservation is about behavior change. Often the goal is for landowners to change behaviors or adopt new ones in order to manage resources more sustainably. A variety of perceived barriers- such as limited time, money, or expertise- deter landowners from engaging in desired conservation behaviors.

Research shows that, on their own, mass information campaigns have minimal success in fostering long-term, sustainable behaviors (Rogers, 2003). According to the Diffusion of Innovation Model (Figure 1), only about 16% of people change or adopt new behaviors based on information alone. The majority of people (68%) change or adopt new behaviors when they're provided with some assistance (e.g. incentives, labor) that helps them overcome specific barriers.

Community-based outreach campaigns are an effective method to reach and engage that 68% of people who are willing to change or adopt new behaviors when their needs are addressed. Campaign practitioners work within a targeted geographic area to identify and address landowners' barriers to behavior change.

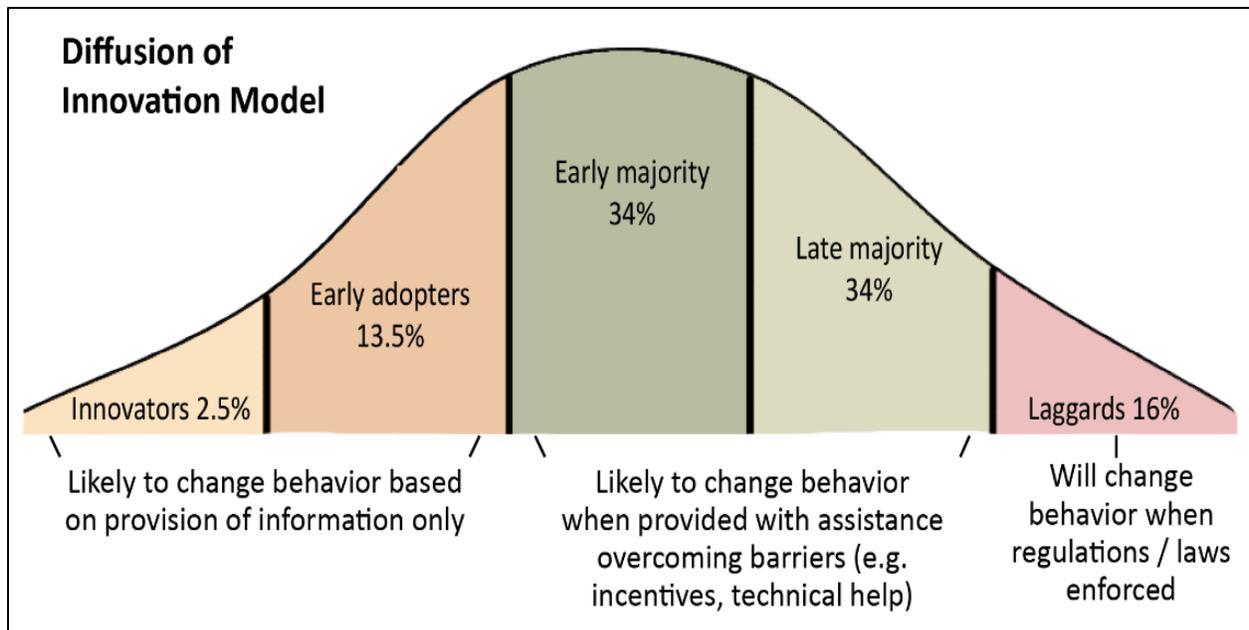


Figure 1. Diffusion of Innovation Model. Adapted from Rogers, 2003 by Laura Johnson, Washington Conservation Commission.

3. Why Social Indicators and Social Marketing?

Decision-makers rely on best available science to inform conservation policies. Conservation practitioners also must rely on best available *social* science to engage landowners with putting those policies into practice on the ground. Around 50% of land in Washington is privately owned, and the state population will top eight million in the next five years (Office of Financial Management, 2017). Private landowners who are actively managing their land, adopting conservation behaviors, and implementing scientifically-proven land management practices will play a critical role in helping Washington State meet its natural resource objectives.

Using best available social science related to behavior change, the community-based social marketing method has helped practitioners around the world make measurable progress toward natural resource objectives. As the name implies, community-based social marketing must be run by a local, community-based entity. It can often be challenging to find or establish an entity that has knowledge of local people, local natural resource issues, and community-based social marketing principles. The Laurel Watershed Improvement District (WID) and the Tenmile Clean Water Project (TCWP) are locally led, community based groups that will aid in the implementation of these strategies. Since these social marketing principles follow a rigorous, science-based strategy, it also can be challenging for local entities to build capacity to follow this method, despite its high return on investment (McKenzie-Mohr, 2011).

The **Marketing Rule of 7** states that a customer needs to “hear” the advertiser's message at least **7** times before they'll take action to buy that product or service. As social marketers, similar rules apply; while there might not be an immediate return on investment from broad radio advertising or an article in the local newspaper, long-term investment in normalizing conversation around water quality will lead to watershed stewardship.

B. OUTREACH STRATEGY OVERVIEW

1. Outreach Goals and Strategy

The Tenmile Watershed Plan has been developed following the best available social science for encouraging sustainable behavior change. The primary goals of this outreach plan are to:

1. Generate broad awareness of water quality issues throughout the watershed, and
2. Enroll land managers with the highest likelihood of participation to develop social norm around conservation behaviors, and
3. Inspire land stewardship and implementation of conservation management practices by landowners located in critical source areas.

This tiered outreach approach follows trusted principles of Community Based Social Marketing (McKenzie-Mohr, 2011) and Social Indicator Planning and Evaluation System (Genskow and Prokopy, 2011). The steps involved are shown below in Figure 2.



Figure 2. Flow diagram of Social Indicator Planning and Evaluation process.

During the pilot watershed assessment phase of this plan, audience and behavior selection was conducted through the Land Cover and Use survey work and identification of potential critical sources areas (CSAs). The characterization of the diversity of land use illustrates the complex social context within which an outreach plan must be developed including: mixed agriculture, rural commercial, and rural residential. Agriculture in the watershed includes dairies, beef cattle, berry (caneberry and blueberry) crops, potatoes, corn, grass hay and silage, pasture, and a small number of orchards, tree nurseries, and vegetable crops. The top four agricultural audiences for targeted outreach have been identified as: Horse owners, Beef/Cattle producers, Dairy producers, and Blueberry and Raspberry growers.

Preliminary barrier and benefit research was accomplished through a series of focus groups designed for the primary agricultural land users in the watershed (Table 1). This information informed the Social Indicator Survey implemented during the fall of 2017. Additionally, the demographics of those land users within a CSA, and associated recommended agricultural best management practices (BMPs), inform the willingness to participate in the various programs by the different land use groups.

There is no defined cultural center for residents of the Tenmile watershed to receive water quality related information or share land management strategies. Therefore, a structured and comprehensive outreach strategy is needed to support the diversity of cultural worldview, socio-economic distribution, and communication differences. In order to understand how this diverse audience receives information, the Social Indicator Survey was built to evaluate the trusted sources of information regarding land management and the preferred methods of communication.

Table 1. Generalization of Social Indicators (values, awareness, barriers, motivators) based on preliminary focus groups (Beef/Cattle, Horse, Berry, Dairy)

Land Use Type	Values	Awareness of Water quality issues	Barriers	Motivators
Beef/Cattle	Family Legacy Pride in feeding the world	High awareness of regulations Don't think water quality is impaired	Time Money	Make me Pay me
Horse	Property Aesthetics Animal Health	Water quality is overall okay to good Other ag sources are the cause of impairment	Physical Ability Time	Pay me Do it for me
Berry	Newer industry Pride in feeding the world	Water quality is overall okay to good Development is the cause of impairment	Need proof that it works	Marketability of product Food safety
Dairy	Family Traditions Family Legacy	High awareness of regulations Know that water quality is impaired	Money Willingness to work with government	Regulation Other industries also taking action

2. Stakeholder Engagement

There are a variety of organizations that are already working on watershed improvement in some capacity within the Tenmile Watershed. The Whatcom Conservation District (WCD) has worked closely with the Tenmile Clean Water Project (TCWP) and the Laurel Watershed Improvement District (WID) to ensure local stakeholders are involved in the process and invested in the outcomes. Both the TCWP and the Laurel WID agreed to partner with the WCD on the Social Indicator Survey, including adding their logos and signatures to the survey cover letter (Appendix A). Additionally, these groups helped to organize focus groups for a pilot of survey questions and initial assessment of values, awareness, constraints and motivators. The TCWP and Laurel WID have agreed to support efforts associated with the outcomes of this research and have funding to offer for implementation assistance.

Focus groups to pilot the survey were formed for four of the primary land use categories identified in the watershed assessment: horse (n=8), cattle/beef (n=9), berry (raspberry, blueberry) (n=5), and dairy (n=4). The information gained from these focus groups (Table 1) helped to develop the survey questions for the Social Indicator survey and provided early feedback on outreach messaging and strategies.

C. SOCIAL INDICATOR SURVEY

1. Goals of the Social Indicator Survey

During fall of 2017, the WCD implemented a robust Social Indicator Survey of farmers and rural landowners in the Tenmile Watershed. The goal of the survey was to evaluate: perceptions of and attitudes towards water quality in the watershed; experience with conservation practices and willingness to implement practices; and source of trusted information and expectations of these sources to provide information or other resources (particularly in the context of water quality and natural resource conservation).

In order to build a robust and successful outreach campaign the following characteristics were the focus of the Social Indicator Survey:

- values and attitudes associated with water quality
- barriers or constraints to behavior change
- motivators to overcome these barriers
- trusted sources or messengers of information
- preferred mechanism of communication

The results of this survey serve as a baseline measurement against which future survey data can be compared, enabling an evaluation of perceptual and attitudinal change over time. Survey design and implementation followed the guidelines described by The Social Indicator Planning & Evaluation System (SIPES) for Nonpoint Source Management (Genskow and Prokopy, 2011).

2. Survey Methods

A cover letter, paper survey, and self-addressed stamped envelope was sent to 733 landowners engaging in agricultural practices in the Tenmile watershed (hereinafter referred to as “Agricultural”). One week following the initial mailing, a follow-up postcard was sent, with a printed link to an online version of the survey specific to Agricultural respondents. Additionally, letters were mailed to 911 rural residential landowners, managing an acre or more of land (hereinafter referred to as “Rural Residential”), with a printed link to an online survey specific to Rural Residential respondents. This group also received a reminder postcard one week after the initial mailing. The overall timeline of survey delivery and analysis is shown in Figure 3.

Return envelopes for paper surveys were coded in order to differentiate survey respondents by agricultural type while maintaining anonymity of survey responses. Agricultural types were assigned a letter A-G (A=Caneberry, B=Blueberry, C=Beef/Cattle, D=Dairy, E=Horse, F= Rural Residential, non-agriculture G=Uncategorized agriculture, including mixed use small farms). Presence within a CSA was assigned a number (01 for within a CSA, 02 for not within a CSA, and 03 unknown). The letter-number combination (e.g. A-01, G-02) was printed on the survey return envelope.

Applied Research Northwest, in partnership with WCD, developed the survey materials and online versions of the survey. After surveys were returned, WCD staff entered survey responses electronically, and Applied Research Northwest performed the statistical analysis.

There were many survey administrative elements adapted from best practices for increasing survey response rates (Genskow and Prokopy, 2011). The survey design was respondent-friendly, with attractive graphics on envelope, plenty of white space and appropriate length (less

than 20 min survey response time). Return envelopes received a real first-class stamp instead of machine-generated postage or bulk mail. All communication was personalized and signed by the president of the Laurel WID and WCD to use trusted messengers for increased response rate.

Survey materials are included in this document as Appendix A, B, C and D.

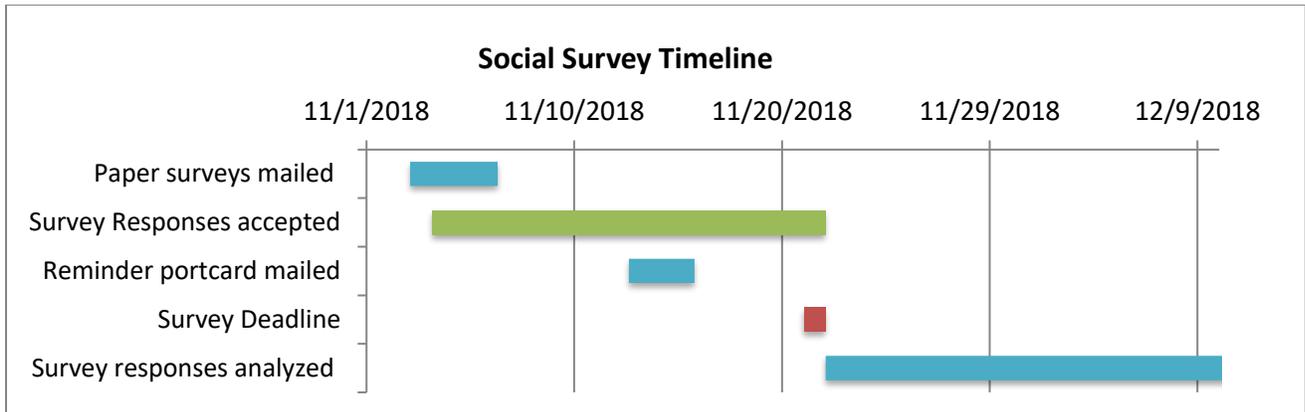


Figure 3. Social Indicator Survey timeline, November-December 2018.

3. Social Indicator Survey Results

One hundred and eighty-six (186) respondents submitted a survey with at least a quarter of the questions completed. Partial surveys were included in the analysis and within the following results summary.

Survey analysis included comparisons between Agricultural respondents (who have some form of agricultural land usage on their property) and Rural Residential respondents (no agriculture).

1. Agricultural (n=112)
 - Berries (n=8)
 - Cattle (n=5)
 - Dairy (n=2)
 - Horse (n=10)
 - Uncategorized agriculture (n=87)
2. Rural Residential (no known agricultural activities) (n=74)

Results Summary by Question

The following pages summarize the most useful results from select questions from the survey analysis organized by question number. Refer to Appendix D for the survey questions in their entirety. To receive a full report of the survey findings, contact the report author.

Question 1: In your opinion, which of these, if any, pose the greatest threat for water quality in your area?

Respondents were presented with ten different potential threats to water quality and asked to identify which activity or source poses the greatest threat to water quality in the respondent’s area. The top ranked threat was “excessive use of fertilizers for crop production,” followed closely by “improperly maintained septic systems,” “highway, road or bridge runoff,” and “excessive use of residential lawn fertilizers or pesticides” (Figure 4). 16% of respondents (or 30 respondents) identified “none of these” as the greatest threat.

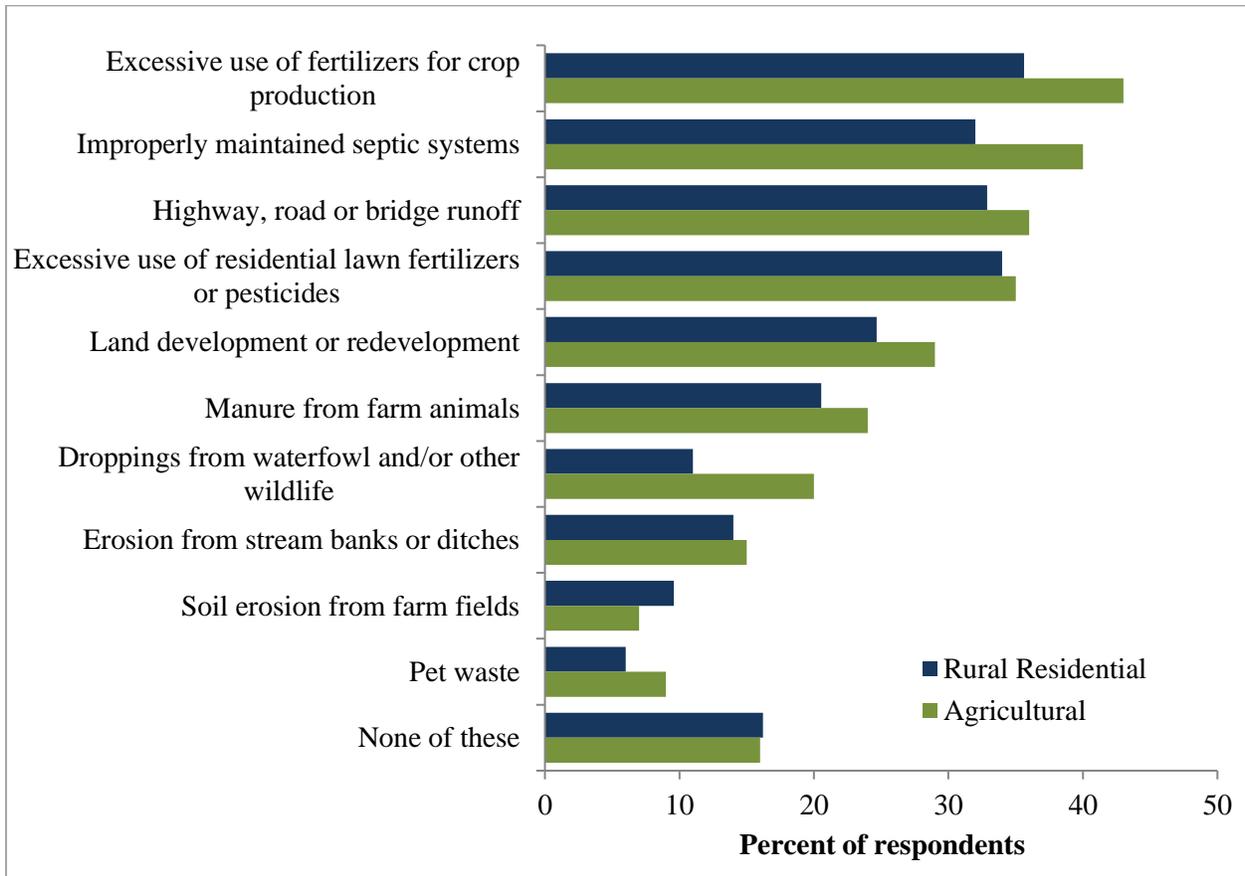


Figure 4. Responses by Rural Residential (n=73) and Agricultural (n=110) audiences to the Social Indicator Survey question “In your opinion, which of these, if any, pose the greatest threat for water quality in your area?”

Question 2: In your opinion, how important is clean water for each of these areas?

Respondents were asked to rate the importance of clean water for a variety of purposes. Figure 5 shows that roughly 70% of respondents thought clean water was *extremely important* for shellfish and fishing, followed closely by swimming and animal health. The fewest number of respondents felt that clean water was important for Boating activities.

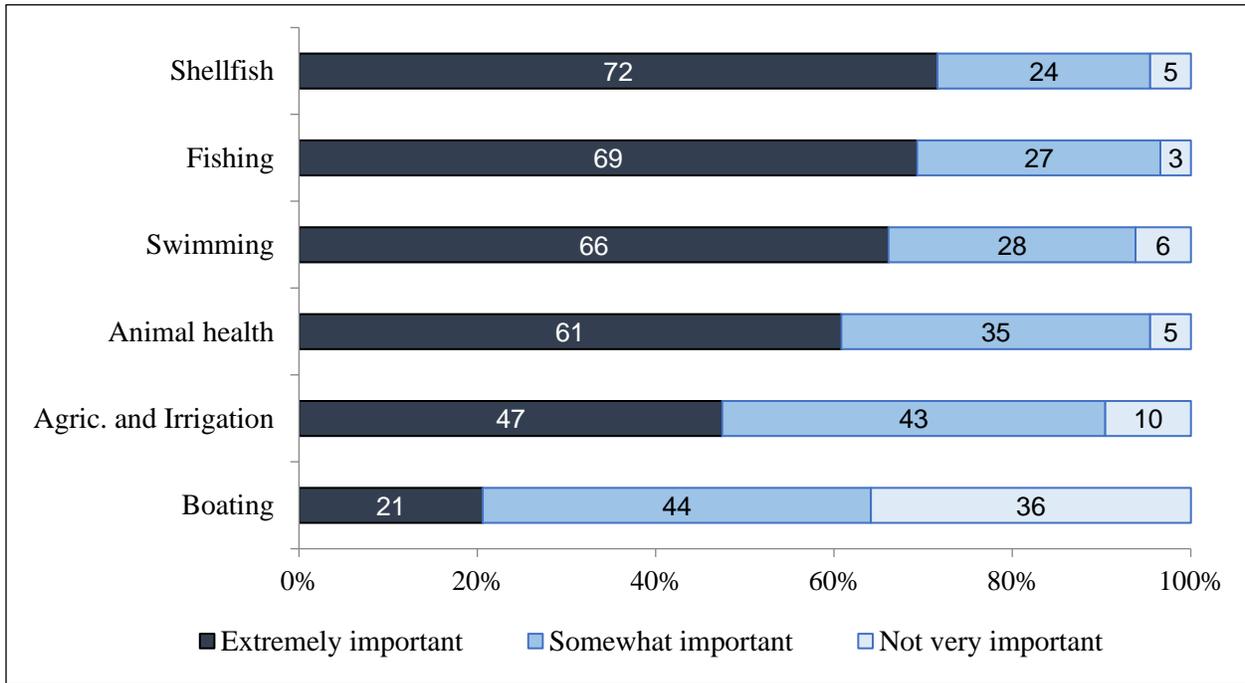


Figure 5. Responses by all audiences (n=177) to the Social Indicator Survey question “In your opinion, how important is clean water for each of these?”

Question 4: Which of the following organizations and agencies do you most trust to provide you with accurate information?

Respondents identified organizations and agencies that they most trust to provide accurate information. When taken together, Department of Health was ranked first, followed by Whatcom Family Farmers and WCD. Note: there was no clarification between Washington State Department of Health versus Whatcom County Health Department in the survey question, they may have led to some confusion for survey respondents.

Table 2 shows the trust ratings for information message providers (messengers) by Agricultural and Rural Residential respondents, with the greenest cells indicating the highest ratings (i.e. most trusted). The agencies and organizations are sorted by the ratings from Agricultural respondents (left column). Values in the table are the % of respondents by audience who ranked the organization as trustworthy.

Agricultural respondents rated the Laurel Watershed Improvement District as the most trustworthy (37% of the Agricultural respondents identifying that organization as one that they trust), ranked slightly higher than the Tenmile Clean Water Project, Whatcom Family Farmers, and WSU Extension. The top third of organizations (for each audience) were assigned a green light, and the bottom third of organizations (for each audience) were assigned a red light.

Table 2. Responses (by % of audience responses) for Rural Residential (n=70) and Agricultural (n=107) audiences to the Social Indicator Survey question “Which of the following organizations and agencies do you most trust to provide you with accurate information?”

Agency or Organization	Agricultural (n=107)	Rural Residential (n=70)
Laurel Watershed Improvement District	 37	 21
Tenmile Clean Water Project	 36	 21
Whatcom Family Farmers	 36	 29
WSU University Extension	 36	 23
Whatcom Conservation District	 34	 29
Department of Health	 28	 43
Whatcom Farm Bureau	 27	 29
Other local landowners, friends, etc.	 25	 29
WA State Department of Agriculture	 24	 17
Farm Service Agency	 19	 11
WA State Department of Ecology	 19	 24
Natural Resources Conservation Service	 18	 13
A local farm and garden center	 15	 14
Local livestock group	 15	 10
U.S. Environmental Protection Agency	 8	 13
Some other agency or organization	 8	 4
Whatcom County	 5	 10
Fertilizer or seed sales people	 3	 0

Table 3. Top trusted messengers for Rural Residential and Agricultural respondents

Rural Residential	Agricultural
Department of Health	Laurel Watershed Improvement District
Whatcom Family Farmers	Whatcom Family Farmers
Whatcom Conservation District	Tenmile Clean Water Project
Whatcom Farm Bureau	WSU University Extension
Other local landowners, friends, etc.	Whatcom Conservation District

Rural Residential respondents said they trust the Department of Health the most, with a fairly large gap before the second tier ratings. Department of Health also fell in the top third for the agricultural residents, though closer to the middle of the pack. For simplicity, the top 5 ranked messengers of information for Rural Residential and Agricultural respondents are summarized in Table 3 in order of ranking. See Table 2 for the percent of respondents that ranked each messenger as trustworthy.

Question 5: Familiarity with three land management recommended practices

Respondents were asked about three recommended practices: maintaining a setback, applying fertilizer at recommended rates, and collecting and covering manure. Figure 6 shows that 41% said they currently maintain a setback, and a similar proportion (40%) said that they follow recommended fertilizer application timing. A smaller proportion (27%) said they currently collect, cover and contain manure, though a sizable portion also said that wasn't relevant for their property (41%).

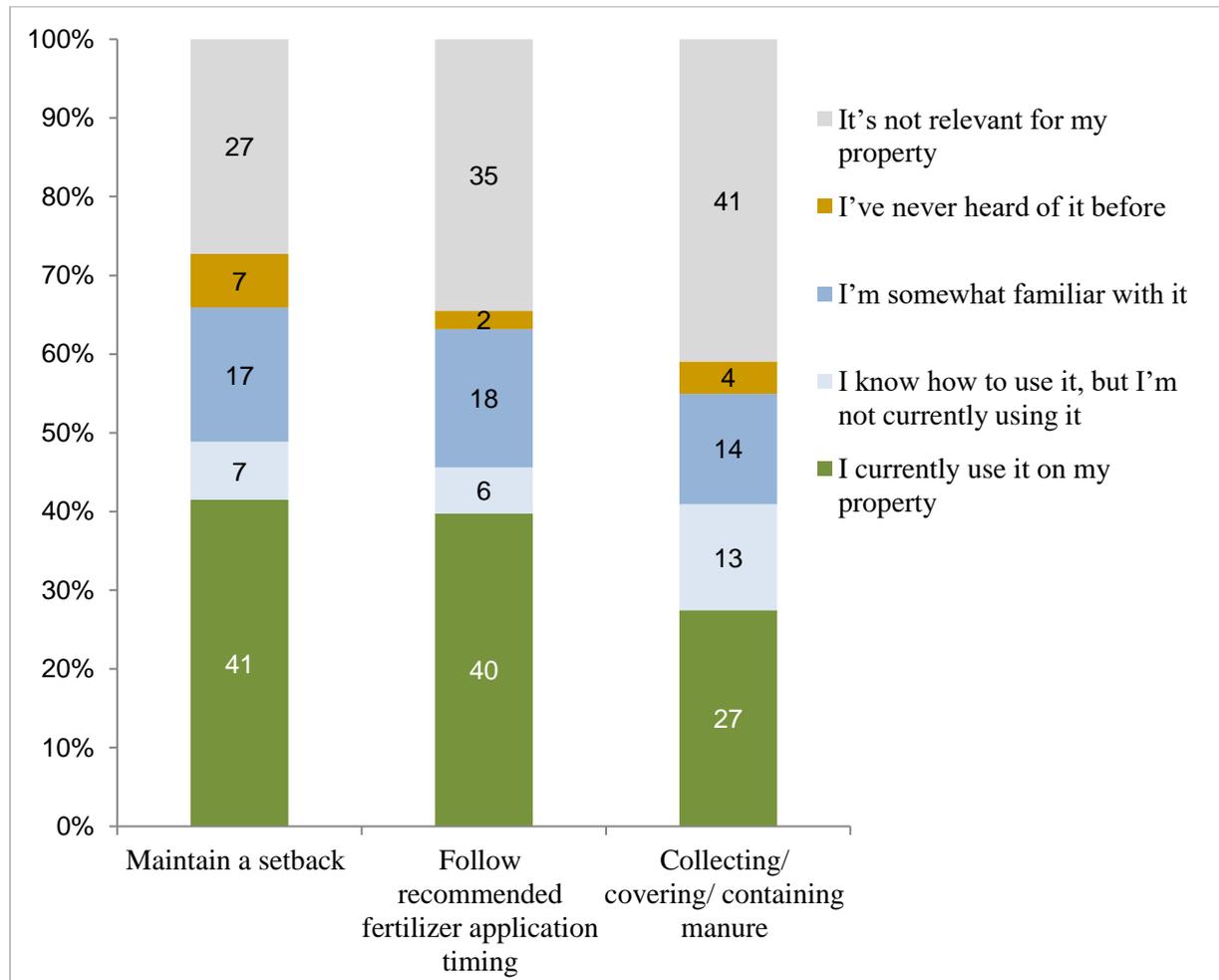


Figure 6. Responses to the Social Indicator Survey question asking about familiarity with three land management recommended practices: maintaining a setback (n=176), applying fertilizer at recommended rates (n=171), and collecting and covering manure (n=171).

Questions 6, 9 and 12: Willingness to participate in the three land management recommended practices

Respondents were asked about their willingness to participate in three recommended practices: maintaining a setback, applying fertilizer at recommended rates, and collecting and covering manure. Figure 7 shows the willingness among respondents who indicated that a practice was relevant to their property. 60% of respondents said they currently *maintain a setback* and another 29% are willing to try or maybe willing to try. 47% of respondents said they currently *collect, cover and contain manure* and another 35% are willing to try or maybe willing to try. 62% of respondents said they currently follow the *recommended fertilizer application timing* and another 27% are willing to try or maybe willing to try.

Analysis comparing Agricultural and Rural Residential respondents found that Agricultural respondents were more likely to say they are already engaged in the practice of *maintaining a setback* (49%) than Rural Residential respondents (31%). The other two land management practices received similar responses from Agricultural and Rural Residential respondents.

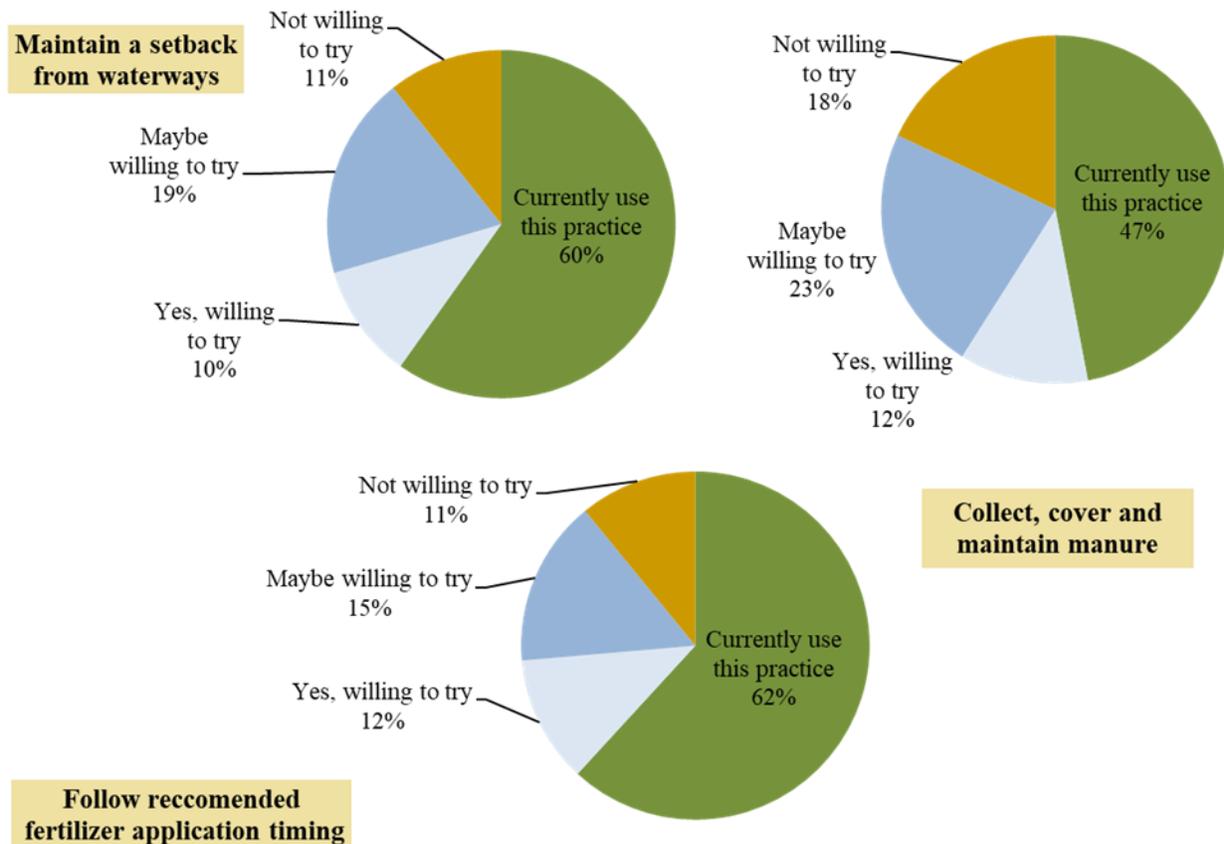


Figure 7. Responses by all audiences to the Social Indicator Survey question asking about willingness to participate in the three recommended land management practices: maintaining a setback (n=122), applying fertilizer at recommended rates (n=110), and collecting and covering manure (n=100).

Questions 7, 10 and 13: Identified barriers for practice implementation

Respondents were asked about their barriers to implementing the three recommended practices described in the previous question (maintaining a setback, applying fertilizer at recommended rates, and collecting and covering manure). As shown in Figure 8, lack of information was the top barrier for each of the three proposed practices. Lack of information related to recommended fertilizer timing was especially salient; 54% of respondents noted that it was a barrier. While financial interests are not the primary consideration for every landowner, the financial costs and benefits of conservation practices remain a significant factor in landowner decision-making.

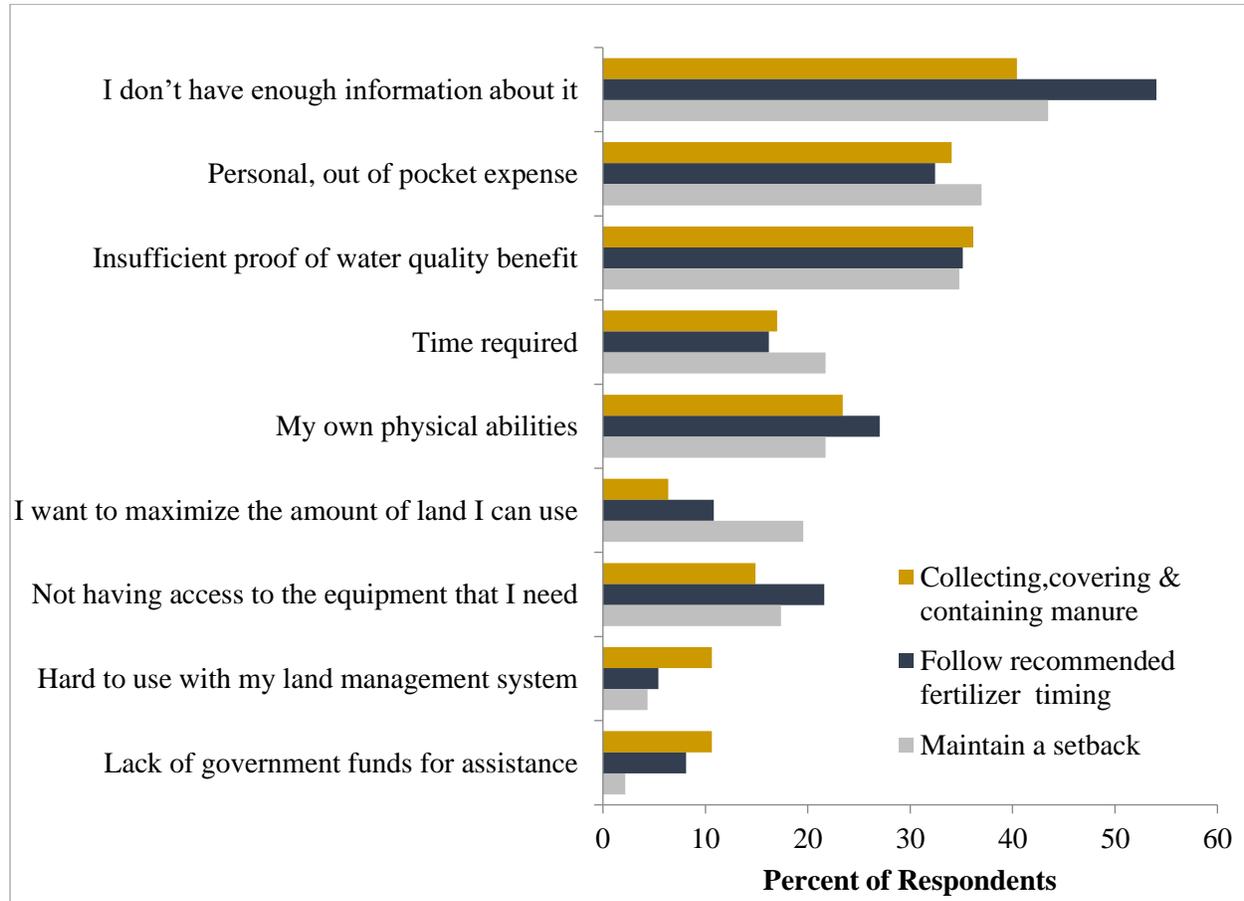


Figure 8. Responses by all audiences to the Social Indicator Survey question asking about identified barriers compared across three practices: collecting and covering manure (n=47), following recommended fertilizer timing (n=37), and maintaining a setback for agricultural activities (n=46).

Question 15: Sources of information

Respondents were asked what types of media they use for gathering information about managing their land. As shown in Figure 9, 43% of Rural Residential respondents and 40% of Agricultural respondents said they receive information from local newspapers. There were some differences between Rural Residential and Agricultural respondents in sources of information used (e.g. other types of media), but generally trends were similar: local newspapers, local radio station and websites were the preferred sources of information.

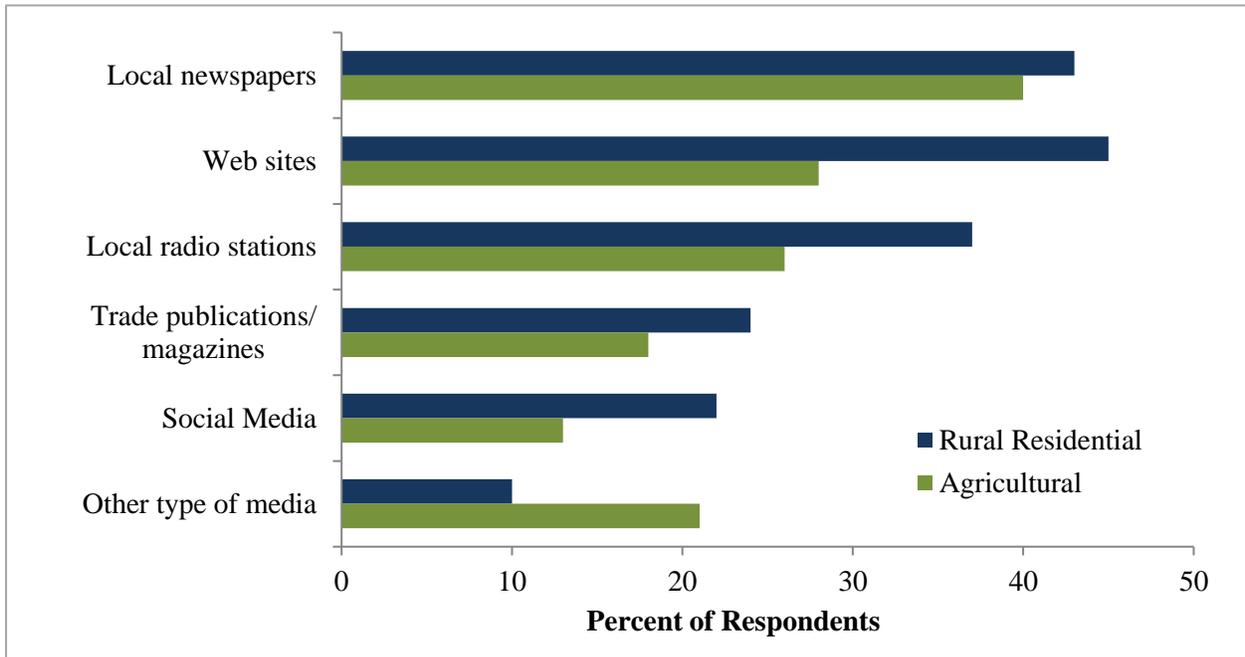


Figure 9. Responses (%) by Rural Residential (n=51) and Agricultural (n=72) audiences to the Social Indicator Survey question about preferred sources of information for managing land.

This survey question allowed for open ended responses to provide more detail of information source by media type. Below is a summary of the open-ended responses with the number of respondents that identified a preference for the media source noted in parentheses.

- **Local newspapers:** Bellingham Herald (25), Lynden Tribune (19)
- **Web sites:** WCD (7), WSU Extension (7)
- **Radio Station:** KGMI (29)
- **Social Media:** Facebook, specifically local farm or garden groups (6)
- **Other:** CHS Northwest/Whatcom Farmers Co-op (2), Farmer's Almanac (2), Tenmile Clean Water Group (2), Whatcom Business Alliance Business Pulse Magazine (3)

4. Recommendations Based on Social Indicator Survey Results

Based on the results of the Social Indicator Survey the following recommendations are suggested for outreach activities in the Tenmile Watershed by any organization working on water quality improvement:

- Partner with trusted sources of information and unify messaging across these sources
- Cite sources of information for credibility and trust-building.
- Connect landowner behavior with environmental or community impact.
- Create multi-media outreach campaigns that can be picked up by local newspapers, social media (e.g. Facebook), farm related groups, and trusted messengers of information.
- Conduct radio ads and interviews to tell landowner success stories on local KGMI radio. While radio itself was not the most preferred media source, KGMI specifically was mentioned more than any other specific source.
- Excessive use of fertilizers for both farm and lawn ranked highest for water quality concerns. Timing and rate of fertilizer application was a target BMPs where lack of information on how to access fertilizer rate and timing was the biggest barrier. Recommend providing landowners free soil testing and interpretation to encourage the adoption of recommended nutrient application rate and timing.
- Plan for multiple strategies for continued engagement and reinforcement to achieve results.
- Use messaging to build upon residents' *current understanding* that upstream water quality is connected to coastal/marine health- focus on impacts of behavior change rather than the value of clean water and the connectivity of watersheds.

D. DEVELOPMENT OF OUTREACH PLAN

As mentioned previously, this outreach plan builds on the work completed for the Tenmile Watershed Assessment. The following outreach activities and materials were conducted as part of the Tenmile Watershed Assessment project delivery, following completion of the final project report. These public presentations set the stage for the coming outreach plan by describing to stakeholders how the watershed assessment would inform outreach and activities and how outreach activities would be used to encourage the behavior changes (e.g. BMP implementation) described and evaluated within in the watershed assessment.

1. Presentation of Watershed Assessment and Survey Results

Presentations to agencies, partners and community members on Tenmile Watershed Assessment Final Report:

- Whatcom Conservation District Staff meeting, 1/8/18
- NRCS Winter Partnership Meeting, 2/15/18
- Tenmile Clean Water Project Member Meeting, 2/20/18

Presentations to agencies, partners and community members on Tenmile Watershed Assessment Final Report, including results from the Social Indicator Survey:

- CTIC Watershed Management Forum, 3/1/18

- Salish Sea Ecosystem Conference, 4/3/18
- Whatcom Clean Water Program Core Team, 4/20/18
- Tenmile Outreach Strategy Workshop, 6/8/18
- Washington Association of District Employees Conference, 6/13/18

2. Strategy Development Workgroups

Watershed Management Forum (March 1, 2018)

In partnership with NRCS, the Conservation Technology Information Center (CTIC), WaterComm, and Purdue University, Whatcom Conservation District brought together local NRCS and state agency staff, landowners, producers and other key partners to get feedback from local leaders regarding watershed management in the Tenmile Watershed on March 1, 2018. The Laurel WID, Tenmile Clean Water Project and Whatcom Family Farmers were given formal invitations to join. The session was led by Dr. Linda Prokopy from Purdue University; the agenda and invitation is included in this document as Appendix E and F. Some of the primary factors agreed upon by forum participants as to what makes a successful watershed project included:

- A holistic approach to watershed management to include diverse groups of people and benefit communities within the watershed including up- and down-stream communities.
- Understanding the importance for managers to seek out local knowledge and prioritize the concerns of local stakeholders.
- Measurably cleaner water as an outcome and the recognition of the importance of a watershed plan that includes a monitoring plan that shows progress of water quality improvements over time.

The primary factors agreed upon by forum participants as to what resources are needed for a successful watershed project are illustrated in Figure 10. These include:

- Community ownership and engagement
- Prioritize solutions to meet needs
- Funding to repair and replace septic systems
- Source tracking and water monitoring
- Flexible permitting
- Adaptable regulatory system
- Address in-stream and out of stream needs
- Manage water for multiple uses
- Management and decision makers
- Drainage improvement and maintenance

Attendees by organization (number of participants in parentheses): TCWP (3), WCD (4), Laurel WID (3), Whatcom County Public Works (2), Washington State Department of Agriculture (1), ReSources (1) and NRCS (1).

Goals of the Tenmile Outreach Strategy Workgroup included:

- Build off of existing efforts
- Determine primary audiences and behaviors
- Inventory resources available to overcome barriers
- Develop strategies for each audience

The workshop began with a review of the key learnings from the Tenmile Watershed Assessment (WCD, 2017) and the Tenmile Social Indicator Survey. The group was then divided into three teams to identify four primary audiences and two target behaviors for each audience. Each group presented their findings and discussed justification, primary messengers of information were then added following discussion. The primary audiences and associated target behaviors suggested by the workshop attendees are summarized in Table 4. Where teams overlapped in their suggestions, primary audiences have been grouped together, meaning there may be more than two target behaviors that were suggested for a primary audience. Under each primary audience category there is a secondary audience which would be a subset of the primary if prioritization is necessary for outreach delivery.

Table 4. Target Audiences, Behaviors, and Messengers suggested during the Tenmile Outreach Strategy Workgroup

Audience and Behavior Selection

<p style="text-align: center;">Primary: Horse Owners Secondary: CSA</p> <ul style="list-style-type: none"> ▪ Behavior 1: Fence animals away from water ways ▪ Behavior 2: Confine animals in winter, heavy use area ▪ Behavior 3: Manage manure collection, storage and use <p>Messengers: Social Media (Next Door, Facebook), WCD, 4H, Boarding Facilities, TCWP, Laurel WID</p>	<p style="text-align: center;">Primary: Septic Owners Secondary: Lower Deer Creek/CSA</p> <ul style="list-style-type: none"> ▪ Behavior 1: Inspect on regular basis ▪ Behavior 2: Maintain/pump when needed <p>Messengers: Whatcom County Health Dept, Certified septic inspectors, TCWP</p>
<p style="text-align: center;">Primary: Corn Growers/ Field Silage Secondary: CSA</p> <ul style="list-style-type: none"> ▪ Behavior 1: Appropriate rate/timing of manure application ▪ Behavior 2: Cover crop/Relay Crop ▪ Behavior 3: Riparian Buffer establishment <p>Messengers: WCD Nutrient Management Training, Whatcom Family Farmers,</p>	<p style="text-align: center;">Primary: Berry Growers Secondary: CSA</p> <ul style="list-style-type: none"> ▪ Behavior 1: In-row cover crops ▪ Behavior 2: Appropriate rate, timing, and setbacks for application of manure solids ▪ Behavior 3: Riparian buffer establishment/ filter strips <p>Messengers: WCD Nutrient Management Training, Whatcom Family Farmers, Punjabi cultural centers</p>

Table 5. Resource inventory gleaned from project partners during the Tenmile Outreach Strategy Workgroup

Resource Inventory

HOW CAN WE OVERCOME THE BARRIERS TO DESIRED BEHAVIORS?

<p style="text-align: center;">Educational Opportunities</p> <ul style="list-style-type: none"> ▪ WSDA/County/WCD: Water quality results map ▪ WSDA: Story Map, with weekly updates on “the Why?” of local water quality ▪ WCD: Farm Speaker Series/ Manure nutrient management/ Small Farm expo/ Native plant sale ▪ WCD: monthly e-news, annual printed newsletter ▪ TMCW: Blog, monthly e-news and gatherings ▪ Laurel WID: Yearly newsletter, monthly meetings ▪ Whatcom Family Farmers: Quarterly newsletter 	<p style="text-align: center;">Cost-Share/ Financial incentives</p> <ul style="list-style-type: none"> ▪ NRCS: \$\$ for BMPs, livestock and berry ▪ WCD: up to \$3000 cost share for BMPs ▪ CREP: riparian buffer planting, 100% of cost is covered and 5 years maintenance ▪ County: Septic Rebates, apply \$100 for inspection, \$200 maintenance pumping ▪ County: Low interest loan for septic ▪ WCD: non-dairy livestock, \$200 to gutters and HUA footing
<p style="text-align: center;">Free Goods/Services</p> <ul style="list-style-type: none"> ▪ WCD: free soil testing ▪ WCD: free tarps for covering manure piles ▪ WCD: free technical assistance/Farm planning ▪ NRCS: free technical assistance/Farm planning 	

Funding has been identified as a large resource need for those involved in watershed planning for the Tenmile. Agency staff presented to the larger group what resources they have to offer to the Tenmile watershed. A summary of that inventory is represented in Table 5.

The workshop attendees determined that a diverse methodology that includes audience specific messaging and targeted outreach must also include the larger audience in order to garner support and to develop social norms around protecting and valuing clean water. Plan for multiple touches to achieve results and choose tactics that will offer maximum impact with consideration to budget and staffing. Figure 11 below identifies the broad-in-reach to narrow-in-scope outreach strategy for the Tenmile Watershed.

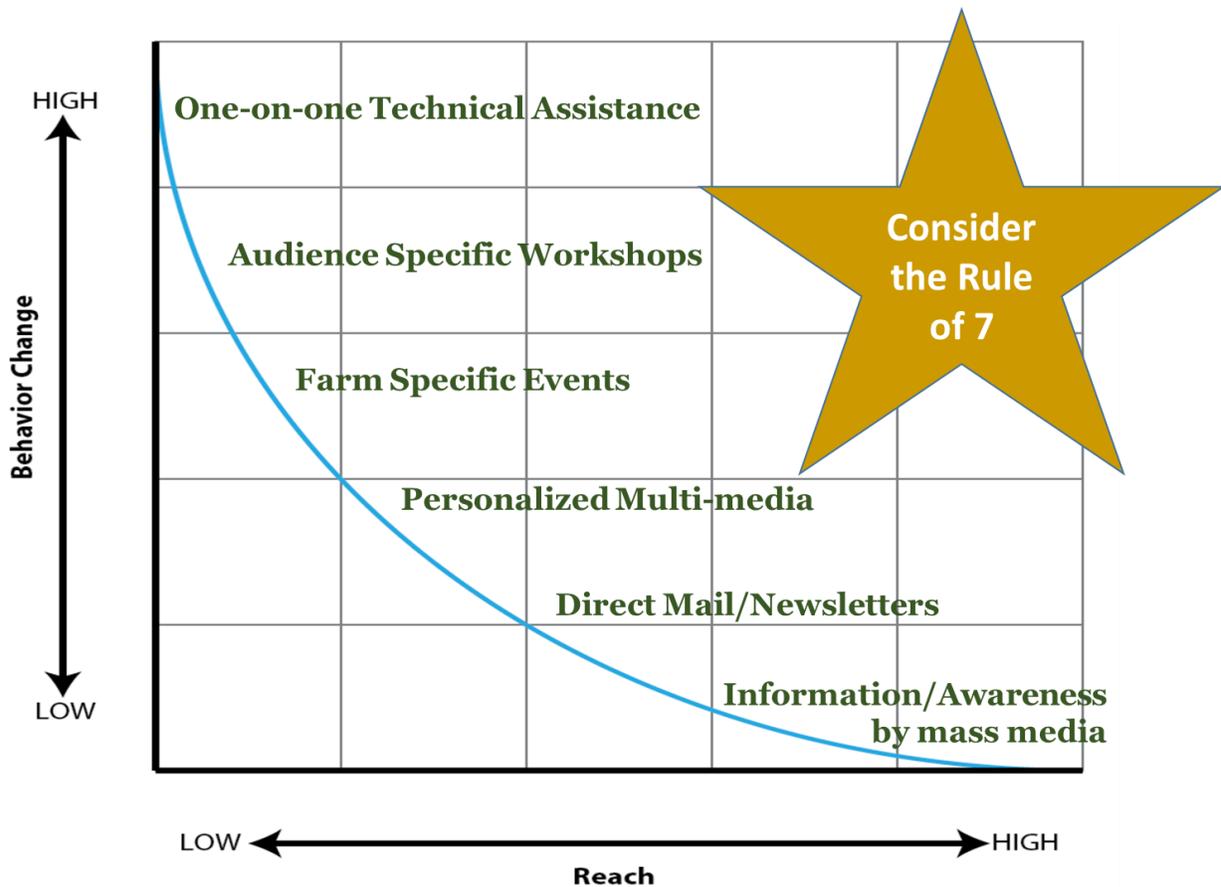


Figure 11. Methodology for outreach plan development from Tenmile Outreach Strategy Workgroup.

E. AUDIENCE SPECIFIC OUTREACH PLAN

The results of the focus groups, Social Indicator Survey, and other partner communication in the Tenmile Watershed will inform the method, messaging, messengers, and content of outreach. The multi-tiered social marketing strategy outlined in Figure 11 includes targeted outreach to audiences determined by local stakeholders, encouraging the behaviors most likely to be adopted based on motivators indicated.

1. Land Use Specific Audiences

All survey results are linked to associated land use, so outreach can be directed to specific user groups. Based on the survey findings, the outreach elements are designed to specifically address their associated values, attitudes, constraints and motivators. Four key audiences are described on the following pages: septic owners, horse owners, corn & field silage growers, and berry growers.

Septic Owners:

In the Tenmile watershed there are 2,957 septic systems identified as of June 2017. These systems are located on both rural residential and agricultural properties. Of these, 1,777 systems are in compliance with state and county inspection requirements, 1,180 are out of compliance, and 38 are new systems. Our social indicator survey results showed that Rural Residential respondents said they trust the Department of Health the most as a source of information, with a fairly large gap before the second tier ratings. In June 2018, Whatcom County administered a survey to all Whatcom County septic owners (results available upon request). This survey revealed additional barriers and motivators that are represented in the categories below.

Behavior 1: Inspect on regular basis

Behavior 2: Maintain/pump when needed

Barriers:

- Lack of knowledge regarding frequency of inspections required
- Part-time residents or renters feel it is unnecessary
- Assume cost of inspection is too high

Motivators:

- Protect the investment
- Avoid large replacement or repair costs
- Financial Incentives
- O&M inspection by the homeowner

Communication Channels:

- State Department of Health or Whatcom County Health Department
- Tenmile Clean Water Project
- Laurel Watershed Improvement District where applicable

Outreach Techniques:

- Annual Nooksack Watershed Newsletter from Whatcom County
- Annual Tenmile Clean Water Project Newsletter
- Radio messaging with Whatcom Health Department
- Facebook/Instagram (Whatcom Family Farmers/ Whatcom Conservation District)
- Septic Reminder Postcard to those out of compliance
- Nextdoor online social network (586 users in Tenmile Watershed)
- Workshop: Whatcom County Health Dept Homeowner O&M training (2x per year)
- Workshop: Grant Opportunities And Proposal Writing, part of the Whatcom Farm Speaker Series, Oct 18, 2018

Evaluation Metrics:

- OSS Operation and Maintenance compliance (evaluate records pre and post outreach efforts for % compliant)
- Number of Tenmile participants in Homeowner O&M trainings

Horse Owners:

There are 93 identified landowners with horses in the Tenmile Watershed. This includes those that might also have other types of livestock. Survey results demonstrate that this audience feels like septic systems and residential lawn fertilizers are more of an issue than manure from farm animals.

Behavior 1: Fence animals away from waterways

Behavior 2: Confine animals in winter, heavy use area

Behavior 3: Manage manure collection, storage and use

Barriers:

- Lack of information on BMPs
- Physical Ability
- Only one animal, feel it could not be an issue
- No ability to spread manure, Equipment

Motivators:

- Animal Health
- Property Aesthetics

Communication Channels:

- Whatcom Conservation District
- Tenmile Clean Water Project
- Social Media
- Youth Programs (4H and FFA)
- Peers/Boarding facilities

Outreach Techniques:

- Annual Nooksack Watershed Newsletter from Whatcom County
- Annual Tenmile Clean Water Project Newsletter
- Facebook/Instagram (Whatcom Family Farmers/ Whatcom Conservation District)
- Workshop: Grant Opportunities And Proposal Writing, part of the Whatcom Farm Speaker Series, Oct 18, 2018
- Event: Small Farm Expo, March 9, 2019
- Event: Native Plant Sale, March 19, 2019
- Workshop: Composting on your Farm: Nutrient Cycling for Fun and Profit, part of the Whatcom Farm Speaker Series, April 18, 2019

Evaluation Metrics:

- Number of Tenmile horse owners attending trainings or workshops
- Number of Tenmile horse owners requesting technical assistance
- Number of Tenmile horse owners applying for cost share/rebates
- Number of Tenmile horse owners requesting Sound Horsekeeping recognition

Corn Growers:

According to the 2017 livestock survey, there are 856 acres in corn production. This corn acreage is managed by one of the 34 dairy producers in the Tenmile watershed. 98% of corn acreage (838 acres) within the Tenmile Watershed falls under the CSA designation from the watershed assessment (WCD, 2017), making this one of the recommended land use types for implementation of best management practices for water quality improvements.

Behavior 1: Appropriate rate/timing of manure application

Behavior 2: Cover crop/Relay Crop

Behavior 3: Riparian Buffer establishment

Barriers:

- Lack of information on nutrient management tools
- Lack of information on cover crop/relay crop funding and resources
- Not willing to work with the Government
- Expense for improvements/ Bottom line
- Don't think that BMPs make a difference

Motivators:

- Funding for improvements
- Regulatory forgiveness
- Family legacy/traditions
- Improve Perception of industry

Communication Channels:

- Whatcom Family Farmers
- Laurel WID
- WCD

Outreach Techniques:

- Annual Nooksack Watershed Newsletter from Whatcom County
- Annual Tenmile Clean Water Project Newsletter
- Facebook/Instagram (Whatcom Family Farmers/ Whatcom Conservation District)
- Radio messaging with Whatcom Family Farmers
- Workshop: Grant Opportunities And Proposal Writing, Oct 18, 2018
- Workshop: WCD Annual Manure Nutrient Management Training, Jan 17, 2019
- Text alert system for Manure application risk
- Stewardship recognition signs for corn growers using cover crops

Evaluation Metrics:

- Number of Tenmile producers attending trainings or workshops
- Number of Tenmile producers requesting technical assistance
- Number of Tenmile producers applying for cost share
- Number of Tenmile producers signing up for the Whatcom Manure Spreading Advisory Text Alert

Berry Growers:

There are nearly 1,600 acres in total berry production in Tenmile (1,073 acres in caneberry production and 520 acres in blueberry production). Of this acreage, 98% (1,556 acres) fall under the CSA designation from the watershed assessment (WCD, 2017), making this another recommended land use type for implementation of best management practices for water quality improvements. In-row cover or cover crops are a best management practice for berry fields. Other BMPs include hedgerows and nutrient management. Survey and focus groups showed that this audience can be newer to agriculture; many have Canadian mailing addresses and may have gotten into farming in a different culture and regulatory framework.

Behavior 1: In-row cover crops

Behavior 2: Appropriate rate, timing, and setbacks for fertilizer and manure solids

Behavior 4: Riparian buffer establishment/ filter strips

Barriers:

- Unfamiliar with local agricultural resources
- Cultural barriers (for some English is their secondary language)
- Lack of information on practices, regulations, and benefits

Motivators:

- Food safety
- Marketability of product

Communication Channels:

- Whatcom Family Farmers
- Laurel WID
- WCD
- WSU extension

Outreach Techniques:

- Annual Nooksack Watershed Newsletter from Whatcom County
- Annual Tenmile Clean Water Project Newsletter
- Facebook/Instagram (Whatcom Family Farmers/ Whatcom Conservation District)
- Radio messaging WSU, Whatcom Family Farmers, and Raspberry Commission
- Workshop: Grant Opportunities And Proposal Writing, part of the Whatcom Farm Speaker Series, Oct 18, 2018
- Event: Small Farm Expo, March 9, 2019
- Event: Small Fruit Conference, December 2018
- Postcard mailer, translated to Punjabi, introducing NRCS, WCD and TCWP
- Stewardship recognition signs for berry growers using cover crops

Evaluation Metrics:

- Number of Tenmile producers attending trainings or workshops
- Number of Tenmile producers requesting technical assistance
- Number of Tenmile producers applying for cost share
- % change of in row cover cropping observed

2. Measuring Success

Water quality impairments in the Tenmile Watershed and Nooksack Basin have come about over many decades and may take decades to amend. Therefore, using water quality improvements as a measure of outreach plan effectiveness is likely inadequate for the short time frame of this project. Confirmation that awareness and attitudes are changing and that behaviors are being adopted may be a better way to demonstrate progress toward water quality goals. These behavior changes will ultimately lead to improvements in water quality. Long-term monitoring in the Tenmile Watershed and Nooksack Basin is already established to track these changes over a longer time-frame (often described in 1 and 3 year trends).

For the purpose of tracking the results of this outreach strategy, a follow up survey will be administered within 1 year of outreach implementation to determine some of the following broader social outcomes:

For the target agricultural audiences, project outcomes will include:

- Increased capacity to support target behaviors
- Increase adoption of practices to improve water quality
- Increased awareness of technical assistance programs available
- Reduced barriers or constraints to behavior

For the general or non-agricultural audience:

- Increased awareness of water quality issues
- Changes in attitudes toward water quality improvements
- Increased support for water quality improvement projects.

3. Clean Streams, Healthy Communities

As this project has progressed, Tenmile partners have contacted WCD for communication and outreach needs. The Tenmile Clean Water Project has contracted WCD to conduct activities and deliver services to as part of the “Clean Streams, Healthy Community” initiative. This contract runs through Dec 31, 2018 and has the opportunity for extension.

Project Goal: significantly increase TCWP contributions towards improved Tenmile Creek water quality.

Objectives:

- Establish a program coordinating landowner stakeholder groups to encourage responsible stewardship of the Tenmile watershed land and waters.
- Periodically measure the effectiveness of stakeholder engagement over a two year period, at the level of objectives and tasks.
- Build the TCWP into a sustainable volunteer organization able to maintain watershed conditions that meet the project goal.

4. Summary of Outreach Partners

Development and implementation of the targeted and general outreach plan for the Tenmile watershed will involve associated partner organizations to ensure the plan is supported

throughout Whatcom County. Below is a list of local partners who will be engaged in the outreach effort:

Natural Resource Conservation Service: The Natural Resource Conservation Service (NRCS) conservationists provide technical expertise, conservation planning, and distribute financial assistance for farmers, ranchers and forest landowners wanting to make conservation improvements to their land. The Everson Service Center provides services for all of Whatcom County including Tenmile Watershed.

For information on programs and services in Washington State visit the NRCS website:
<https://www.nrcs.usda.gov/wps/portal/nrcs/main/wa/programs/>

Whatcom Conservation District: The Whatcom Conservation District (WCD) mission is to assist land managers with their conservation choices, through a variety of services including farm planning, habitat programs, outreach, and education. In the Tenmile Watershed, WCD farm planners have worked with farmers and landowners to develop 95 farm plans and install over 200 habitat projects. Many other Tenmile residents and agricultural producers participate in WCD events throughout the year, including the district's Farm Speaker Series and the Annual Small Farm Expo.

Website: <http://www.whatcomcd.org/>

Whatcom County: Whatcom County Public Works' Pollution Identification and Correction (PIC) Program uses water quality monitoring data to identify areas with high levels of bacteria in surface waters and work with local landowners to reduce these water quality problems. The PIC program provides community outreach and education, technical and financial assistance for landowners, and coordination with County departments and other agencies to identify and address potential bacteria sources.

Whatcom County Health Department (WCHD) manages community health and environmental health, including oversight of on-site sewage (OSS) evaluations and code enforcement. Whatcom County Planning & Development Services (PDS) oversees environmental permitting in Whatcom County, including activities that impact shorelines, wetlands, and other critical areas. Whatcom County Health Department and PDS works regularly with Public Works through the PIC program.

Website: <http://wa-whatcomcounty.civicplus.com/1789/Departments>
<http://wa-whatcomcounty.civicplus.com/1072/Water-Quality>

Laurel Watershed Improvement District: The Laurel Watershed Improvement District (WID) is a special purpose district managed by farmers and landowners who live and work within the district. The Laurel WID overlaps much of the Tenmile Watershed, including portions of Tenmile, Deer and Fourmile Creeks.

Website: <https://www.laurelwid.com/>
<http://www.agwaterboard.com/>

Tenmile Clean Water Project: The Tenmile Clean Water Project (TCWP) is a citizen-led group whose mission is to work with the community to reduce fecal bacteria in the Tenmile, Deer and Fourmile Creeks. The TCWP group meets monthly and TCWP volunteers participate

in regular water quality sampling in the Tenmile Watershed, as well as educational and outreach events.

Website: <https://tenmilecleanwater.org/>

Washington State and Federal Partners: State level partners in the Nooksack Basin and Tenmile Watershed include Washington State Department of Ecology, Washington State Department of Health, and Washington State Department of Agriculture Dairy Nutrient Management Program. EPA Region 10 is also involved as a partner in a number of water quality projects in the Nooksack Basin. These agencies participate in Whatcom County through the Whatcom Clean Water Program, which is a collaborative effort between local, state, federal, and tribal partners. The program is coordinated through Ecology and Department of Health.

Website: <http://www.ecy.wa.gov/water/whatcomcleanwater/>.

Tribal Partners: The Nooksack Tribal Natural Resources and Lummi Nation Natural Resources divisions are active in water quality monitoring throughout the Nooksack basin and Portage Bay. Both organizations also participate as members of the Whatcom Clean Water Program.

Website: <http://nooksacktribe.org/departments/natural-resources/>

Website: <https://www.lummi-nsn.gov/Website.php?PageID=1>

F. NRCS SPECIFIC RECOMMENDATIONS

In Whatcom County, USDA Natural Resource Conservation Service (NRCS) lacks an outreach and communication presence, as demonstrated by the survey results and focus group interactions, and have long relied on local Whatcom Conservation District (WCD) staff to bring cooperators into their programs. From interviews with local NRCS staff, it appears that funds are allocated for planning and programs, but there is little to no funding available for outreach and education. Reliance on other agency staff for landowner engagement has proven sufficient to date, verified by NRCS cost share dollars being utilized. Yet, WCD and NRCS staff have identified barriers to enrollment in NRCS programs for livestock producers. One barrier is the requirement of a Certified Nutrient Management Plan (CNMP) for enrollment into EQIP programs, which presents a large hurdle for producers and planners to work through including:

- Many small farmers in the watershed are not EQIP eligible.
- Many of the farmers in the Tenmile watershed are not large operations (>20 acres), therefore CNMP is too robust for their use.
- Limited amount of certified planners or Technical Service Providers (TSP) to complete a CNMP.
- Time required to complete a CNMP is considerable, particularly if a producer does NOT receive EQIP funds.

Recommendations for NRCS specific outreach improvements tied into the larger outreach plan:

- 0.5 FTE devoted to outreach.
- Revamping current EQIP program materials to be more photo centric, user friendly, and locally relevant.

- Create landowner stories of EQIP projects in local papers/newsletters.
- Provide news releases in local media on program open enrollment with simple, clear instructions on eligibility and application procedures.

G. REFERENCES

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- Whatcom Conservation District. (2017). NRCS National Water Quality Initiative (NWQI) Pilot Watershed Assessment: Tenmile Watershed. Accessed 30 August 2018.
http://www.whatcomcd.org/sites/default/files/watersheds/tenmile/TenmileWatershedAssessment_Report.pdf

H. LOCAL CONTACTS

Whatcom Clean Water Program

<http://www.ecy.wa.gov/water/whatcomcleanwater/index.html> (08/2018: The WCWP website is currently undergoing renovations and does not redirect. This link will redirect when a new WCWP website is established).

Washington State Department of Health PIC Programs

<https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/EPAGrants/PathogensGrant/PIC>

Department of Ecology Bellingham Field Office - Water Quality Program

<http://www.ecy.wa.gov/programs/wq/wqhome.html>

EPA Region 10

<https://www.epa.gov/aboutepa/epa-region-10-pacific-northwest>

WSDA Dairy Nutrient Management Program

<https://agr.wa.gov/foodanimal/livestock-nutrient/>

Whatcom County Public Works

<http://www.co.whatcom.wa.us/308/Public-Works>

<http://wa-whatcomcounty.civicplus.com/1072/Water-Quality>

Whatcom County Health Department

<http://www.co.whatcom.wa.us/360/Health-Department>

Whatcom County Planning & Development Services

<http://www.co.whatcom.wa.us/358/Planning-Development-Services>

Nooksack Tribal Natural Resources

<http://nooksacktribe.org/departments/natural-resources/>

Lummi Nation Natural Resources

<https://www.lummi-nsn.gov/Website.php?PageID=1> **Whatcom Conservation District**

<http://www.whatcomcd.org/>

Washington State Conservation Commission

<http://scc.wa.gov/>

Laurel Watershed Improvement District

<https://www.laurelwid.com/>

Ag Water Board

<http://www.agwaterboard.com/>

Whatcom Family Farmers

<http://www.whatcomfamilyfarmers.org/>

<http://www.whatcomfamilyfarmers.org/watershed-improvement-districts.html>

Tenmile Clean Water Project

<http://www.re-sources.org/tenmile-creek>

Nooksack Salmon Enhancement Association

<http://www.n-sea.org/>

I. APPENDICES

Appendix A: Social Indicator Survey Cover Letter

Social Indicator Survey Cover Letter to Agricultural landowners



Laurel WID



Dear Neighbor,

The Whatcom Conservation District (WCD) and the Laurel Watershed Improvement District (WID) are working to improve programming to assist landowners in your area. As someone managing land in the Tenmile watershed area, your insights are particularly important, and we would greatly appreciate your participation in a survey to help us learn how we might best serve the needs of agricultural producers and rural residents in the watershed. Your opinions are very valuable to work in conserving our County's natural resources. We invite you to complete the enclosed survey.

The survey is completely voluntary and anonymous. It should only take you about **15 minutes to complete**. Many of the questions are multiple choices, while some give you the chance to answer in your own words. Please complete the questionnaire and return it to us in the prepaid envelope before November 22nd. By participating in this survey, you will be helping to shape the kinds of technical assistance and outreach efforts provided in the future.

Responses from all residents in the watershed completing the survey will be analyzed together, and no individual responses will be identified in any way. Your name will not be used in any report. Your participation in this survey is very important to ensure we understand the land management activities and the needs and interests of the community in the watershed. If you have any questions about the survey please contact WCD at (360) 526-2381 x103. We appreciate you taking the time to answer our questions and contribute to the future of our community.

Sincerely,

Aneka Sweeney, WCD Education Coordinator

Sincerely,

Mike Boxx, Laurel WID President

Whatcom Conservation District
6975 Hannegan, Lynden, WA 98264
360-526-2381 wcd@whatcomcd.com

Laurel Watershed Improvement District
1796 Front Street, Lynden, WA 98264
360-354-1337 Fax 360-354-0948
info@agwaterboard.com

Social Indicator Survey Cover Letter to Rural Residential



Laurel WID



Dear Neighbor,

The Whatcom Conservation District (WCD) and the Laurel Watershed Improvement District (WID) are working to improve programming to assist landowners in your area. As someone managing land in the Tenmile watershed area, your insights are particularly important, and we would greatly appreciate your participation in a survey to help us learn how we might best serve the needs of agricultural producers and rural residents in the watershed. We invite you to complete an online survey.

The survey is completely voluntary and anonymous. It should only take you about **15 minutes to complete**. Many of the questions are multiple choices, while some give you the chance to answer in your own words. By participating in this survey, you will be helping to shape the kinds of technical assistance and outreach efforts provided in the future.

Responses from all residents in the watershed completing the survey will be analyzed together, and no individual responses will be identified in any way. Your name will not be used in any report.

To begin, please type the following URL into the address bar of your internet web browser: <https://surveymonkey.com/r/whatcomcd>

If you have any problems finding the site please don't hesitate to email asweeney@whatcomcd.org or call (360) 526-2381 x103 and we can email you the link. We appreciate you taking the time to answer our questions and contribute to the future of our community.

Sincerely,

Aneka Sweeney, WCD Education Coordinator

Sincerely,

Mike Boxx, Laurel WID President

Whatcom Conservation District
6975 Hannegan, Lynden, WA 98264
360-526-2381 wcd@whatcomcd.com

Laurel Watershed Improvement District
1796 Front Street, Lynden, WA 98264
360-354-1337 Fax 360-354-0948
info@agwaterboard.com

Appendix B: Social Indicator Survey Outgoing Envelope

Social Indicator Survey Outgoing Envelope for Agricultural Residents



Whetcom
CONSERVATION DISTRICT
6975 Hannegan Road
Lynden, WA 98264

First and Last Name
Address
City, State Zipcode

Help shape programs offered in your area!!



Social Indicator Survey Outgoing Envelope for Rural Residents



Whetcom
CONSERVATION DISTRICT
6975 Hannegan Road
Lynden, WA 98264

First and Last Name
Address
City, State Zipcode

Help shape programs offered in your area!!



Appendix C: Social Indicator Survey Reminder Postcard Agricultural

Social Indicator Survey Reminder Postcard Agricultural Residents



Whatcom Conservation District and the Laurel WID are looking for feedback on the direction of future programs.

We want to hear from you!

You recently received a survey in the mail. If you have already completed the survey, **thank you** for your input! If you have not, we wanted to remind you about the opportunity and ask you to take the time to participate either by mailing the paper survey or filling it out online.

The survey is available until December 15th.

Please type the following URL into the address bar of your browser.
<https://www.surveymonkey.com/r/tenmilewcd>

QUESTIONS? CONTACT ANEKA SWEENEY
ASWEENEY@WHATCOMCD.ORG OR 360-526-2381

 Laurel WID  Whatcom CONSERVATION DISTRICT

Social Indicator Survey Reminder Postcard Rural Residents



Whatcom Conservation District and the Laurel WID are looking for feedback on the direction of future programs.

We want to hear from you!

You recently received a post card with a link to a survey in the mail. If you have already completed the survey, **thank you** for your input! If you have not, we wanted to remind you about the opportunity and ask you to take the time to participate.

The survey is available until December 15th.

Please type the following URL into the address bar of your browser.
<https://www.surveymonkey.com/r/whatcomcd>

QUESTIONS? CONTACT ANEKA SWEENEY
ASWEENEY@WHATCOMCD.ORG OR 360-526-2381

 Laurel WID  Whatcom CONSERVATION DISTRICT

Appendix D: Social Indicator Survey Mailed Version (8 pages)



Thank you for your participation in this important survey!
Your responses will help the Conservation District modify programs to benefit landowners like you.

1. In your opinion, which of these, if any, pose the greatest threat for water quality in your area? (Please select up to five)

- Soil erosion from farm fields
- Excessive use of residential lawn fertilizers or pesticides
- Improperly maintained septic systems
- Manure from farm animals
- Droppings from waterfowl and/or other wildlife
- Pet waste
- Excessive use of fertilizers for crop production
- Land development or redevelopment
- Highway, road or bridge runoff
- Erosion from stream banks or ditches
- None of these

2. In your opinion, how important is clean water for each of these?

Animal health

- Extremely important Somewhat important Not very important Don't know

Boating

- Extremely important Somewhat important Not very important Don't know

Fishing

- Extremely important Somewhat important Not very important Don't know

Agriculture and Irrigation

- Extremely important Somewhat important Not very important Don't know

Shellfish

- Extremely important Somewhat important Not very important Don't know

Swimming

- Extremely important Somewhat important Not very important Don't know

3. In the past five years, would you say water quality in your area has...

- Worsened
 Stayed the same
 Improved

4. Which of the following organizations and agencies do you most trust to provide you with accurate information? (Please select up to five)

- A local farm and garden center
- Local livestock group
- Department of Health
- Whatcom Farm Bureau
- Farm Service Agency
- Fertilizer or seed sales people
- Laurel Watershed Improvement District
- Natural Resources Conservation Service (NRCS)
- Other local landowners, friends, neighbors or family
- Tenmile Clean Water Project
- U.S. Environmental Protection Agency (EPA)
- Washington State Department of Agriculture (WSDA)
- Washington State Department of Ecology
- Whatcom Conservation District
- Whatcom County
- Whatcom Family Farmers
- WSU University Extension
- Some other agency or organization: _____

We'd like to know about your familiarity and experience with a few land management practices.

Practice #1: Maintaining a vegetative area between land activities (such as grazing, barns and/or fertilizer application) and streams or ditches.

5. How familiar are you with this practice?

- I currently use it on my property → **please skip to next page**
- I know how to use it, but I'm not currently using it
- I'm somewhat familiar with it
- I've never heard of it before
- It's not relevant for my property (I have no waterways or ditches bordering or on my land) → **please skip to next page**

6. Are you willing to try this practice?

- Yes Maybe No

7. Which of the following factors would most limit your ability to implement this practice? (Please choose up to three)

- I don't have enough information about it
- Time required
- Personal, out of pocket expense
- My own physical abilities
- Insufficient proof of water quality benefit
- I want to maximize the amount of land I can use
- Lack of government funds for assistance
- Hard to use with my land management system
- Not having access to the equipment that I need

Practice #2: Following recommended fertilizer application timing (manure, grazing, compost, chemical fertilizer) in the rainy season

8. How familiar are you with this practice?

- I currently use it on my property → **please skip to next page**
- I know how to use it, but I'm not currently using it
- I'm somewhat familiar with it
- I've never heard of it before
- It's not relevant for my property (I don't apply manure or fertilizer) → **please skip to next page**

9. Are you willing to try this practice?

- Yes Maybe No

10. Which of the following factors would most limit your ability to implement this practice? (Please choose up to three)

- I don't have enough information about it
- Time required
- Personal, out of pocket expense
- My own physical abilities
- Insufficient proof of water quality benefit
- I want to maximize the amount of land I can use
- Lack of government funds for assistance
- Hard to use with my land management system
- Not having access to the equipment that I need

Practice #3: Collecting, covering and containing stored manure, compost, and/or pet waste.

11. How familiar are you with this practice?

- I currently use it on my property → **please skip to next page**
- I know how to use it, but I'm not currently using it
- I'm somewhat familiar with it
- I've never heard of it before
- It's not relevant for my property (I have no animals or manure on my property) → **please skip to next page**

12. Are you willing to try this practice?

- Yes Maybe No

13. Which of the following factors would most limit your ability to implement this practice? (Please choose up to three)

- I don't have enough information about it
- Time required
- Personal, out of pocket expense
- My own physical abilities
- Insufficient proof of water quality benefit
- I want to maximize the amount of land I can use
- Lack of government funds for assistance
- Hard to use with my land management system
- Not having access to the equipment that I need

14. Here are a few more practices. Please check the ones you currently use on your property.

- Regularly inspecting and servicing my septic system
- Following a nutrient management, field, or farm plan written for my land
- Using winter cover crops or row crops
- Taking and using soil nutrient tests to determine fertilization rates and/or grazing timing
- Applying fertilizers (manure, compost, commercial) at recommended rates

15. What types of media do you use for information about managing your land? Please check your preferred sources and provide specifics.

- Local radio stations, please list your favorites:

- Local newspapers, please list your favorites:

- Trade publications/magazines, please list your favorites:

- Web sites, please list your favorites:

- Social Media, please list your favorites:

- Some other media source: _____

16. How many years have you lived in Whatcom County?

- <5 years
- 5-9 years
- 10-19 years
- 20-29 years
- 30 years or more

17. We want to hear from you! What are the issues in Whatcom County that Whatcom CD or Laurel WID should be working on?

18. What programs or materials could the Whatcom CD or Laurel WID produce to help you manage your land/homestead?

Thank you!

Appendix E: Watershed Management Forum – Invitation

We Want Your Advice! Please Participate in a Watershed Management Forum

Dear Laurel Watershed Improvement District Board Members,

In partnership with the Natural Resources Conservation Service (NRCS), Conservation Technology Information Center (CTIC), WaterComm and Purdue University, we are working to evaluate watershed management programs in your area. NRCS has been working with state agencies, private landowners and local partners to create a watershed management plan that improves water quality in the Ten Mile Creek area. Using a targeted approach, NRCS has identified your watershed as an area where on-farm conservation practices will have the greatest impact on water quality.

To move these efforts forward, we are hosting a meeting that brings together local NRCS and state agency staff, landowners, producers and other key partners to get feedback from local leaders regarding watershed management in the Ten Mile Creek area. You are invited to participate in this important event because we believe you are a local leader in both agriculture and stewardship. During this meeting, we will ask for your input regarding concerns specific to your watershed, your experience with watershed planning and management, and suggestions to improve watershed related outreach and communication strategies.

We know your time is valuable, but we believe that your input and perspective is instrumental to successful watershed management. This meeting is planned for:

**Thursday, March 1
10:00 am – 4:00 pm
BelleWood Acres Event Center
6140 Guide Meridian Drive
Bellingham, WA**

A hearty lunch will be provided

The purpose of this forum is to:

- Provide candid feedback on current watershed planning and management projects.
- Share ideas and strategies to improve future watershed management projects.
- Suggest improvements for watershed outreach and communication strategies.
- Discuss current and future needs for local watershed management.

Thank you for considering this opportunity to improve watershed management in Whatcom county and we sincerely hope you can join us for this exciting event. Please mark your calendar for March 1 and **RSVP by February 14** by phone or email, at 360-526-2381 x103 or asweeney@whatcomcd.org

Best,

Aneka Sweeney
Whatcom Conservation District

Appendix F: Watershed Management Forum - Agenda

Tenmile Creek Watershed Management Forum

BelleWood Acres Event Center, Bellingham WA

March 1, 2018

Today's objective is to gather input on ***watershed project design, marketing, delivery and implementation*** to identify success factors and hurdles to effective implementation of NRCS supported small watershed efforts.

- | | |
|--------------------|--|
| 10:00-10:15 | Registration and Meet and Greet <ul style="list-style-type: none">• Ongoing activity: Write Tenmile Creek resource concerns on flipcharts |
| 10:15-10:45 | Introduction and Overview <ul style="list-style-type: none">• Presentation: What we know about successful watershed management and communication |
| 10:45-12:15 | SESSION ONE: ACTIVITY AND FACILITATED DISCUSSION
WHAT IS SUCCESSFUL WATERSHED MANAGEMENT? <ul style="list-style-type: none">• What elements are needed for successful watershed management?<ul style="list-style-type: none">○ Activity using statements from participants and current literature addressing necessary elements for successful watershed management |
| 12:15-1:00 | Working Lunch: Discussion of Tenmile Creek resource concerns |
| 1:00-2:45 | SESSION TWO: FACILITATED DISCUSSION -
HOW TO ACHIEVE SUCCESSFUL IMPLEMENTATION <ul style="list-style-type: none">• Resource Needs<ul style="list-style-type: none">○ Who is involved? What resources do they bring?○ What resources are missing?○ Who is <u>not</u> involved that could be?○ How can NRCS leverage their resources to be an effective local partner in conservation? <p>***Break***</p> <ul style="list-style-type: none">• Education and Outreach<ul style="list-style-type: none">○ Who?○ What?○ When?○ How?○ What role should NRCS play in watershed education and outreach? |
| 2:45 - 3:00 | CONCLUSION |

Appendix G: Outreach Strategy Workshop - Agenda

AGENDA

Tenmile Clean Water Project/Whatcom Conservation District

Outreach Strategy Workshop

June 7, 2018

2:30 pm – 5:00 pm

Bellewood Acres

6140 Guide Meridian, Lynden, WA 98264

Objective: Gather vital stakeholders and outreach professionals to develop outreach and engagement strategies to reduce fecal bacteria pollution in the Tenmile Watershed.

2:30 – 2:50 - Welcome/Introductions/Meeting Goals

2:50 -3:15 **Background Summary of Recent Watershed Assessment**
- NRCS NWQI Modeling
- Social indicator survey results

3:15-4:00 - Audience and Behavior selection activity
- Prioritization

4:00 -4:15 - Incentive Resource inventory (toolbox)

4:15 -4:50 - Message Development
- Barriers and Benefits Analysis
- Prioritization

4:50 – 5:00 - Wrap up/Next Steps

Thank you,

Aneka Sweeney
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