



# **Lower Skagit River Tributaries Temperature Implementation Strategy**

**October 28<sup>th</sup>, 2019**

# Morning Agenda

10:00 – 12:00

- Introductions
- Next steps
- Open House discussion
- Washington State Conservation Commission pilot program – Dr. Alison Halpern



# Afternoon Agenda

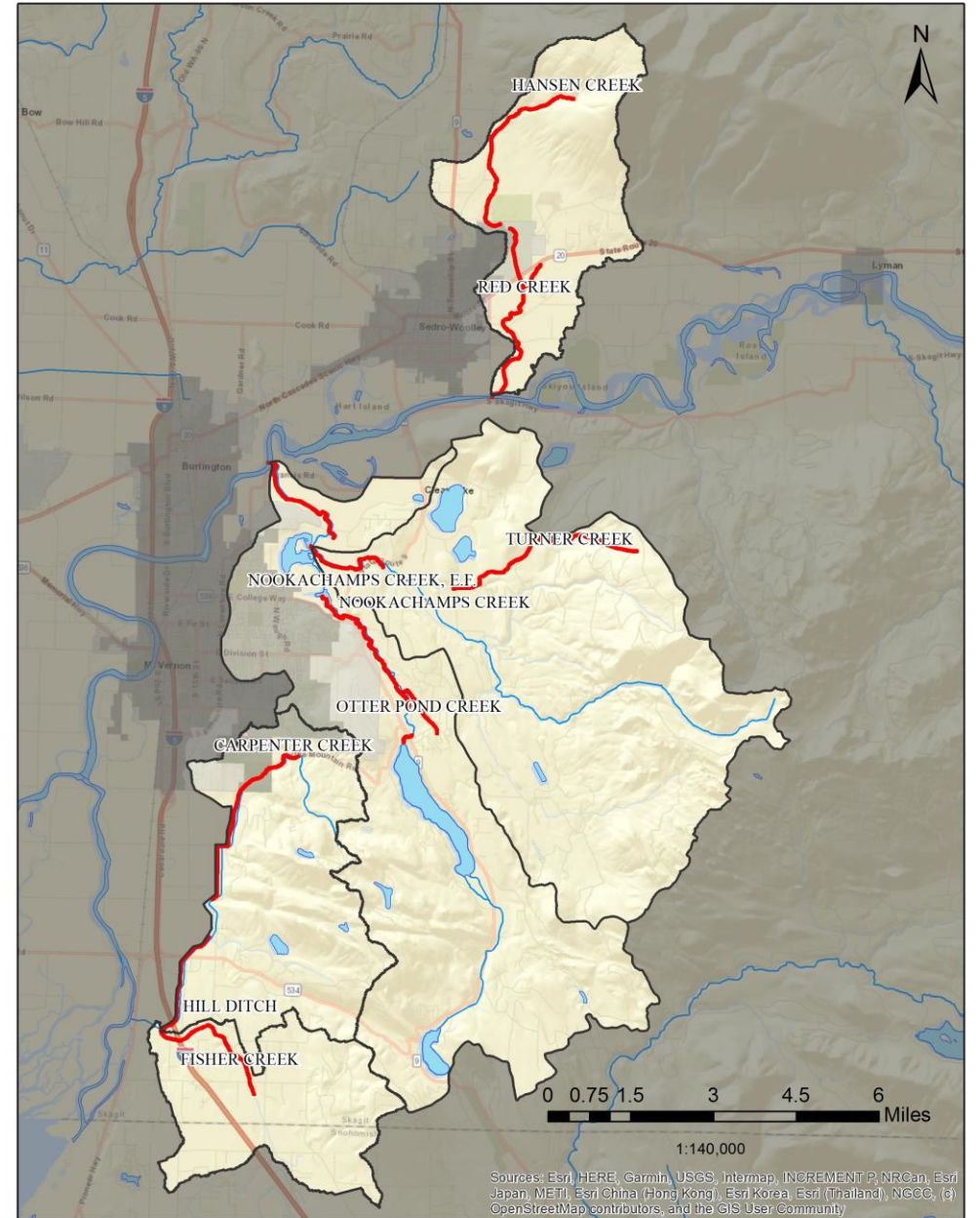
1:00 – 2:30

- Sequencing discussion
  - Brief discussion on sequencing, trying to order planning efforts
- Small groups - LSTT Action matrix discussion



# Open dialog and discussion

- Be Respectful
- Please give others the freedom to speak candidly and express ideas.
- Please don't interrupt



# Introductions

- Who are you?
- What efforts, projects, or milestones has your organization recently completed?



# Strategy Timeline

- Draft strategy to group by late November
  - Two week review period
- Ecology internal review process
- Ecology response to comments from the group
- Ecology commitment to complete the Strategy by December 31<sup>st</sup>, 2019



# What will the strategy include?

- 4 Chapters
  - 1- Intro/problem statement
  - 2 - Group discussion synthesis/Action Matrix for each topic
  - 3 - Restoration Actions/Implementation Organizations
  - 4 - Policy discussion, comments, and recommendations



# Nine key elements – EPA/319

- Identification of the causes of impairment and pollution sources
- An estimate of the load reductions expected from management measures
- Description of the nonpoint source management measures (BMPs)
- An estimate of the technical and financial assistance needed
- Information and education to be provided in the watershed
- Schedule for implementing needed BMPs
- Description of interim milestones
- Criteria to determine if load reductions are being met
- Monitoring to evaluate effectiveness of the plan





# Action Matrix

- High level goals – Used to support the next steps.
- Includes organization who will help implement the goal
- Milestones and timelines



# What is the goal of the strategy?

- Original plan
- Based on feedback from the group - phased approach
- This Strategy - Phase I
  - Near term actions
  - Long term Goals
- Phase II
  - Targeted projects based on funding



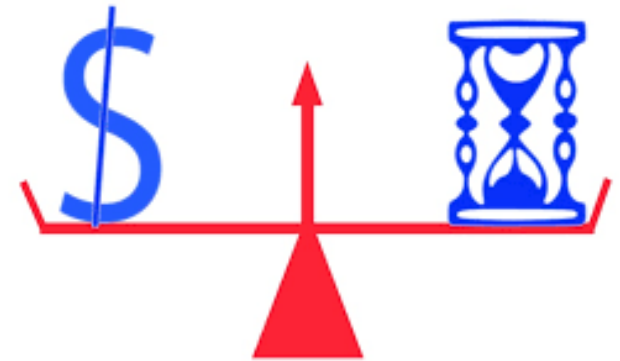
# Identify and fund near term actions

- 319/Combined Funds grants
- Reach scale planning  
NTA # is 2018-0885 –  
“Support Additional Reach-Scale Planning for Riparian Protection and Restoration in Agricultural Landscapes”
- Direct Implementation Funding
- Conservation Commission Pilot Program
- Ecology support – 1 FTE dedicated to Skagit County



# Begin long term goal funding

- A legislative ask – Long term (10 year) dedicated funding to support efforts
- Realistically, what is necessary to reduce temperatures?
  - Increased capacity?
  - Increased project funding?
  - Now is the time to provide an estimate



# Comments or Questions?

- Missing elements?
  - Letters of support from Partners
  - Ecology committed to support
  - Who are the local champions?
- Any other important actions, items, etc.?



# Open Houses

- Ecology is committed to hosting an open house event to discuss the TMDL and Implementation Strategy
  - Who is interested/willing to participate?
  - When and Where?
  - Timeline, notifications/public attendance. Group recommendations?



# Open Houses

- Proposed event structure
  - Brief Ecology presentation
  - Displays and information available from partners
  - Any other specific topics that we should cover?  
Local concerns?



# Washington Conservation Commission

- Presentation from Dr. Alison Halpern from the Washington State Conservation Commission.
- Pilot program, and potential opportunity for Skagit County to participate.





# Watershed sequencing exercise

- What is the correct scale to target efforts?
- What is the priority for the group?



# Action Matrix

- An outline of goals, partners, and needs to help increase capacity and efforts
- Develop the restoration efforts matrix in real time
  - Include reasonable costs estimates related to the capacity needs for your organization
  - Practice costs, program costs.



# Small Groups

- **Education and Outreach**

- Will meet as a separate group

- **Restoration Efforts**

- Kari Odden
- Kyra Symonds
- Bill Blake
- Jason Vander Kooy

- **Strategic Planning and Policy**

- Amy Trainer
- Alison Halpern
- Rick Hartson

- **Data and Research**

- Richard Brocksmith
- Mike See
- Wendy Cole
- Aundrea McBride



# Action matrix review

- Are any key goals or actions missing?
- Is your agency willing to be listed as an implementation partner?
  - Do you have any recommendations for other partners?
- If you would be a willing partner, do you need to increase capacity or funding to help?



# Summary

- Review small group discussion if we have time.
- A summary of the discussion will be sent out to the group.



# Next meetings

- **The next meeting will be Tuesday, November 26<sup>th</sup> .**
- **I will send out a meeting notice and include meeting location details.**



# Thank you

- Feel free to contact me with any comments or discussion topics.
- Additional work on the “action matrix” is welcome if you have time.







# What is the goal of the strategy?

- Lowering water temperatures, using the most beneficial and cost effective methods.
- The goals should not be less than the TMDL goals.



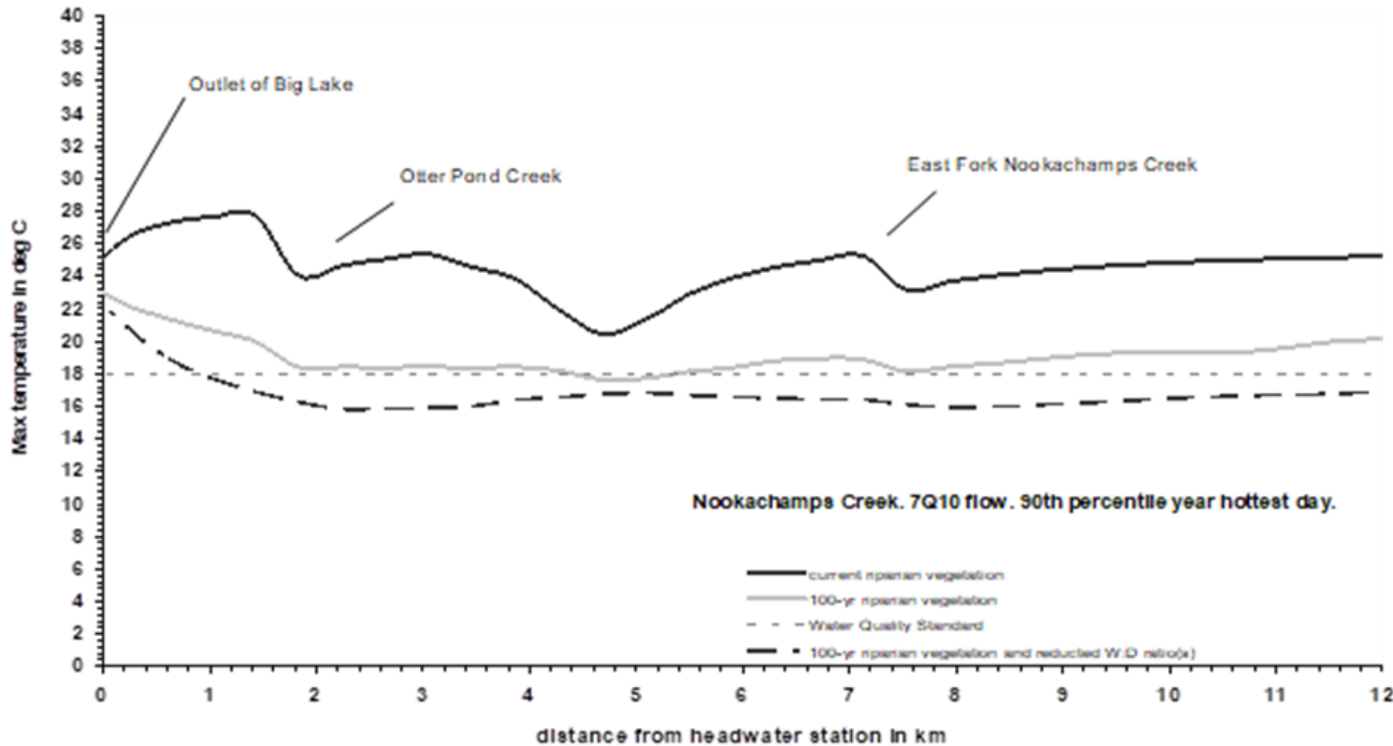
# Buffer Width

Category	Functions	Minimum Buffer Width West of Cascades	Minimum Buffer Width East of Cascades
A. Constructed Ditches, Intermittent Streams and Ephemeral Streams that are not identified as being accessed and were historically not accessed by anadromous or Endangered Species Act (ESA) listed fish species	Water quality, shade, source control and delivery reduction.	35' minimum	35' minimum
B. Perennial waters that are not identified as being accessed and were historically not accessed by anadromous or ESA listed fish species	Water quality, shade, source control and delivery reduction.	50' minimum	50' minimum
C. Perennial, intermittent and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, large wood debris (LWD) for cover, complexity and shade and microclimate cooling, source control and delivery reduction.	100' minimum	75' minimum
D. Intertidal and estuarine streams and channels that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, habitat complexity	35'-75' minimum, or more as necessary to meet water quality standards	N/A



# Nookachamps Creek

Based on the TMDL model, 90% effective shade is required, and may require additional W/D ratio reductions to meet standards



Distance in km from headwater station	Current condition average effective shade (%)	Daily load allocation for effective shade on August 12 (%)
0 (headwater)		
0.41	30.0	90.0
0.81	30.0	92.3
1.22	30.0	91.2
1.63	30.0	91.7
2.04	30.0	92.8
2.44	30.0	91.5
2.85	30.0	91.5
3.26	30.0	92.0
3.66	50.0	91.7
4.07	50.0	92.9
4.48	75.0	93.0
4.88	82.0	93.0
5.29	40.0	93.0
5.70	35.0	93.0
6.11	35.0	92.2
6.51	35.0	92.2
6.92	35.0	89.8
7.33	35.0	90.9
7.73	35.0	92.5
8.14	35.0	91.0
8.55	35.0	85.9
8.95	35.0	85.9
9.36	35.0	84.0
9.77	35.0	83.5
10.18	35.0	84.3
10.58	35.0	85.5
10.99	35.0	87.2
11.40	35.0	87.7
11.80	35.0	81.5
12.21	35.0	79.1

# Width research

- Beschta et al. (1987) report that a 98-foot-wide (30-m) buffer provides the same level of shading as that of an old-growth stand.
- Brazier and Brown (1973) found that a 79-foot (24-m) buffer would provide maximum shade to streams.
- Steinblums et al. (1984) concluded that a 56-foot (17-m) buffer provides 90% of the maximum ACD.
- Corbett and Lynch (1985) concluded that a 39-foot (12-m) buffer should adequately protect small streams from large temperature changes following logging.
- Broderson (1973) reported that a 49-foot-wide (15-m) buffer provides 85% of the maximum shade for small streams.
- Lynch et al. (1985) found that a 98-foot-wide (30-m) buffer maintains water temperatures within 2°F (1°C) of their former average temperature.



# Continued discussion

- Large range of the effective shade values in literature.
- On going effort to evaluate buffer widths and effectiveness.
- TMDL recommendations and goals – Water needs to meet standards.



# Funding

- What programs are available?
- Incentives
  - What should they be?
  - Who funds them?
- What are the funding mechanisms?



# Education/Outreach

- Who is the face of the program?
- New messages, aimed at local benefit
- What sort of message or approach?
- Who has the capacity for the work?



# Strategic Planning

- Setting milestones
- Near term actions/Larger policy Issues
- Program flexibility





# Riparian plantings/BMPs

- Riparian plantings – In water work
- Combinations or “suites” of BMPs
- Incentives for buffers or multiple BMPs
- Easements
  - Easement availability/programs
  - Are higher payments to key to increasing implementation?



# Data and Research

- Do we have enough monitoring?
  - Effectiveness monitoring
  - Adaptive management
- In channel work
  - Cold water refuge
  - Water retention/Restoration potential
- Data gaps?



- “Programs don’t match up to the goals we are setting, we need to evaluate the programs and determine what is allowable, what is useful, and what we can do.”



# Group discussion

- Voluntary focus
  - Are we looking to adapt programs to increase participation? What levels of program change are we willing to make?
  - What rate or level of participation will prevent external influence? Is that the goal?



# Regulatory Backstop

- “Ecology must be willing to use regulatory power – no other entity has the power to enforce state WQ standards for salmon stream temps.”
- “There needs to be a clear regulatory consequence listed in the plan. Voluntary measures by themselves have not been working – Carrots and sticks work together.”



# Regulatory Backstop

- What is fair?
- Reasonable goals and milestones?
- Are we the group to decide?



# Response

- Ecology as the regulatory authority
  - Mandatory buffers
  - What is the appropriate approach?
- Public perception/response
- Political reality



# Clarifying and Condensing Topics

- ~~Funding~~ – Included under topics
- Education
- Strategic planning
- ~~BMP/Riparian plantings~~ – Restoration Efforts
- ~~Policy~~
  - ~~General policy recommendations and ideas~~
  - Regulatory approach - Separate category
- Data and research.





# Increasing implementation

- Long term, adequately funded program.
- Multiple programs and practices, with adequate compensation and flexibility.
- Local partner and stakeholder support
  - How does this relate to the meetings so far?

