

**WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT**


**FRANK M. ABART
Director**



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MEMORANDUM

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

FROM: Chris C. Brueske, P.E., Assistant Public Works Director 

DATE: March 11, 2013

RE: March 2013 Council Surface Water Work Session

Please refer to the proposed agenda below for the next work session on March 19, 2013 from 10:30 a.m. to 12:00p.m. Supporting documents are attached.

AGENDA

Date:	Tuesday, March 19, 2013		
Time:	10:30 a.m. to 12:00 p.m.		
Place:	Courthouse Conference Room No. 513		
Time	Topic	Council Action Requested	Background Information Attached
10:30 a.m. –11:30 a.m.	<p>Canyon Creek Integrated Fish and Flood Project:</p> <ul style="list-style-type: none"> • Overview of history of debris floods and mitigation efforts • Review of proposed design • Discussion of project budget and cost 	Legislative direction as to whether Public Works should prepare Supplemental budget request from FCZD Fund to accomplish 2013 construction	<p>A) Copy of presentation</p> <p>B) Schematic of project design</p> <p>C) Project budget and cost estimate</p>
11:30 a.m. – Noon	<p>Whatcom County Aquatic Invasive Species Ordinance</p> <ul style="list-style-type: none"> • Update of status of ordinance preparation • Discussion of City of Bellingham ordinance adoption 	Discussion and feedback on various aspects of AIS ordinance	None

If you have questions, please feel free to call me at (360) 676-6692, extension 50693.

cc: Frank Abart	Joe Rutan	Paula Cooper	John Wolpers	Mike Donahue
Mike McFarlane	Jeff Hegedus	Craig MacConnell	Kraig Olason	Erika Stroebel
Peter Gill	Josh Fleischmann	John Thompson	Martha Blakely	Chip Anderson
Remy McConnell	Kirk Christensen	Karen Frakes	Jennifer Paulson	Jill Nixon
	Roland Middleton	Dana Brown-Davis	Atina Casas	Cathy Craver
	Sue Blake	Lonni Cummings		
		George Boggs		

Canyon Creek Integrated Fish and Flood Project

March 2013

History of Recent Fan Activity

- 1989: Debris flood destroyed one house
 - SCS constructed bank armoring
- 1990: Smaller event destroyed three houses and portion of a County road
 - SCS structure was destroyed
- 1994: WC constructed new levee with FEMA, State and local funding
- 1995: Flood event destroyed deflectors and exposed toe of riprap

Canyon View Drive after 1990 Event



New Levee after Construction (1994)



Levee after 1995 Flood



History Since 1995

- FEMA provided funding for repair through Public Assistance Program
- Staff turnover and ESA issues prevented construction prior to funding expiring in 1998
- AC supported analysis of alternatives
- Alternatives analysis led to buyout of high-risk properties (2002 to 2012)

Current Levee Condition



Integrated Fish Flood Project

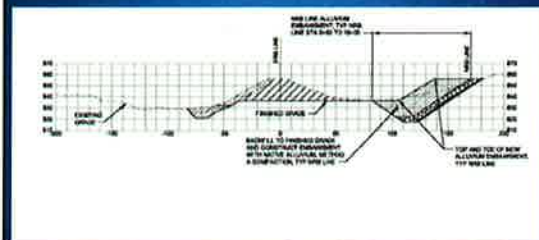
- WRIA#1 Salmon Recovery Plan identifies lower Canyon Creek as high priority for restoration
- SRFB provided funding for restoration design and Phase 1 implementation
- NOAA provided ~ \$1M for restoration in 2011
- Project design completed in 2012 once acquisition of key properties was complete

Basis of Design

- Flood Objectives:
 - Project cannot increase or transfer risk to Glacier Springs or Mt Baker Highway
 - Design should consider aggradation potential
- Design Results:
 - Project can convey the 500-year debris flood under current conditions and under aggraded condition (post-1990 event)
 - Rock is sized for 100-year clearwater flood
 - Jams are sited to keep creek from exposing riprap
 - Risk of catastrophic levee failure is mitigated (but all risk is not eliminated)
 - Significant area is available for sediment storage



Cross-Section near Bend

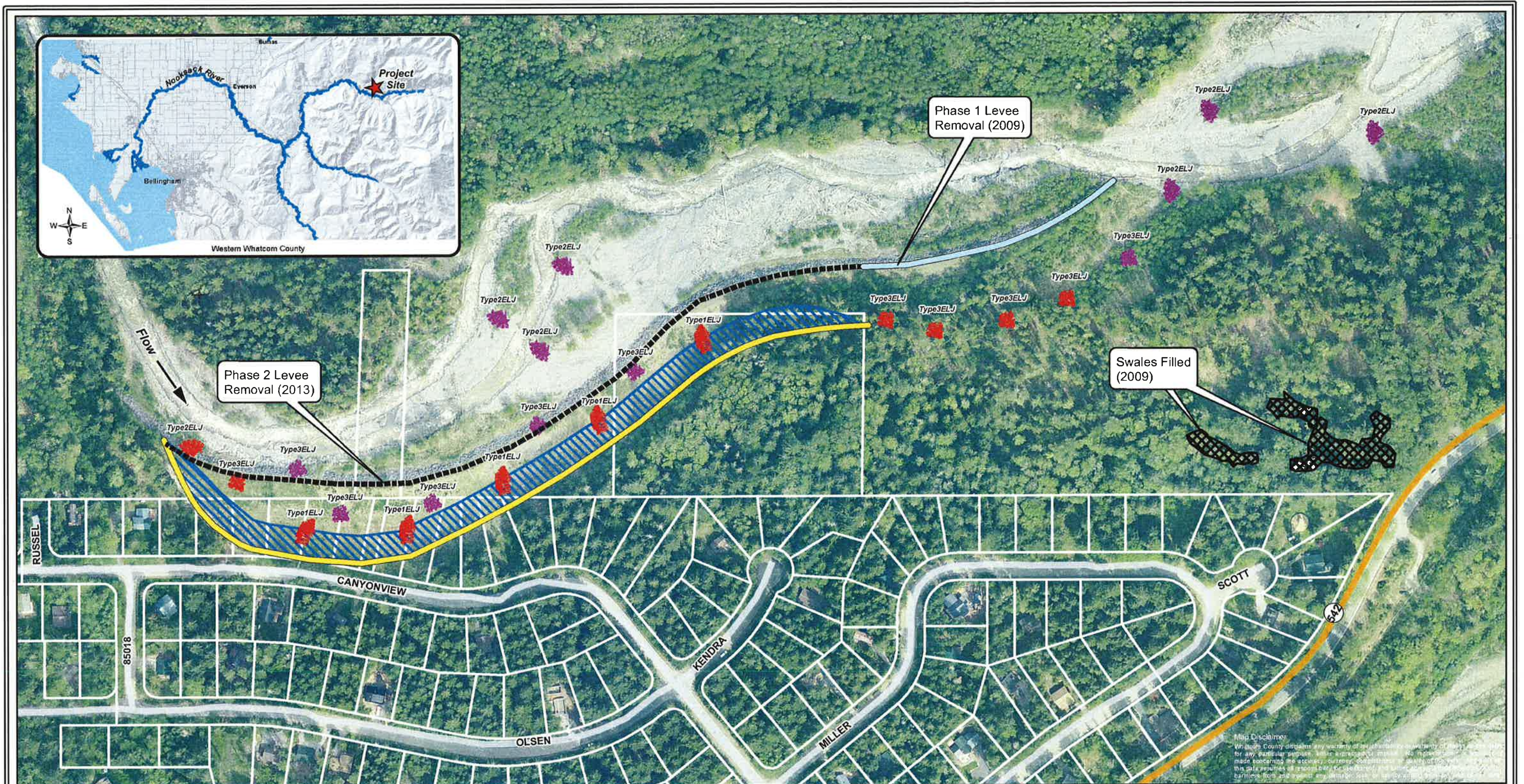


2013 Construction

- Schedule A scope
 - Removal of existing levee
 - Construction of setback revetment
 - Construction of 11 engineered log jams
- Schedule A scope is minimum needed for flood protection and habitat goals
- Schedule B adds 12 more jams
 - Improves likelihood of achieving flood protection and adds habitat (2014?)

2013 Construction

- Schedule A Cost estimate
 - \$3.4M
- Current funding in hand:
 - 2013 approved budget allocated \$2.3M
 - New grants since 2013 budget add \$0.5M
 - Projected potential shortfall: \$635,000
- State funding request for FY14-15:
 - \$2.1M for Schedule A shortfall and Schedule B (2014)

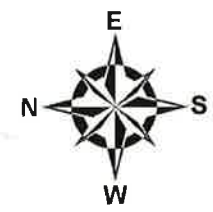


- Legend**
- State Route
 - Minor Roads
 - Set Back Rip-Rap
 - Phase 1 Levee Removal (2009)
 - Phase 2 Levee Removal (2013)
 - Set Back Bank (to be planted)
 - Engineered Log Jams (2013)
 - Engineered Log Jams (2013 or later)
 - Filled Swales (2009)

*Note: Parcel boundaries are approximate

LOWER CANYON CREEK HABITAT RESTORATION PROJECT

PLAN VIEW



By: TEB
Date: 12/7/12

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200 100 0 200
Feet

Map Disclaimer:
Whatcom County does not warrant or guarantee the accuracy or reliability of the information shown on this map. The information is provided for informational purposes only. The user assumes all responsibility for the use of the information shown on this map. The user agrees to hold Whatcom County harmless from and against any and all claims, damages, and expenses, including reasonable attorneys' fees, arising out of or from the use of the information shown on this map.

**Canyon Creek Integrated Fish Flood Project
Project Budget and Cost Estimate**

2013 Funding Source	Amount (\$)	Notes
NOAA/RCO grant	973,750	within 2013 approved budget
FCZD fund	1,302,020	within 2013 approved budget
RCO grant amendment	292,248	coming to BOS in March/April
NOAA/PSP grant	197,302	contingent on BOS committing to Schedule A
Total funding in hand	\$ 2,765,320	

Schedule A cost estimate **\$ 3,400,000**

Potential Budget Shortage **\$ 634,680**

NOTE: 2014 preliminary budget does not include funding for Schedule B

Acronyms:

BOS: Board of Supervisors

FCZD: Flood Control Zone District

NOAA: National Oceanic and Atmospheric Administration

RCO: Recreation and Conservation Office

PSP: Puget Sound Partnership