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 12:00 p.m. Supporting documents are attached.

AGENDA

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<th>Council Action Requested</th>
<th>Background Information Attached</th>
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| 10:30 a.m. – 11:30 a.m. | Canyon Creek Integrated Fish and Flood Project:  
• 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 | A) Copy of presentation  
B) Schematic of project design  
C) Project budget and cost estimate |
| 11:30 a.m. – Noon | Whatcom County Aquatic Invasive Species Ordinance  
• 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  
   Mike McFarlane  
   Joe Rutan  
   Jeff Hagedus  
   Craig MacConnell  
   Paula Cooper  
   John Wolpers  
   Mike Donahue  
   Erika Stroebel  
   Chip Anderson  
   Jill Nixon  
   Cathy Craver  
   Peter Gill  
   Kirk Christensen  
   Josh Fleischmann  
   John Thompson  
   Karen Frakes  
   Dana Brown-Davis  
   Martha Olason  
   Jennifer Paulson  
   Alina Casas  
   Remy McConnell  
   Roland Middleton  
   Sue Blake  
   Loni 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)

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)
  - Bank 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)
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