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: September 5, 2013

RE: September 2013 Council Surface Water Work Session

Please refer to the proposed agenda below for the next Surface Water Work Session. Supporting documents are attached.

AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Council Action Requested</th>
<th>Background Information Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 AM – 10:40 AM</td>
<td>Introduction of new staff – MRC Coordinator and Natural Resources Manager</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Project Narratives</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Draft Resolution adopting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>the Six-Year WRIP</td>
</tr>
<tr>
<td>11:45 AM – Noon</td>
<td>Update on status of WRIA 1 Planning Unit</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

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  John Thompson  Kraig Olason  Erika Stroebel
    Remy McConnell  Josh Fleischmann  Karen Frakes  Martha Blakely  Jill Nixon
    Kirk Christensen  Dana Brown-Davis  Lonnin Cummings  Jennifer Paulson  Cathy Craver
    Roland Middleton  George Boggs  Atina Casas  Mike Personius
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Project Description</th>
<th>Database ID No.</th>
<th>DBE</th>
<th>Previous Expenditures</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 - 2019</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Phase</td>
<td>Amount</td>
<td>Source</td>
<td>Phase</td>
<td>Amount</td>
<td>Source</td>
</tr>
<tr>
<td>1</td>
<td>Cerroado/Framenom (LU CSIP CP-07, CP-08): Biocenosis swales, treatment vault, and channel restoration</td>
<td>07-099</td>
<td>60.5</td>
<td>PE</td>
<td>$100,000</td>
<td>FCDI</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Academy Road/Joint with CGB (LU CSIP CP-05): Pretreatment, biocenosis swales, filter cartridge vault, high flow bypass, and vegetated buffer along lake front</td>
<td>07-097</td>
<td>60.5</td>
<td>PE</td>
<td>$75,000</td>
<td>FCDI</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cedar Mills/follow (LU CSIP CP-05, CP-10): Install rain gardens, filter vaults, and equals</td>
<td>07-066</td>
<td>63.0</td>
<td>PE</td>
<td>$75,000</td>
<td>FCDI</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Agate Heights Estate/Ray Lane (LU CSIP CP-11, CP-13): System upgrades to improve water quality [biocenosis swales, reduce ditch erosion]</td>
<td>07-102</td>
<td>60.5</td>
<td>PE</td>
<td></td>
<td></td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Beaver Creek (LU CSIP CP-12): Restore and repair eroded sections of Beaver Creek</td>
<td>15-003</td>
<td>56.1</td>
<td>PE</td>
<td></td>
<td></td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sudden Valley (LU CSIP CP-16, CP-21): Drainage systems upgrades and outfall retrofits</td>
<td>13-004</td>
<td>46.1</td>
<td>PE</td>
<td></td>
<td></td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Silver Beach Creek (LU CSIP CP-04, CP-06): Main channel restoration below inflatable using natural vegetation</td>
<td>07-097</td>
<td>60.5</td>
<td>PE</td>
<td></td>
<td></td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Project Design (2019): Project location not yet specified</td>
<td>NA</td>
<td>N/A</td>
<td>PE</td>
<td></td>
<td></td>
<td>PE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BIRCH BAY**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Project Description</th>
<th>Database ID No.</th>
<th>DBE</th>
<th>Previous Expenditures</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 - 2019</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Phase</td>
<td>Amount</td>
<td>Source</td>
<td>Phase</td>
<td>Amount</td>
<td>Source</td>
</tr>
<tr>
<td>9</td>
<td>Beachway Drive &amp; Farm/Park (CS &amp; CS-5): Upsize outfall and install drainage system to reduce neighborhood flooding and for water quality improvement</td>
<td>13-005</td>
<td>56.1</td>
<td>PE</td>
<td>$120,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Harborview Road Culvert Replacement (H-13): Upsize six culverts along Harborview Road to reduce flooding over roadway and adjacent properties</td>
<td>07-217</td>
<td>52.0</td>
<td>PE</td>
<td>$60,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Cottonwood Drive Drainage Improvement (HL-2): Complete stormwater system improvements for reduced flooding and water quality treatment improvements</td>
<td>13-006</td>
<td>52.0</td>
<td>PE</td>
<td>$70,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Richmond Park (HL-3, HL-4, HL-5): Upsize outfall and install new drainage diversion system rain Garden to reduce flooding and gully erosion</td>
<td>07-217</td>
<td>63.1</td>
<td>PE</td>
<td>$125,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>WashBee Drive Drainage Improvements (CC-05): Improve drainage system to reduce local flooding and incorporate water quality treatment</td>
<td>13-007</td>
<td>52.2</td>
<td>PE</td>
<td>$50,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>North Bay Tract Park - ditch Protection (HL-3): Prevent ongoing damage from concentrated runoff causing significant erosion</td>
<td>13-008</td>
<td>48.4</td>
<td>PE</td>
<td>$40,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Birch Bay Drive &amp; Pedestrian Project: Transfer out to support roadway protection project</td>
<td>07-030</td>
<td>72.1</td>
<td>PE</td>
<td>$250,000</td>
<td>BBBARM</td>
<td>PE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. Expenditures shown are planning level cost estimates. The Six-Year WRP is not a budget document and does not authorize expenditures.
2. PE = Preliminary Engineering; RW = Property Acquisition; CN = Construction.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Project Description</th>
<th>Database ID No.</th>
<th>Previous Expenditures 2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 - 2019 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Phase</td>
<td>Amount</td>
<td>Source</td>
<td>Phase</td>
</tr>
<tr>
<td>16</td>
<td>Marietta Acquisition – Acquire properties in repetitive flood loss area</td>
<td>07-002 73.1</td>
<td>PE</td>
<td>$320,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>17</td>
<td>Canyon Creek Restoration – Leave siltbank and construction of 29 engineered log jams</td>
<td>07-033 70.2</td>
<td>PE</td>
<td>$50,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>18</td>
<td>Denning Levee Improvement – Realize and improve upstream portion of levee to protect Denning</td>
<td>07-036 70.2</td>
<td>PE</td>
<td>$220,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>19</td>
<td>Jones Creek Dam Renovation – Construct sediment basin and address local access</td>
<td>07-035 70.4</td>
<td>PE</td>
<td>$250,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>20</td>
<td>Lower North Fork Overflow Corridors – Construct overflows and protect infrastructure in overflow areas</td>
<td>Various 95 - 50</td>
<td>PE</td>
<td>$160,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>21</td>
<td>High Creek – Recommended projects to address ongoing sedimentation</td>
<td>07-125 51.1</td>
<td>PE</td>
<td>$90,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>22</td>
<td>System Wide Improvement Framework (SWIFP) – Projects resulting from SWIFP planning process deemed to warrant ACME FECD 84-90 eligibility</td>
<td>12-003 56.3</td>
<td>PE</td>
<td>$30,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>23</td>
<td>Sediment Management Pilot – Small-scale sediment removal to support sediment management strategy</td>
<td>07-265 33.3</td>
<td>PE</td>
<td>$550,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>24</td>
<td>City of Bella Vista Aquifer Basin – Flood Hazard Reduction</td>
<td>N/A N/A</td>
<td>PE</td>
<td>$8,000,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>25</td>
<td>Birch Bay Drive &amp; Pedestrian Project – Expand out to support software protection project</td>
<td>07-080 72.1</td>
<td>PE</td>
<td>$250,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
<tr>
<td>26</td>
<td>Emergency/Project – Typically repair projects that result from new damage, as needed</td>
<td>08-003 var</td>
<td>PE</td>
<td>$250,000</td>
<td>FECD</td>
<td>RW</td>
</tr>
</tbody>
</table>

**Notes:**
1. Expenditures shown are planning level cost estimates. The Six-Year WRP is not a budget document and does not authorize expenditures.
2. PE = Preliminary Engineering; RW = Property Acquisition; CN = Construction.
Coronado-Fremont Stormwater Improvements
Database ID No. 07-099

Construction Funding Year(s): 2013 / 2014

Project Narrative:
Improvements will treat stormwater, promote infiltration, slow velocity to reduce erosion and sediment transport. In 2013, elements will include constructing a bio-infiltration swale and installing stormwater vaults. Creek restoration and installation of an additional treatment vault will occur in 2014.

Project Status:
Construction to begin in July 2013 of bio-infiltration swale and installation of stormwater vaults. In 2014, construction of creek restoration will occur with the annual watershed work window.

Total Estimated Project Cost: $1,085,000
Expenditures to Date: $715,000
Academy Road Stormwater Improvements
(Joint Project with City of Bellingham)
Database ID No. 07-097

Construction Funding Year(s): 2015

Project Narrative:
Whatcom County has partnered with the City of Bellingham on a joint project to improve stormwater quality in the Academy sub-basin of the Lake Whatcom Watershed. The project will treat runoff from approximately 80 acres. Project elements will include a pretreatment unit, bioinfiltration swale, filter cartridge vault, high flow bypass, and a vegetated buffer along the lake front.

Project Status:
Preliminary engineering design will begin September 2013. Construction is expected to occur during the summer of 2015 Lake Whatcom Watershed work window.

Total Estimated Project Cost: $945,000
Expenditures to Date: $75,000
Cedar Hills / Euclid
Database ID No. 07-066

Construction Funding Year(s): 2016

Project Narrative:
Install rain gardens, filter vaults, and treatment swales.

Project Status:
Preliminary engineering design is anticipated to begin in 2014 with construction to take place during the summer of 2016 during the Lake Whatcom Watershed work window.

Total Estimated Project Cost: $615,000
Expenditures to Date: $-0-
Agate Heights Estate / Bay Lane
Database ID No. 07-102

Construction Funding Year(s): 2017

Project Narrative:
System upgrades to improve water quality through construction of bio-infiltration swales and channel stabilization to reduce ditch erosion.

Project Status:
Preliminary engineering design is anticipated to begin in 2015 with construction to take place during the summer of 2017 during the Lake Whatcom Watershed work window.

Total Estimated Project Cost: $500,000
Expenditures to Date: $0
# Beaver Creek
Database ID No. 13-003

**Construction Funding Year(s):** 2018

**Project Narrative:**

Restore and repair eroded sections of Beaver Creek.

**Project Status:**

Preliminary engineering design is anticipated to begin in 2016 with construction to take place during the summer of 2018 during the Lake Whatcom watershed work window.

<table>
<thead>
<tr>
<th>Total Estimated Project Cost:</th>
<th>$445,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures to Date:</td>
<td>$-0-</td>
</tr>
</tbody>
</table>
# Sudden Valley
Database ID No. 13-004

| Construction Funding Year(s): | 2019 |

**Project Narrative:**
Drainage system upgrades and outfall retrofits in Sudden Valley.

**Project Status:**
Preliminary engineering design is anticipated to begin in 2017 with construction to take place during the summer of 2019 during the Lake Whatcom watershed work window.

| Total Estimated Project Cost: | $515,000 |
| Expenditures to Date: | $0 |

![Site Locations](image-url)
Silver Beach Creek – Main Channel  
Database ID No. 07-095

Construction Funding Year(s):  
2020

Project Narrative:
Restoration of the main channel of Silver Beach Creek below Hillsdale using natural vegetation.

Project Status:
Preliminary engineering design is anticipated to begin in 2018 with construction to take place during the summer of 2020 during the Lake Whatcom watershed work window.

Total Estimated Project Cost:  
$135,000 (2018 - Preliminary engineering)  
$450,000 (2020 - Construction)

Expenditures to Date:  
$0-
### Project Design (Future Projects)
#### Database ID No. TBD

<table>
<thead>
<tr>
<th>Construction Funding Year(s):</th>
<th>2019</th>
</tr>
</thead>
</table>

**Project Narrative:**
Design of future projects in the Lake Whatcom watershed.

**Project Status:**
Anticipated in 2019.

<table>
<thead>
<tr>
<th>Total Estimated Project Cost:</th>
<th>$115,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures to Date:</td>
<td>$0</td>
</tr>
</tbody>
</table>

Due to the nature of this item, no map exists. Board of Supervisors review and prioritization will be sought at the appropriate time.
Beachway Drive & Fern/Park
Database ID No. 13-005

Construction Funding Year(s):
2014

Project Narrative:
This project will upsize an undersized outfall to Birch Bay, provide for local near shore drainage outlets, route upland water into the Beachway drainage system through grassed swales for improved water quality and away from low lying lots.

Project Status:
Design underway summer 2013 with construction late summer 2014.

Total Estimated Project Cost: $625,000
Expenditures to Date: $120,000
Harborview Road Culvert Replacement  
Database ID No. 07-217

<table>
<thead>
<tr>
<th>Construction Funding Year(s):</th>
<th>2015</th>
</tr>
</thead>
</table>

**Project Narrative:**  
Upsizing culverts along Harborview Road to reduce flooding.

**Project Status:**  
Design will begin Fall 2013 with construction late summer 2015.

<table>
<thead>
<tr>
<th>Total Estimated Project Cost:</th>
<th>$225,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures to Date:</td>
<td>$60,000</td>
</tr>
</tbody>
</table>
Cottonwood Drive Drainage Improvement
Database ID No. 13-006

Construction Funding Year(s): 2016

Project Narrative:
Improve conveyance from upland areas to reduce near shore flooding and to provide additional drainage connections along Birch Bay Drive. Water quality treatment options will also be incorporated.

Project Status:
Design will begin January 2014 with construction in late summer 2016.

Total Estimated Project Cost: $820,000
Expenditures to Date: $0-
Richmond Park
Database ID No. 07-271

Construction Funding Year(s): 2017

Project Narrative:
This project will reduce flooding in the Richmond Park neighborhood by rerouting a portion of the stormwater through the installation of a new drainage system to Birch Bay. Rerouting of peak stormwater flows will also reduce erosion in the gully at Deer Trail. Opportunities for water quality treatment will also be evaluated.

Project Status:
Design will begin January 2015 with construction late summer 2017

Total Estimated Project Cost: $1,420,000
Expenditures to Date: $0
### Wooldridge Drive Drainage Improvement

**Database ID No. 13-007**

<table>
<thead>
<tr>
<th>Construction Funding Year(s):</th>
<th>2018</th>
</tr>
</thead>
</table>

**Project Narrative:**

Improve stormwater conveyance system to reduce street flooding and improve water quality.

**Project Status:**

Design will begin January 2016 with construction late summer 2018.

<table>
<thead>
<tr>
<th>Total Estimated Project Cost:</th>
<th>$255,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures to Date:</td>
<td>$0</td>
</tr>
</tbody>
</table>
North Bay Trailer Park Ditch Protection
Database ID No. 13-008

Construction Funding Year(s): 2019

Project Narrative:
Install conveyance system to accommodate concentrated flow and reduce erosion.

Project Status:
Design will begin January 2017 with construction late summer 2019.

Total Estimated Project Cost: $165,000
Expenditures to Date: $0
Birch Bay Drive and Pedestrian Facility
Database ID No.: 07-030

Construction Funding Year(s): 2016

Project Narrative:
This project is located parallel to Birch Bay Drive from Cedar Avenue to the mouth of Terrell Creek. This is a 1.58 mile separated berm to provide soft-shore erosion protection, habitat enhancement, and encourage pedestrian use along Birch Bay Drive. While primarily a roadway project, it is included in the Six-Year WRIP to reflect contributions from both the FCZD and BBWARM.

Project Status:
Phase I of the Feasibility Study was completed in 2006. Phase 2A (Preliminary Construction Cost Estimate) was completed in 2007, and updated in spring of 2013. Preliminary Engineering will begin in late 2013, RW acquisition in 2014/2015 and construction in 2016/2017. The Six-Year WRIP includes transfers out of BBWARM and FCZD in 2016 to support construction.

Total Estimated BBWARM/FCZD Contribution: $500,000

FCZD/BBWARM Expenditures to Date: $0
## Project Narrative:
Acquire residential properties in the frequently-flooded repetitive flood loss area of Marietta. Remove existing structures and restore properties with native vegetation.

## Project Status:
Property acquisition began in 2001 and is still ongoing. As properties are acquired through tax title sales, purchases funded with hazard mitigation, habitat restoration grants, and FCZD funding, structures are removed and native vegetation is planted. All acquisitions are voluntary and the project is ongoing as current property owners decide to sell their properties.

### Total Estimated Project Cost:
TBD

### Expenditures to Date:
$720,000
Canyon Creek Restoration
Database ID No. 07-133

Construction Funding Year(s): 2009, 2013 - 2014

Project Narrative:
Acquire high-risk properties on Canyon Creek alluvial fan, setback existing levee to edge of active alluvial fan and construct 23 engineered log jams (ELJ's) to restore habitat and improve reliability of flood protection.

Project Status:
Property acquisition complete. Phase 1 removed the lower 520 feet of levee in 2009. Setback of the rest of the levee and construction of 12 ELJ's underway in 2013. Construction of additional 11 ELJ's is scheduled for 2014 construction.

Total Estimated Project Cost: $5,840,000
Expenditures to Date: $4,260,000
Deming Levee Improvement Project
Database ID No. 07-106

Construction Funding Year(s): 2015

Project Narrative:
Realign and improve low-lying berm at upstream end of Deming levee to increase level of flood protection to the Mt Baker School District and Nooksack Tribal facilities, and the town of Deming.

Project Status:
An alignment for the improved levee has been selected and detailed design is underway; potential impacts to wetlands will require mitigation; studies are being conducted to evaluate the extent of mitigation that will be required.

Total Estimated Project Cost: $2,700,000
Expenditures to Date: $300,000
Jones Creek Debris Flow Protection
Database ID No. 07-105

Construction Funding Year(s): 2016

Project Narrative:
Acquire residential properties in the high hazard area of the Jones Creek alluvial fan and construct setback deflection berm to route debris flows around the town of Acme. Project includes potential realignment and bridge improvements at Turkington Road.

Project Status:
Property acquisition began in 2005 and additional properties will need to be acquired. Preliminary design has been performed for the deflection berm and alternatives are currently being evaluated for Turkington Road.

Total Estimated Project Cost: TBD
Expenditures to Date: $640,000
Lower Nooksack Overflow Corridors
Database ID No.: Various

Construction Funding Year(s): TBD

Project Narrative:
This item provides funding to implement the overflow corridors as recommended in the Lower Nooksack River Comprehensive Flood Hazard Management Plan (CFHMP). Work will include creating designed overflows and addressing impacts to private and public infrastructure within the corridors.

Project Status:
Hydraulic modeling of the overflow locations recommended in the CFHMP has been performed for some reaches of the river; additional modeling and preliminary design is being done for Reach 1 (downstream of Ferndale) under an existing Estuary Salmon Restoration Program (ESRP) grant.

Total Estimated Project Cost: TBD
Expenditures to Date: $530,000
High Creek Sediment Management
Database ID No. 07-125

Construction Funding Year(s): 2014 - 2015

Project Narrative: High Creek flooding damaged nearby homes and closed Mount Baker Highway in the mid-1990's. A legal settlement resulting from that event directs Whatcom County to prepare a creek management plan. Sediment management in the watershed including the 3400 feet of County owned right of way east of Kendall Creek will be an important plan element along with fish habitat mitigation. State permits for future maintenance dredging are dependent on management plan completion.

Project Status: Background materials have been collected and analyzed by staff. A consultant will be hired to review the existing information, gather supplemental data, evaluate alternatives, recommend a preferred option, assist with public outreach, and present financing recommendations. Accumulation of gravel at the SR 542 bridge will necessitate implementation of initial actions in 2014 to maintain winter flood conveyance.

Total Estimated Project Cost: TBD
Expenditures to Date: $50,000
System-wide Improvement Framework (SWIF)
Database ID No. 12-003

Construction Funding Year(s): TBD

Project Narrative:
The SWIF is a two-year planning process to develop a plan to reduce risk associated with levees and to address deficiencies identified by the US Army Corps of Engineers (USACE) during their periodic inspections. The SWIF will likely result in a set of capital improvements to the levee system, with an implementation strategy and schedule. Adherence to the implementation schedule will be necessary to ensure ongoing eligibility in the USACE’s PL 84-99 rehabilitation program.

Project Status:
The USACE has approved the FCZD’s request to develop a SWIF and the stakeholder process will be initiated in the fall of 2013. The SWIF plan development must be completed by June of 2015.

Total Estimated Project Cost: TBD
Expenditures to Date: $80,000
Sediment Management Pilot Project
Database ID No. 07-265

Construction Funding Year(s): TBD

Project Narrative:
The Lower Nooksack River Comprehensive Flood Hazard Management Plan includes sediment management as one of the components in the recommended plan. A pilot sediment removal project has been developed to evaluate the feasibility of removing gravel from the river and to improve the science associated with gravel removal to support the development of an overall sediment management strategy.

Project Status:
A preliminary design has been developed for a small-scale removal project near Nolte Road. The proposal is being evaluated to determine the permitting process that will be required under the State Environmental Policy Act (SEPA) and what additional information will be required to permit the project.

Total Estimated Project Cost: TBD
Expenditures to Date: $150,000
Squalicum Creek Berm
Database ID No.: N/A

Construction Funding Year(s): 2015

Project Narrative:
The City of Bellingham applied for and received Flood Hazard Reduction Funding from the Whatcom County Flood Control Zone District in 2001 (Resolution No. 2001-0033). The project involves construction of a berm along Squalicum Creek to protect property and allow construction of a new connector under Interstate 5.

Project Status:
Project design is underway. Construction is expected to occur during 2015. The FCZD is providing partial funding for the project and is not an active participant in the design or construction.

Total Estimated Project Cost: $800,000
(Maximum FCZD contribution)

Expenditures to Date: $0
Emergency/New Projects
Database ID No. 08-003

Construction Funding Year(s): 2014 - 2019

Project Narrative:
This item provides funding to address unanticipated projects resulting from new damage to flood control facilities.

Project Status:
Design and construction to occur as necessary.

Total Estimated Project Cost: TBD
Expenditures to Date: N/A

Due to the nature of this item, no map exists. Board of Supervisors review and prioritization will be sought at the appropriate time.
Swift Creek Phase 1 Projects
Database ID No. 13-0001

Construction Funding Year(s):
T

Project Narrative:
Construction and operation of projects for the management of the sediment deposited from the Swift Creek landslide. Phase 1 to include: Sediment Traps, Upper Goodwin Reach Setback Levee, and Sediment Basins.

Project Status:
EIS completed, plan adopted by resolution July 2013; Work is on hold for Liability Consent Decree and State/Federal funding appropriations.

Total Estimated Project Cost: $TBD
Expenditures to Date: $1,315,000
### Swift Creek North Fork Reroute Project
Database ID No. 13-0001

<table>
<thead>
<tr>
<th>Construction Funding Year(s):</th>
<th>TDB</th>
</tr>
</thead>
</table>

#### Project Narrative:
Feasibility analysis for the reroute of North Fork of Swift Creek to reduce bed load and suspended sediment from the Swift Creek landslide.

#### Project Status:
Identified as a recommended response in the Swift Creek Sediment Management Action Plan. Feasibility analysis and conceptual design to begin in 2014; estimated cost $220,000.

<table>
<thead>
<tr>
<th>Total Estimated Project Cost:</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures to Date:</td>
<td>$0</td>
</tr>
</tbody>
</table>
RESOLUTION NO. __________

(A Resolution of the Whatcom County Flood Control Zone District Board of Supervisors)

WHATCOM COUNTY FLOOD CONTROL DISTRICT
SIX-YEAR WATER RESOURCES IMPROVEMENT PROGRAM
FOR THE YEARS 2014 THROUGH 2019

WHEREAS, pursuant to RCW 86.15.110, flood control or storm water control improvements may be extended, enlarged, acquired, or constructed by a zone pursuant to a resolution adopted by the Board of Supervisors; and

WHEREAS, Whatcom County Public Works Department on behalf of the Flood Control Zone District has prepared a Six-Year Water Resources Improvement Program for adoption; and

WHEREAS, pursuant to RCW 86.15.120, the supervisors shall hold a public hearing prior to adopting the resolution; and

WHEREAS, the Six-Year Water Resources Improvement Program attached hereto as Exhibit "A" has been reviewed and determined to be consistent with the County’s comprehensive plan and is consistent with the following plans:

- Lower Nooksack River Comprehensive Flood Hazard Management Plan, October 1999
- Canyon Creek Alluvial Fan Risk Assessment, September 2003
- Jones Creek Debris Flow Study, March 2004
- WRIA 1 Salmon Recovery Plan, October 2005
- Lake Whatcom Comprehensive Stormwater Plan, March 2008
- Birch Bay Comprehensive Stormwater Plan, July 2006
- Swift Creek Sediment Management Action Plan, July 2013; and

Page 1
WHEREAS, pursuant to RCW 86.15.110, for constructed improvements the preliminary engineering studies are on file with the Whatcom County Public Works Department; and

WHEREAS, pursuant to RCW 86.15.110, the estimated cost of the acquisition or construction of the improvement, together with supporting data is included in the Six-Year Water Resources Improvement Program; and

WHEREAS, the improvements will benefit one or more zones, subzones and the county as a whole;

NOW, THEREFORE, BE IT RESOLVED by the Whatcom County Flood Control Zone District Board of Supervisors as follows:

1. That the Whatcom County Flood Control Zone District Six-Year Water Resources Improvement Program for the years 2014 through 2019, which is attached hereto as Exhibit "A", is hereby adopted.

APPROVED this ____ day of __________, 2013.

ATTEST: 

FCZD Board of Supervisors 
WHATCOM COUNTY, WASHINGTON

Dana Brown-Davis, Clerk of the Council 

Kathy Kershner, Chair of the FCZD

APPROVED AS TO FORM:

Daniel L. Gibson, Chief Civil Deputy Prosecutor