Rockport Community Meeting
Barnaby Reach Project

Thursday, December 12, 2017, 6:00 pm
Meeting location: Howard Miller steelhead Park in the 'Clubhouse'
52804 Rockport Park Rd, Rockport, WA 98283

Meeting Purpose: Project update and presentation on South Rockport Drainage Study.

SUMMARY

Introductions and Agenda Review

Cynthia Carlstad (facilitator) opened the meeting and introduced the project representatives in attendance: Devin Smith (Skagit River System Cooperative (SRSC) project manager), Erin Lowery (Seattle City Light (SCL)), Bob Warinner (Washington Department of Fish and Wildlife (WDFW)), and technical consultant Leif Embertson (Natural Systems Design (NSD).

Cynthia provided a brief overview of the meeting agenda:

1. The meeting was held primarily to present results from the South Rockport Drainage Study, conducted as an element of the Barnaby Reach Project analysis. The project team wants input from the community on potential improvements to drainage that would benefit the community's flood response.
2. Considering the Thanksgiving Day flood, Erin Lowery of Seattle City Light also has information to present on how the utility's dams were managed during the flood. He can also answer questions.

Project Update

Devin Smith provided a project update that included the following information (see slide show):

- Project location and purpose
- Project goals – fish and wildlife habitat improvements, plus community benefits
- Recently completed data collection
  - Topography and bathymetry
  - Groundwater and surface water levels
  - Sediment sampling
  - Culvert and roadway survey
  - Flood level survey, including November 2017 flood
- Current work is focused on analyzing existing conditions to create a strong foundation for the next step – which will be evaluating different alternatives.
- Project schedule:
  - Jan-April, 2018 – Existing conditions analysis
  - July – Dec, 2018 – Develop and analyze project alternatives
  - 2019 – Design and permitting
  - 2020 – Project construction starts

<u>Questions and Answers</u>

1. What is the funding for the South Rockport Drainage Study? Answer: Project funding is blended, and comprised of Salmon Recovery Funding Board (SRFB) grants, Seattle City Light funding, and miscellaneous other smaller grant funds.
2. What time of year was the LiDAR shot? Answer: April, 2017.

South Rockport Drainage Study

Devin introduced the South Rockport Drainage Study, and described the reason for including the work in the Barnaby Reach Project analysis:

- Community residents reported localized flooding, drainage, and problems with culverts.
- The scope of the drainage study included the following:
  - Characterize localized flooding related to roads and culverts
  - Document road access issues during floods, and drainage constraints after flood events
  - Identify possible projects to reduce problems
- Larger scale flooding from the Skagit River will be analyzed with upcoming work utilizing a river model.

Leif Embertson (NSD) presented the study methods and results (see slide show):

- Scope included the following work:
  - Field assessment – NSD inspected each of the sites, accompanied by Russ Dalton and Howard Stafford, who provided observations about each of the sites.
  - Hydrologic analysis – calculating how much flow will be generated off the hillsides
  - Hydraulic analysis – calculating whether the culverts are large enough to convey the flow generated from the hillsides.
- NSD evaluated twelve culverts in the south Rockport area. In addition, they considered a location on Martin Road that does not have a culvert, but was flagged as experiencing road flooding that isolates several residences on Martin Road.
- NSD delineated five drainage basins that drain to and through the twelve culverts.
- They used two separate hydrologic models to predict flows:
  - Western Washington Hydrologic Model
  - USGS Regression equations
- To evaluate culvert capacity, NSD used the HY-8 Culvert Analysis Program with three conditions:
  - Free flow condition
  - 50% blockage
  - Tailwater control (such as when the Skagit River backs water up into some of these drainages)
- The results of this analysis showed the following:
  - Three culverts on Martin Slough are undersized for hydraulic capacity and fish passage. Skagit County previously evaluated two of these culverts for fish passage improvements.
  - One culvert on the Rockport Cascade Road is undersized for hydraulic capacity.
  - One culvert (not discussed in the meeting) on the Martin Ranch Road is undersized for hydraulic capacity.
  - A culvert and road raising could improve accessibility at the Martin Road site that floods early each flood and isolates several residences.

<u>Questions and Answers / Comments</u>

1. Comment: I am concerned because my house appears to be at the same elevation as the Skagit River.

2. Comment: It seems like every flood is different. A big concern is the unknown variables that add up to unpredictability.
3. Comment: Flow in Martin Slough during the Nov 2017 flood was swift - concern about erosion potential. Response: Leif noted that increasing capacity of culverts would enable more upstream flow when Skagit River flows are high. Several additional participants noted this is a serious consideration. If culvert upsizing is decided to proceed, this concern would be best evaluated during the design of those features.
4. Comment: Flooding and drainage got worse when WSDOT raised SR530. Additional culverts may improve this situation. Response: NSD will evaluate this with the upcoming river modeling.
5. Comment: Many people were landlocked during the Nov 2017 flood because of flooding over SR530 and the Rockport Cascade Road.

Seattle City Light Dam Management During Nov 2017 Flood

Erin Lowery, Seattle City Light, provided several slides that showed the flows at various locations on the Skagit River system upstream from Rockport (see slide show):

- Because of the predicted flow level, the Corps of Engineers took over dam operations during the height of the flood – 11/22 at 8:50am to 11/24 at 8:28am.
- Gage data from Marblemount and the Cascade River show a second peak flow on November 27 that is not present in the Newhalem record.
- The Ross Lake gage shows increasing stage (reservoir storing water) during the peak of the flood.
- During the peak of the flood, an average flow of 708 cfs was being released from Ross lake. The natural flow into the reservoir during that time averaged approximately 30,000 cfs (29,731 cfs average) with an estimated peak of approximately 39,851 cfs.

Questions and Answers

1. Question: Did Seattle City Light contribute to the flood peak? Answer: No, as shown in the slides, dam releases were much lower than natural flows during the flood peak. Ross Lake was storing water during the flood; the other two Seattle City Light dams (Gorge and Diablo) do not have storage capacity.
2. Comment: The peak in Concrete is caused by the Sauk River. There are a lot of unmeasured flows. There used to be a flow gage on the Skagit River near Cascadian Farms which was useful. Unmonitored tributaries were the problem.
3. Comment: The Skagit County Flood hotline was 16 hours behind with information for the community. This put the community at a disadvantage in preparing for the flood. The hotline predicted no flood, but then flood waters rose quickly during the night.

Open House

Following the presentation and discussion, project sponsors and community member attendees talked in small groups and viewed map posters of the project site and surroundings.

Attachments:

- Z Document: Meeting announcement
- Z Microsoft PowerPoint slides