S. Fork Sauk River Bridge #540 Replacement Project

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View exhibits from the November 2011 property owners meeting and the Preliminary Channel Migration Assessment map online. Visit www.snoco.org and type "br 540" in the search box.

More Information

Questions can be sent to tina.hokanson@snoco.org, or Snohomish County Public Works, Attn: Tina Hokanson, Communications, 3000 Rockefeller Ave., Everett, WA 98201

Note: Each project is different, but typically multi-year road and bridge projects generate one, and possibly two update mailings per year where new information is provided and responses to questions can be answered at one time for everyone's benefit.

April 2012 Update

Since the November 2011 property owners meeting, work has continued on the project to design a Bridge #540 replacement.

What has been accomplished to date?

- Soils have been analyzed. This data is used to determine size and depth of foundations, type and amount of scour protection required, etc.
- The ordinary high water mark and critical areas (streams and buffer areas) have been identified. This information is used to situate bridge supports and other items outside of the river's high water elevation and outside of wetland areas, etc., as required by environmental regulations.
- The archeology/cultural resources report is finished and has been submitted to WSDOT for review. The Forest Service has completed their review of the document.
- River flow and stormwater runoff and scour modeling are partially completed. The remainder will be completed after the CMZ analysis.
- Cross sections of the river have been completed. These provide information to calculate the river's capacity and velocity at each location.

Preliminary hydraulic study evaluated the historic Channel Migration Zone (CMZ)

In January 2012, Surface Water Management staff completed a preliminary channel migration assessment to get an idea of the historic range of the river's lateral movement across the valley. Aerial photos spanning a 60-year period (1949 to 2009) were examined. The photos revealed that the river has repeatedly migrated across the valley floor to a greater degree than had previously been expected. This new information has significant implications that affect the bridge's design, adding a complexity that was not well understood when the design process was initiated.

What's next?

A consultant will be hired to conduct a complete, on the ground analysis of the CMZ, and a structural consultant will be hired for the bridge's structural design. Federal funding on the project establishes the process for hiring consultants, which will take approximately two months each and include interviews and contract negotiations. The needed CMZ study is affecting the project schedule, so the CMZ consultant selection process is already underway. The selection of a structural

consultant will not affect the project schedule; that process will begin in about one month.

The CMZ analysis will provide vital information needed to determine how deep the bridge foundation should be, how long the bridge should be, how best to situate it and what else might need to be done to best protect it against the future action of the river.

Due to the expense of the bridge replacement, and in view of the new information regarding past river activity, this additional information is needed to give a new bridge the best chance of lasting for many years. The goal in new bridge design is for structures to last 75 years. At only 26 years of age, Bridge #540 is already in need of replacement.

We know the river will migrate in the future, but there is no way to be certain how. The CMZ analysis will provide the best information available for modeling future possible migration.

What steps will follow the CMZ analysis?

- **Bridge design:** all of the data collected up to and through the CMZ analysis will be used by engineers to design a recommended option.
- Work on the **Design Report** is commencing, and it will become the plan that the team will use for completing the project. Completion of the Design Report is contingent upon results of the CMZ study, adequate soil boring information, hydraulic modeling results, scour analysis, and other factors. If the CMZ study and other tasks go as planned and no additional borings are required, the draft Design Report should be ready by the end of this year, and it should be finalized by Spring 2013. The report will include the recommended bridge design, what other options were considered, a summary of findings from the CMZ and other studies that led to the recommendation, which permits will be needed, a list of environmental reports needed, site considerations, right-of-way and estimated cost. The report will be reviewed by Washington State Department of Transportation and the County Engineer.
- **Environmental studies** will be completed after the Design Report is completed. The studies will address impacts caused by the project and identify mitigation measures to offset those impacts. Specific environmental studies are required for permit applications.
- **Public Comment:** There will be opportunities for public comments during the SEPA review and the Shoreline Permit review processes. Residents will receive notification by mail advising them of the public comment period.
- Using information developed during the design process, **permit application packages** will be prepared and submitted between the 60% and 90% design stages.
- **Final permit approvals and right-of-way** and/or easement acquisition and certification are required prior to advertising the project for construction.
- **Federal funding** will be obligated for the construction phase.
- **Construction:** Duration is anticipated to take at least one year, and it may require a second year.

Is there anything that can be done to speed up the process and get the bridge built faster?

The project team will look for every opportunity for shortening the process, but given the permit requirements, the challenges of this site, and the federal funding and right-of-way process that must be followed, this will be at least a four- to five-year process.

Twenty-six years ago it took six years from washout of Bridge #540 to its replacement in 1986. Since that time, there are more environmental requirements and the federal government wants to make sure the money is being used wisely, therefore more oversight as part of the environmental and design approval process. Limited access to the site will make the use of some types of equipment and materials cost-prohibitive or impractical, and design also must consider impacts to Endangered Species Act (ESA) listed species.

In addition, this river is designated "wild and scenic" for a reason. In the past, it has occupied various locations within the valley, and it has done so in a dynamic manner. In the area of Bridge #540, the river is braided—a main stem river with side channels. Even in a recent time frame, the main stem flow has changed course, new side channels have formed, and a side channel became the main stem. The "wild and scenic" designation carries with it some very specific requirements; those requirements place constraints on the bridge replacement project, and issues involved must be coordinated with and approved by the US Forest Service. We want to be very deliberate in our investigation, modeling, and design; again, to give the new bridge the best chance of remaining in service for many years.