



## *Lewis County Department of Public Works*

Timothy R. Elsea, PE, Director / County Engineer

Rodney Lakey, PE, Assistant County Engineer

### *MEMORANDUM*

Date: October 11, 2013

To: Chehalis River Basin Flood Authority

From: Tim Elsea, PE, Director/County Engineer

Re: Centralia-Chehalis Airport Levee Progress

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The base widening and restoration portion of Phase 1A of the Centralia-Chehalis Airport Levee project will be more than ½ completed as winter shutdown approaches. The construction progress was unexpectedly delayed by an Army Corps fill specification that was unintentionally difficult to produce, as well as record levels of rainfall in September. Those factors prevent us from completing this phase this calendar year. However, both Phase 1A and Phase 1B are on track to be completed by the end of 2014.

Phases 1A and 1B of this project were funded by the legislature in its 2012 session when \$1.2 million was appropriated to widen the base of the airport levee in preparation of a future project (Phase 2) to raise the levee to an elevation of three feet above the 100 year flood elevation as per the US Army Corps of Engineers Levee Standards. This was done because the levee, built by the War Department in 1943, was at some level of risk of failure and has been overtopped by several massive flood events since 1990. Future construction to raise the levee will be necessary to both protect the airport facility and nearby structures and also to protect the adjacent portion of I-5.

The project is planned for 3 phases, with Phase 1A and 1B widening the levee in two stages which are (1) safety measures, and (2) necessary steps to the eventual raising of the levee level.

**Background:**

Lewis County originally put the construction project for Phase 1A out to bid on April 15, 2013 and the bids were opened on May 7, 2013. Due to the specification provided to

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**Road Maintenance & Traffic**

476 West Main St.  
Chehalis, WA 98532  
o 360.740.3380  
F 360.740.2741

**Erik Martin**, PE, Manager

**Administration, Engineering,  
Utilities & Real Estate Services**

2025 NE Kresky Ave.  
Chehalis, WA 98532  
o 360.740.1123  
F 360.740.1479

**Solid Waste Services**

Post Office Box 180  
Centralia, WA 98531  
o 360.740.1451  
F 360.330.7805

**Steve Skinner**, Manager

the county by the Corps of Engineers for the levee fill material, all bids came back higher than the funding level that had been approved by OFM, and all bids were rejected. The original funding level was \$1,239,829 and the low bid was \$1,451,257.50 which did not include the Cultural Resource consultant, permitting costs, construction materials inspection costs or reimbursing the county for the cost of the design. The Corps of Engineers had provided a material specification that was not readily available. Each contractor that bid on the project provided similar costs that were based on the need to mechanically manufacture the fill material.

Lewis County personnel worked with the Corps of Engineers to obtain a different fill specification that would be more readily available in Lewis County and meets the needs of the Corps of Engineers, allowing the levee to remain eligible for funding in the US Army Corps of Engineers Flood Control and Coastal Emergency Act (PL 84-99) program. Ensuring the levee remains eligible for the PL 84-99 program is essential to federal monies being available to help fight flooding (100% covered for eligible levees) and restoration after flooding (80% covered). The county re-advertised the project on June 10 (with a new low bid of \$910,042) and awarded the contract to Sterling Breen on July 1, 2013. The contractor's first day of work was July 22, 2013.

After a late start and an unusually wet August, the county received record rainfall in the month of September, more than doubling the previous record rainfall for the month (September Average = 2.08", Previous Record 1978 = 5.61", September 2013 rainfall = 11.74"). This has slowed construction of the levee improvements because of the moisture sensitivity of the fill material. As of the writing of this memorandum, the contractor has placed approximately 21,000 cubic yards of material which is approximately ½ of the material that will eventually be needed for Phase 1A. (40,750 yd<sup>3</sup>)

Although the long range weather forecast is not favorable for the completion of Phase 1A this year, we will be in a position to have the project "buttoned up" to a point where the airport is protected to historical protection levels prior to a winter shut down. This will include ensuring the narrowest portions of the levee originally constructed in 1943 are widened per design (southern 1,600-ft) and the levee height remains at or above pre-construction elevation. Although the new design width will not be able to be achieved throughout a portion of project limits, we will provide sediment control on exposed slopes, and we will ensure the airport's storm water pumping system is fully operational.

This has been a challenging project for the county to inherit. I believe RB Engineering certainly did a yeoman's job in providing a preliminary cost estimate of \$1.28M for the project. However, the current costs and permitting realities have placed the final construction costs well above the original estimate, and depending on final Army Corps requirements on jurisdictional wetlands, it will take an additional \$400,000 to \$800,000 to finish Phases 1A and 1B of the project. The community appreciates your efforts to ensure adequate funding for the completion of this phase of the project.