

## FLOOD REVIEW BOARD

**Date:** November 4, 2020

**Time:** 8:30 AM

**Location:** Zoom Webinar

**Contact:** Devin Traff, Larimer County Engineering Department

## MEETING MINUTES

**Staff Present:** Devin Traff

**Board Members:** Elisabeth Ervin-Blankenheim, Chad Morris, Chris Thornton, Greg Koch, John Hunt

**Applicant(s) Present:** Walter Niccoli, Dale Leech

Mr. Koch opened the meeting at 8:30 a.m., MST

### Introductions

#### Item #1. Louden Diversion FPSR

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Mr. Traff introduced the item. A petition on behalf of the Louden Irrigating Canal and Reservoir Company for repairs of the diversion weir within the Big Thompson River Floodway and Floodplain Zoning District at the following location: NW ¼ of Section 12, Township 5 North, Range 69 West. This application is the result of a code violation observed during routine inspections on October 2nd along the Big Thompson River. During inspections, staff observed construction activities being performed within the Big Thompson channel southeast of the intersection of U.S. 34 and County Road 27. After observing the work and discussing with the project engineer, staff ascertained that the ditch company (Louden) had initiated construction work to modify the Big Thompson channel and the Louden diversion facilities without a permit. Larimer County Code require the ditch company to obtain a floodplain development permit and approval from the FRB for a Floodplain Special Review. The work has ceased until proper approvals are obtained. The 2013 Flood damaged the concrete on the diversion weir and removed a portion of the concrete pan. The project proposes to remove the existing concrete approximately one foot from the weir crest, lay a new concrete weir at the crest, and overlay the existing concrete to the downstream riprap. The existing downstream riprap will be replaced. The



engineer utilized CHAMP and updated with existing survey data to develop an existing condition (denoted corrected effective in the report) and compared to the proposed condition (sometimes denoted proposed effective in the report). The report indicates no-rise in BFEs for the proposed condition when compared to the existing condition. A no-rise certificate has been supplied with report. Scour was not formally analyzed but the report does discuss flow velocities along the reach. The engineer explained that the velocities only increase slightly at the weir pan by 0.4 ft/s (Table 6) where concrete exists so that scour is not expected to be an issue at this location. Code section pertaining to Floodplain Special Reviews is located in Section 4.2.2.G.6

Mr. Niccoli added that the weir needed to be repaired from holes and cracks and missing part of the pan. There is no increase in water surface elevation, but there's a slight increase in velocity. The new pan will be lower than previously.

Mr. Traff asked is there is rises between the channels and if it creates an increase in water surface elevations. Mr. Niccoli responded that the adjustment from the Champ model in the local survey caused the rises. Mr. Traff also added that the earth work (especially on the right bank when looking downstream) is not included in the report. Mr. Niccoli responded that he will add it to the report. Mr. Traff added that they will require stamped as-builts. Mr. Traff asked what the regulatory boundary was because it did not show up in the plans and which boundary is being referred to. Mr. Niccoli responded that a layer must not have been turned on. Mr. Traff also asked if there would be ground water pumping and if he communicated with the state engineer's office to get permits. Mr. Niccoli stated that there might be pumping and that they have communicated with the river commissioner and that the water is going back into the ditch.

Mr. Thornton asked if the 2015 survey topo was included. Mr. Niccoli responded that those surveys are on the proposed conditions. Mr. Morris also asked if the proposed pan is higher than the existing and Mr. Niccoli replied that he is correct and the existing condition on the topo, the pan was not uniform on the contour and the cut will result in a slightly lower elevation. Mr. Morris also asked if the damage was caused because of scour below the structure. Mr. Niccoli replied there was not much scour, but they hope to replace the riprap that was there before.

Mr. Hunt asked what the lower structure below the weir was. Mr. Niccoli replied that it is a grade control structure. Mr. Hunt followed up that in 2014 there was no grade structure and wonders if it was for downstream stability. Mr. Niccoli replied that the flood eroded that structure and that it needed to be replaced to create the dead pool. Mr. Koch asked if there was surveying of the existing structure. Mr. Niccoli affirmed that there was no previous surveying besides the pre-construction surveying he did himself. Mr. Koch asked Mr. Traff if there needs to be new surveys done. Mr. Niccoli agreed that they will have someone come out to do correct surveying.

Mr. Koch asked if there were insurable structures. Mr. Traff affirms that there are insurable structures such as River View Campground structures.



Mr. Thornton stated that the biggest concern would be to return the area to pre-existing conditions since there was work done after the county notified them to stop work. Mr. Traff adds that the size of the riprap should be recorded. Mr. Morris also adds that the lower structure should be added to the plans.

**MOTION:**

- Mr. Hunt moved that the board recommend that the BCC approve the special review with the condition that the applicant demonstrates that the grades after the project match the pre-project grade (2015 topography), that the riprap size and placement downstream of the weir is specified in a drawing, and that the structure downstream of the weir is specified in a drawing and all these conditions are verified by the staff. Mr. Morris seconded the motion. The motion passed 5-0.