

## FLOOD REVIEW BOARD

**Date: February 18, 2021**

**Time: 8:30 AM, MST**

**Locations: Lake Estes Conference Room, 200 W. Oak St., Fort Collins, CO 80521 and remote via Zoom**

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

## MEETING MINUTES

**Staff Present:** Devin Traff, Tina Kurtz

**Board Members:** Bets Ervin-Blankenheim, John Hunt, Chad Morris, Mike Oberlander, Chris Thornton

**Applicant Present:** Matt Clark (Anderson Consulting Engineers), Scott Parker (Anderson Consulting Engineers), Brad Grasmick (Lawrence, Custer, Grasmick, Jones LLP), Brent Bartlett (Fischer Brown Law), Jason Walker (Van Horn Engineering), Amy Greenwell, Harry Nequette, Daniel Reed

Mr. Hunt opened the meeting at 8:35 a.m., MST

### Introductions

#### Item #1: Little Cache Headgate FPSR

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Mr. Traff introduced the project. The first item is a continuation from the November 2020 FRB meeting. It is a petition on behalf of the Larimer & Weld Reservoir Company for a Floodplain Special Review regarding construction work which was completed around 2007 at the Little Cache Ditch headgate along the Cache La Poudre River.

The work was done on the north side of the Poudre, west of Overland and south of CR 54G. The work included: in-kind replacement of four (48"x48") slide gates that control diversions from the Poudre River, installation of retaining wall and wingwall extensions on the east ditch embankment, installation of a new apron and extension of a below-grade apron in front of the headgate, fill placement in the left overbank between the wingwalls.

The Flood Review Board (FRB) reviewed this request at the August 27 and November 19 meetings last year. At the end of the November meeting, the Board tabled the application for further analysis of local topography changes and impact assessment to the adjacent properties. The Board wished to allow the homeowner(s) the opportunity to provide additional survey data to the project engineer for analysis of potential impacts from any local changes in topography. In response to this request, Ms. Greenwell (a resident in the Cotton Willows neighborhood) provided three sources of topographic information. Two of the sources were dated prior to 1980 and one does not appear to have a date shown. None of the sources appear to be certified by a licensed land surveyor. The sources were assumed to be referenced



to the NGVD 29 vertical datum (due to the older dates) and were converted to NAVD 88 datum (by adding 3' to the contour elevations) They were then overlaid onto FEMA's 2013 post-flood contour data for comparison. So, the three sources of data the Board reviewed include: 1978 Landscape Plan showing existing ground contours (2' intervals) between the Poudre River and the Little Cache Ditch, a boring location map for the Cotton Willows subdivision showing existing contours (2' intervals), and a 1973 Master Plat for the Cotton Willows subdivision showing existing contours (2' intervals). Comparisons of the topography are provided in the report.

Mr. Hunt clarified scope of FRB in relation to this application. Mr. Traff clarified that the FRB is tasked with evaluating the work done in 2007 by the Larimer and Weld Reservoir Company on the basis of the approval criteria in the Land Use Code. Work not completed during the 2007 project would not be within the scope of the FRB review.

Mr. Clark, project engineer, confirmed that there is no indication of fill outside of the areas of concern for this application. He examined the paper map data and compared it to 2013 contours. When you compare the available contour elevations to 2013 it illustrates that fill was placed immediately around the headgate as already stated in previous submittals. He said in his opinion, there is not a determination that can be made of another placement of fill based on this data. The Board discussed that there may appear to be some evidence of fill outside the immediate vicinity of headgate wingwalls placed before 2002.

Mr. Morris asked about the source for where the work was done. Mr. Clark clarified that the 1999 vs 2019 comparison shows the extent of the work done in 2007 and further explained that only the area near the headgate show any clear area of fill based on the contours.

The Board reviewed the comparison and indicated there may be evidence of fill outside the wingwalls based on what was provided. Mr. Clark responded that the comparison is subjective without knowledge of the points used to interpolate the contours.

Board discussed the purview of the review and decided that the 2002 vs 2013 comparison shows that any fill outside of the 2007 project was completed prior to 2002.

Mr. Grasmick clarified that the allegations outside of the 2007 work was litigated and the claims were either dismissed or adjudicated.

Ms. Greenwell discussed her comments and disputed the use of the 2002 LiDAR data for this FRB review. Mr. Hunt clarified that the Board has allowed the use of LiDAR and other forms of topographic information for no-rise analyses in the past and would not refuse the use of such data endorsed by the City of Fort Collins. While error is associated with the LiDAR information, it is usually quantified to within half a foot. Survey contours also suffer error in that magnitude. It would depart from the Board's many years of precedent to reject LiDAR data in a no-rise analysis.

Mr. Hunt stated that if the pre-2002 fill had been placed during the 2007 project, that there may be impacts to the flood elevations.



Mr. Nequette mentioned that the applicant violated the law in this project and asked, had they come into the FRB properly, would the FRB have required any sort of remediation. Dr. Thornton reiterated the comment.

Mr. Hunt stated that based on the comparisons, the 2002 contour data appears to be accurate and appropriate for use in this analysis. Mr. Oberlander stated that he believes the comparison shows that whatever changes occurred north or east of the project, it was done before this project was completed. The rest of the FRB agreed.

Ms. Ervin-Blankenheim stated that she felt it would not be difficult to remove the fill and is concerned about the fill that occurred pre-2002. Mr. Morris stated that the issue with the pre-2002 fill appears to be a separate issue outside of the purview of this project and the FRB.

Mr. Thornton, Ms. Ervin-Blankenheim, and Mr. Hunt asked the applicant to consider sorting out the issues related to the fill with the neighbors.

**Motion:**

Mr. Thornton motioned to recommend approval. Mr. Oberlander seconded the motion. The motion passed 4-0 with one abstention.

Mr. Hunt left the meeting at 9:57 a.m.

Mr. Thornton acted as the Chair for the remainder of the meeting.

**Item #2: Laporte Diversion Repairs**

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Mr. Traff introduced the project. This item is for new work in the same area as the previous application. It is a petition on behalf of the Larimer & Weld Reservoir Company for a Floodplain Special Review regarding repairs to retaining walls on the north and south side of the Cache la Poudre River (Poudre River). In the August meeting of last year, the FRB approved the construction of repairs to the Laporte Diversion Structure along the Poudre River. During the demolition phase of construction, the downstream wingwalls on both the north and south sides of the diversion structure failed (photos of the damaged wingwalls are included in the submittal packet).

The County was notified of the failures and the need for emergency repairs. The project engineer provided the County with his assessment of the damage and the work needed to restore a safe condition on the site which included the rebuilding of the wingwalls (needed before the remainder of the original repair project could be completed). And, due to the current instability of the dam, the full repairs need to be completed before spring runoff. At that time, staff informed the engineer that all repairs would be subject to review of the FRB to remain permanently. In addition to the wingwalls, the interior eco-block wall near the Little Cache Ditch headgate is also in need of repair and was the subject of the FRB discussion in November. The new wingwalls and interior wall are proposed with a top elevation below the pre-project top elevations, and the report indicates that the repairs will not increase



flood surface elevations for the 10, 50, or 100-year events. There is minimal increase in velocities downstream of dam and the project will aid in restoring stability to the diversion structure and channel.

Mr. Parker stated that the berm and headwall on east side was lowered average of two feet. Mr. Clark stated that the lowering should result in a shallower slope on Mr. Nequette's property and may address some of his concerns.

Mr. Nequette stated that the construction work on the south wall was nicely done but was concerned about a potential scour hole that may be created on the north side near the wall. He would like to see the wall extended straight out versus the current alignment to avoid this issue.

Mr. Morris asked about erosion and channel protection. Mr. Clark stated that the channel will be protected with 24" riprap that Dr. Thornton recommended in previous meetings. Mr. Clark and Mr. Parker clarified that the alignment of the walls is constrained by the 404 permit and the need to stabilize the riprap on the north side.

**Motion:**

Mr. Morris motioned to recommend approval with no conditions. Mr. Oberlander seconded the motion. The motion passed 4-0.

**Item #3: Reed Variance Request**

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Ms. Kurtz introduced the project. This is a variance to allow a shed in a regulatory floodway that is used for water treatment for cabins on the property. During 2013 flood, the shed was moved off its foundation and it is desired to move the shed into the conveyance shadow of an existing structure.

Ms. Kurtz stated that the engineer used CDOT's preliminary hydraulic model to determine the base flood elevation (BFE) for the shed. The shed and equipment inside will be elevated above both the FEMA and CDOT BFE. The electrical service to the shed will be floodproofed.

Mr. Walker clarified that there is a structural connection between the concrete piers and the treated wood columns, and it has been ensured that the structure is stable in event of a flood. He also confirmed that the existing structure upstream of the shed did not move in the 2013 flood.

**Motion:**

Ms. Ervin-Blankenheim motioned to approve with no conditions. Mr. Morris seconded the motion. The motion passed 4-0.

**Item #4: Approval of Minutes**

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**Motion:**



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Dr. Thornton motioned to approve the minutes from February 2020 through January 2021. Ms. Ervin-Blankenheim seconded the motion. The motion passed 4-0.

Meeting adjourned at 10:45 am, MST.