
Date: February 19, 2021

To: Jeff Martin, Gross Reservoir Expansion Project Manager

From: Doug Raitt, Engineering Manager

Subject: Gross Reservoir Expansion Project Schedule

The Gross Reservoir Expansion (GRE) Project schedule represents Denver Water's plan for project delivery adhering to the requirements set forth in the Federal Energy Regulatory Commission's (FERC's) amended order issued on 16-Jul-2020. The order requires Denver Water to start and complete the authorized activities within two years and seven years, respectively, from the 16-Jul-2020 issue date of the order. Timely execution of critical activities is fundamental to Denver Water's plan for compliant project delivery. The following narrative describes the path through dam construction based on design, procurement, permitting, and construction information currently available. Ultimately, the Issued for Construction plans and specifications will be the basis for the Contractor's detailed construction schedule which may vary from current plans.

As shown on the figure on page 2 below, the path through dam construction consists of 1041 approval, necessary property acquisition, local permitting, and construction. The first part of the path, 1041 permit approval, begins with Denver Water's review and response to referral agency comments scheduled for 19-Feb-2021. The submission is followed by a 7-week period for Denver Water and Boulder County to finalize the 1041 permit application on 16-Apr-2021. The path continues through the Land Use Director's determination followed by the Board of County Commissioner's (BOCC) hearing on 27-Jul-2021 with BOCC approval on 10-Aug-2021.

Upon receipt of BOCC approval, the path moves through submittal of 90% design for Gross Dam Road (GDR) to Boulder County for referral and comment prior to Denver Water beginning the property acquisition process for easements along GDR. The acquisition process consists of surveys, appraisals, initial offers, final offers with time allocated for contested acquisitions, if required. Once property acquisition is complete, Denver Water will submit applications and receive permits for roadway construction and stormwater management prior to the start of work on the GDR, anticipated for 07-Jul-2022. GDR construction is planned for about 6 months with a forecasted completion date of 20-Dec-2022.

While GDR improvement is the driver of the longest path through construction, State Highway 72 (SH-72) / GDR intersection construction and dam surface preparation are near-critical construction packages which must also be completed prior to the start of dam foundation excavation. The SH-72 / GDR intersection package has similar permitting and property acquisition predecessors that drive the start of its construction to late Apr-2022 with a forecast completion of 29-Nov-2022. Dam surface preparation mobilization is forecast to start on 11-Mar-2022 to support a construction start date of 01-Apr-2022 with a forecast finish on 16-Dec-2022.

The path continues through foundation excavation from 20-Dec-2022 through 12-Feb-2024 followed by placement of the stilling basin foundation prior to the start of main dam roller compacted concrete (RCC) placement beginning on 15-Apr-2024 and continuing through 04-May-2026. RCC placement is constrained to take place between 15-Apr and 15-Nov each year with seasonal shutdowns planned outside of that window. Once RCC placement is complete, the final structural concrete elements will be installed leading to a forecast for substantial completion on 13-May-2027. Site restoration and demobilization are expected to continue through 08-Jul-2027.

The current planned start date for construction activities, 01-Apr-2022, results in substantial completion in mid-2027. Short delays in the planned start date may cause disproportional delays to the substantial completion date. A large portion of the construction work is weather dependent including foundation excavation, RCC placement and structural concrete placement. As such, if these activities are pushed into non-favorable weather conditions, significant logistical complications can arise. The subsequent cascading effects through the construction schedule would certainly result in a longer total construction period (i.e., ending after mid-2027) and increased costs to Denver Water. Therefore, it is vital that construction activities begin as planned.

Figure: Path Through Gross Reservoir Expansion Construction with 1041 Process