

Appendix 6

Water System Report

HAYMEADOW WATER SYSTEM PHASE 1 TECHNICAL MEMO

TO: Morgan Landers, Town of Eagle Planning Director
CC: Brandon Cohen, Scott Schlosser, Rick Pylman
FROM: Gary Brooks, Project Manager - AEI
DATE: April 9, 2018
ATTACHMENTS: Conceptual Water System Exhibits

The purpose of the memorandum is to describe the water distribution system proposed to serve the Haymeadow development project in Eagle, Colorado. An initial design was submitted and reviewed under Preliminary Plan through the Town of Eagle entitlement process and was outlined in the Preliminary Utility Impact Report dated November 2012 and Revised on August 15, 2013.

Preliminary Plan Water System:

The original concept for the water distribution system for the Haymeadow project was to have a single pressure zone for the project based on the highest feasible location for a water storage tank (WST). The design was to connect to the existing 24" DIP water main in Brush Creek Road at the location of the old town water plant where a PRV was installed to maintain pressure in the line that would be connected to the proposed Haymeadow WST. The tank and water system above the PRV would "float" hydraulically.

The Haymeadow distribution system was proposed to be a separate, single hydraulic pressure zone fed by the proposed WST. This design would be a "build once" scenario and would provide all of the water storage needs for all phases of the project. The downside to this design was that it required extensive infrastructure to connect the Upper WST to the Brush Creek Road PRV and to extend a 12" distribution main line to the first phase of the subdivision which was located at the far western end of the site and the WST at the far eastern end. The preliminary design had 10,250 LF of 12" DIP versus 2,650 LF as proposed for Phase 1.

The design team has taken a new look at the water system to see if there would be opportunities to reduce the large upfront costs and uncertainty associated with the original design.

Proposed Phase 1 Water System Description:

The proposed Haymeadow Phase 1 water system is shown on the attached Conceptual Water System Exhibits. A portion of the A1 Neighborhood falls within the existing Town pressure zone which covers the majority of old town and the lower half of Eagle Ranch. The upper end of the pressure zone is at an elevation of 6730 which equates to approximately 50 psi static pressure. Phase 1 is proposed to tap into the existing 24" transmission line in Brush Creek Road with a loop of 12" DIP through Sylvan Lake Road and then 8" DIP distribution lines to serve the western half of development parcel A1. This design would allow the construction of a variety of

multi-family, duplex and single-family residential units without having to install long runs of 12” DIP distribution and transmission lines or a WST. As the A1 Parcel develops above the upper limit of the Town pressure zone, additional water system infrastructure will be required as shown the attached exhibits.

Future Water System:

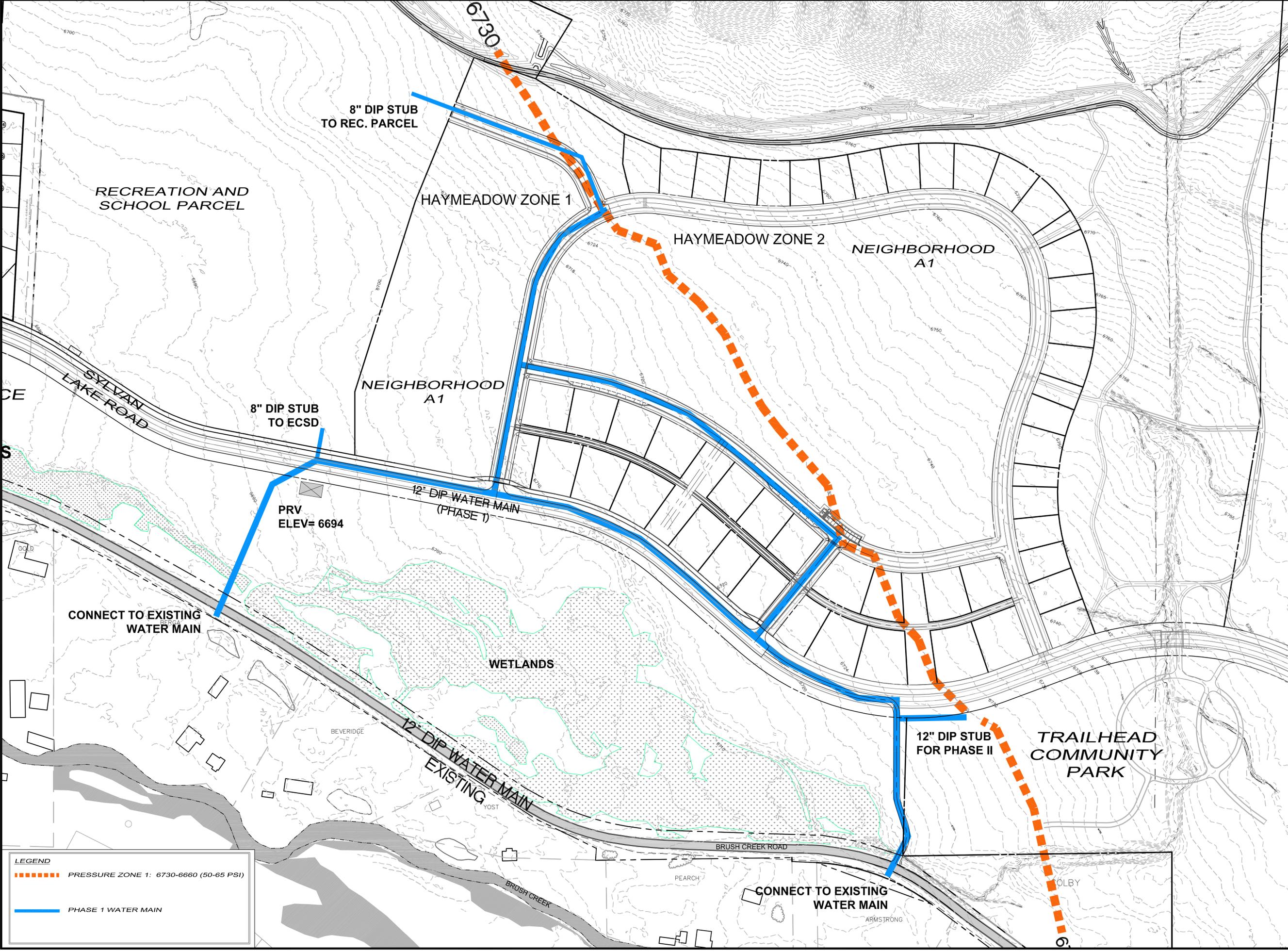
For future phases of construction, the proposed water system will require the extension of additional water mains and a water storage tank(WST). As part of the Phase 1 infrastructure design, a PRV vault is proposed to be installed at the low end of the system adjacent to Sylvan Lake Road (see attached Figure 1) so that when the future WST is in place, a PRV can be installed in the vault and the Phase 1 water system will become part of a single, overall water system for Haymeadow. Storage volumes could then be downloaded into the Town Pressure Zone during a high demand event in the lower zone.

The sizing of the water tanks should be reviewed in light of reduced water demand from smaller multi-family units, revisions to the Town’s new EQR rate schedule and include allowances for decreased seasonal demand of outdoor irrigation through the implementation of the non-potable irrigation system.

**HAYMEADOW
PHASE 1
CONCEPTUAL WATER SYSTEM**

DESIGNED A/E	NO.	DATE	REVISIONS	BY
DRAWN XXX				
CHECKED XXX				
JOB NO. XXX				
DATE 11/10/2017				

**FIGURE
1**



LEGEND

- - - - - PRESSURE ZONE 1: 6730-6660 (50-65 PSI)
- PHASE 1 WATER MAIN

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