#### Section 4 Site Inventory Maps

This section addresses Larimer County Procedural Guide for 1041 Permits, Item 4.

4.a The applicant must identify all resources and environmental conditions potentially impacted by the proposed development. The inventory must include the following features on the site and within one half mile of the boundaries of the project perimeter (1,000 feet for linear facilities). If access to adjacent land is not possible the inventory may be completed by using map resources available in the Planning Department. The inventory may include a narrative explanation and/or maps depicting the location of the features. The site inventory may be integrated with the Project Description to give a complete picture of the proposal. The title of the project must appear on each map sheet. If an aerial photo is being used, indicate the date of the photography.

Site inventory maps identify resources and environmental conditions potentially impacted by the TWP. As discussed during the Pre-Application Conference with Larimer County Planning staff on May 26, 2016, a site inventory is not required beyond the TWP corridor. However, Thornton included an additional study buffer at most locations that includes a 500-foot buffer from the TWP corridor for the water pipeline and a 1,200-foot buffer around the TWP corridor near the water tank and source water pump station locations. Additional study buffer was not evaluated in areas where environmental impacts are expected to be minor, that is, where the water pipeline is proposed to be located in the Larimer County Douglas Road ROW or on Thornton-owned property near Douglas Road where ground-disturbing activities already take place; that information is provided in **Appendix C**.

The aerial imagery utilized in the creation of the site inventory maps is from multiple sources; the three main sources are Denver Regional Council of Governments (DRCOG) 2016, Microsoft Bing Imagery 2011, and National Agricultural Imagery Program (NAIP) 2015. The information shown in these maps is the best available data downloaded from Larimer County's website and other local agencies. Each figure lists its source information.

The Site Inventory Map(s) may be required to contain the following information:

4.b Existing buildings, structures, utilities (water transmission lines and sewer collection lines), easements and other features including irrigation facilities, fences, roads, etc.;

**Figure 4.b** shows the best available data for existing utility corridors, which includes gas, electrical, telecommunications, water, and sanitary sewer utilities. Oil and gas wells are also shown. Subsurface utility engineering will be completed during the design and construction phases of the TWP and will include surface geophysical methods and test holes to determine the locations of existing utilities. Thornton has communicated with local utility providers to begin coordination activities as shown in **Appendix E** - Stakeholder Outreach Communications.

Other existing infrastructure such as buildings, other structures, irrigation facilities, and roads are shown on the Vicinity Maps in Section 3. Infrastructure information is shown on separate maps to enhance legibility.

4.c Location of all residences, any abutting subdivision outlines and names, and the boundaries of any adjacent municipality or Growth Management Area.

The location of residences, subdivision outlines and names, and the boundaries of adjacent municipality and Growth Management Areas are shown on the Vicinity Maps in Section 3.

**4.**d Existing vegetation, soil types for SCS Soil Survey, water bodies, and other natural features; **Figures 4.d-1** through **4.d-11** show soil types with the Soil Conservation Service (SCS) soil type, water bodies, and other natural features. Existing vegetation information within the TWP corridor and

study buffer can be found in the Natural and Cultural Resources Assessment Report and Addendum to the Natural and Cultural Resources Assessment in **Appendix C**. Vegetation figures (**Figures 4.1** through **4.55** and **Figure Addendum-3**) can be found in the reports.

4.e Officially designated 100 year flood plains with Flood Way and Flood Fringe clearly shown;

**Figure 4.e** shows the officially designated 100-year floodplains within the TWP corridor. The 100-year floodplain and floodway were identified using Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM). The flood fringe is identified as those areas within the floodplain but outside the floodway. Additional information can be found in Section 8.f, Floodplain Hydraulic/ Hydrologic Modeling Report.

4.f Geologic Hazards rated 3 through 7 with location and classification shown, including areas with expansive soils and other moderate hazards;

**Figure 4.f-1** shows geological hazards with rating and classifications. Additional information can be found in Section 8.c, Natural Hazard Mitigation Plan.

**Figures 4.f-2** through **4.f-12** shows the Natural Resources Conservation Service (NRCS) soil erodibility K factor values. K factor values represent the susceptibility of soil erosion, transportability of the sediment, and the amount and rate of runoff given a particular rainfall event. The majority of the TWP corridor is located within the low-to-medium soil erodibility range. Additional information can be found in Section 8.e, Drainage and Erosion Control Report and Plan.

4.g Wetlands – area of wetlands (See Section 8.2)

Open waters, wetlands, and riparian areas within the TWP corridor and study buffer are described in the Natural and Cultural Resources Assessment Report and Addendum to the Natural and Cultural Resources Assessment in **Appendix C. Figures 4.1** through **4.55** and **Figure Addendum-3** show these areas in the reports.

4.h Drainage patterns and general direction of flows on and through the site;

**Figure 4.h** shows drainage patterns and the general direction of flows in the TWP corridor. Additional information can be found in Section 8.e, Drainage and Erosion Control Report and Plan.

4.i Topography with a contour interval sufficient to evaluate the proposal but no greater than 40-foot intervals. Contours must be labeled every 5 to 7 inches and every 5<sup>th</sup> contour line clearly shown by a heavier line. Areas of 20% or greater slope must be clearly shown by shading or other means;

**Figures 4.i-1** through **4.i-5** shows the topography of the TWP corridor with 10-foot contour intervals and areas of 20 percent or greater slope.

4.j Wildlife habitat and migration corridors with a description of the ways wildlife use the site and the species involved, with proposed setbacks or other potential mitigation measures;

Wildlife habitat and migration corridors within the TWP corridor and study buffer with description of the ways that wildlife use the site and the species involved, with proposed setback and other potential mitigation measures, can be found in the Natural and Cultural Resources Assessment Report and Addendum to the Natural and Cultural Resources Assessment in **Appendix C**. Wildlife figures (**Figure 3**, **Figures 5.1** through **5.55**, **Figure 6**, **Figure 7**, and **Figure Addendum-3**) can be found in that report.

4.k Habitat for rare and endangered plants with species clearly indicated;

Information on habitat for rare and endangered plants, and specifically the species within the TWP corridor and study buffer, can be found in the Natural and Cultural Resources Assessment Report in **Appendix C**.

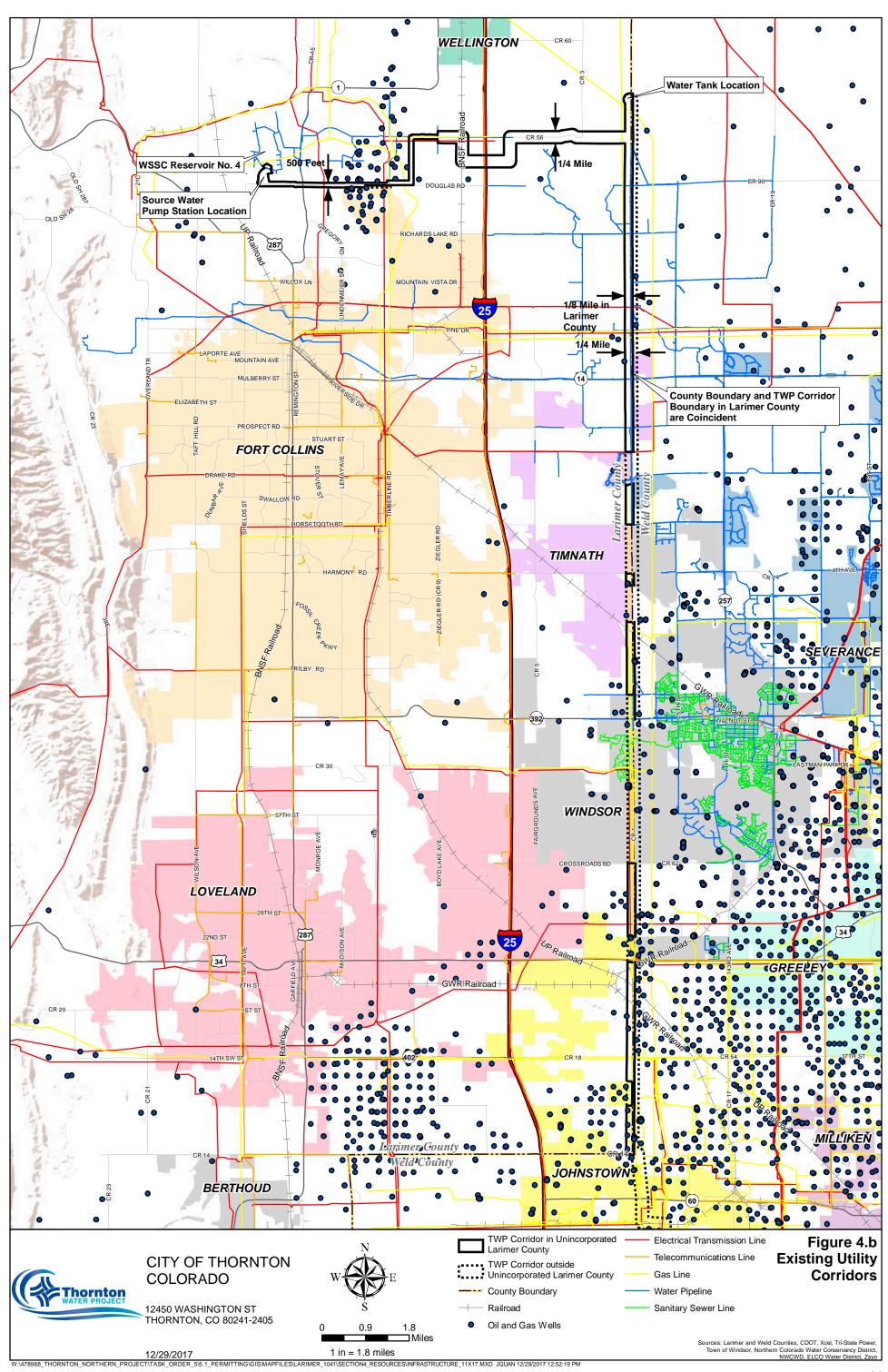
4.1 Wildfire Hazards with location and classification shown;

**Figure 4.I** shows wildfire hazards with location and classification in the area surrounding the TWP corridor. The TWP corridor is located outside of wildfire hazard areas. Additional information can be found in Section 8.c, Natural Hazard Mitigation Plan.

4.m Sites and structures listed on the State and National Register of Historic Places;
No cultural sites and structures listed on the State and National Register of Historic Places are located within the TWP corridor. Additional information can be found in the Natural and Cultural Resources Assessment Report and Addendum to the Natural and Cultural Resources Assessment in Appendix C. Figures showing the Office of Archaeology and Historic Preservation search results (Figures 8.1 through 8.23) can be found in that report.

4.n Commercial Mineral Deposits with the type of mineral deposit indicated along with estimates of the quantity and quality of the mineral and the amount of overburden present.

Commercial mineral deposits are not present within the TWP corridor. **Figure 4.n** shows locations of commercial mineral mines, active hard rock mines, sand and gravel construction mines, and other mines from the Division of Reclamation Mining and Safety. One active sand and gravel construction pit is shown on **Figure 4.n** within unincorporated Larimer County.



#### **Thornton Water Project** Source Water Pump Station General Location 500 Feet 63a **FORT COLLINS** 48a - Heldt clay loam, 0 to 3 percent slopes 65a - Midway clay loam, 5 to 25 percent slopes Soil Map Unit Name 90 - Renohill clay loam, 3 to 9 percent slopes 5a - Aquepts, loamy 49 - Heldt clay loam, 3 to 6 percent slopes 71 - Nelson fine sandy loam, 3 to 9 percent slopes 95 - Satanta loam, 1 to 3 percent slopes 6a - Aquepts, ponded 53a - Kim loam, 1 to 3 percent slopes 73a - Nunn clay loam, 0 to 1 percent slopes 103 - Stoneham loam, 5 to 9 percent slopes 35 - Fort Collins loam, 0 to 3 percent slopes 54 - Kim loam, 3 to 5 percent slopes 74 - Nunn clay loam, 1 to 3 percent slopes 102 - Stoneham loam, 3 to 5 percent slopes 36 - Fort Collins loam, 3 to 5 percent slopes 55 - Kim loam, 5 to 9 percent slopes 80a - Otero-Nelson sandy loams, 3 to 25 percent slopes 106 - Tassel sandy loam, 3 to 25 percent slopes 37 - Fort Collins loam, 5 to 9 percent slopes 63a - Longmont clay, 0 to 3 percent slopes 108 - Thedalund loam, 3 to 9 percent slopes 107 - Thedalund loam, 0 to 3 percent slopes \* Final location of the Source Water Pump Station will be determined during design development. Thornton will submit a Site Plan Review permit application to Larimer County after design has progressed to the level necessary to submit the application. TWP Corridor in Unincorporated Larimer County River/Stream/Canal/Ditch Soil Map Unit Figure 4.d-1 CITY OF THORNTON Soil Map Unit Soil Map \*Source Water Pump Station ## COLORADO TWP Corridor outside Unincorporated Larimer County ✓ General Location 12450 WASHINGTON ST THORNTON, CO 80241-2405 **Thornton** ✓ Water Tank General Location --- County Boundary ---- Railroad 12/29/2017 1 inch = 1,000 feet Sources: NHD, USGS, CDWR, Larimer and Weld Counties, CDOT, NRCS, DRCOG, NAIP

