

**Project:** TOWN OF WALDEN HYDRAULIC WATER STUDY

**Location:** Walden, Colorado

**Client Address:** Nolte Vertical Five  
8000 S. Chester Street, Suite 200  
Centennial, Colorado 80112

**Contact:** Michael Welker, P.E., Senior Engineer

**Year Completed:** 2012

**Project Scope:**

Nolte Vertical Five was retained by the Town of Walden, Colorado to complete a hydraulic water analysis of the municipal water system. This analysis was made to determine potential deficiencies of the existing system, as well as the capability of the water system to support future community growth. Pedersen Planning Consultants (PPC) was retained by Nolte Vertical Five to develop community growth assumptions for the coming decade, a forecast of anticipated water demand, as well as other relevant data that were needed to run the hydraulic water model developed for the project.



PPC initially provided Nolte Vertical Five with a digital map of the municipal water system along with attributes of the existing system. This map was developed through the use of available spatial data files and ArcGIS Standard software.

PPC subsequently obtained and mapped elevations for all road intersections in the community. This task was accomplished through the use of a mobile global positioning system (GPS) device and ArcGIS software.

Community growth assumptions were addressed by PPC through its evaluation of various factors influencing future community growth. PPC examined recent population and economic trends, and developed assumptions for three potential community growth scenarios: no growth, low growth, and moderate growth. The scenarios were based, in part, upon the insights of informal discussions with individual members of the Walden Board of Trustees and the Town's water/wastewater superintendent.

The assumptions associated with the low growth scenario and related population growth were used along with per capita rates of water consumption to forecast average day and maximum day demands during the coming decade. Per capita consumption rates were estimated based upon available water production, consumption, and population data for 2010 and 2011.