

CW-143

Appendix – Application Edits

Page 3: In your own words, tell us what physical conservation measures you have made or propose to make and the reason for the change(s):

The EFID Sublateral Modernization Project would take place within the East Fork Irrigation District (EFID) within the Hood River Watershed in Hood River County. The project would install 15 pressure reducing stations, remove 14 waterboxes, and replace 11,200 feet of non-pressure rated pipe with pressure-rated pipe. This would eliminate overflows at the existing water boxes and allow EFID to pressurize nine sublaterals of the Eastside Lateral system and two sub-laterals on the Central Lateral system. The primary goals of this project are to increase summer stream flows for threatened salmon and steelhead and increase long-term irrigation water reliability.

Page 4: Describe the pre-project water delivery system. Include information on the diversion structure, pumps, and conveyance facilities (including canals, pipelines, and sprinklers used to divert, convey, and apply the water at the authorized place of use.)

During peak irrigation (early July through mid-September) in an average summer, EFID diverts an average of 75% of the East Fork Hood River's flow, which reduces spawning and rearing habitat for threatened salmon and steelhead on 7 miles of the East Fork and 14 miles of the mainstem Hood River. EFID operates a single diversion at its headworks on the East Fork Hood River (River Mile 6.6). A rock push-up dam and wood headgate were replaced in 2013 with an Obermeyer weir, four steel headgates, and a vertical slot fish ladder. From the sand trap and fish screen facility below the diversion, the water diverted for irrigation enters EFID's open Main Canal and is conveyed 6.8 miles north to a distribution center where the system splits into two laterals: the 4.5-mile Central Lateral Pipeline and the 5-mile open Dukes Valley Canal. The Central Lateral Pipeline supplies water to 10 District-owned, sub-lateral pipelines and to the open Eastside Canal, which is 6.1 miles long and supplies water to seven District-owned piped laterals and transitions into the Whiskey Creek Pipeline. The Eastside Lateral Canal serves about one-third of the East Fork Irrigation District and conveys up to 40 cfs. There are multiple sublaterals within the Central and Eastside Lateral systems, all of which are not piped and keep the overall system from being pressurized. Currently, end spills ensure that the line does not go dry if all patrons are taking their full water right. Unless all lines have pressure-rated pipe, each line must have an end spill to ensure that the user at the end of the line receives their water

right. End spills from the East Fork go into a number of downstream tributaries, which then flow into the mainstem Hood River. (So the spill never returns to the East Fork itself.)

Page 5: Describe the proposed changes to the physical system, operations, and application methods that will result in the conservation of water.

The proposed project would pressurize eleven sublateral irrigation lines; nine off the Eastside Lateral and two off the Central Lateral. These sub-laterals were selected because they provide the greatest water conservation per unit cost and currently require significant operations and maintenance by the district. In addition, pressurizing the Eastside Lateral sub-laterals will increase the efficacy of water conservation for the Eastside Lateral Pipeline project currently underway.

The **Eastside Lateral** sub-laterals upgrades will include the installation of 12 pressure reducing stations in place of 12 open water boxes and the replacement of 5,050 feet of non-pressure rated pipe with 6" – 18" HDPE or PVC pipe. Upon further analysis and engineering, commissioned by EFID's new district manager, additional need for pressure reducing infrastructure was realized along the nine Eastside sub-laterals. Locations in need of additional pressure reducing stations, which are not covered in WPG-0029-20's scope, are where open water boxes exist along the sub-lateral lines. It is not possible to eliminate the overflows and corresponding water loss at these locations without installation of pressure reducing stations, which consist of concrete vaults, isolation valves, air-vacuum valves, pressure relief valves (where required), and pressure reducing valve systems (systems consist of one or two pressure reducing valves depending on flow rate).

The Central Lateral sub-laterals include the installation of three pressure reducing stations in place of open water boxes as well as 2060' of 6" HDPE pipe and 4050' of 8" HDPE pipe.

Page 7: Mitigation

Water that is proposed to be conserved is currently lost by way of end spills within the Eastside Lateral and Central Lateral systems. Proposed allocation of conserved water is less than the total amount of water currently lost to these end spills, and therefore there will be no expected effects on other water rights.

The water conserved in-stream for this project will be conserved in the East Fork Hood River, downstream of EFID's single diversion.

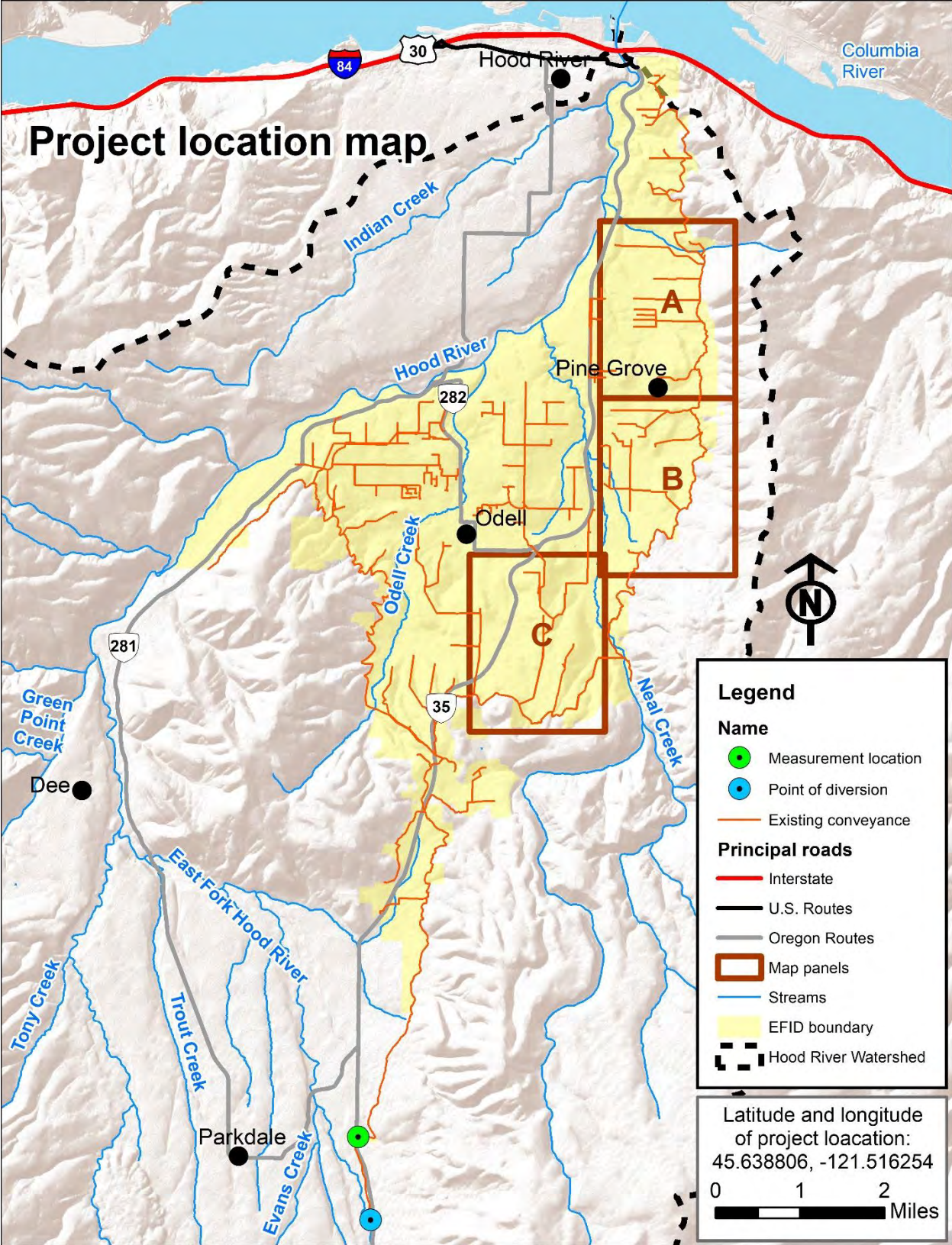


Figure 1. Location map.

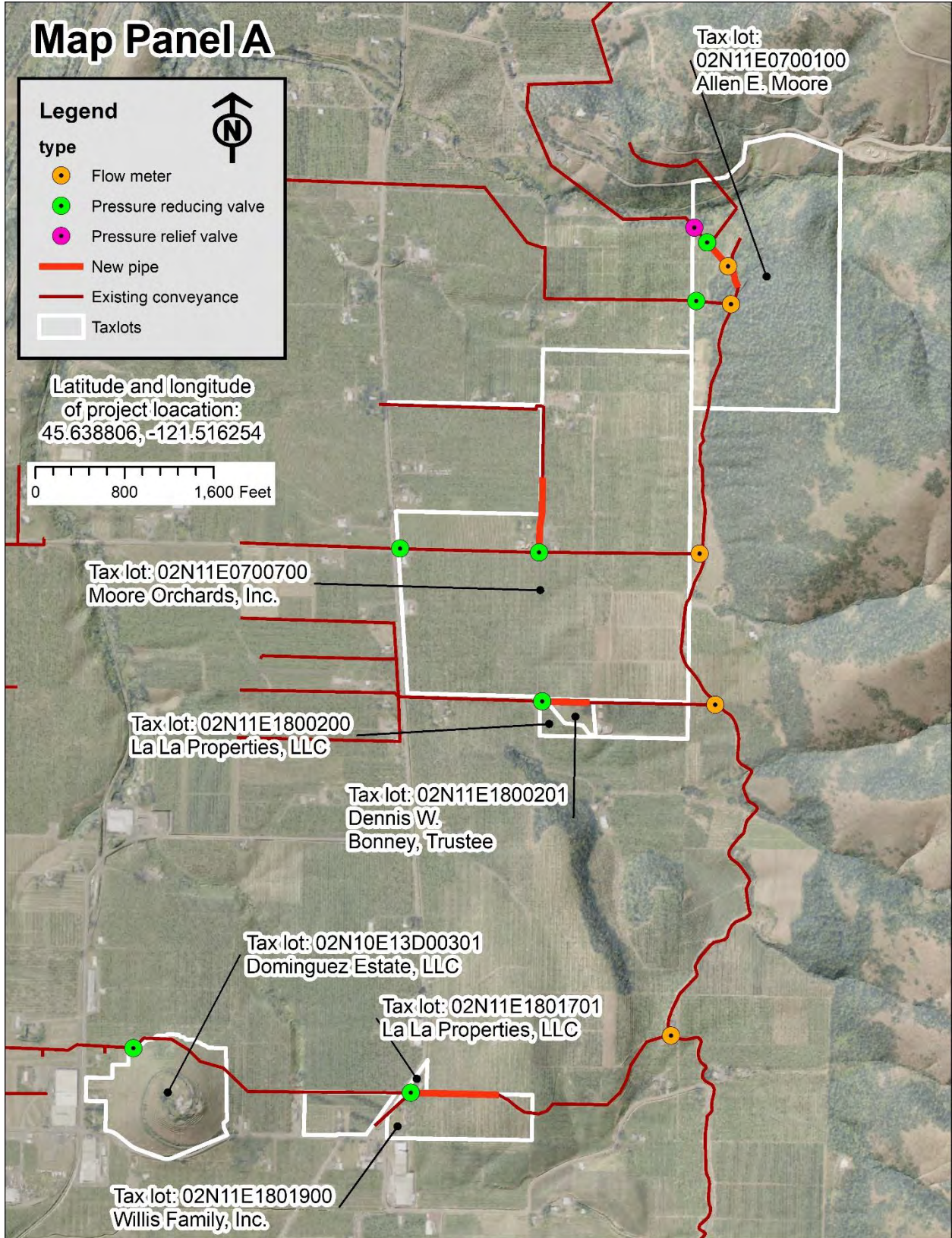


Figure 2. Map panel A.

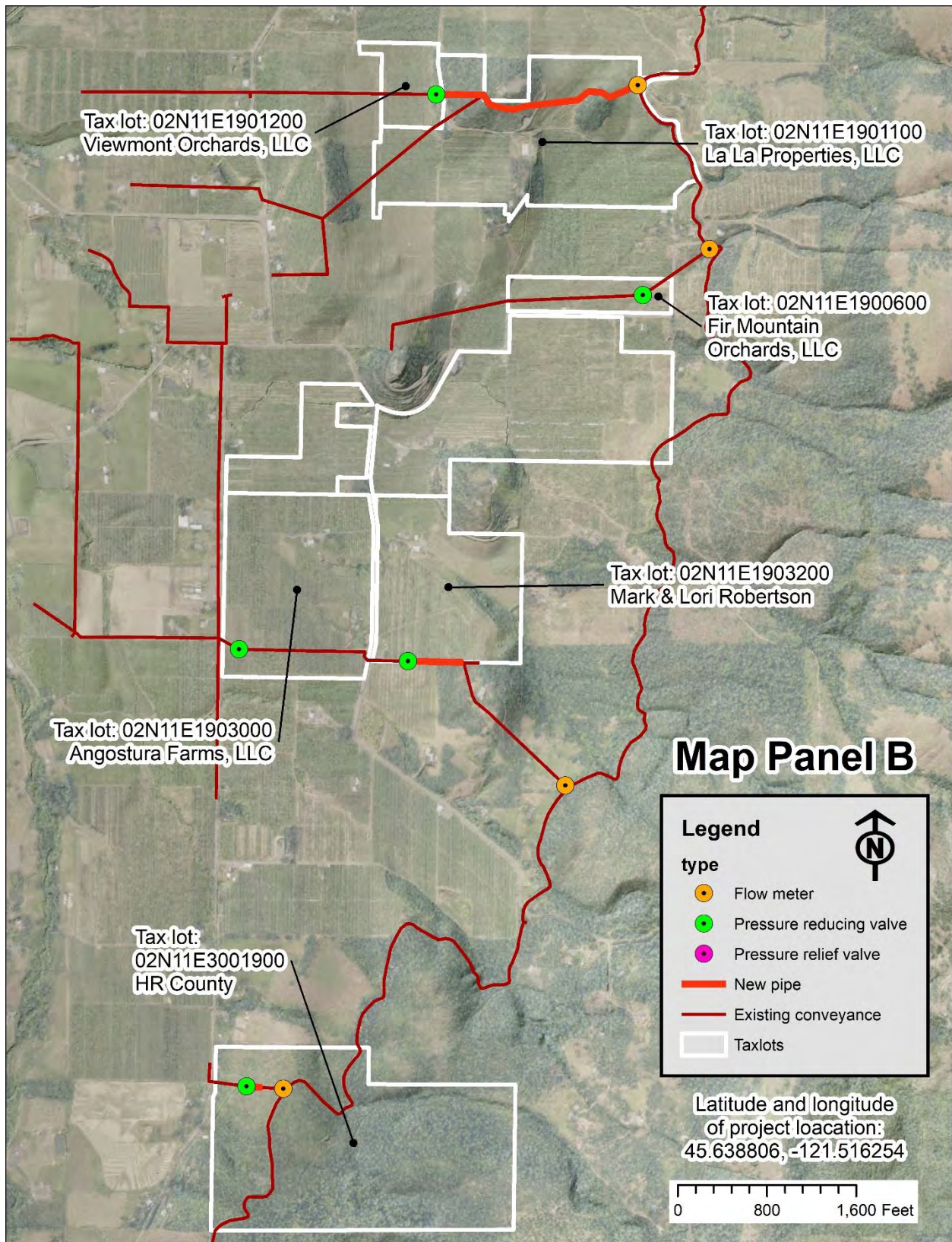


Figure 3. Map panel B.

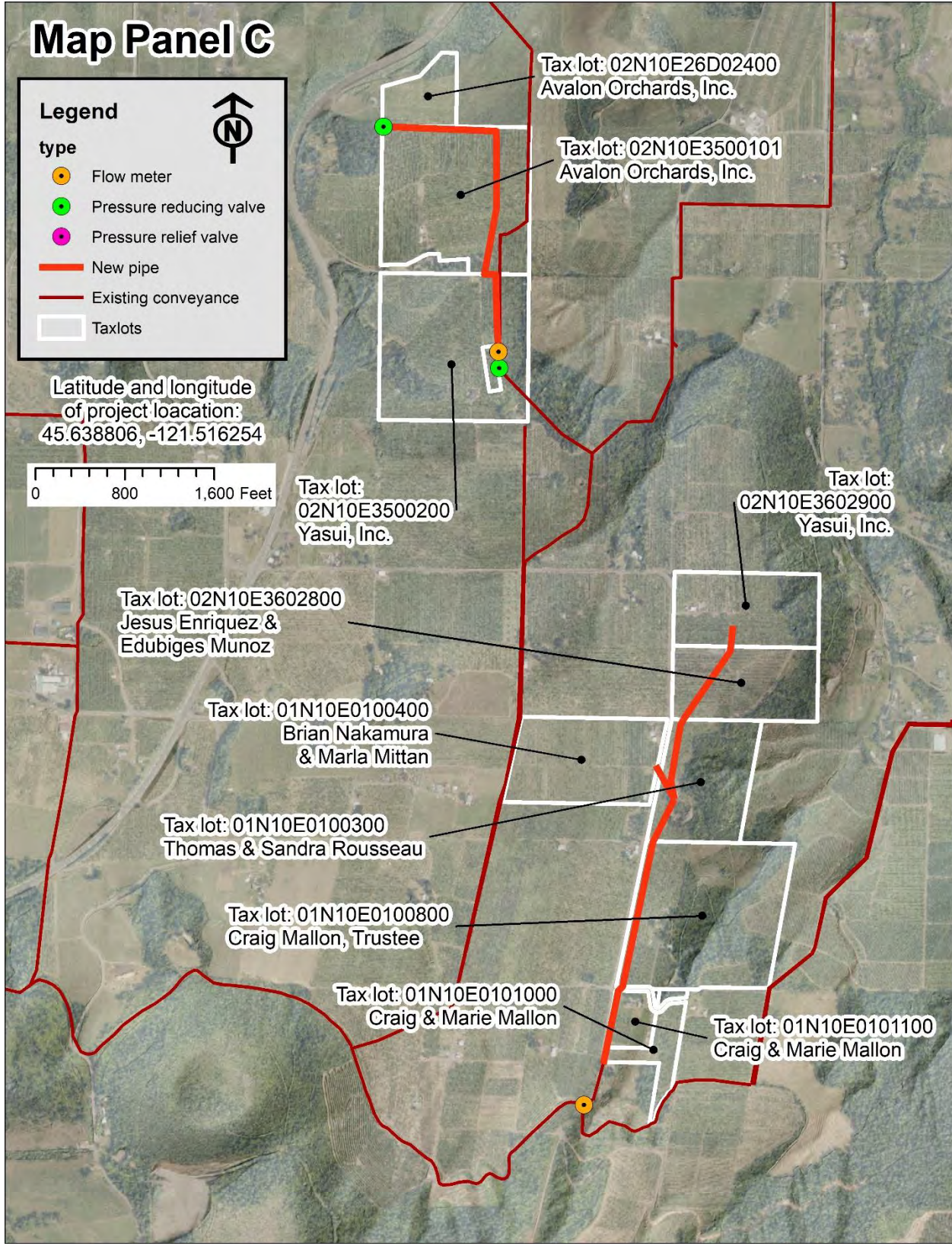


Figure 4. Map panel C.