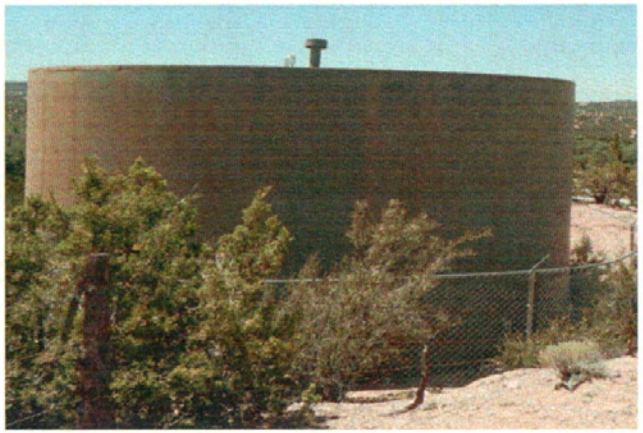
The Regional Water System

- Provide water users with a safe, reliable water supply for domestic and commercial purposes
- Surface-water-based Public Utility in the Pojoaque Basin
  - 4,000 afy capacity
    - 2,500 afy for Pueblos
    - 1,500 afy for Non-Pueblo residents
  - Diversion just above Otowi Bridge
  - Treatment plant on San Ildefonso land, near El Rancho
  - Transmission
  - Run by Regional Water Authority joint board
  - The majority of the construction costs are covered by the federal government with the non-Pueblo portion paid by state and county.

Why Water Tanks?



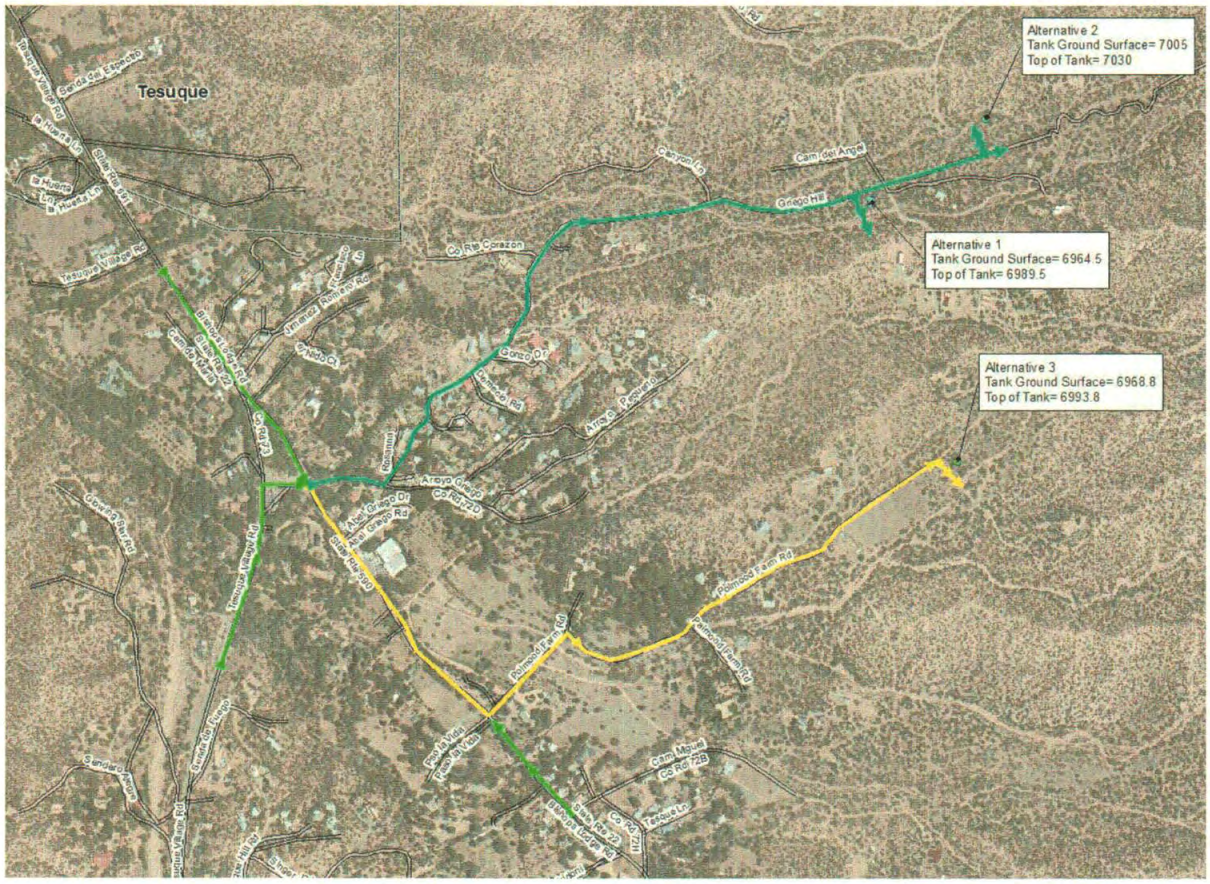
- Store water to meet demand.
- Provide water for emergency operations such as firefighting.
- Serve as a reservoir during peak water usage.
- Extend water availability time and reliability (e.g. 3 day water supply)
- Provide adequate water pressure if pump station fails.

Tesuque Water Tank Design Specifications

- Operating Tank Volume: 600,000 gallons
- Approximate Diameter x Height Options for Tank Volume
  - 55 ft D x 38.5 ft H
  - 70 ft D x 25 ft H

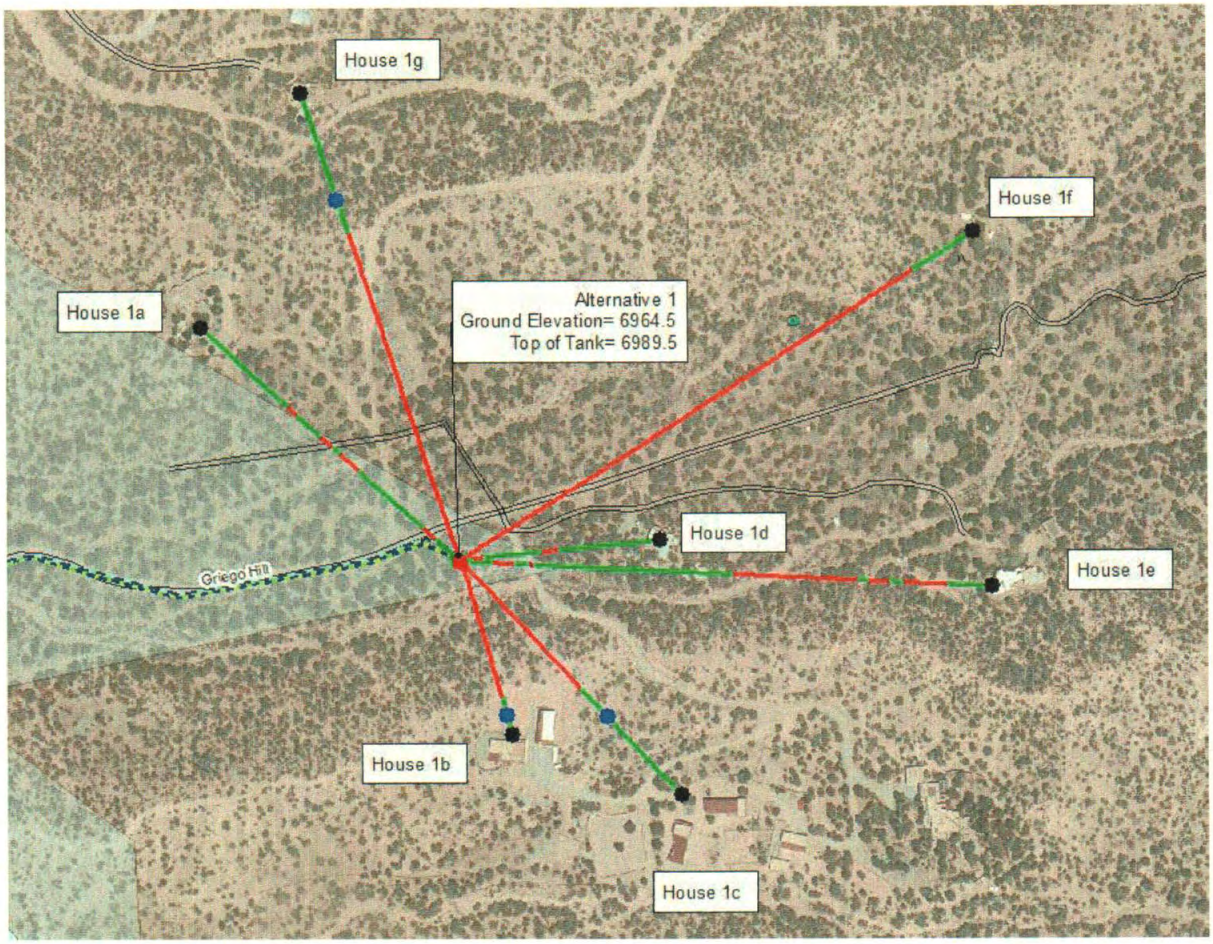
Alternative Comparison

Access



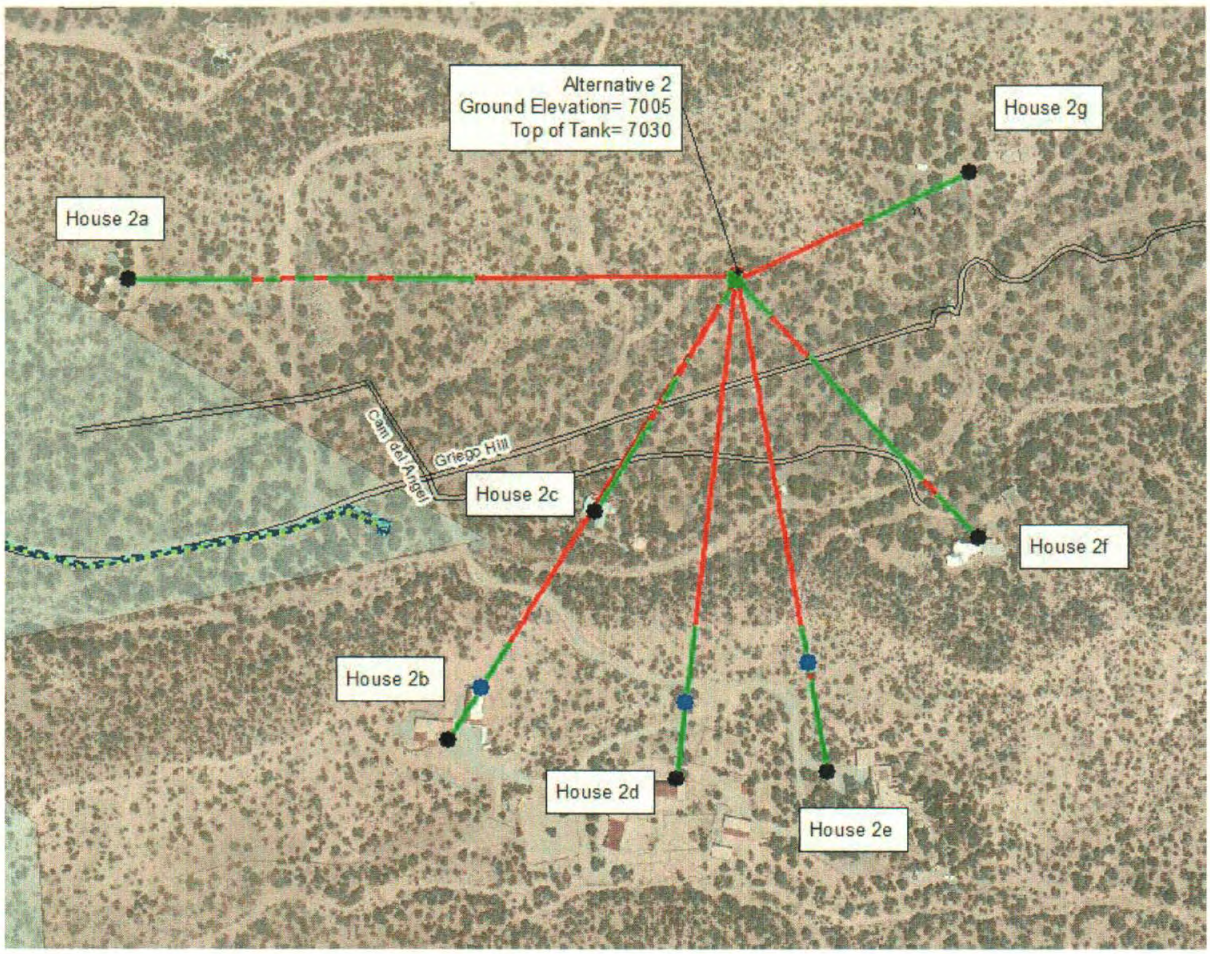
Access roads to the sites for all alternatives appear to be acceptable. Each alternative tank location site is accessible through established roads (combination of paved and unpaved). The alternative 2 site may pose difficulty in acquiring the land from the landowner and there is currently a locked gate restricting access to the area. Access to the tank site proposed in Alternative 1 (PRWSER, HKM, 2008) appears to be the easiest on the basis of unrestricted access and minimal grade variability.

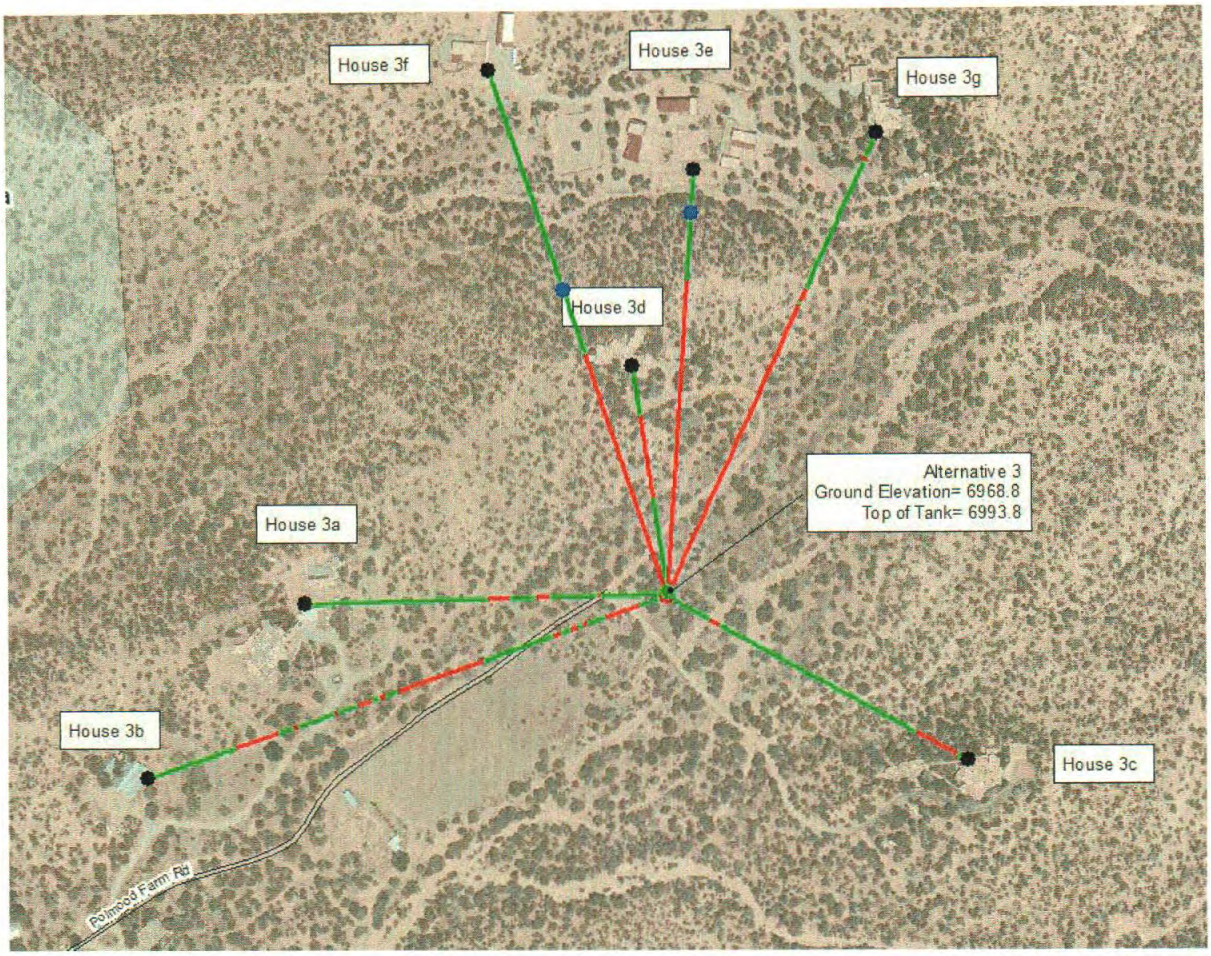
Alternative	Route
Alternative 1	(Green and blue lines) Access from State Route 591, Tesuque Village Rd, or State Route 22 (Bishop's Lodge Rd), turn onto Arroyo Griego Rd, then to Griego Hill Rd for approximately 0.7 miles
Alternative 2	(Green and blue lines) Access from State Route 591, Tesuque Village Rd, or State Route 22 (Bishop's Lodge Rd), turn onto Arroyo Griego Rd, then to Griego Hill Rd for approximately 1 mile
Alternative 3	(Green and yellow lines) Access from State Route 591, Tesuque Village Rd, or State Route 22 (Bishop's Lodge Rd), turn onto Polmood Farm Rd for approximately 0.6 miles



House Number	Analysis
House 1a	view is obstructed, tank is partially visible
House 1b	tank is not visible from house
House 1c	tank is not visible from house
House 1d	view is obstructed, tank is partially visible
House 1e	view is obstructed, tank is partially visible
House 1f	view is obstructed, tank is partially visible
House 1g	tank is not visible from house

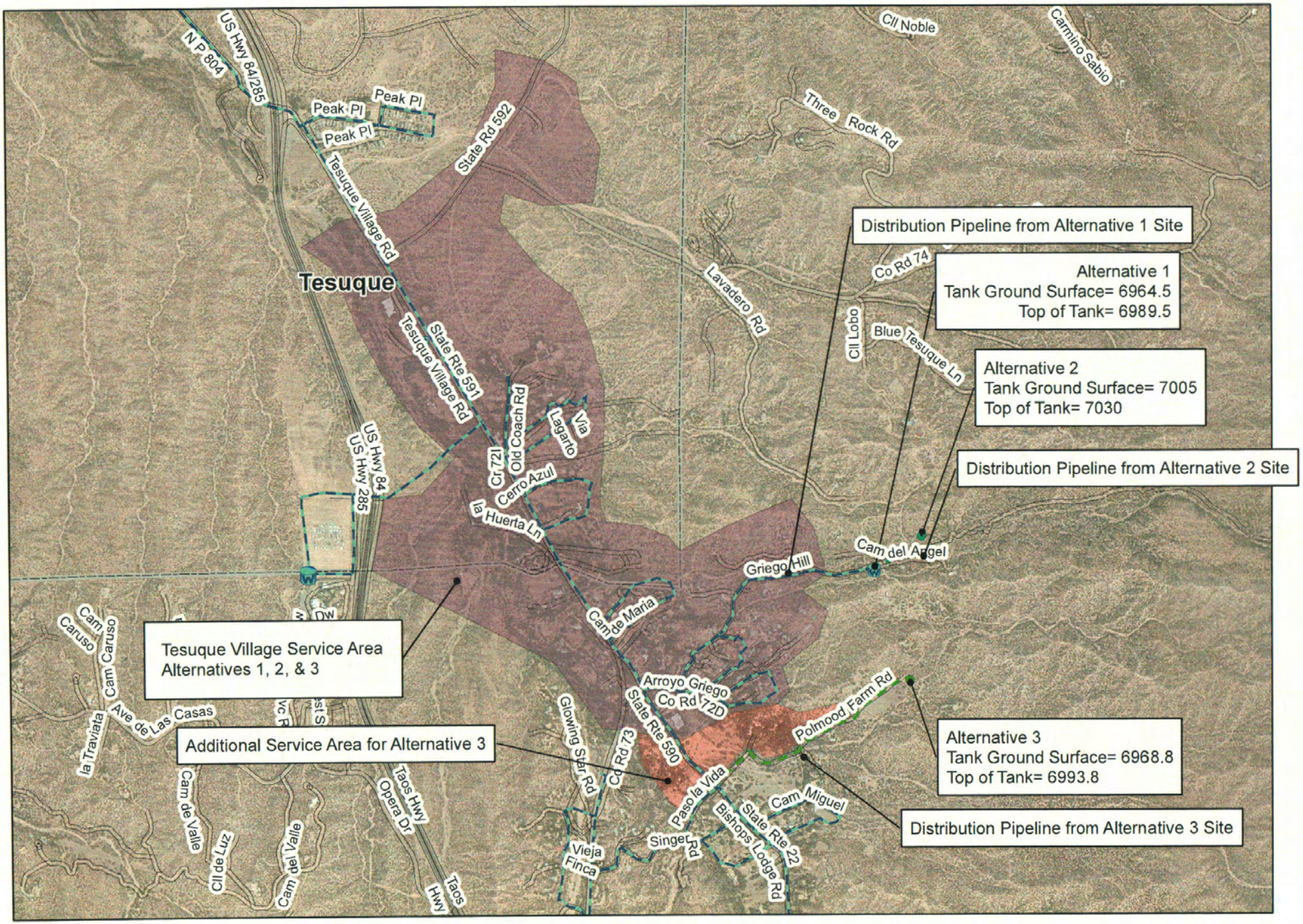
House Number	Analysis
House 2a	view is obstructed, tank is partially visible
House 2b	tank is not visible from house
House 2c	view is obstructed, tank is partially visible
House 2d	tank is not visible from house
House 2e	tank is not visible from house
House 2f	view is obstructed, tank is partially visible
House 2g	view is obstructed, tank is partially visible



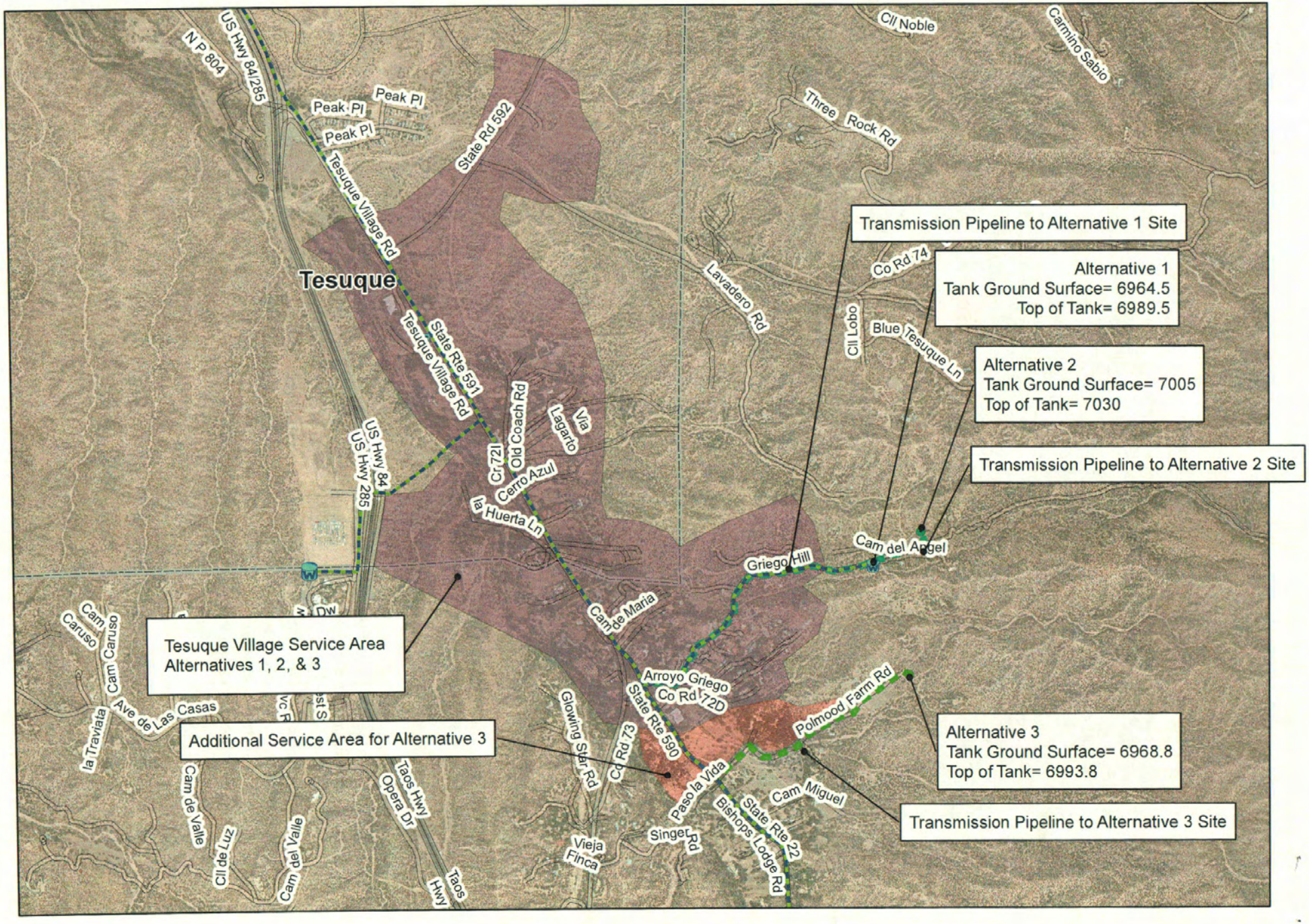


House Number	Analysis
House 3a	view is obstructed, tank is partially visible
House 3b	view is obstructed, tank is partially visible
House 3c	view is obstructed, tank is partially visible
House 3d	view is obstructed, tank is partially visible
House 3e	tank is not visible from house
House 3f	tank is not visible from house
House 3g	view is obstructed, tank is partially visible

Tesuque Village Alternative Tank Locations - Distribution Pipelines

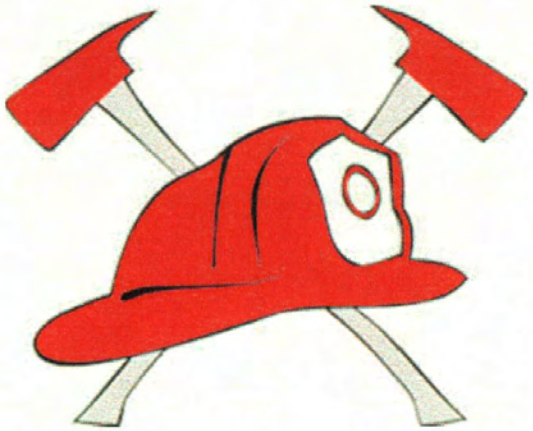


Tesuque Village Alternative Tank Locations - Transmission Pipelines

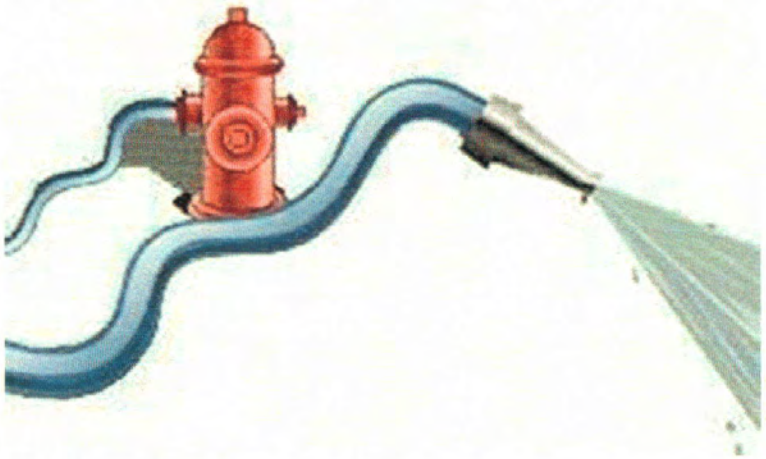


County Residential Fire Code Requirements

- Fire Flow: 500 gallons per minute
- Fire Duration: 2 Hours
- Fire Volume: 60,000 gallons
- Fire Hydrants: No less than every 1,000 feet (by road)
- Line Diameter: 8-inch



County Commercial Fire Code Requirements



- Fire Flow: 1000 gallons per minute
- Fire Duration: 2 Hours
- Fire Volume: 120,000 gallons
- Fire Hydrants: No less than every 500 feet (by road)
- Line Diameter: 8-inch

Tesuque Mutual Domestic's Specifications

- Fire Flow: 500 gallons per minute
- Fire Duration: 1 hour 40 minutes (assuming a full water tank; which is unlikely)
- Fire Volume: 50,000 gallon tank
- Fire Hydrants: 7 total. Some in dis-repair
- Line Diameter: 6-inch main line, many 2-inch lines

ISO Ratings and Insurance Savings

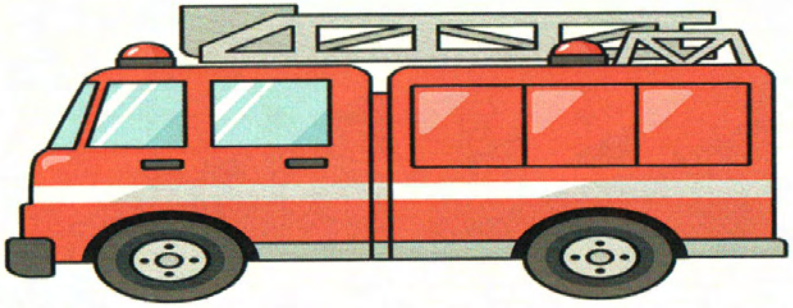
What is an ISO rating?

- The Insurance Services Office provides ratings that help communities evaluate a local fire department's ability to respond to structure fires.
- Ratings are on a scale of 1 to 10; 1 being the most protective and 10 being the least protective.
- A large portion of the rating is based on water availability.

ISO Ratings and Insurance Savings

Impacts on Insurance Premiums

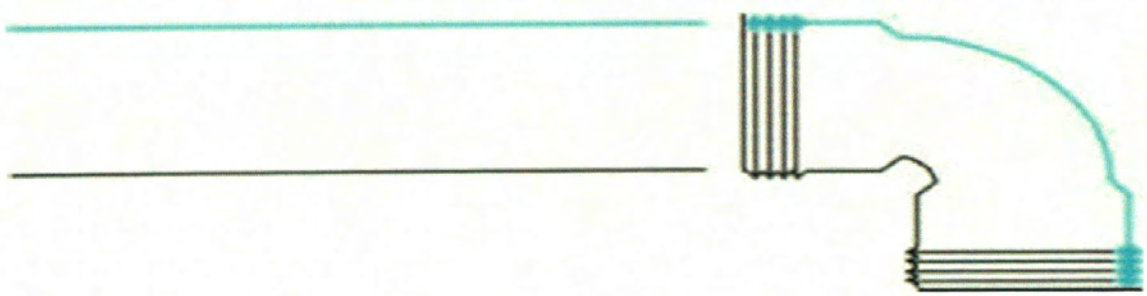
- As the ISO rating drops, so does your fire insurance premium.
- Homeowners can expect significant savings if a fire hydrant is located within 1000 road feet of their home and a fire station with adequate water supply is no more than 5 miles away.



Tank Site Selection Criteria

Required Criteria

- Good hydraulics (maintain operating pressure)
- Adequate site size
- Minimize visual impacts (e.g. vegetative screening and paint color)



Tank Site Selection Criteria

Proposed Criteria

- Impacts to neighbors
  - Number of houses that will see the tank
  - Distance from houses to the tank
- Constructability
  - Access to the site
  - Number of people impacted by construction
  - Ability to maintain traffic flow during construction
- Costs
  - Added costs for transmission and distribution pipeline

Tank Site Selection Criteria

What other criteria should the County and BOR consider?

-
-
-
-
-
-
-

Next Steps

2015/2016

- Site selection and acquisition
  - Finalize selection criteria
  - Evaluate site options
  - Notify Tesuque residents of evaluation
  - Make recommendation to BOR
  - Acquire property/easements
- Draft Environmental Impact Statement (EIS) and Feasibility Study published

Next Steps

September 15, 2017

- EIS and Record of Decision finalized.

June 30, 2021

- Bureau of Reclamation verifies that construction of the regional water system is complete or will be complete by June 30, 2024.

June 30, 2024

- Regional water system construction complete.