

# Cayucos Sustainable Water Project

## Preliminary Draft Site Analysis Report



Presenter: David Foote, Firma Consultants

# Purpose

---

**The Site Analysis Report provides documentation of the site selection process that will:**

- Be utilized by the consultant team and District in subsequent stages in the process.
- Ensure that a reasonable range of sites have been considered.
- Identify fatal flaws or characteristics of any sites that would render them infeasible or add substantial cost or time to the final completion of the facility.

**Site Analysis Report is prepared in advance of Comparative Analysis Report.**

- The Comparative Analysis will provide more detail on the potential uses of treated wastewater that will influence selection of a final site.
- Site constraints will be considered with the Options for treatment and reuse and cost to arrive at a recommended site.



# Rough Screening Evaluation

**12 Candidate Sites were selected for rough screening evaluation based on:**

## Primary Site Selection Criteria:

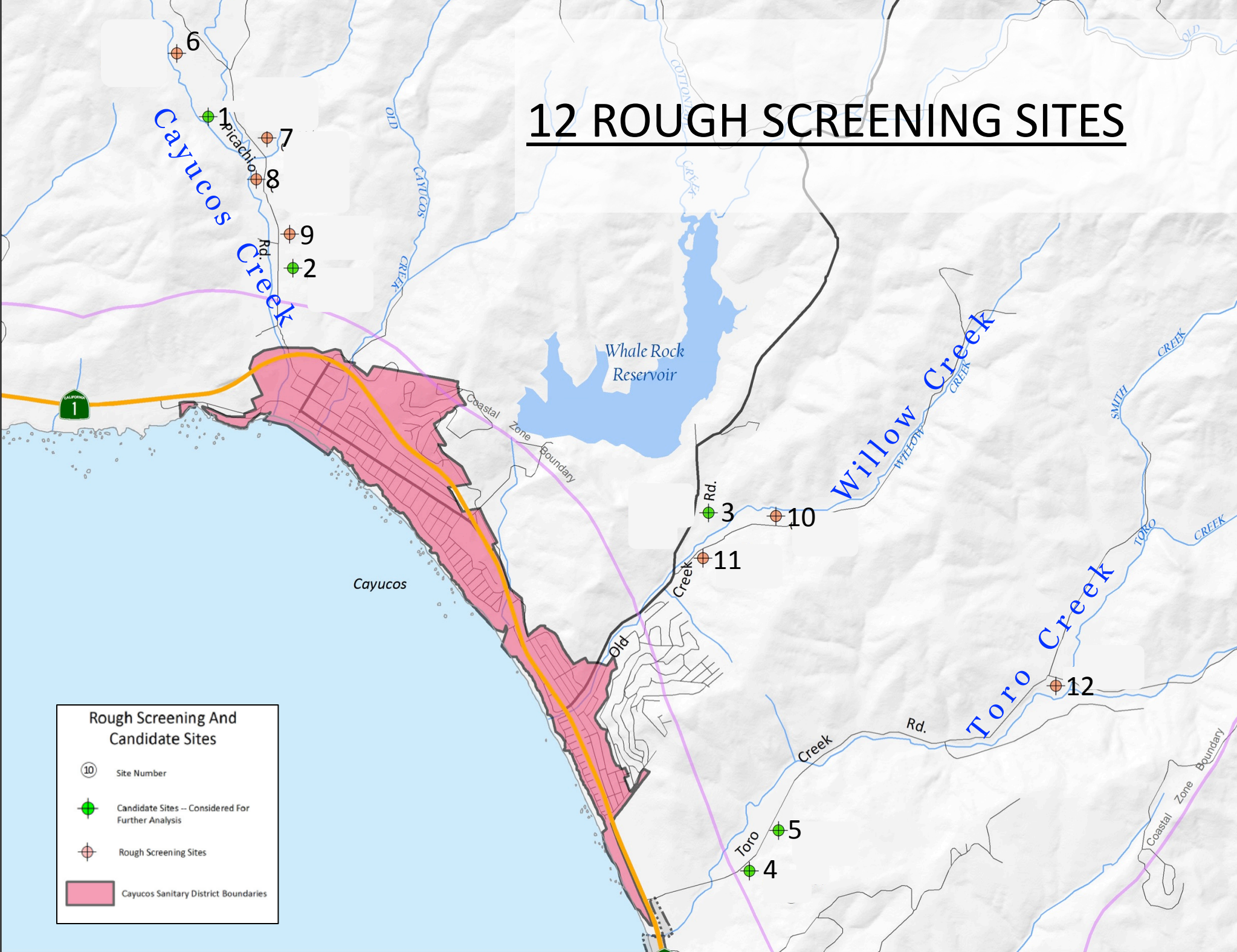
- Outside the Coastal Zone Boundary
- Located in the three creek valleys: Toro Creek, Willow Creek and Cayucos Creek.
- Located Outside FEMA Flood Zone
- Site is not visible from State Route 1

## Rough Screening Criteria

These questions were used to further narrow the candidate sites with the best potential to meet the project objectives.

1. Is the property owner a cooperative partner?
2. Does the property lend itself to creation of a site of suitable proportions and slope?
3. Does the site offer a unique opportunity to fulfill the project objectives?
4. Compared to other candidate sites in the same creek canyon, is the site a reasonable distance from existing infrastructure?

# 12 ROUGH SCREENING SITES



**Rough Screening And Candidate Sites**

- ⑩ Site Number
- ◆ Candidate Sites – Considered For Further Analysis
- ◆ Rough Screening Sites
- █ Cayucos Sanitary District Boundaries

## R O U G H S C R E E N I N G C R I T E R I A

Candidate Site	Landowner Cooperative Partner	Parcel configuration/ slope	Unique opportunity	Relative Distance from core infrastructure
1 Cayucos Creek	yes	optimal	Existing agricultural infrastructure	ok
2 Cayucos Creek	yes	optimal	Whale Rock adjacency *	ok
3 Willow Creek	yes	optimal	Whale Rock adjacency and Existing ag. infrastructure *	ok
4 Toro Creek	yes	optimal	Gravity infrastructure	good
5 Toro Creek	yes	optimal	Gravity infrastructure	good
6 Cayucos Creek	yes	optimal	Existing agricultural infrastructure	far
7 Cayucos Creek	no	slope	-	ok
8 Cayucos Creek	no	slope	-	ok
9 Cayucos Creek	no	optimal	-	ok
10 Willow Creek	no	optimal	-	ok
11 Willow Creek	no	optimal	-	ok
12 Toro Creek	yes	Less than optimal	-	far

\*Potential exists for surface water augmentation

# Rough Screening Criteria



## When evaluating the 4 Screening Criteria:

1. Is the property owner a cooperative partner?

↳ **7 of the 12 sites have interested property owners**

2. Does the property lend itself to creation of a site of suitable proportions and slope?

↳ **Of the 7 remaining candidate sites all were suitable parcel configuration/slope**

3. Does the site offer a unique opportunity to fulfill the project objectives?

↳ **Of the remaining sites, 6 have a unique opportunities including:**  
-Existing irrigation infrastructure in place for beneficial reuse for Ag.  
-Proximity to Whale Rock reservoir for potential surface water augmentation.  
-Benefit of using gravity infrastructure for collection

4. Is the site a reasonable distance from existing sewer infrastructure in the community?

↳ **5 Sites are a reasonable distance from core infrastructure**

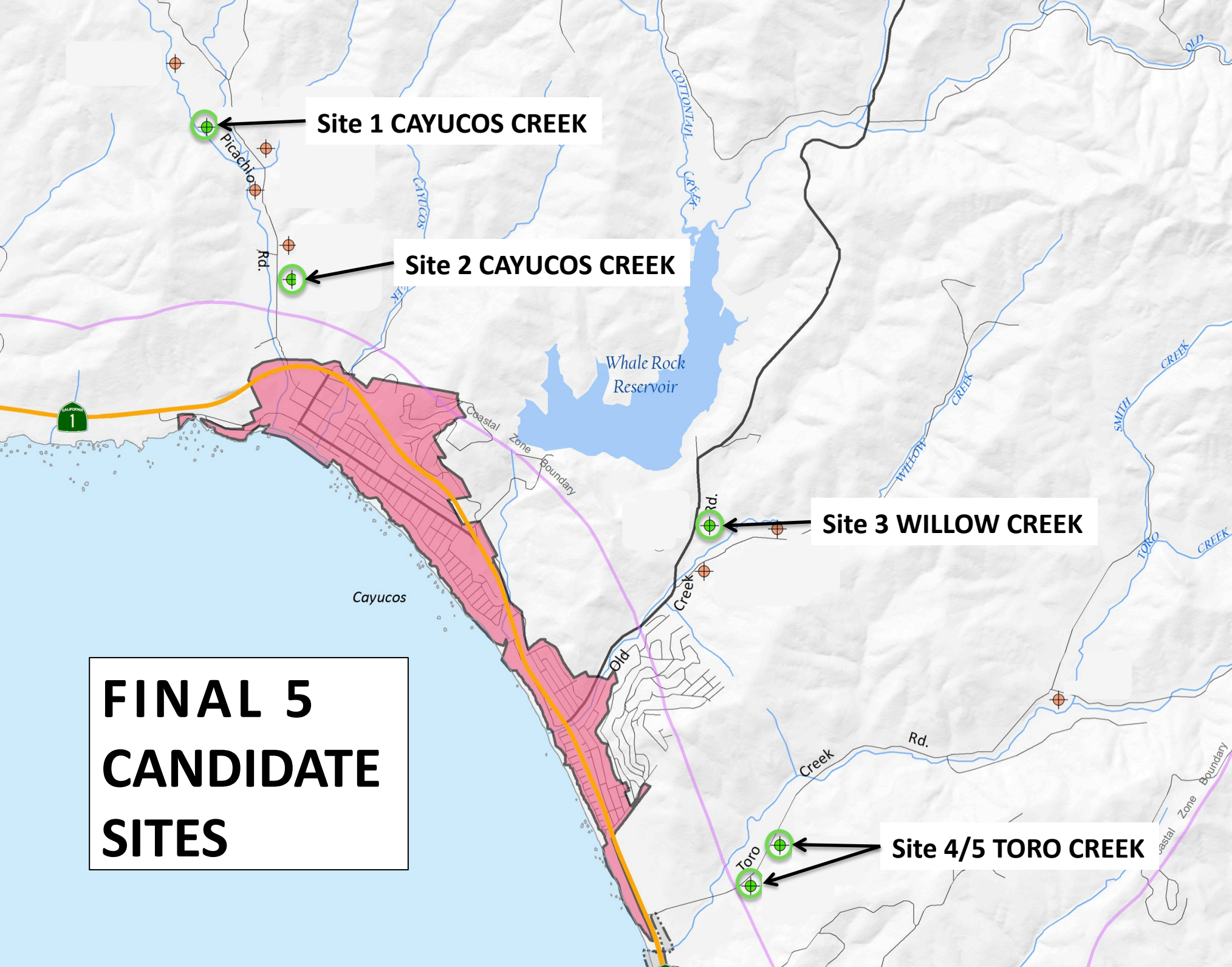
**FINAL 5  
CANDIDATE  
SITES**

**Site 1 CAYUCOS CREEK**

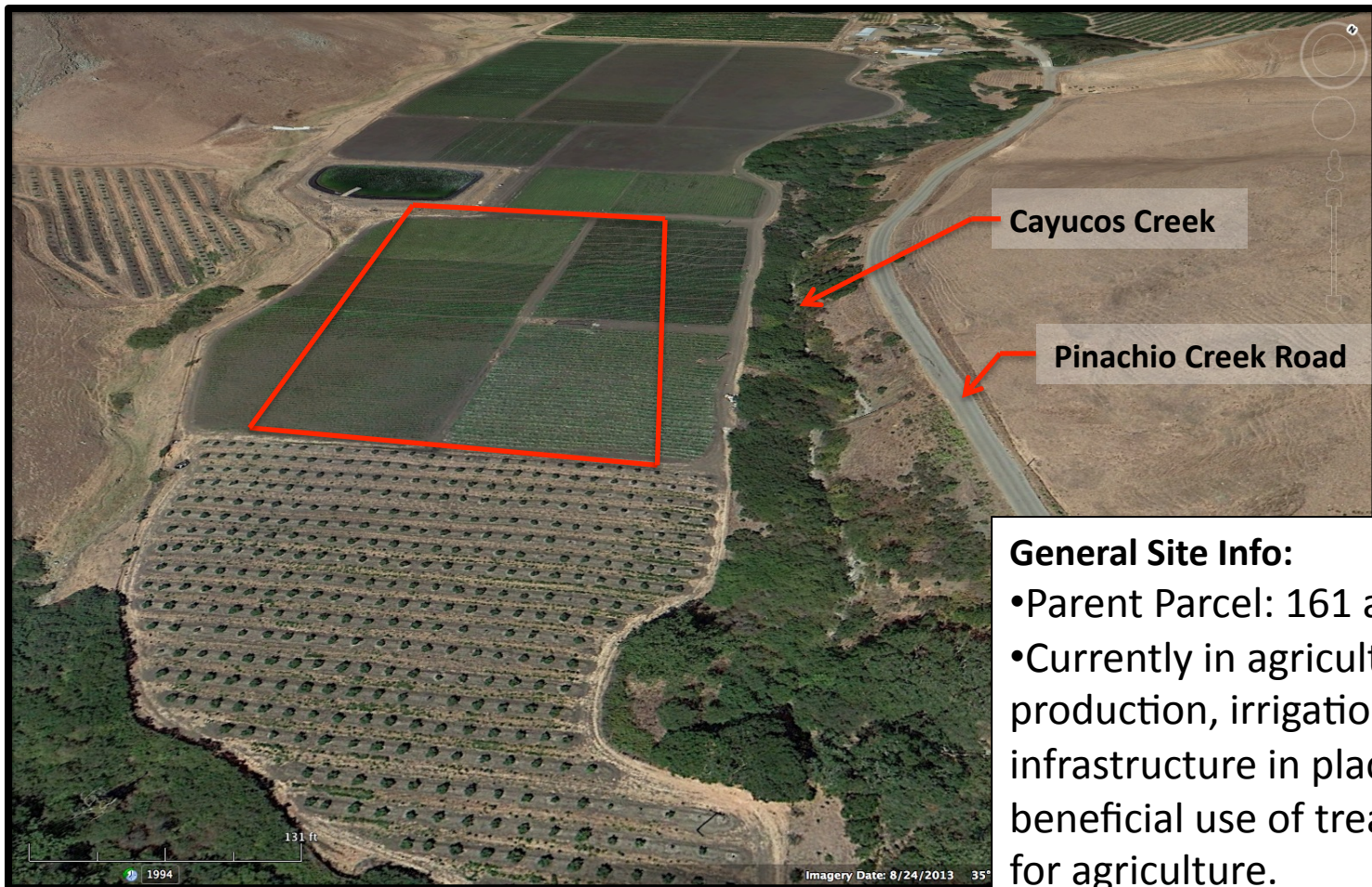
**Site 2 CAYUCOS CREEK**

**Site 3 WILLOW CREEK**

**Site 4/5 TORO CREEK**



# Site 1: CAYUCOS CREEK

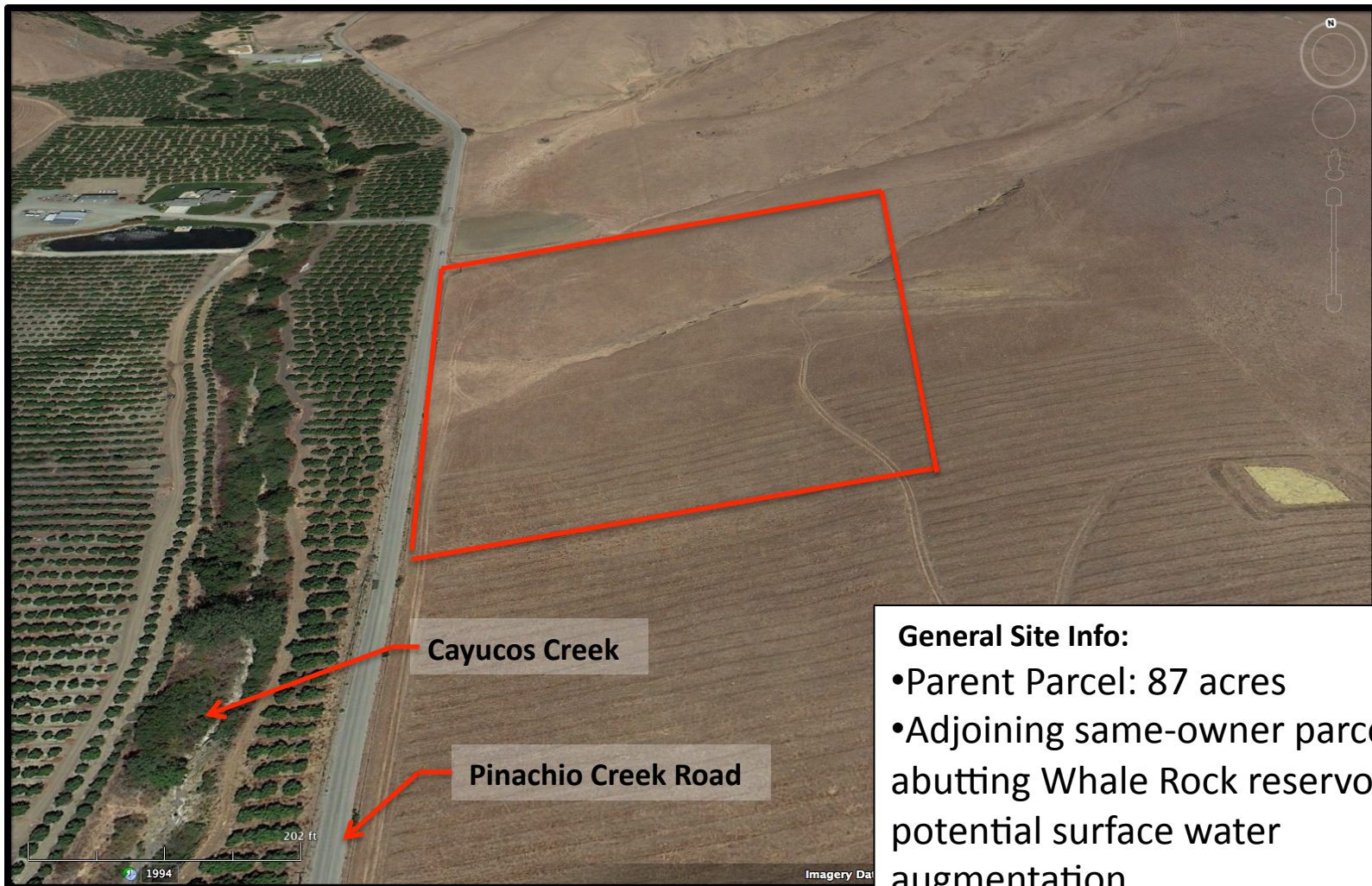


## General Site Info:

- Parent Parcel: 161 acres
- Currently in agricultural production, irrigation infrastructure in place for beneficial use of treated water for agriculture.



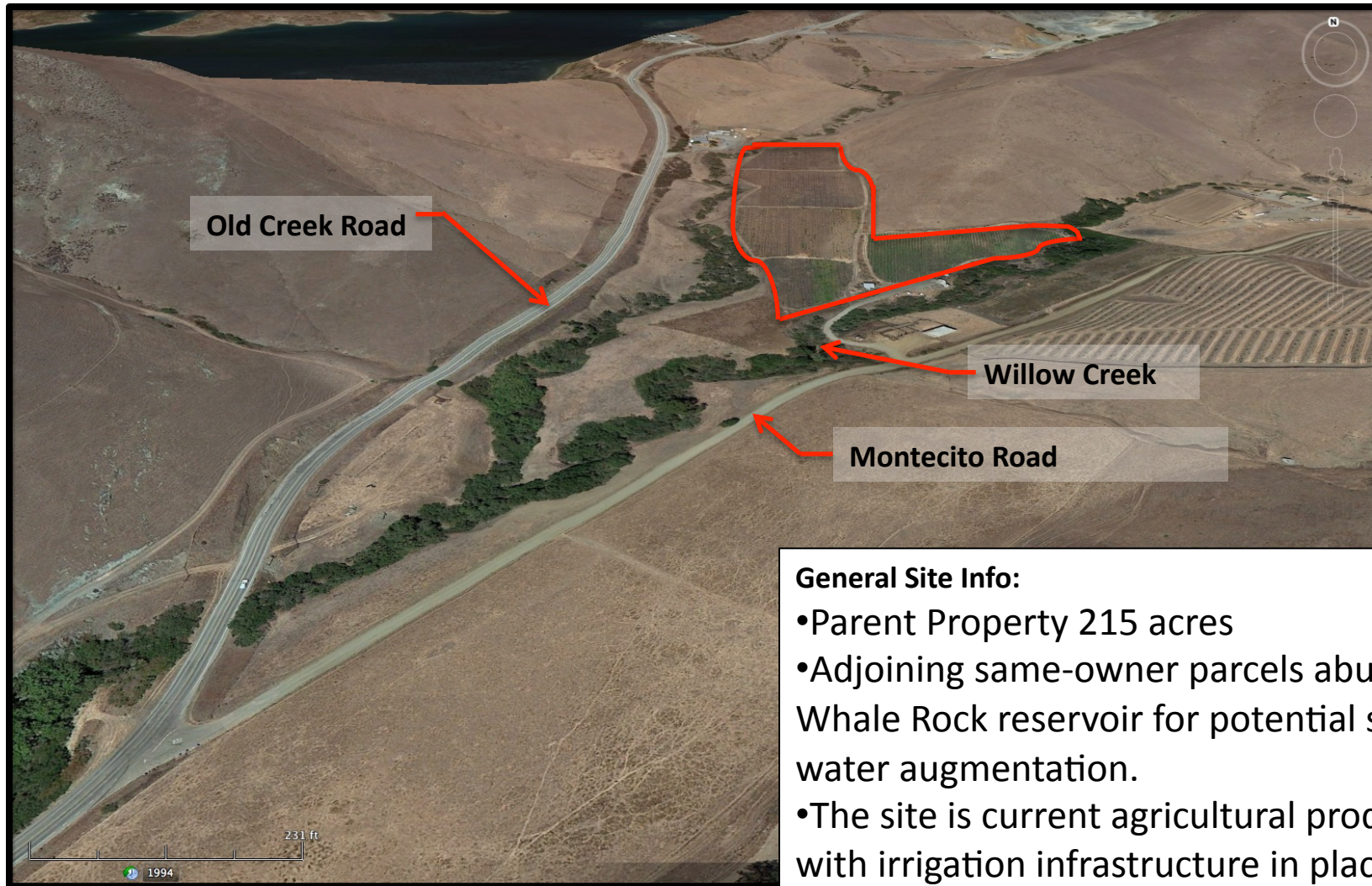
# Site 2: CAYUCOS CREEK



## General Site Info:

- Parent Parcel: 87 acres
- Adjoining same-owner parcels abutting Whale Rock reservoir for potential surface water augmentation.

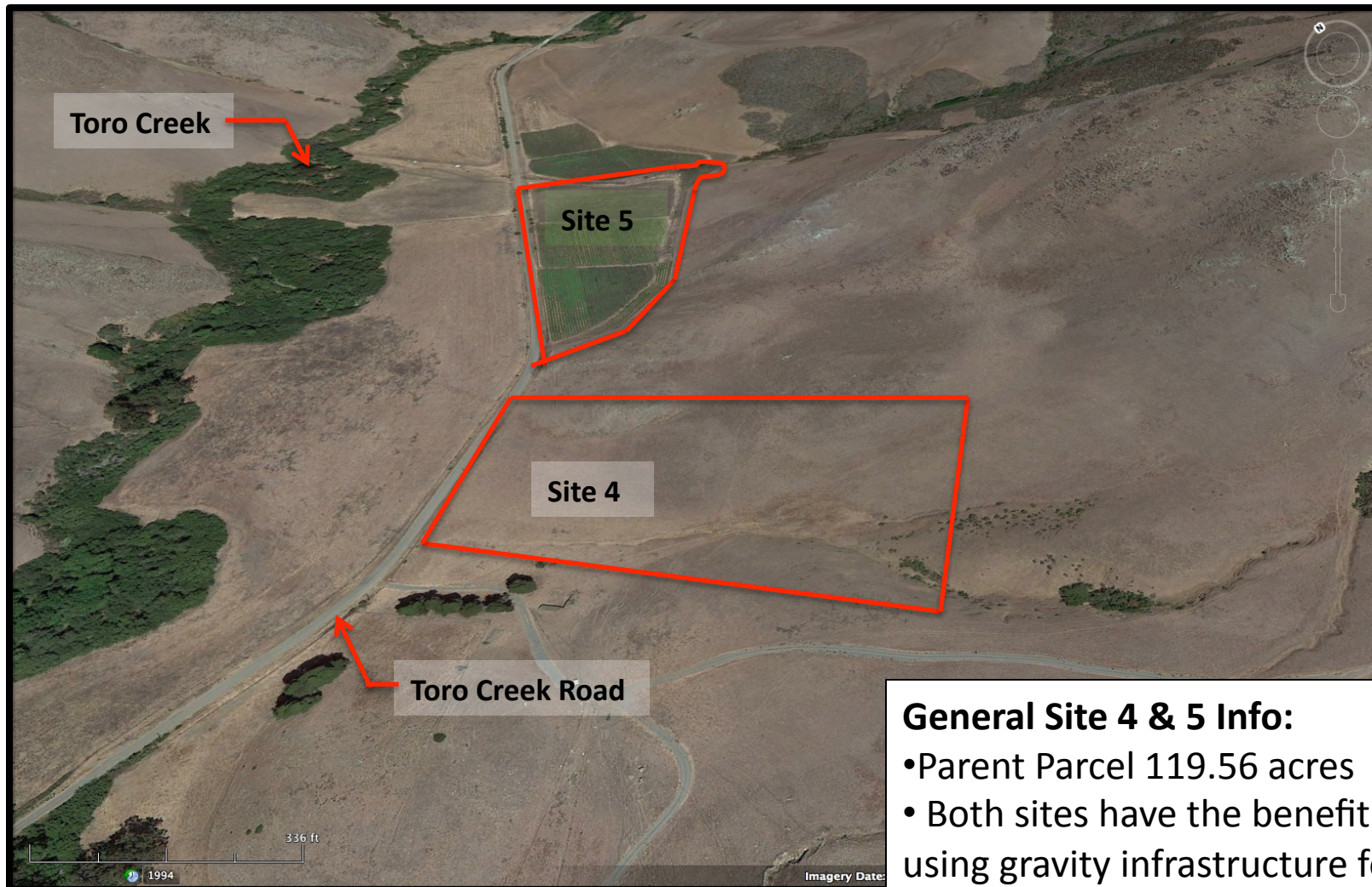
# Site 3: Willow Creek



## General Site Info:

- Parent Property 215 acres
- Adjoining same-owner parcels abutting Whale Rock reservoir for potential surface water augmentation.
- The site is current agricultural production with irrigation infrastructure in place.

# Sites 4 & 5 Toro Creek



## General Site 4 & 5 Info:

- Parent Parcel 119.56 acres
- Both sites have the benefit of using gravity infrastructure for collection.

# Key Environmental and Regulatory Issues

Four factors have been identified in this screening-level stage to determine the relative strengths and weaknesses of the selected five candidate sites.

## ■ Geologic Hazards



## ■ Biologic Resources



## ■ Agricultural Resources



Di Leo & Moran  
Environmental Consulting

## ■ Cultural Resources



# Key Environmental and Regulatory Issues

## Geologic Hazards

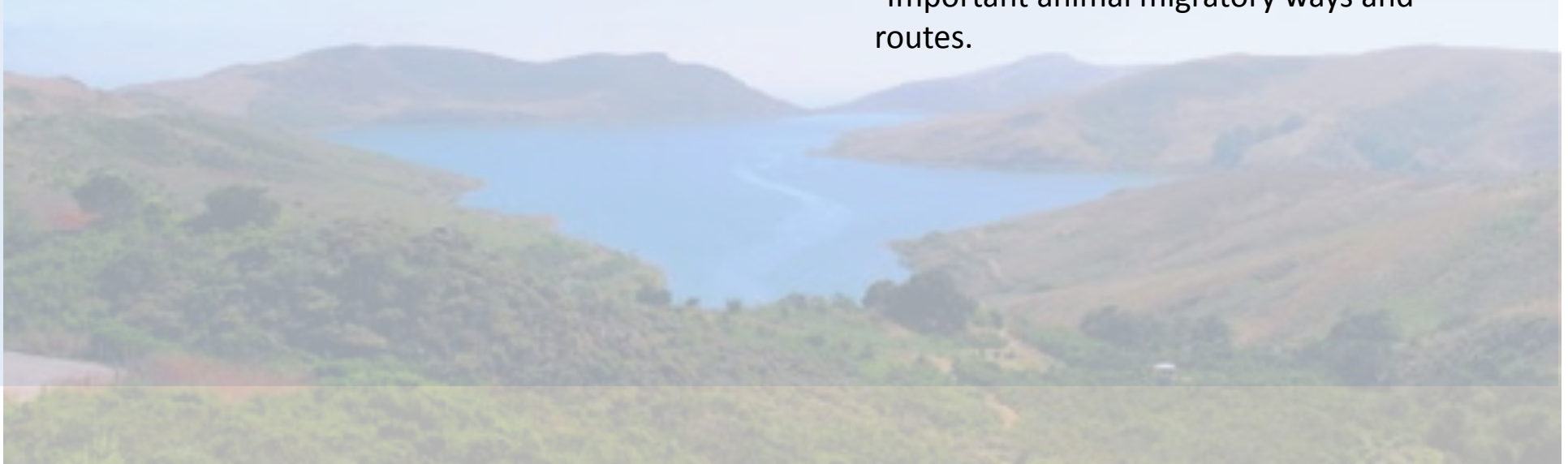
The presence of one or more of these hazards requires more cost and engineering design effort to mitigate risks.

- Slope stability
- Potential of liquefaction
- Seismic ground shaking

## Biologic Resources

Significant site constraints arising from biological resources would be the presence of, or proximity to:

- Listed (endangered, threatened, etc) plant or animal species, or their habitat
- Other protected or important plant or animal species such as nesting or migratory birds
- Wetlands
- Important animal migratory ways and routes.



# Key Environmental and Regulatory Issues

## Agricultural Resources:

**The following present constraints to development:**

- Presence of prime agricultural land
- A Williamson Act land contract (agricultural preserve)
- Underlying agricultural zoning

**Conversion of prime agricultural land to non agricultural use would be a significant impact requiring mitigation.**

- Procedures exist for mitigation of this impact, but at a cost.

## Cultural Resources:

**The presence of a significant cultural or historical resource on the site would constrain development and add time and cost to the development process.**



## Key to Comparison Table

■ **Geologic Hazards:**

“Minor” means normal engineering practices and design can address hazards. “Significant” means the constraint is likely surmountable by engineering but at extra cost.

■ **Biologic Resources:**

“Creek Proximity” means consultation with regulatory agencies, probable further study and setback requirements. “Access” means regulatory permits for creek crossings.

■ **Agricultural Resources:**

Prime soil means the conversion of the land to non-agricultural use would be a significant impact requiring mitigation.

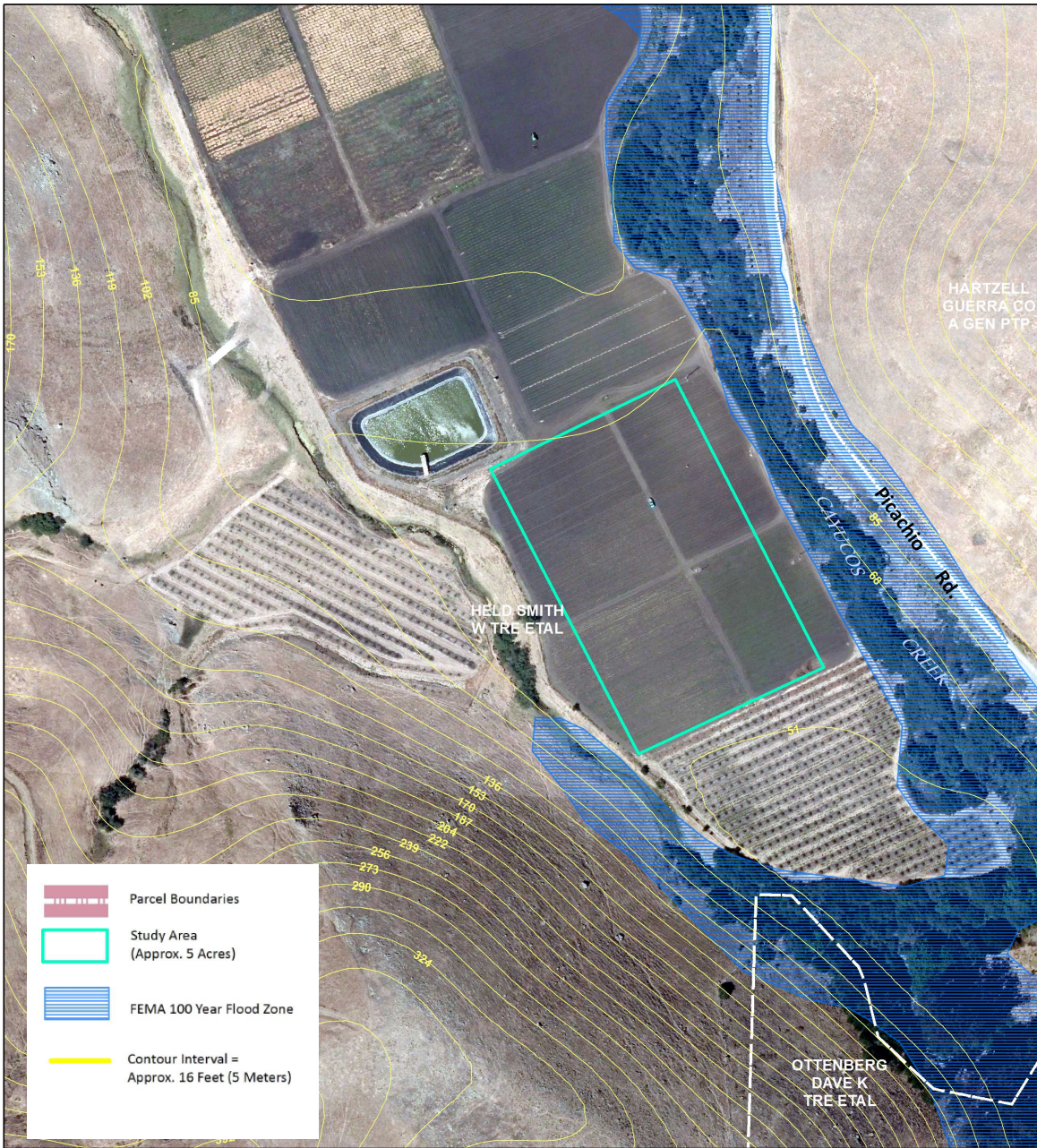
■ **Cultural Resources:**

“Monitor construction” means due to potential for resources to be present construction monitoring would be required. “None” means on the basis of the Phase 1 survey resources are not likely to be present.

# CANDIDATE SITE COMPARISON

	1 Cayucos Creek	2 Cayucos Creek	3 Willow Creek	4 Toro Creek	5 Toro Creek
Geologic Hazard	Minor	Minor	Minor	Significant Landslide, Fault	Minor
Biologic Resources	Creek Proximity, Access	Creek Proximity, Native Grassland	Creek Proximity, Access	Creek Proximity	Creek Proximity
Cultural Resources	Monitor Construction	None	None	Monitor Construction	Monitor Construction
Agriculture	Prime Soil	Grazing	Prime Soil	Grazing	Prime Soil





# Site 1 Cayucos Creek

**Geologic Hazard**

Minor

**Biologic Resources**

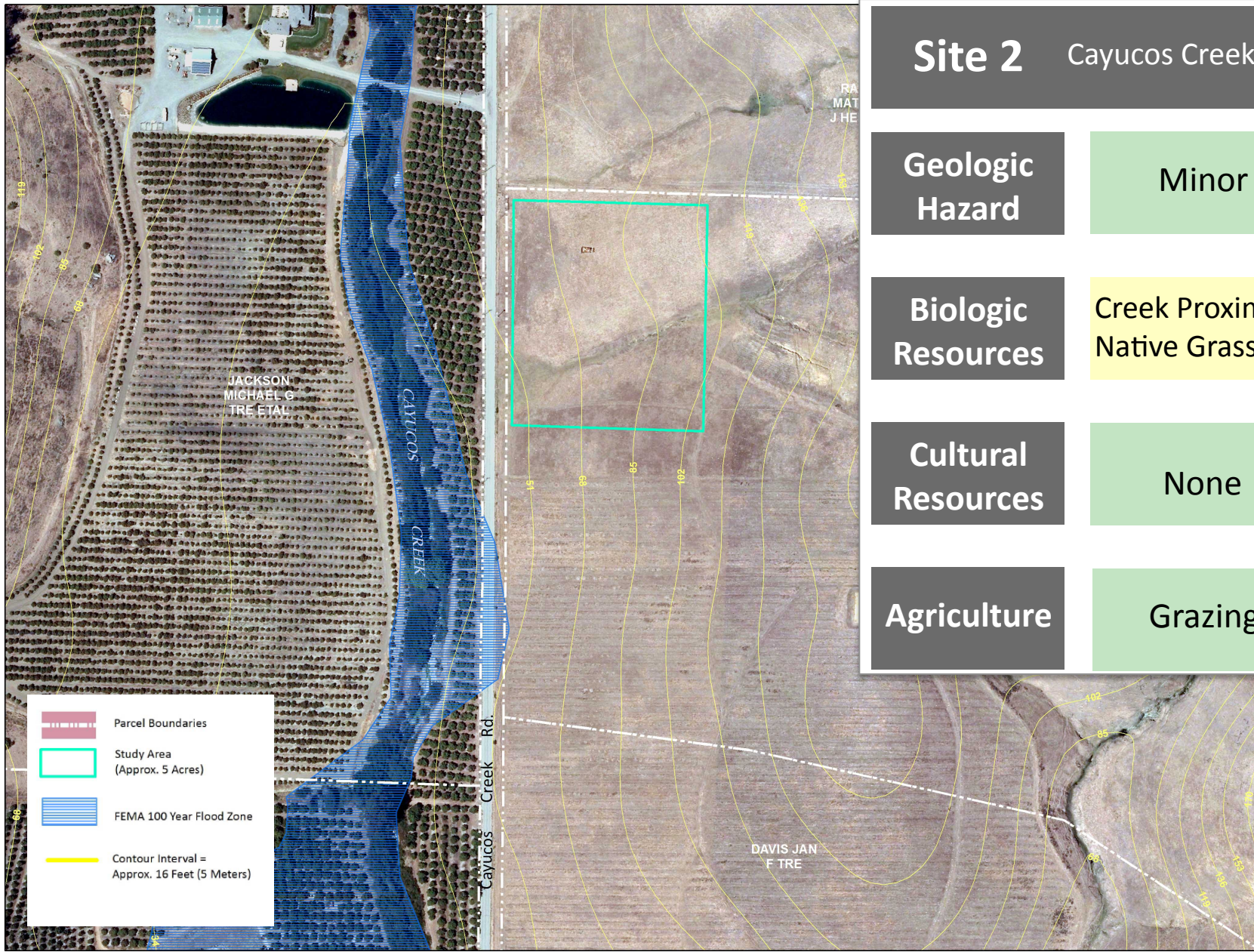
Creek Proximity, Access

**Cultural Resources**

Monitor Construction

**Agriculture**

Prime Soil



**Site 2** Cayucos Creek

**Geologic Hazard**

Minor

**Biologic Resources**

Creek Proximity, Native Grassland

**Cultural Resources**

None

**Agriculture**

Grazing

# Site 3 Willow Creek

Geologic Hazard

Minor

Biologic Resources





Creek Proximity, Access

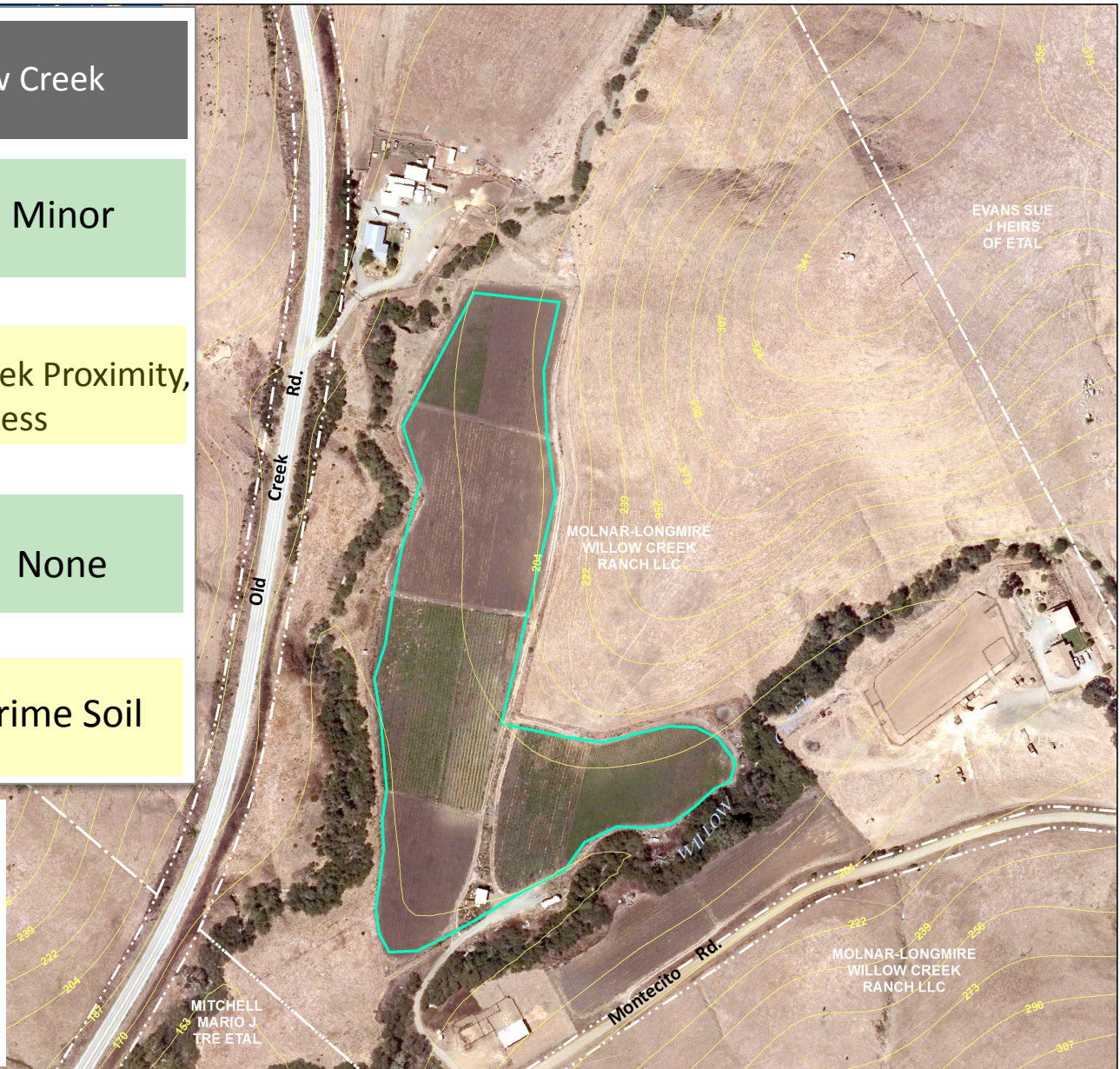
Cultural Resources

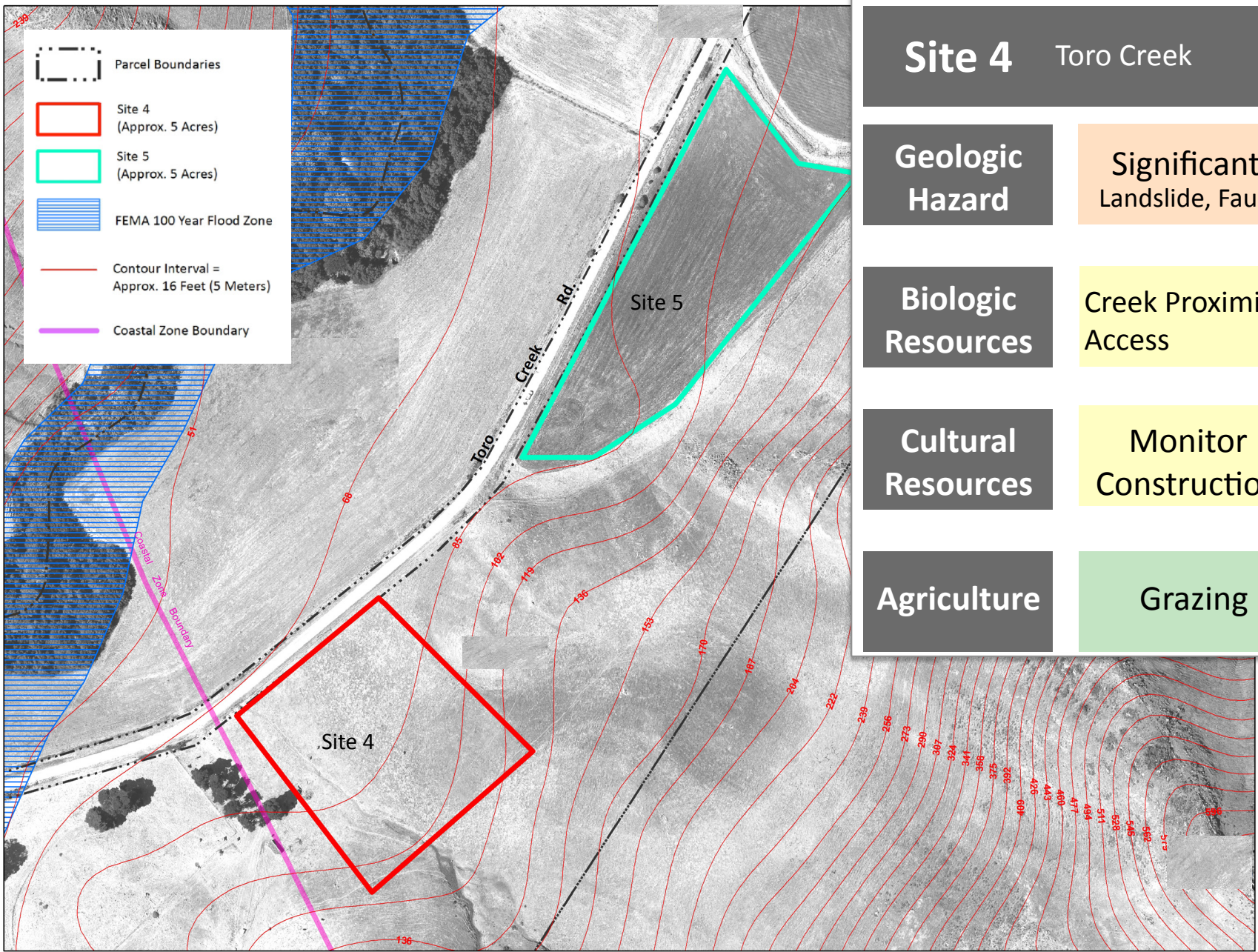
None

Agriculture

Prime Soil

-  Parcel Boundaries
-  Study Area (Approx. 5 Acres)
-  FEMA 100 Year Flood Zone
-  Contour Interval = Approx. 16 Feet (5 Meters)





**Site 4** Toro Creek

**Geologic Hazard**

Significant  
Landslide, Fault

**Biologic Resources**

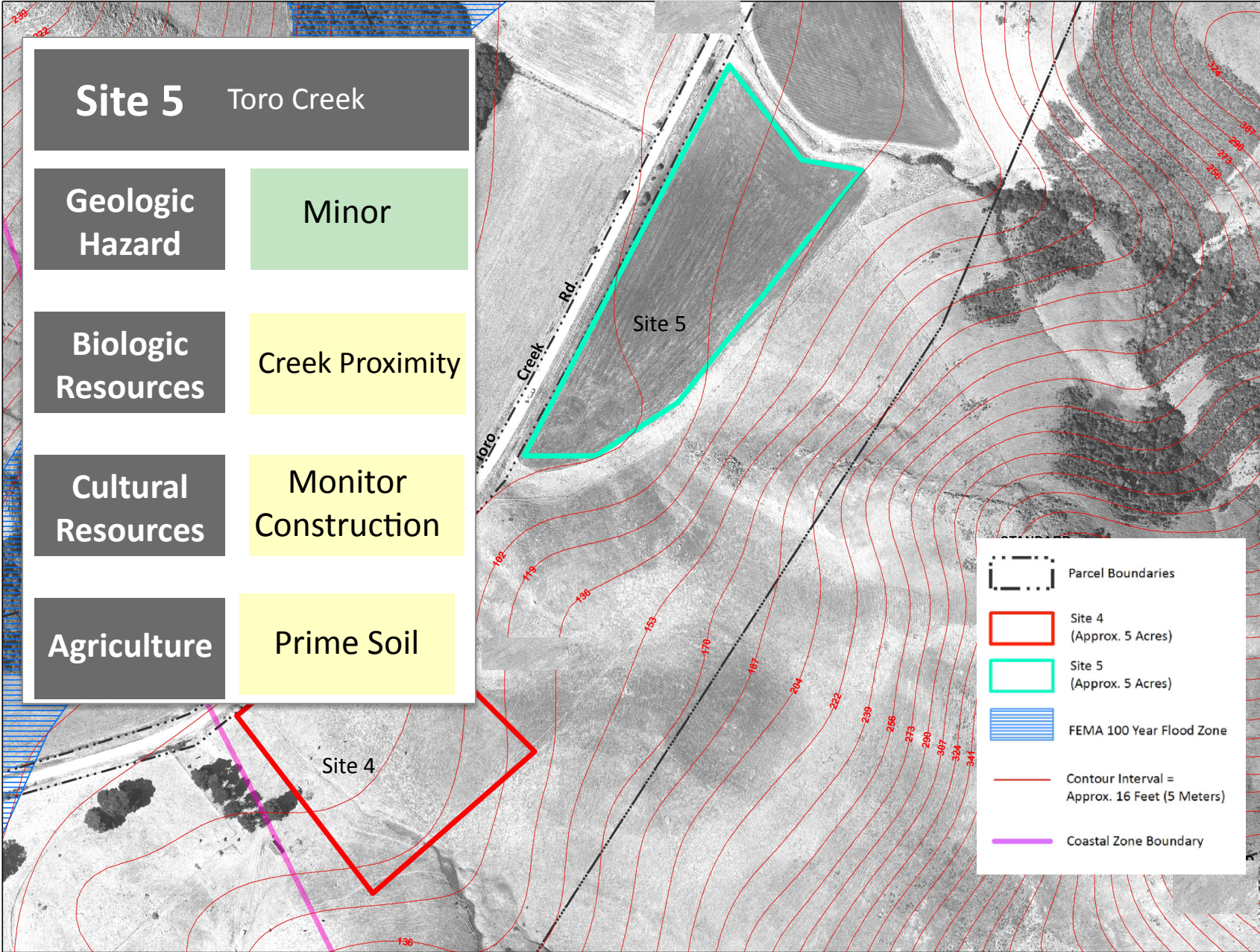
Creek Proximity,  
Access

**Cultural Resources**

Monitor  
Construction

**Agriculture**

Grazing



An aerial photograph of a coastal town and vineyard. The town is built on a hillside overlooking the ocean, with a road curving through the landscape. In the foreground, there are green fields and a large vineyard with rows of grapevines. The ocean is visible on the right side of the image.

Next meeting:

# Board of Directors Dec 17

- Beneficial use of Alternatives
- Conveyance infrastructure