



Zone 3A Annual Meeting

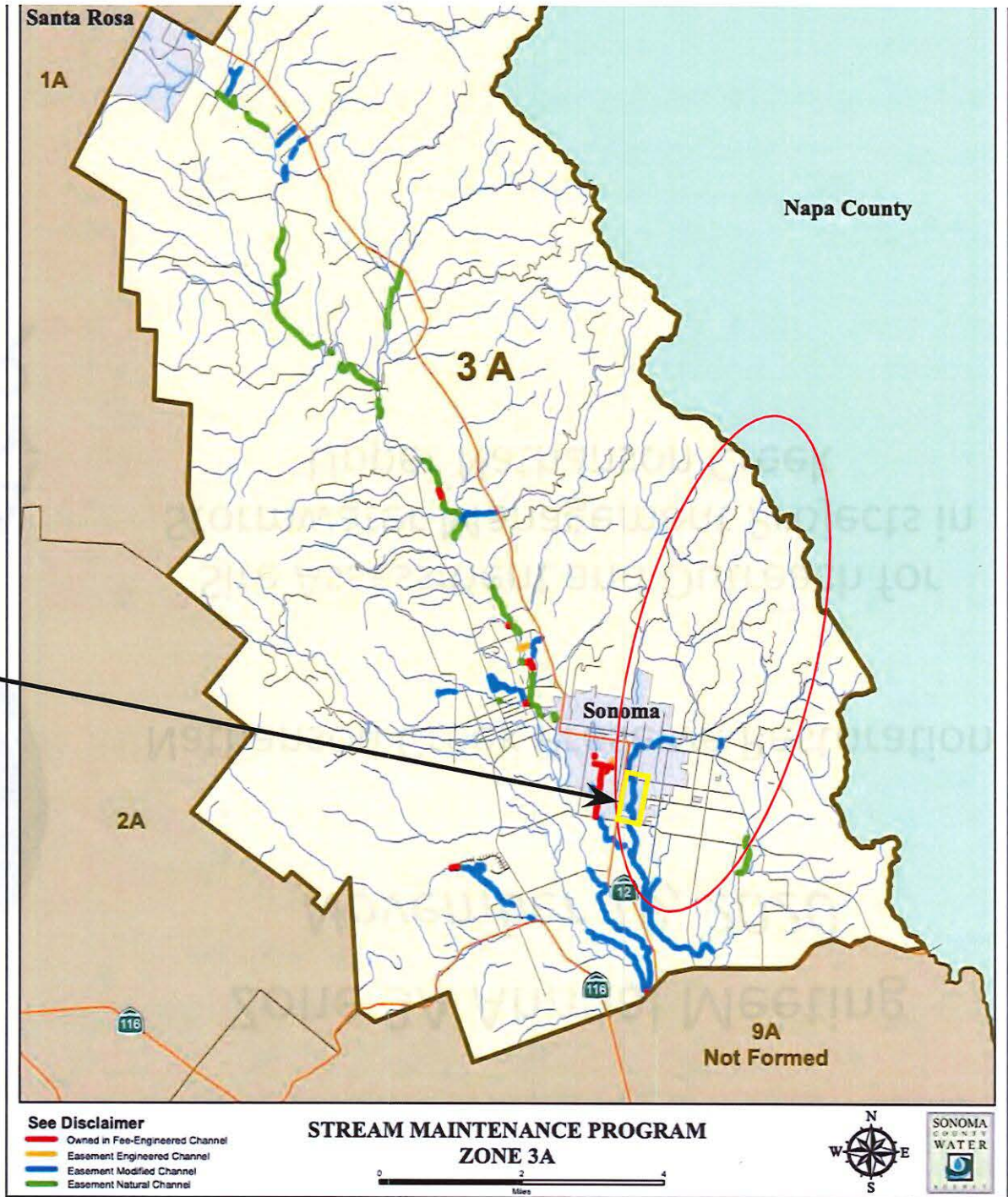
November 19, 2020

Nathanson Creek Preserve Restoration

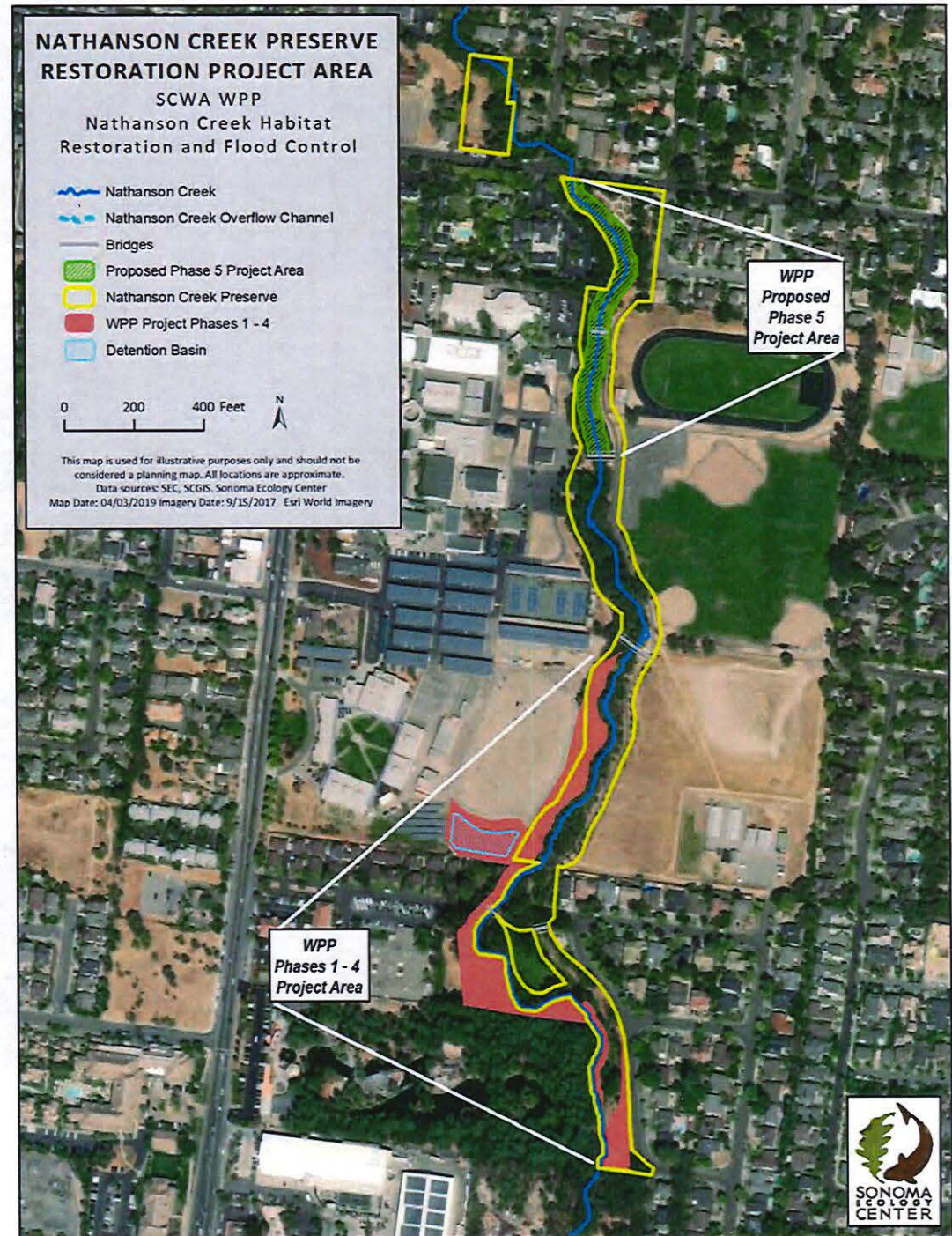
Site Assessment and Outreach for
Stormwater Management Projects in
Upper Nathanson Creek



Nathanson Creek Preserve



Watershed Partnership Program Areas





Newly Restored Areas





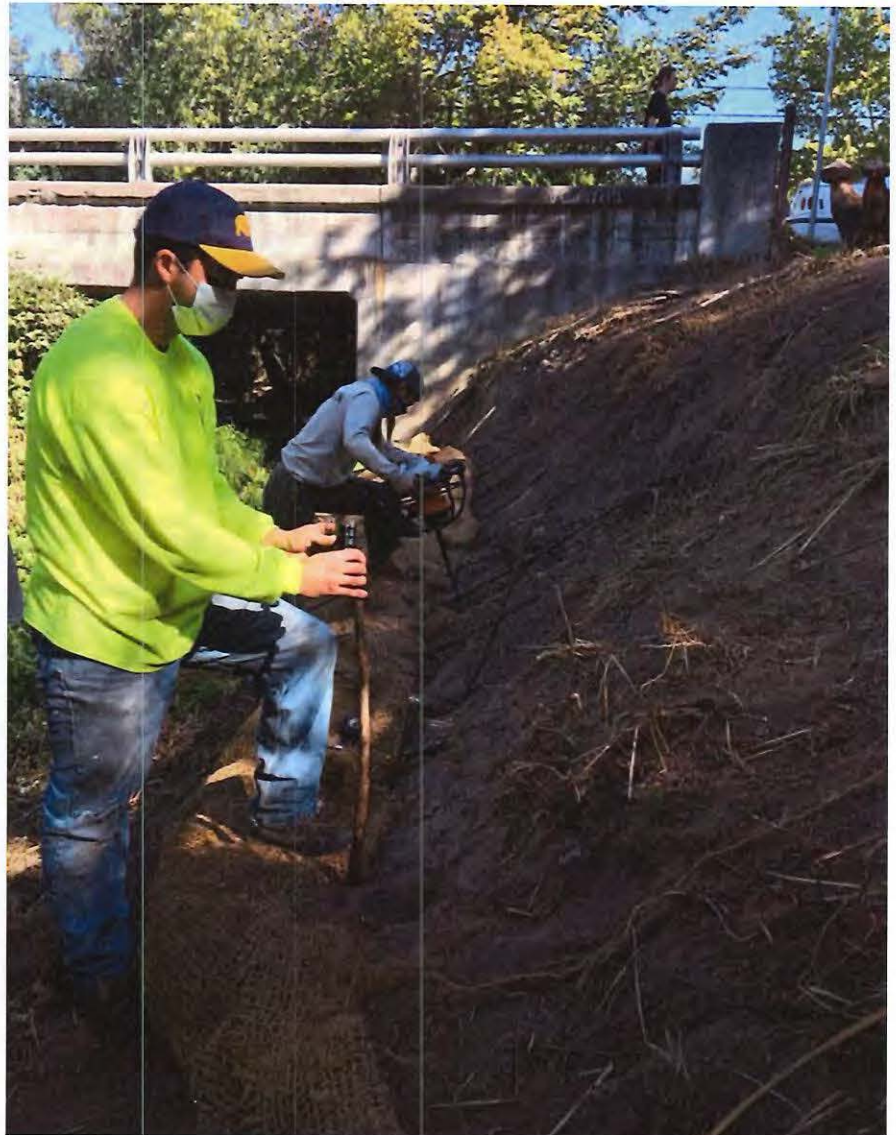
BMP Installation

Bioengineered Bank Stabilization





Soil Lift in Coco Coir





MacArthur Bridge





In Stream Debris Management



BEFORE



AFTER

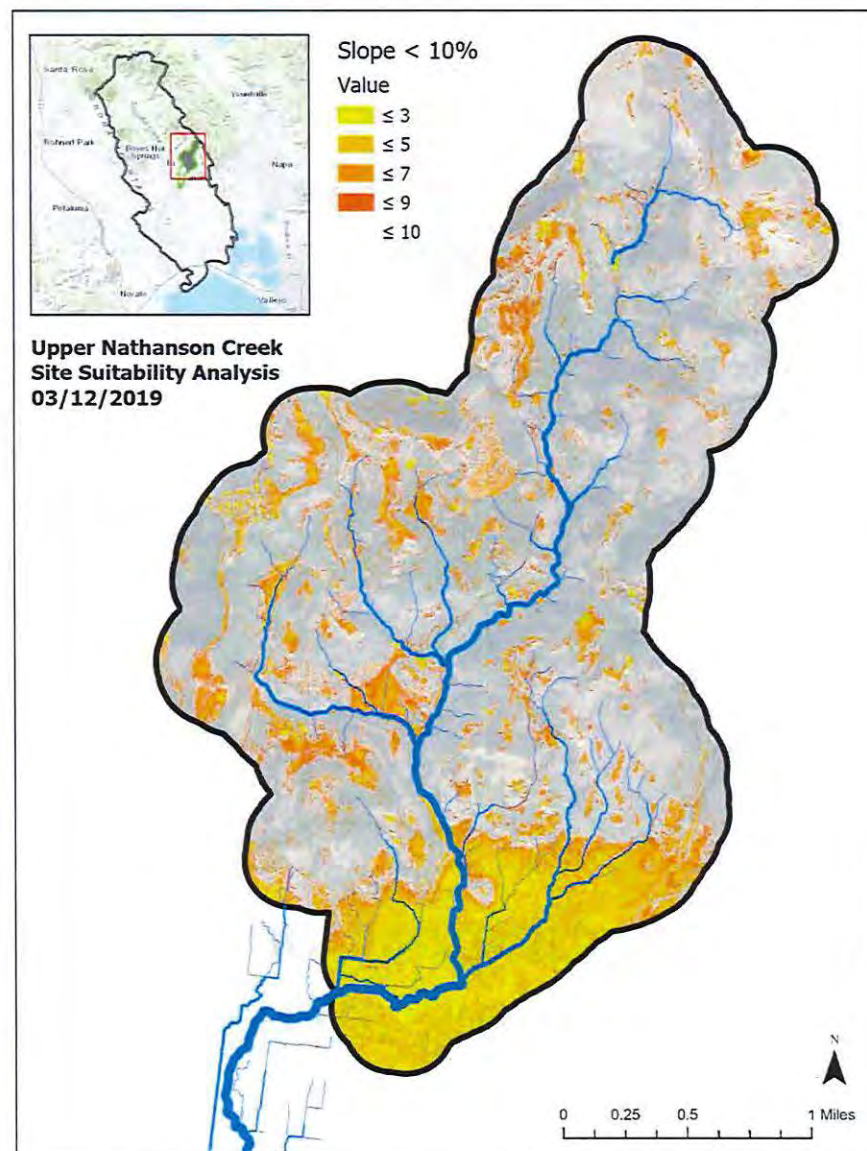


Site Assessment and Outreach for Stormwater Management Projects on Upper Nathanson Creek

Landscape Analysis

Considerations:

- Slope (topography)
- Proximity to creeks
- Exclude existing infrastructure and buildings
- Include larger vineyard parcels





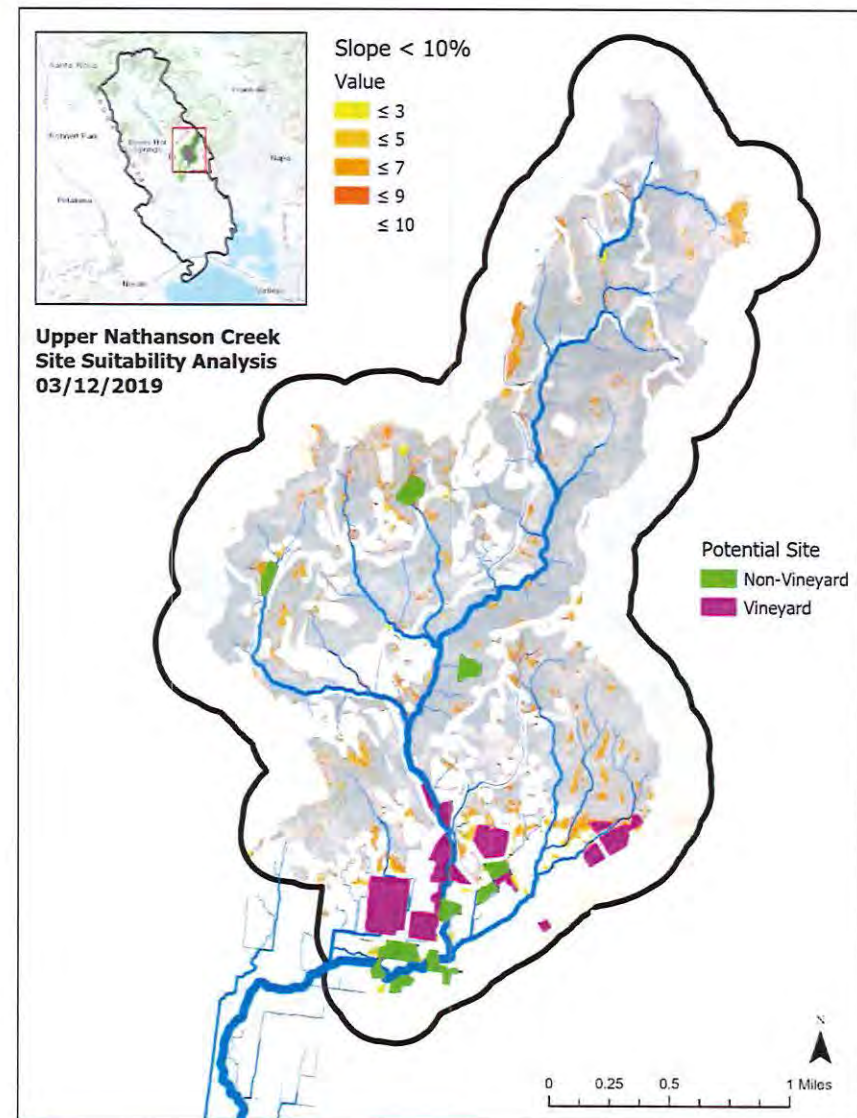
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Landscape Analysis

Considerations:

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Results: 35 acres of open space and 73 acres of vineyard, the median size was 2-acres, and the largest size was 24-acres





Site Assessment and Outreach for Stormwater Management Projects on Upper Nathanson Creek

Outreach

- Networking with SEC contacts
- Email blast, newsletter, blog post
- Chamber of Commerce and Sonoma Valley Vintners & Growers Alliance

- 1 RAIN GARDEN**
A garden planted in a shallow basin is ideal for capturing and filtering storm water from rooftops and parking areas. This one receives overflow from our rainwater catchment tank.
- 2 MULCHING**
Placing a layer of leaves or arbor mulch around vegetation and over exposed soil prevents evaporation, reduces erosion and suppresses weeds.
- 3 GRAY WATER SYSTEM**
Used water from a sink or drinking fountain is directed to a drainage system below ground to safely soak into the soil or be used to water plants.
- 4 INFILTRATION BASINS**
A simple basin filled with gravel receives storm water runoff, and allows it to soak slowly into the soil and recharge groundwater. The gravel is level for a picnic table.
- 5 ROOF WATER CATCHMENT**
A modified downspout turns any roof into a large surface area for catching storm water. These storage tanks are able to hold 750 and 1,500 gallons of water each for use during the summer.
- 6 INFILTRATION TRENCHES**
Similar to basins, these trenches are typically long, narrow and filled with gravel. Some trenches feature vegetated filter strips for filtering storm water as it soaks into the ground.

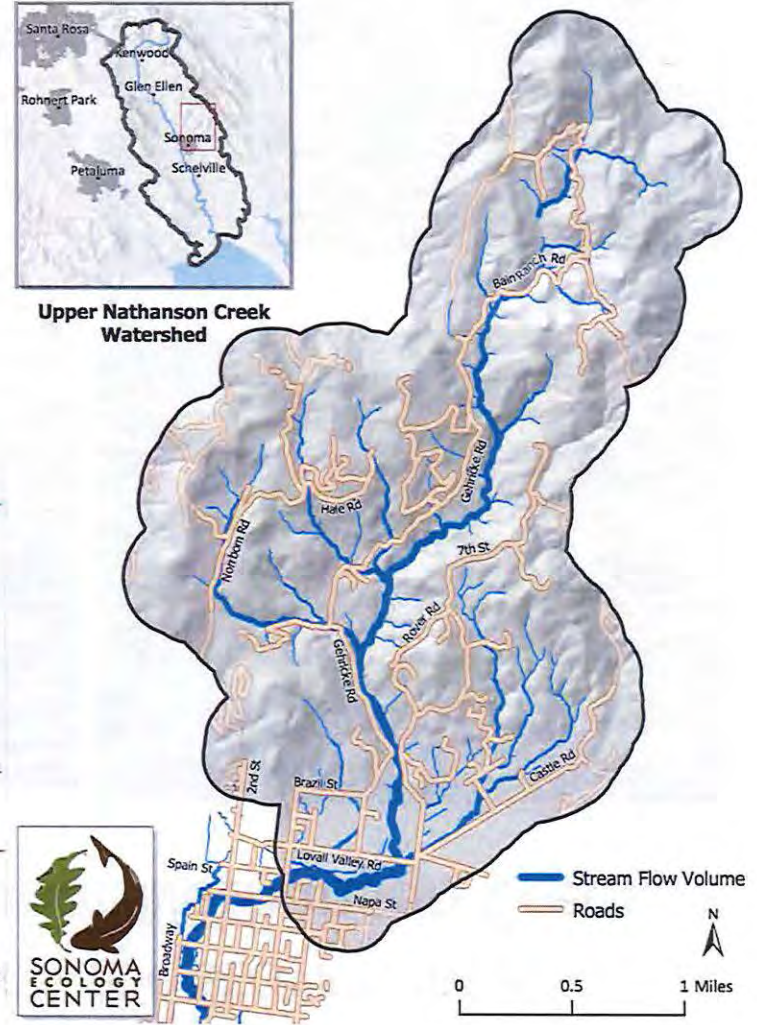


- 7 DRIP IRRIGATION**
An automated irrigation system with drip emitters provides efficient watering of plants while reducing water loss from evaporation. Irrigation can be adjusted based on a plant's type, stage of development and seasonal needs.
- 8 DROUGHT-TOLERANT NATIVE PLANTING**
Most plants that are native to this region require less water once established. Other good options for drought-tolerant planting include non-invasive Mediterranean species.
- 9 VEGETATED FILTER STRIPS**
A border of dense vegetation acts as a filter for storm water runoff from non-permeable surfaces. Ideal along roads, driveways, downspouts and parking areas.
- 10 SWALES**
These shallow depressions can be contoured to divert storm water away from structures while allowing it to soak into the ground. Most are rock lined or vegetated for filtration.
- 11 PERMEABLE PARKING LOT**
A gravel parking area with infiltration features and hollow pavers to hold the gravel in place is strong but permeable, allowing storm water to soak in and preventing polluted runoff.

Visit SonomaGardenPark.org/LID for more information and resources



Upper Nathanson Creek Watershed





Site Assessment and Outreach for Stormwater Management Projects on Upper Nathanson Creek

Stormwater Management Project Types:

- **Off-Channel Detention**
- **Instream Impoundments Management** - forecast informed pond management
- **Vineyard Inundation**
- **Roadside Ditch Networks**

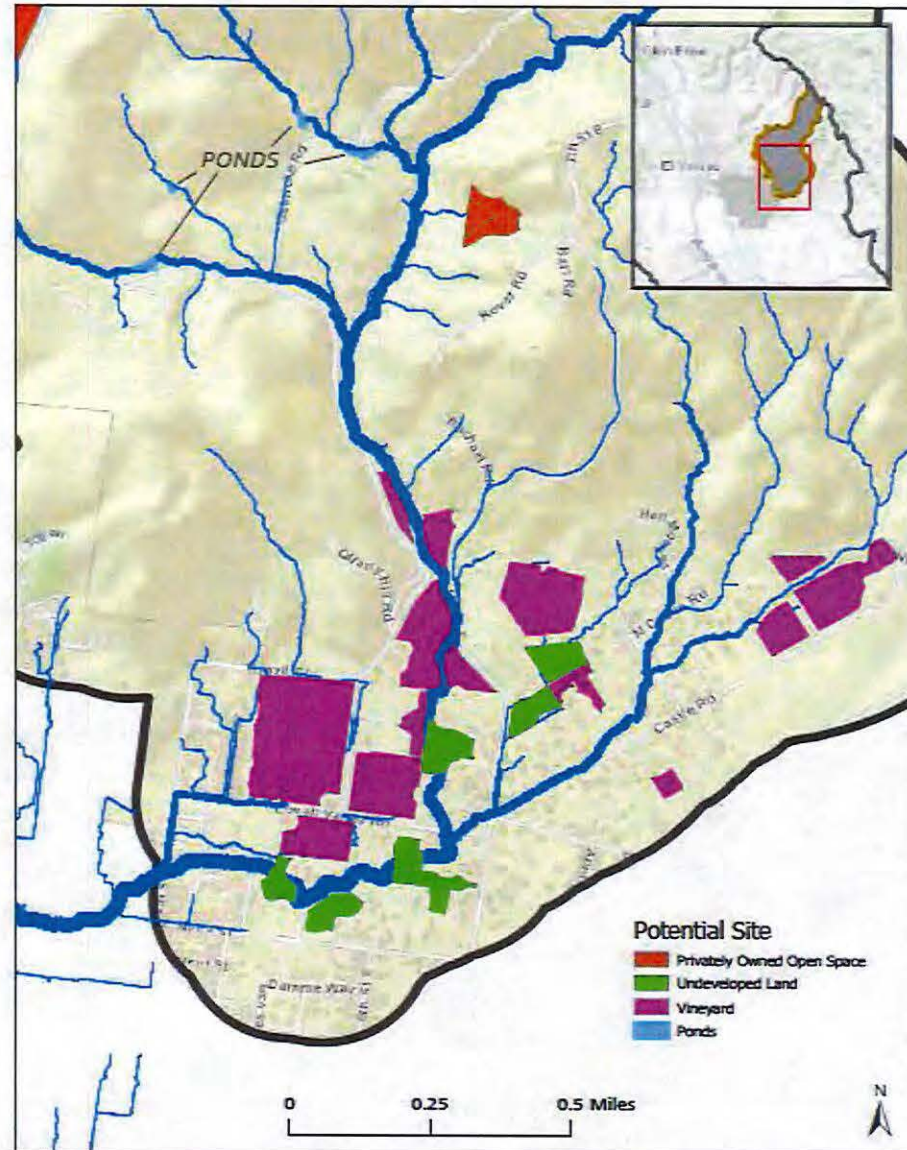




Site Assessment and Outreach for Stormwater Management Projects on Upper Nathanson Creek

Next Steps

- Engineering feasibility study for identified stormwater project locations
- Planning projects where landowners interest and feasibility are in alignment
- Continued landowner outreach and project development



Comments? Questions?

