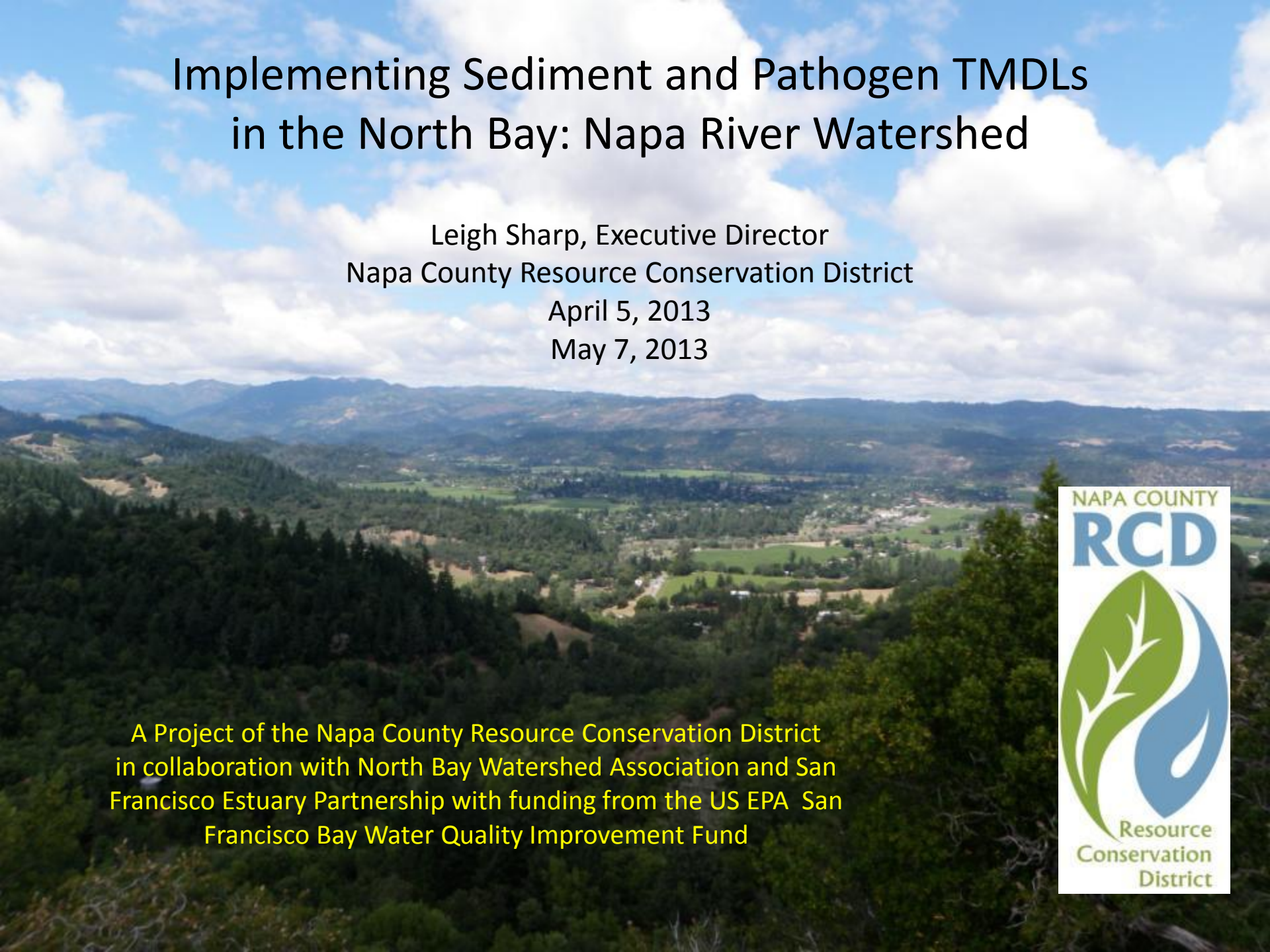
Implementing Sediment and Pathogen TMDLs in the North Bay: Napa River Watershed

Leigh Sharp, Executive Director
Napa County Resource Conservation District
April 5, 2013
May 7, 2013

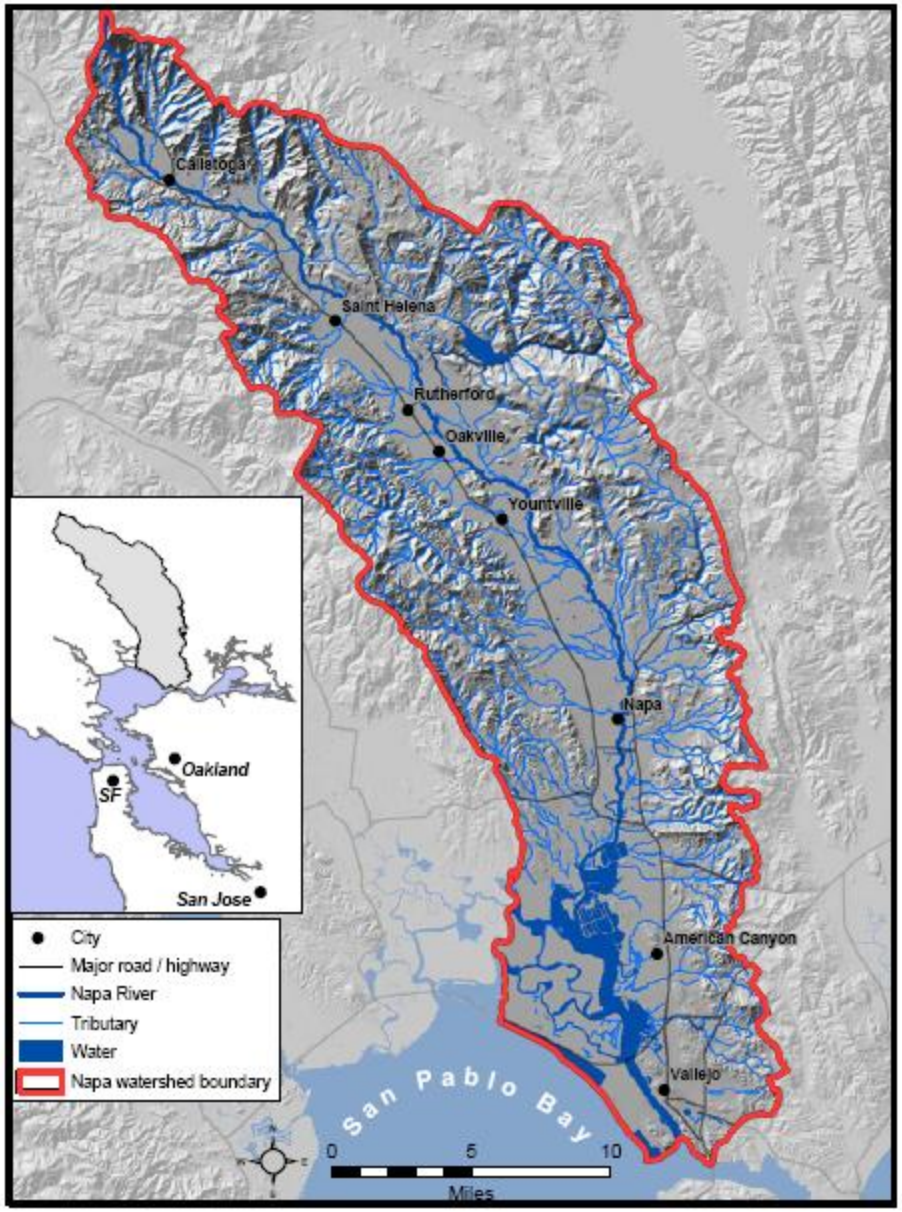


A Project of the Napa County Resource Conservation District in collaboration with North Bay Watershed Association and San Francisco Estuary Partnership with funding from the US EPA San Francisco Bay Water Quality Improvement Fund

NAPA COUNTY RCD Resource Conservation District

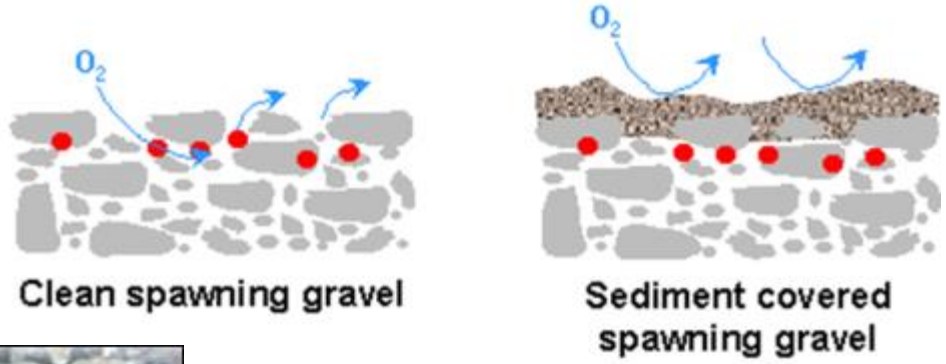
Napa River TMDL Information

- Listed for sediment, nutrients, pathogens
- TMDLs adopted for sediment and pathogens
- Sources of sediment
  - Channel incision & bank erosion, roads, gullies, and sheet erosion
  - associated with vineyards, grazing, rural lands, parks and open space, and public works
- Sources of pathogens
  - On-site sewage disposal systems, sanitary sewer systems, municipal runoff, grazing lands, confined animal facilities

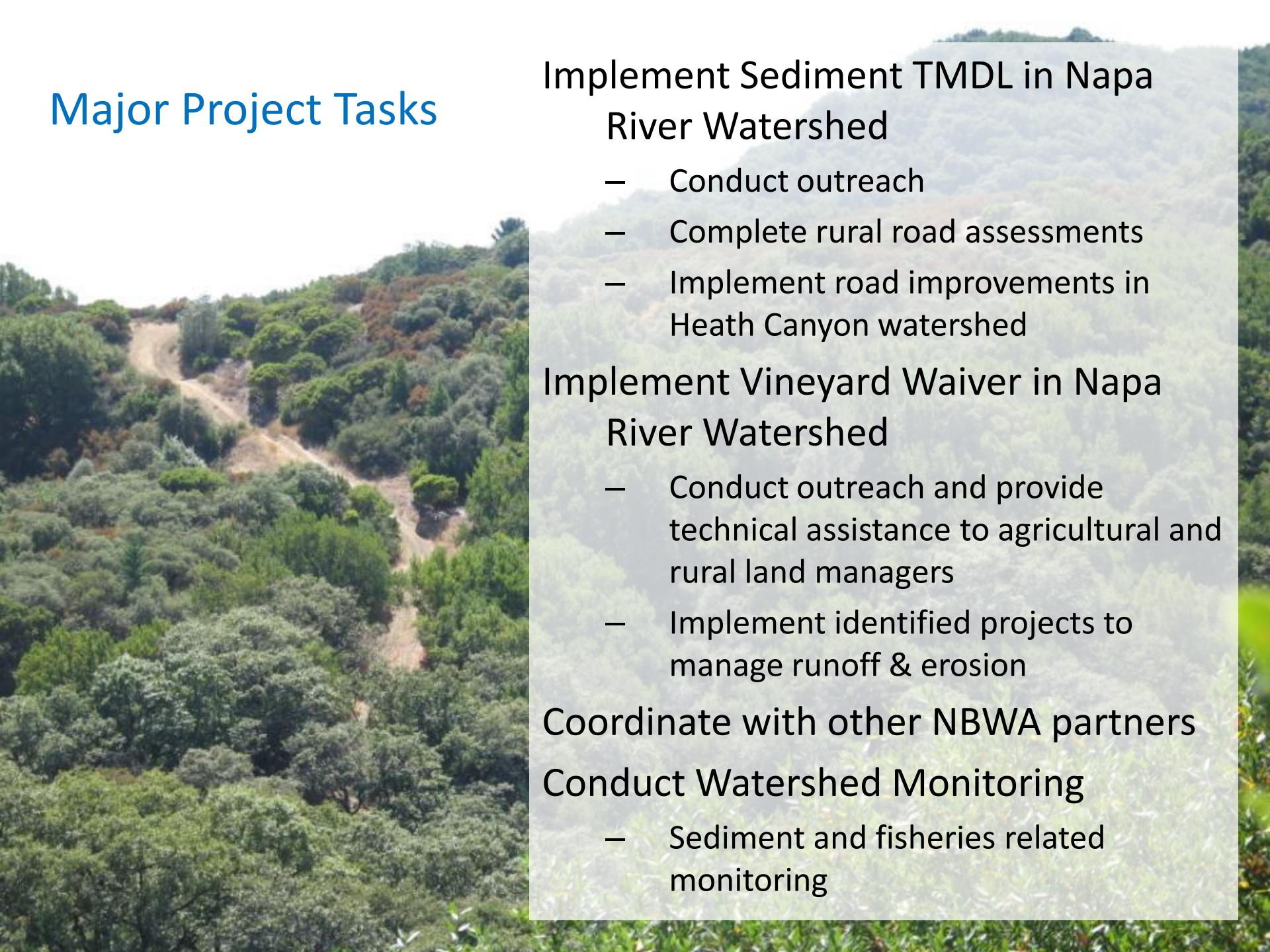


Excess sedimentation impairs aquatic habitat

- Suffocates fish eggs in spawning beds
- Loss of aquatic habitat



Major Project Tasks



- Implement Sediment TMDL in Napa River Watershed
  - Conduct outreach
  - Complete rural road assessments
  - Implement road improvements in Heath Canyon watershed
- Implement Vineyard Waiver in Napa River Watershed
  - Conduct outreach and provide technical assistance to agricultural and rural land managers
  - Implement identified projects to manage runoff & erosion
- Coordinate with other NBWA partners
- Conduct Watershed Monitoring
  - Sediment and fisheries related monitoring

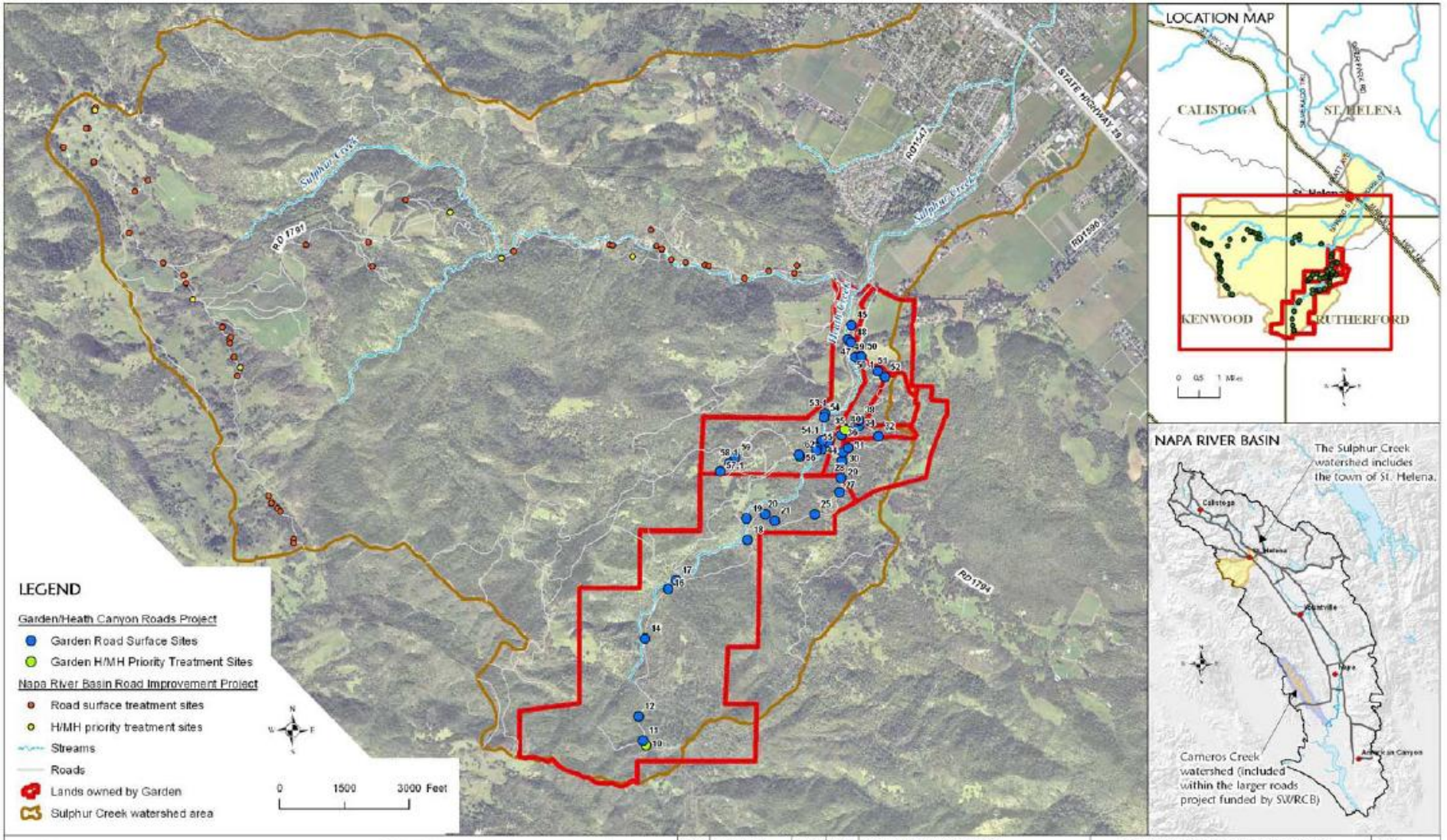
Implement Sediment TMDL

Road Improvements

- *storm proofed 4.71 miles of dirt road*
  - *rolling dips, critical dips, road shaping*
- *47 critical erosion sites treated*
  - 35 crossings, 9 relief culverts, 3 surface discharge points
- *6,045 yrd^3 prevented from being delivered to stream*

Stream Improvements

- *removed fish barrier (633 linear ft. of habitat)*
- *removed 5 yrd^3 of fine sediment*



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This project is funded in part from a grant from State Water Resources Control Board.
The Plan was developed from a roads assessment completed by Pacific Watershed Associates for the Napa County RCD in 2002.

DESIGN:	Napa County RCD	REVISION	DATE
DRAWN:	LH		
SCALE:	As shown		
DATE:	5/23/07		
FILE:	DFG_Heath_roads.mxd		

Primary Landowner Information:
David Garden, 2727 Sulphur Springs Ave., St. Helena
Multiple property owners are involved in a larger project "Roads Improvement in the Napa River Basin - Sulphur and Carneros Creek Watersheds" for which this FRGP is a subset.

GARDEN/HEATH CANYON SULPHUR CREEK WATERSHED ROADS PROJECT PROPOSED TREATMENT SITES

Sheet No. 1 of 1 Sheets

Road Improvements 2011

Culvert replacement with trash rack

Armored fill crossing

Road Shaping

Road runoff from both roads delivering to a gully and a stream

Road runoff from side road treated separately, runoff dispersed via rolling dips (away from gully and stream)

Stream Improvement
2012

Two weirs acting as fish passage barrier, altering natural movement of sediment, potentially influencing localized flooding

Weirs removed, ~ 633 linear feet of habitat made available, ~ 5 yrd^3 of fine sediment removed

Implement Sediment TMDL

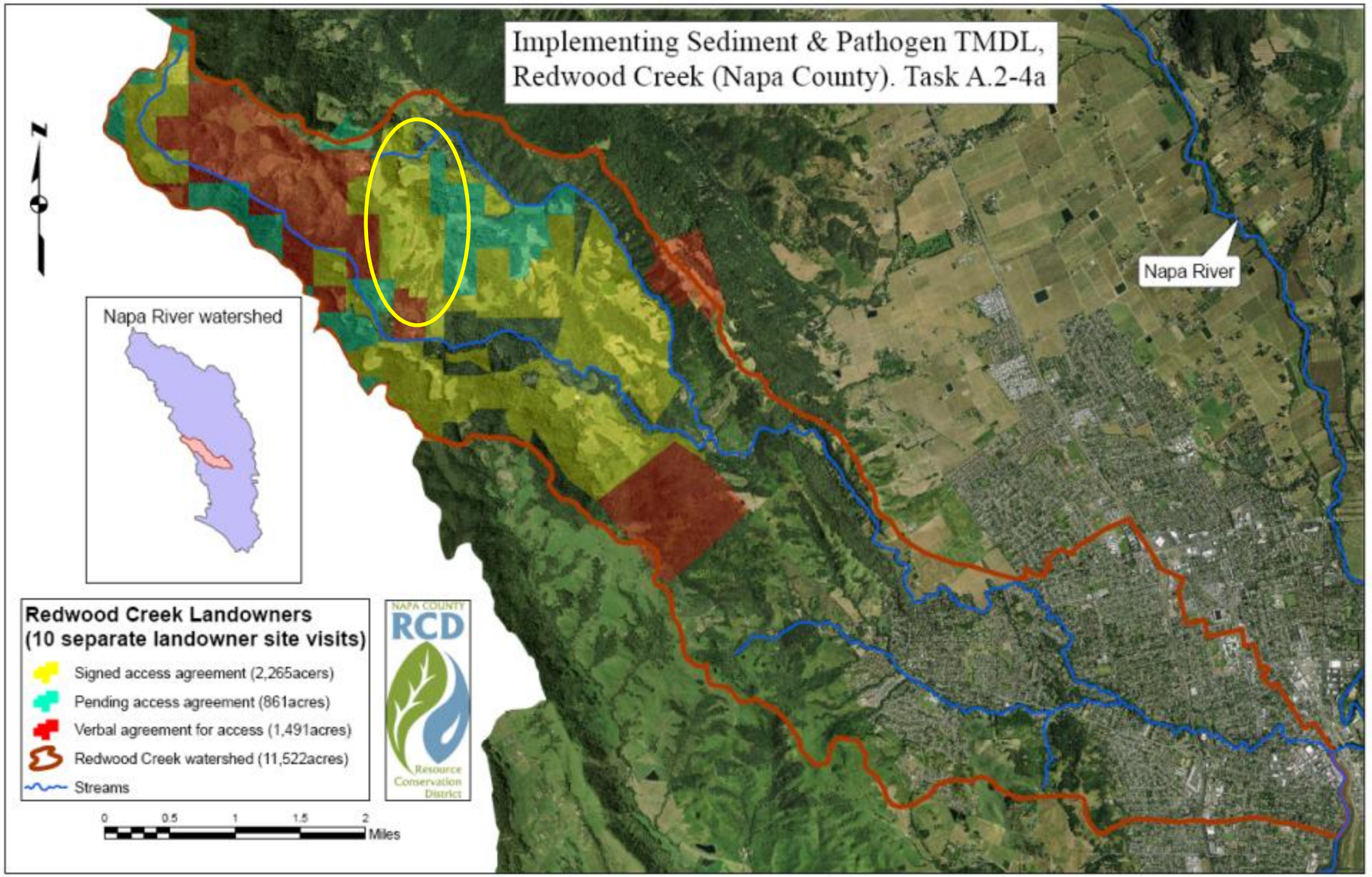
Outreach & Education

- *Two presentations to Napa Engineers Group*
- *Presentation to Napa Sustainable Winegrowing Group*
- *Outreach to landowners in Redwood Creek Watershed to provide technical assistance*
  - *landowner access to assess 75 miles of dirt road*

Road Assessments

- *10.8 miles assessed and treatments recommended*
  - *total future erosion volume of 8,575 yd^3*
  - *rolling dips, waterbars, culvert replacement*
- *Additional assessments to be conducted*

Landowner Outreach



Implement Vineyard Waiver

Outreach & Technical Assistance for Farm Plans

- *Vineyard Waiver withdrawn*
- *General Order?*
- *Vineyard Facilities required to comply with BPA by 10/14*
  - *General Order (if one is adopted) OR*
  - *Individual Report of Waste Discharge*
- *RCDs working together and moving forward with Vineyard Planning Program*

Reduce storm water runoff

- *Obligation to implement 3 practices*
- *Non-vineyard sites identified*

? ?

Coordinate with Partners

NBWA

- *Presentations to Board*
- *Presentations to Watershed Council*
- *Floodplain/Habitat Committee – Indicators Report*

WICC of Napa County

- *Presentations*

Southern Sonoma RCD

- *Farm planning program*

LandSmart
Productive lands. Thriving streams.

Watershed Monitoring

- *Monitoring Plan & QAPP approved*
  - *Streambed Scour*
  - *Gravel Permeability*
- *Monitoring initiated in 2012*

Monitoring the TMDL Targets

- 20 monitoring reaches
  - 12 tributary reaches (perm only)
  - 8 main stem reaches (perm & scour)
    - 10 scour sites per reach
- 5 monitoring sites per reach
  - 60 tributary sites
  - 40 main stem sites
- 4 constructed redds per site
  - 240 constructed redds in tributaries
  - 160 constructed redds in main stem
- 5 monitoring points per redd
  - 2,000 monitoring points
  - 5 repeat points taken at each

Next Steps…..

- Continue to monitor the road work we've completed
- Conduct more road assessments
- Continue to provide education workshops or develop educational materials
- Conduct Farm Plan Workshops & Provide Technical Assistance
- Implement 3 storm water runoff management practices
- Analyze monitoring data and perform more monitoring
- Continue to collaborate with partners and provide updates


Thank you NBWA, MMWD
and SFEP
for overall project and
herd management!!