



Napa County Groundwater Conditions & Monitoring Recommendations

2011 LSCE Report Recommendations

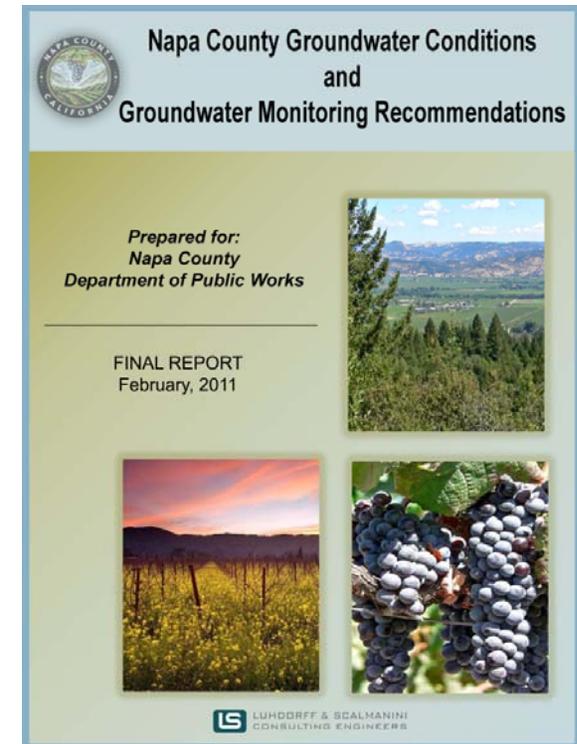
Phillip Miller, P.E.
Deputy Director Public Works

April 26, 2012

Groundwater Conditions & Monitoring Recommendations

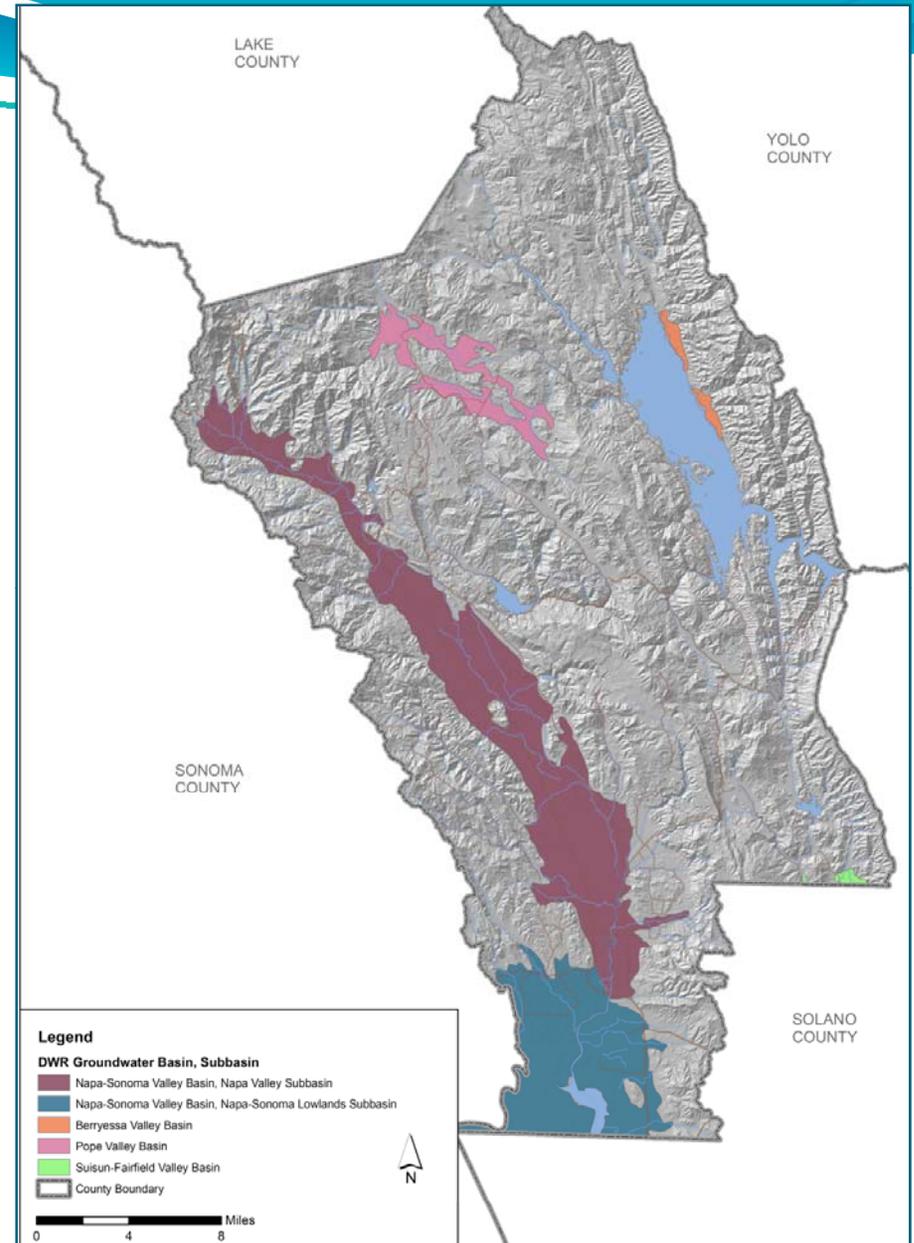
2011 LSCE Report

- **Performed Reconnaissance Level Evaluation**
 - **Compiled Readily Available Data**
- **Evaluated Countywide GW Conditions**
- **Report Findings:**
 - **What We Know, What We Don't Know, and What We Need to Know**
- **Provided Recommendations Related to GW Monitoring Program**
- **Other Recommendations.....**



Groundwater Basins & Subbasins

- Napa-Sonoma Valley Basin
 - Napa Valley Subbasin
 - Napa-Sonoma Lowlands Subbasin
- Berryessa Valley Basin
- Pope Valley Basin
- Suisun-Fairfield Valley Basin





Key Findings of LSCE Study: Groundwater Level Conditions

Napa Valley Floor (Except for MST Subarea)

- **Generally Stable Long Term Trends**
 - St. Helena, Yountville, and Napa areas
- **Shallow Depth to Groundwater**
 - 10 to 30 feet Below Ground Surface

MST Area

- **Pumping depressions common and worsening in some areas**
- **Importance of correlating levels with portion of aquifer system**

Elsewhere – generally insufficient data

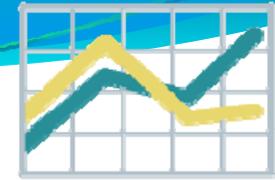
Key Findings of LSCE Study:

Groundwater Quality Conditions

- **Generally Good GW Quality**
- **Selected Areas of Elevated Constituents**
- **Calistoga Area of the Napa Valley Floor**
 - Geothermal Influences
- **Southern Napa County**
 - Elevated TDS and Chloride
- **Napa Valley Floor**
 - Scattered Nitrate



Key Findings of LSCE Study:



Historic Record & Data Quality

- **Long Historic Record in many areas of the Valley**
 - **Historical GW Monitoring Sites (pre-2005) Exceeds Current Sites (2005 to Present) by 50%**
 - **GW Quality Data More Spatially Distributed than Level Data**
 - **GW Level Data Primarily Collected from NVF Subareas**
- **Data Quality issues related to:**
 - **Well log/construction data**
 - **Pumping influence on gw level data**
 - **Anomalous gw quality data**
 - **Changes in wellhead reference elevations**
 - **Well location coordinates**



Key Findings of LSCE Study:

Recommendations

- **Countywide GW Level Network Priorities**
 - **High priority subareas and monitoring needs**
 - NVF-Calistoga/MST/Napa/St. Helena/Yountville, Carneros, and Pope Valley
 - Improved spatial distribution; subsurface geologic conditions for aquifer ID; improve understanding of SW/GW relationships
- **Countywide GW Quality Network Priorities**
 - **High priority subareas and monitoring needs**
 - NVF-MST, Carneros, Jameson, Pope Valley
 - **Aquifer-specific data**



Key Findings of LSCE Study:

Recommendations

- **Updated Conceptualization & Characterization of Hydrogeologic Conditions in Napa County**
LSCE Work Underway 2012
 - **Updated hydrogeologic conceptualization and characterization for priority areas**
 - **ID supplemental GW monitoring wells for high priority areas**
 - **Refine and further characterize areas with greatest recharge potential**



Key Findings of LSCE Study:

Recommendations

Update the Plan for On-going Countywide Groundwater Monitoring

- **Implement 2011 GW Study Recommendations**
- **CASGEM Program – Implemented in 2011**
- **Groundwater Resources Advisory Committee(GRAC)**
 - **Provides countywide knowledge to help define objectives for GW Monitoring Plan Update**
 - **Input on high priority subareas and/or issues of concern**
 - **Assist with public outreach/education and volunteer participation in the ongoing GW monitoring program**
- **Next Steps.....**



Discussion & Questions