

Sonoma Valley Basin Advisory Panel

Groundwater Management and Land Use Planning



Sonoma County
Permit and Resource Management Department

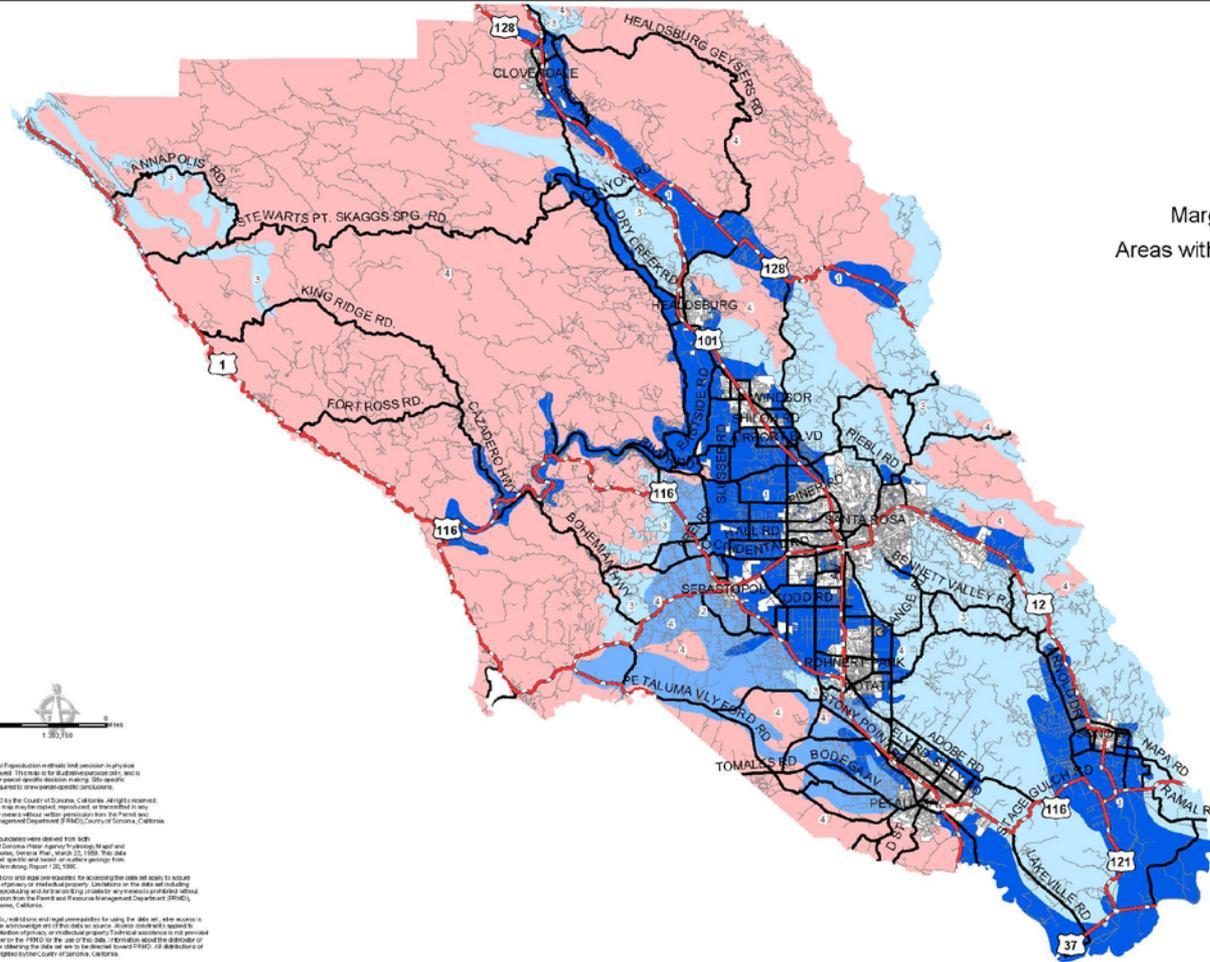
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Today's Presentation

- Groundwater Maps for Planning
- General Plan policies
- Well Ordinance
- Ministerial approvals
- Groundwater studies for discretionary permits

Sonoma County

Groundwater Availability



Legend

Groundwater Availability Classifications

- Major groundwater basin (Zone 1)
- Major natural recharge area (Zone 2)
- Marginal groundwater availability area (Zone 3)
- Areas with low or highly variable water yield (Zone 4)

Base Map Data

- City Boundaries
- Major Roads
- Highways
- Streets

Map Scale: Best Representation is that of the physical medium displayed. This is not to be used for any other purpose, and is not suitable for any other specific location marking. Site specific details are required for any other purpose.

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The original boundaries were derived from 1988.

The County of Sonoma Water Agency, Healdsburg, Marin and County of Sonoma, General Plan, March 23, 1989. The data was updated as of January 1, 2003. Other sources from 1988 to 1998.

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Groundwater Availability Map

- Based on geology (rock type and distribution)
- Produced in 2003 based on hydrology maps in the 1989 General Plan
- The original data is from California Geologic Survey Special Report 120 (*Geology for Planning in Sonoma County, 1980*)
- Data is not parcel specific

Groundwater Classification	Definition	General Location
Zone 1	Major groundwater basin	Alluvial valleys (young, poorly consolidated sediments) including the Santa Rosa Plain, Sonoma, Petaluma, Alexander, and Russian River valleys
Zone 2	Major natural recharge area	Foothill areas west of Sebastopol & Petaluma and in Valley Ford (sedimentary rocks)
Zone 3	Marginal groundwater availability	Upland areas adjacent to Zone 1 areas in porous rock types (volcanic rocks in the Sonoma mountains and Mayacamas)
Zone 4	Areas with low or highly variable water yield	Upland areas that include most of the northern portion of the County. Groundwater in these areas occurs in fractured bedrock (mostly Franciscan Assemblage), not in pore space - is considered "secondary porosity"

General Plan

Water Resource Element

GOAL WR-2: Manage groundwater as a valuable and limited shared resource

- Numerous **Objectives** to conserve groundwater, collect data, encourage recharge, and avoid land subsidence
- Key **Policies:** WR-2c, WR-2d, WR-2e, WR-1u
- Key **Implementation Programs** Water Resource Programs 6, 7, and 10

Policy WR-2c

- Work with well drillers and other parties familiar with groundwater conditions in Sonoma County to develop well permit standards in order to:
 - Improve data on locations, depth, yields, GW quality, water storage
 - Establish Standards to reduce the potential for well interference and drawdown
 - Ensure sufficient groundwater quality and quantity for existing and proposed using, particularly for higher capacity wells
 - In areas where a groundwater management plan has been approved require the issuance of well permits and any limitations imposed on well permits to be consistent with the adopted plan

Policy WR-2d

- Continue the existing program to require groundwater monitoring for new or expanded discretionary commercial and industrial uses using wells. Where justified by the monitoring program, establish additional monitoring requirements for other new wells.
 - Only applies to use permits approved after 2004
 - Does not apply to agricultural uses but does apply to agricultural processing
 - About 50 to 60 wells currently being monitored
 - Only about a dozen in Sonoma Valley

Policy WR-2e

- Require proof of groundwater with sufficient yield and quality to support proposed uses in Class 3 and 4
- Require test wells of the establishment of community water systems in Class 4 water areas
- Test wells may be required in Class 3 areas
- **Deny discretionary applications in Class 3 and 4 areas unless a hydrogeologic report establishes that groundwater quality and quantity are adequate** and will not be adversely impacted by the cumulative amount of development and uses allowed in the area, so that the proposed used will not cause or exacerbate an overdraft condition in a groundwater basin or subbasin

WR-2e Hydrogeology Report

- Includes review of existing regional & site specific data, including well logs & water levels
- Usually includes a pump test
- Water Balance to show amount of recharge, amount of water use, and impacts of the project on:
 - Draw down
 - Well interference
 - Effects on surface water (base flow)
 - Saline intrusion

Policy WR-2e Applicability

- Applies only to discretionary action (not ministerial)
- Only applies where the project is in Class 3 and Class 4 areas
- Only applies where not served by a water district
- Does not apply if the groundwater source is from a Class 1 or Class 2 parcel

Policy WR-1u



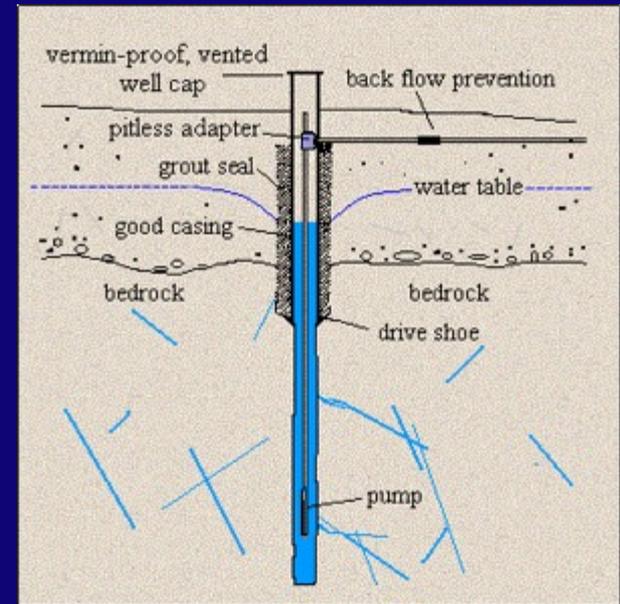
- In the marshlands and agricultural areas south of Sonoma and Petaluma, require all environmental assessments and discretionary approvals to analyze and, where practicable, avoid any increase in saltwater intrusion into groundwater.

General Plan Implementation

Program No.	Program	Status
WR-Program 6	Well Permits and Procedures	A Draft Ordinance is being developed by the well ordinance working group and public hearings are expected to occur in 2014.
WR-Program 7	Groundwater Monitoring, Annual Report, Area Studies and Evaluation	PRMD continues to require annual groundwater monitoring on discretionary permits and has developed a database in coordination with the SCWA. The dataset is insufficient to analyze any trends yet. Staffing resources are too limited to undertake the full program at this time.
WR-Program 10	Watershed planning	Adoption of the Sonoma Valley Groundwater Management Plan. Development of the Santa Rosa Plain groundwater model (USGS/SCWA) and work on groundwater Management Plan.

Well Ordinance

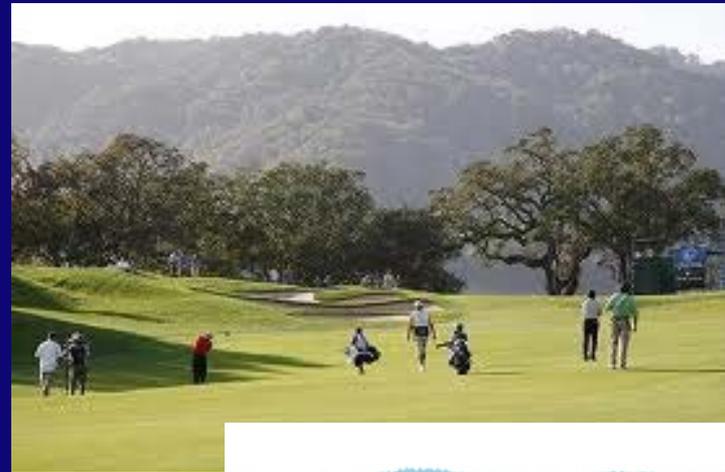
- Chapter 25 of County Code
- Specifies methods for well installation
- Well permits are ministerial
- May require setbacks from other features or uses
- Includes groundwater quality testing, typically for arsenic, nitrates, & bacteria



Major Water Users

In unincorporated County not served by urban water supply

- Agricultural irrigation
- Rural Residential
- Golf Courses
- Dairies & agricultural processing
- Wineries



Groundwater Review for Ministerial Activities

- No County review of groundwater use
- Ministerial projects include building permits, grading permits, etc.
- Other activities not covered are:
 - Use of existing well for an existing use
 - “Allowed uses” under zoning
 - Agricultural crop changes

Groundwater Review for Discretionary Projects

- Applies to Use Permits, Subdivisions, Design Review, etc.
- These projects are also subject to the California Environmental Quality Act (CEQA)
- Must show adequate water quality
- Must show adequate water quantity for proposed use and the environment

Next Steps for PRMD

- Continue work on Well Ordinance update
- Continued groundwater monitoring efforts
- Collaborate with SCWA and others through the groundwater management planning process
- Consider appropriate changes to policy and procedure, consistent with the General Plan and Board direction
- Consider updating or supplementing the Groundwater Availability Map

Questions?



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