WELL ORDINANCE
POLICY WORKING GROUP MEETING

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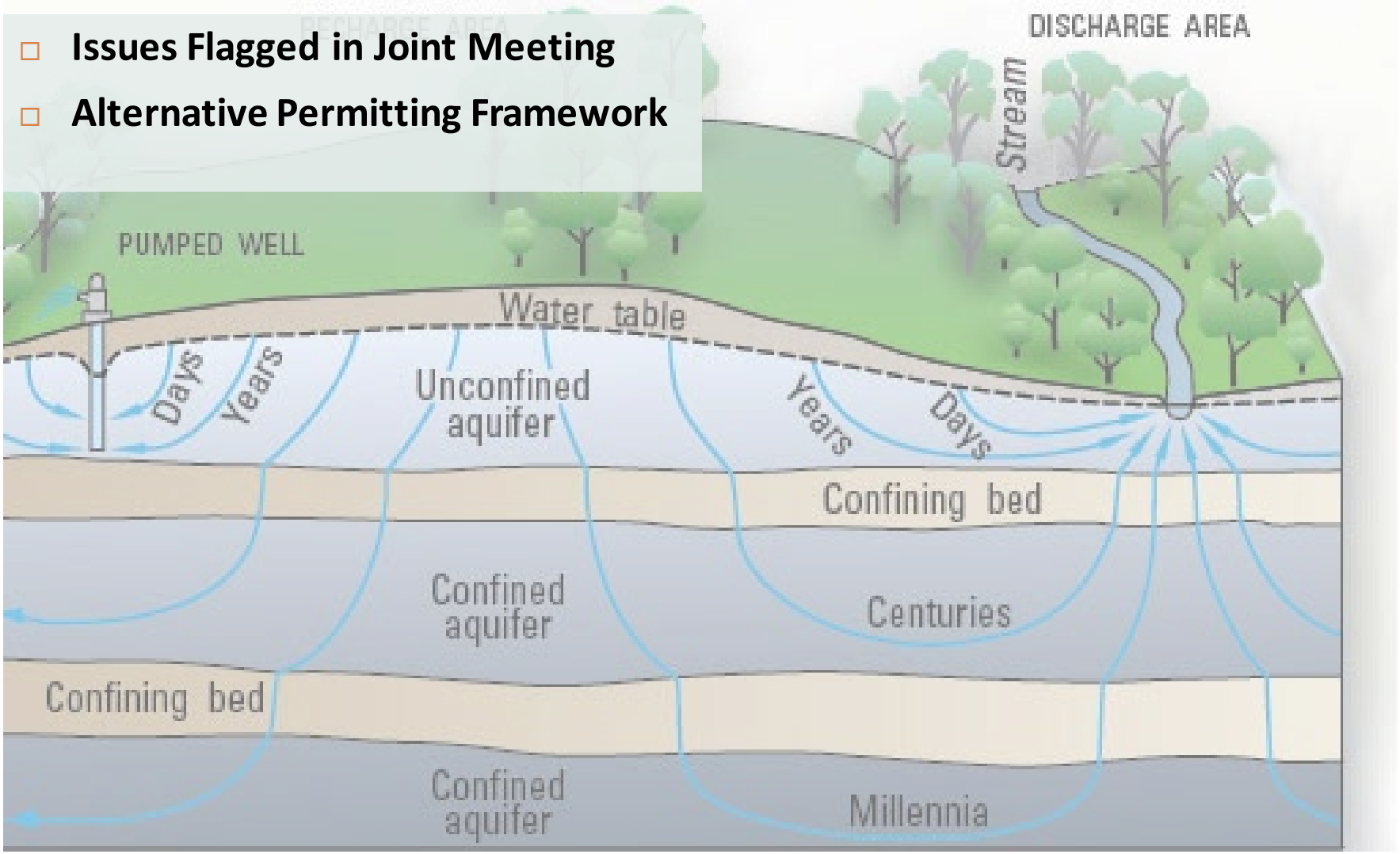
Today's Presentation Topics

- **Issues Flagged in Joint Meeting**
- **Alternative Permitting Framework**



Issues flagged at Joint Meeting

Additional Level 2 requirements triggered by drought conditions

- (could be based on current year type index for Russian River).
- The process would remain ministerial, but require additional actions when habitat/flows most at risk

Zero Net Use / Increase

- Further clarification and quantification
- GW recharge + GW Management Project
- Regenerative ag (included or separate)

Public Trust Review Area Refinement and Options

- Refined buffers
- Perennial streams
- Critical Watershed area
- “Fish Informed” - Alternative - PTRA

Zero Net Increase

Zero Net Increase Well, inside Public Trust Review Area

Water well, for any land use, where the proposed use would not result in a net increase in groundwater use from the local aquifer through implementation of water conservation measures, rainwater catchment or recycled water reuse system, water recharge project, ***farming practices that increase infiltration and soil moisture capacity****, local groundwater management project, or participation in a streamflow augmentation project authorized by the California Department of Fish and Wildlife or National Marine Fisheries Service.*

GW Recharge, and farming practices that increase infiltration…

- **not be accepted through ministerial review** until objective standards and procedures are adopted

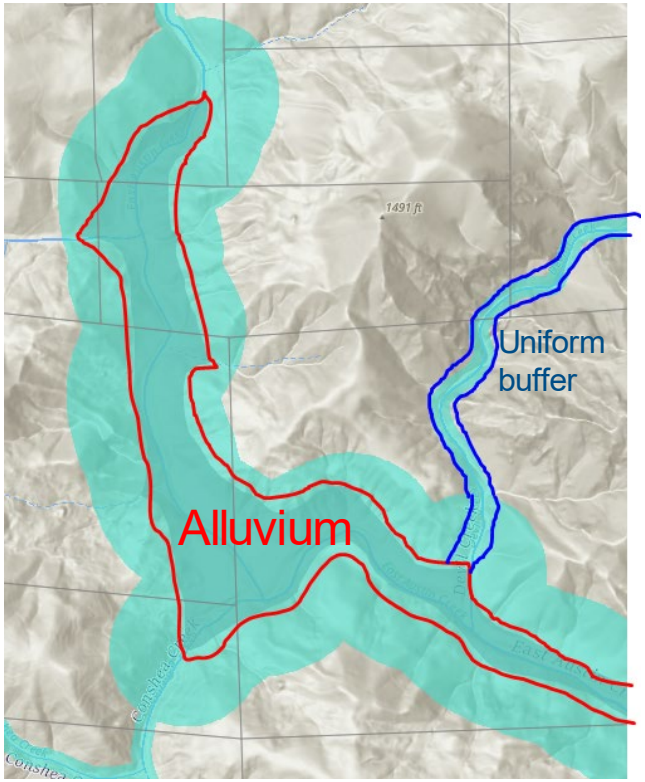
Public Trust Review Area (PTRA) Refinements and Options

Refined buffer:

- Buffers clipped to alluvium and sedimentary rocks (Stetson, 2008)
  - Alluvium and Sed. Rocks within 750 ft.
  - 100 or 250 ft uniform buffer in volcanic or basement rocks

Perennial Streams:

- NMFS steelhead streams plus contributing **perennial** tributaries (NHD)
- Prior version used USGS streams layer



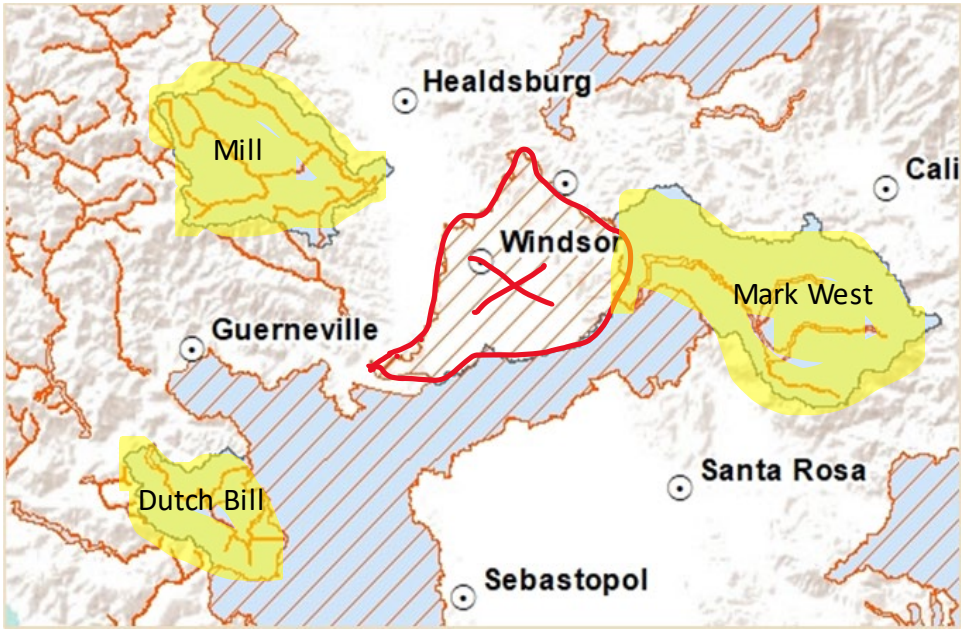
Alternative "Fish Informed" PTRA

Expands to full sub-watersheds for **"critical watersheds":**

- Mill, Mark West, and Dutch Bill Creeks

Removes Windsor Creek sub-watershed

- Low priority steelhead stream
- No existing Coho or Steelhead rearing identified by Sonoma Water



Working PTRA = 277 square miles (16% of County)

Fish Informed = 315 square miles (18% of County)

Alternative Permit Framework - Rohde Proposal

Adverse Impacts Analysis Tool

- Estimates cumulative depletion from proposed well and existing wells
- Adverse impacts based off environmental flows or more comprehensive CEFF process

No Impacts

Ministerial Well Class

Existing Use (Replacement Well)

Level 1 + 2 requirements

Zero Net Use (New or Replacement Well)

Level 1 + 2 requirements

Water Board Regulated

Level 1 requirements

Public Water Well (CEQA completed)

No conservation + monitoring requirements

New Wells

Level 1+ 2+ 3** requirements (Level 3 - based on depletion analysis)

Yes Impacts

Ministerial Well Class

Zero Net Use (New or Replacement Well)

Level 1 + 2 requirements

Water Board Regulated

Level 1 requirements

Existing Use (Replacement Well)

Level 1 + 2+ 3 requirements

Public Water Well (CEQA completed)

Water Conservation and Monitoring requirements + Level 3 conservation

Discretionary Public Trust Review

New Wells

Permit Denied (until public trust impacts are mitigated) or applicant can appeal by providing its own analysis

New Level 3 = Conservation measures designed to mitigate or prevent quantified impacts to public trust (e.g., well density rules, seasonal pumping requirements, etc)

Rohde Recommendations

1. Proceed with Working Proposal as an **interim** solution.
   a. Schedule update of PTRA based on new pumping and recharge data.
   b. Improve recharge estimates in pumping ratio by integrating geologic data.

2. Require **metering on all wells** and collect better well construction data, so that models can be improved over time.

3. Start California Env. Flows Framework (CEFF) process to define adverse impacts

4. Develop Analytical Model to screen all well permits
   - Public trust impacts assessed before designating permitting pathway

Framework Comparison

	Working Proposal	Rohde Proposal
Impact Evaluation Location?	• Navigable Waters • Non-navigable waters that are existing priority habitat for salmonids	• All streams
Public Trust Review Area?	• Moderate or high risk areas based on PTRA Risk Matrix • 15 - 30 % of County • Static, unless revised by ordinance	• County-wide
Permits subject to Impacts Analysis?	• Discretionary well permits	• All well permits
Impacts Analysis Method?	• Calibrated **numerical models** (where available) • Analytical models / PTRA methods / hydrogeologic reports • Adverse impacts based off Richter (2012)	• **Analytical depletion function** for the entire county • Adverse Impacts from Natural Flows Database or CEFF • Similar to state of Michigan's Water Supply Assessment Tool
Permitting process?	• Determined by the PTRA and well class	• Determined by output of impact analyses and well class
Water Conservation Requirements?	• For ministerial permits, determined by the PTRA and well class • Requirements of ministerial permits may not fully mitigate impacts	• Determined by output of impact analyses and well class • Requirements can be designed to prevent or mitigate public trust impacts