Groundwater Ordinance Well Permitting and CEQA Review Process

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Presented to: Stanislaus County Water Advisory Committee
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Presentation Overview

- Program Objectives, Requirements and Approach
- Program Overview
- Example of Process Framework

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Objectives, Requirements and Approach

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Permitting Program Objectives

- Comply with County Groundwater Ordinance
- Comply with California Environmental Quality Act (CEQA)
- Forward-looking to Sustainable Groundwater Management Act (SGMA)
- Protective but not unduly burdensome
- Defensible, objective and well documented

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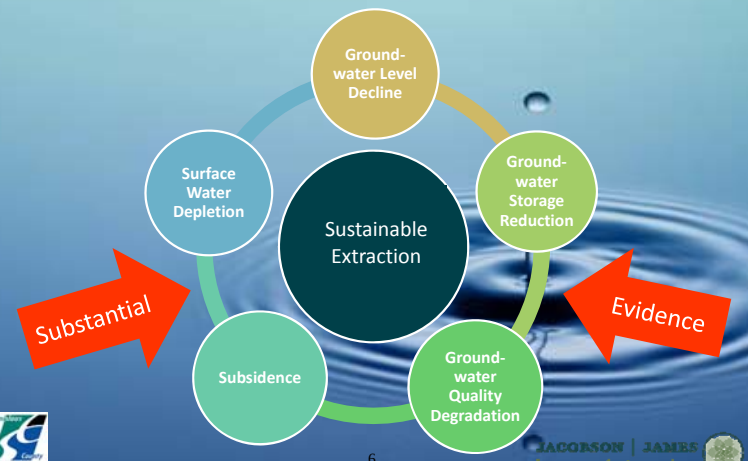
Who is Exempt?

- Applicants served by a public water agency in compliance with a Groundwater Management Plan and Policies
- "*De minimis*" extractors (<2 AFY)
- Replacement wells in kind
- Wells covered by a permit granted by DER
- Ordinance does not apply to incorporated areas
- Pumping from a "known and definite channel" *Regulated by SWRCB under surface water rights*

Ordinance Requirements



CEQA Requirements

- Initial Study determines potential for significant impacts.
  - Questions aligned with Undesirable Results
- Based on IS, Lead Agency determines CEQA compliance document
  - *Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report*
- Notifications, Public Review and BOS Approval

Current Proposed Approach

- Groundwater Sustainability Plan not available
- In absence of data, framework based on conservative assumptions
- Establish Special Management Zones
- Triggers for additional information requirements and permit conditions
- Individual CEQA review for each non-exempt application

Process Overview

Permitting Process Work Flow

Application
- Minimum Required Information (all applicants)
- Additional Information for Non-Exempt Applications
- Supplemental Studies in Some Cases

Intake
- Review Application for Exemption
- If not Exempt- Additional Information Requested
- Completeness Check (Notify Applicant if not Complete)

Review
- Technical Review for Compliance with Ordinance
- Triggers for Additional Information or Study Request
- Permit Conditions

CEQA Compliance
- CEQA Initial Study
- Preparation of ND, MND or EIR
- Notifications; Public Comment Period; Approval Hearing

Application Review Work Flow

Required Information Received from Applicant

Review by Comparing to Objectives and Thresholds

Additional Plans or Studies if Needed → Consult with Applicant

Assign Permit Conditions

Designated Special Management Zones

Groundwater Level Management Zone
- Undesirable Results are occurring or imminent, or Undesirable Results can be reasonably inferred
- Requires Offset Plan, or Groundwater Resources Investigation and Monitoring Plan

Groundwater Quality Protection Zone
- Area of high quality groundwater that warrants special well design standards
- Special well construction standards may be required

Groundwater Quality Study Zone
- Area of high quality groundwater that warrants special study to verify protection
- Groundwater Quality Investigation required

Designated Special Management Zones

Subsidence Special Study Zone

- Potential for significant subsidence; within 2 miles of Corcoran Clay in confined aquifer system
- Drawdown comparison to historical levels required
- Geotechnical Subsidence Investigation may be required

Surface Water Protection Zone

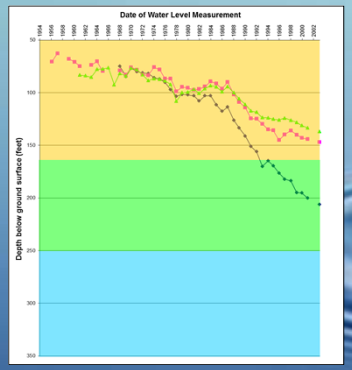
- Area near surface water where groundwater extraction could cause significant surface water depletion
- Surface-Groundwater Interaction Study required

Permit Conditions

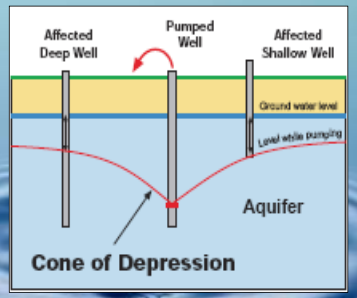
- General Conditions (same for all permits)
  - Permit review when GSP is adopted
  - Prohibition against Unsustainable Extraction (Burden of proof on permittee)
  - California Well Standards
  - Water Use Accounting
  - Inspection Access
- Threshold-Triggered Conditions
- Management Zone-Triggered Conditions

Example of Process Framework

Groundwater Level Decline



Regional Effects



Local Effects (Well Interference)

Local Groundwater Level Decline

MANAGEMENT OBJECTIVE

Prevent interference draw-down that substantially interferes with the ability to support existing land uses, or land uses for which permits have been granted

BASELINE APPLICATION SUBMITTALS

Proposed Well Location; Pumping Rate, Schedule and Volume; Well Design	Distance-Drawdown Calculations	Locations of Existing Wells within Projected 5' Drawdown Contour

Local Groundwater Level Decline

Triggers for Permit Conditions

- Predicted drawdown >5' at Domestic Wells → Implement Interference Drawdown Monitoring; Mitigation if Needed
- Predicted drawdown > 20' at Irrigation, Industrial or Municipal Wells → Implement Interference Drawdown Monitoring; Mitigation if Needed

Regional Groundwater Level Decline

MANAGEMENT OBJECTIVE

Prevent regional drawdown that will interfere with the ability to support existing or permitted land uses, or substantially increase the cost to extract groundwater.

BASELINE APPLICATION SUBMITTALS

Proposed Well Location; Pumping Rate, Schedule and Volume; Well Design	Aquifer Storage Volume Beneath Contiguous Property to be Served	Hydrographs for Existing Wells in the Area

Regional Groundwater Level Decline

Triggers for Additional Plans or Studies

- Location in Groundwater Level Management Zone → Groundwater Extraction Offset Plan, OR; Groundwater Resources Investigation, and Groundwater Level Monitoring Plan
- Calculated Extraction Volume > 10% of Aquifer Storage → Groundwater Level Monitoring Plan

Regional Groundwater Level Decline

Triggers for Permit Conditions

- Within GLMZ or Calculated Extraction Volume > 10% of Aquifer Storage
  - Implement Groundwater Level Monitoring Program
- Measured Drawdown > 5% of Aquifer Thickness
  - Groundwater Pumping Management Program, or
  - Groundwater Resources Investigation
- Measured Drawdown > 10% of Aquifer Thickness
  - Curtail Pumping until GW Levels Recover, or
  - Groundwater Resources Investigation

Reduction in Storage

Image from San Francisco Public Utilities Commission

Reduction in Storage

MANAGEMENT OBJECTIVE

Prevent depletion of groundwater storage to levels that are insufficient to support existing or permitted land uses during dry and critically dry years.

REQUIREMENTS

Required Application Submittals same as Groundwater Level Decline	Triggers for Additional Plans and Investigations same as Groundwater Level Decline	Triggers for Permit Conditions same as Groundwater Level Decline

Potential Plans and Investigations

Groundwater Resources Investigation
- Available data regarding hydrogeology and undesirable results
- If necessary, additional site-specific evaluation
- Effect of proposed extraction on the local water balance
- Prediction of drawdown; evaluation of undesirable results

Interference Drawdown Monitoring & Mitigation
- Enlist local well owners in monitoring program; Document baseline conditions
- If significant & unreasonable effects, implement mitigation
- Mitigation proportional to applicant's effect on well usability

Groundwater Level Monitoring
- Designate representative key well(s)
- Conduct spring and fall groundwater level monitoring
- Define drawdown-based action triggers and response actions