DRAFT

DEPARTMENT OF ENVIRONMENTAL RESOURCES
Administration

Jami Aggers
Director

3800 Cornucopia Way, Suite C, Modesto, CA 95358-9492
Phone: 209.525.6770 Fax: 209.525.6773

COUNTY ORDINANCE PROHIBITING THE MINING AND EXPORT OF GROUNDWATER

EXEMPTIONS INCLUDED IN THE ORDINANCE

The Department of Environmental Resources is charged with implementing the County's Groundwater Mining and Export Prevention Ordinance. The Ordinance provides a framework using California Water Law to review proposed projects. The Ordinance includes several exemptions from the mining and export prohibition. Please review this list of exemptions below, and refer to the Ordinance directly for more information. The Ordinance is available on the County's website at www.stancounty.com. For proposed projects that are not exempt, and therefore, are subject to review, the Department has developed an in-house assessment checklist which can be used by applicants to assist them in completing their application.

Refer to the Ordinance Exemptions for more information:

____ 9.37.050 (1). Water resources management practices
____ 9.37.050 (2). De-watering of shallow water tables
____ 9.37.050 (3). Reasonable use to supplement or replace water
____ 9.37.050 (4). Water conservation
____ 9.37.050 (5). Groundwater recharge
____ 9.37.050 (6). Contamination remediation
____ 9.37.050 (7). Ag operations on contiguous property with common ownership
____ 9.37.050 (8). Licensed bottled water operator
____ 9.37.050 (9). Have or are applying for a permit with Stanislaus County DER

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PROJECTS SUBJECT TO REVIEW UNDER
COUNTY ORDINANCE PROHIBITING THE MINING AND EXPORT OF GROUNDWATER

Below is a preliminary review application you must complete to facilitate the review of your project. Detailed and specific information will help staff better understand your project information needs and expedite the review. Please complete sections specific to your request and indicate N/A for those items not applicable. Other Federal and State applications or permit requirements may be necessary. In addition, projects may be subject to the California Environmental Quality Act.

For assistance in completing your application, please refer to the County Ordinance which is available at www.stancounty.com and the Department's Assessment tool (checklist) which is also available online.

TO BE COMPLETED BY APPLICANT
OR BY A LICENSED PROFESSIONAL WHERE APPLICABLE
(Please print or type)

1. APPLICANT INFORMATION

PRINT NAME OF APPLICANT:		NAME OF FIRM, IF APPLICABLE	
ADDRESS	CITY	STATE	ZIP CODE
DAYTIME TELEPHONE # ( )	FAX TELEPHONE # ( )	E-MAIL ADDRESS	

2. IF APPLICABLE, LICENSED PROFESSIONAL (Professional Engineer or Geologist, with applicable hydrological experience) INFORMATION

PRINT NAME OF LICENSED PROFESSIONAL:		LICENSE #	
ADDRESS	CITY	STATE	ZIP CODE
DAYTIME TELEPHONE # ( )	FAX TELEPHONE # ( )	E-MAIL ADDRESS	
SECTION(S) COMPLETED BY LICENSED PROFESSIONAL			
SECTION #	SECTION #	SECTION #	
PRINT NAME OF LICENSED PROFESSIONAL:		LICENSE #	
ADDRESS	CITY	STATE	ZIP CODE
DAYTIME TELEPHONE # ( )	FAX TELEPHONE # ( )	E-MAIL ADDRESS	
SECTION(S) COMPLETED BY LICENSED PROFESSIONAL			
SECTION #	SECTION #	SECTION #	

3. GENERAL PROJECT INFORMATION	
A.	Project Location, Parcel Size and Address: (Example: 1234 Alpine Way, Modesto, CA)
B.	Existing Use and Purpose of the Project:
C.	How is the pumped groundwater going to be conveyed out of the county? Provide specific timeframes.
D.	Details about number of wells, production rates, and production schedule. Please attach (1) at least one e-log so we can determine the local stratigraphy, (2) a map showing the location of the project wells (existing or planned), neighboring wells, Assessor's Parcel information, and (3) screened intervals of project wells and, if known, neighboring wells.
E.	State how this project has satisfied the requirements of the California Environmental Quality Act (CEQA). Please note that it is the applicant's responsibility to satisfy CEQA (see attached guidance document):
F.	State how this project will <u>not</u> have an adverse environmental or economic impact on the County:

G.	State how this project will not result in GW mining and export if not part of an existing local water agency or purveyor:
H.	Exports during periods of emergency a. An emergency includes (1) states of emergency as described in the California Government Code, section 8558; (2) states of water shortage emergency as determined by the California Department of Water Resources; or (3) determination by the Stanislaus County Board of Supervisors that groundwater within the County can assist areas outside the County. b. Groundwater extraction for the purpose of emergency relief shall be metered, so precise volumes of water exported can be determined. c. The duration of groundwater extraction for the purpose of emergency relief shall not exceed the time frame of the emergency. Groundwater extraction for the purpose of emergency relief does not set precedents or entitles the exporter to future exports.

Note: Terms of art definitions so as to ensure reasonable implementation of the Ordinance:

1. Adverse impacts – means causing significant quantifiable economic or physical damage to a resource that any reasonable person would agree are irrefutably attributable to the action of one resource user (or users) in comparison to the other legal users.
2. Significant quantifiable economic or physical damage – means loss of reasonable use of the resource or costs that are not attributable to the normal cost of doing business while using the resource.

The Stanislaus County Department of Environmental Resources (DER) will notify the applicant of the date in which the complete information has been received. This date will trigger the 30-day review period to determine whether your application is complete. If additional information is needed or requested, this will trigger another 30-day review period.

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DEPARTMENT ASSESSMENT TOOL (CHECKLIST)

In order to effectively implement the County "groundwater mining and export prevention" Ordinance, County staff charged with its implementation require an evaluation process that fairly assesses the activities potentially subject to the Ordinance. The Ordinance provides a framework using California water law that can serve as part of the process. In addition, other terms of art and science regarding groundwater management need definitions so as to provide the clearest assessment possible. The checklist below proposes to provide the core of such an evaluation but can be amended as needed to accommodate professional advice and consensus on value judgments that may be necessary when considering the facts in any activity under review.

THE FOLLOWING TO BE COMPLETED BY DEPARTMENT
(DER)

1. POLICY/PROHIBITIONS

A. Qualifies for an Exemption as per Ordinance Code 9.37.050? ☐ Yes ☐ No

Refer to the Ordinance for more information:

____ 9.37.050 (1). Water resources management practices
____ 9.37.050 (2). De-watering of shallow water tables
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Conclusion: If the answer to this question is "yes," then there is no need for additional DER review. DER can perform the rest of the review if the applicant so desires, for the sake of county-wide transparency.

2. ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACTS

A. Is the project likely to limit the availability of groundwater to the residents of Stanislaus County? ☐ Yes ☐ No

Is the current year, or any of the past two years, found to be critically dry for the San Joaquin River basin (i.e., a San Joaquin River Index of less than 2.1)? How much lower than 2.1 is the San Joaquin River Index?

Is the current groundwater table lower than is customary for the project area? How much lower?

Use the answer to these questions to determine if the project schedule is likely to overlap with a time in which county farmers and cities will be increasing their pumping to maintain the vitality of the County.

B. Will the project have a significant effect in the elevation of the water table or piezometric surface? ☐ Yes ☐ No

Is the aquifer to be tapped confined or unconfined?

Given the proposed water withdrawal and the area of the project, what would be the expected drawdown from an unconfined aquifer? Assume specific yield of 0.2 to make this calculation or the results of a pumping test provided by the applicant.

Given the proposed water withdrawal and the area of the project, what would be the expected drawdown from a confined aquifer? Assume a storativity of 0.001 to make this calculation or the results of a pumping test provided by the applicant.

Use the answer to these questions to determine if the project volume is likely to cause significant (i.e., more than 10 ft) overdraft due to the project in this portion of the County.

C. Will the project be likely to cause ground subsidence in excess of 0.2 ft? ☐ Yes ☐ No

Using the e-log provided by the applicant, determine the total thickness of shales present in this portion of the groundwater basin.

For every shale interval, calculate the compression (vertical strain) that each of the shale intervals is likely to experience given the expected drops in hydraulic head (from 2.B). Use a virgin compressibility coefficient of 5×10^{-7} m2/N to make the calculation. Is the calculated value greater than 0.2 ft? How much greater?

Are there any reported cases of subsidence in this portion of the County?

Are there repeated topographic surveys over this area (check with Public Works for street leveling surveys)?

Use the answer to these questions to determine if the project volume is likely to cause significant (i.e., more than 0.2 ft) subsidence in this portion of the County.

D. Will the project be likely to cause degradation of water quality? ☐ Yes ☐ No

Using the elevation of the water table in the area of the project, and a saline water density of 1.01 g/cm^3, calculate the depth to the saline water interface. Using the results of 2.B, calculate how much would this interface rise given the project withdrawals. Is the rise likely to bring the salty water within the reach of the aquifer being tapped by the project and its neighbors?

Are there known contamination plumes in the vicinity of the project?

Could any of these contamination plumes change its dispersion pattern because of the project, as suggested by a capture zone analysis?

Is the project within a critical recharge area of the County's Groundwater Basins?

Use the answer to these questions to determine if the project is likely to cause degradation of water quality in this portion of the County.

A **"yes"** answer to any of these questions should trigger a return of the project to the applicant, with the directive to modify the project, or to propose realistic mitigation measures. The date when the revised project is submitted to DER triggers a new 30 day review cycle.

3. ASSESSMENT OF POTENTIAL ECONOMIC IMPACTS

A. Will the project be likely to lead to a loss of arable land? ☐ Yes ☐ No

If groundwater is being exported, how will the project land be irrigated? Will the project result on fallowing of land?

B. Will the project result in increased pumping costs for the neighboring properties due to the lowering of groundwater levels? ☐ Yes ☐ No

Based on the findings in 2.B, will implementation of the project cause increased pumping costs for the neighboring properties?

Contact the local power supplier to calculate the increased costs. Is the cost increase significant (i.e., greater than 2%)?

C. Will the project be likely to trigger replacement of neighboring wells? ☐ Yes ☐ No

Based on the findings in 2.B, and on confirmed data about the screen depths of neighboring wells (to be provided by the applicant), is it likely that one or more wells will go dry or experience diminished function?

Using realistic projections, estimate the replacement costs. How large are they?

D. Will the project be likely to trigger the need for replacement of conveyance infrastructure, roads, bridges and appurtenances, structures, or facilities due to land subsidence? ☐ Yes ☐ No

Based on the findings in 2.C, will implementation of the project be likely to trigger infrastructure replacement?

Working in concert with Public Works, estimate the replacement costs. How large are they?

E. Will the project be likely to result in increased groundwater quality treatment costs? ☐ Yes ☐ No

Based on the findings in 2.D, will implementation of the project cause treatment costs for the neighboring properties?

Using realistic projections, estimate the costs. How large are they?

F. Will the project be likely to cause a decline in property values? ☐ Yes ☐ No

Based on the findings in 2.B,2.C, 2.D, 3.B, 3.C, 3.D, and 3.E, will implementation of the project cause a decline in the value of neighboring properties?

Using current real estate values, estimate a likely range for the decline in value. How large is this range when compared with current property values?

A **"yes"** answer to any of these questions should trigger a return of the project to the applicant, with the directive to modify the project, or to propose realistic mitigation measures. The date when the revised project is submitted to DER triggers a new 30 day review cycle.

4. FINAL DETERMINATION

A. Is the project, even with its proposed mitigation measures, likely to cause undesired environmental impacts to Stanislaus County? ☐ Yes ☐ No

B. Is the project, even with its proposed mitigation measures, likely to cause undesired economic impact to Stanislaus County? ☐ Yes ☐ No

If the answer to these questions is "no," then the Application is consistent with the County's Ordinance Prohibiting the Mining and Export of Groundwater (Ordinance). If the answer to any of these questions is "yes," then the Application is deemed "denied." At that time the Applicant may revise their Application such that it conforms to the County's Ordinance and submit it for a second reconsideration.

An approved Application will be valid for 5 years, but will undergo an annual review to make sure that the project remains consistent with the Ordinance and has had no adverse effects on the environment and residents of the County and to ensure that the project remains consistent with the application and permit.

_____ _____

Name of DER employee completing this form Date

GUIDANCE DOCUMENTS

(To be inserted)