



DEPARTMENT OF ENVIRONMENTAL RESOURCES

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COUNTY GROUNDWATER ORDINANCE

WELL PERMIT APPLICATION REVIEW PROCESS

The following process has been adopted by the Stanislaus County Department of Environmental Resources (DER) to review and process well permit applications under the County Groundwater Ordinance (Chapter 9.37 of the Stanislaus County Code) after the effective date of November 26, 2014. The process is also illustrated graphically on the attached flow chart.

1. The Applicant submits a Well Permit Application using the Application Packet available at <http://www.stancounty.com/ER/pdf/water-well-construction-and-destruction-application.pdf>, or from the DER office, and provides a check for the appropriate permit fees.
2. After receipt of a Permit Application, it is reviewed by the DER to determine whether it is subject to, or exempt from, the prohibitions in the Groundwater Ordinance against unsustainable groundwater extraction and the export of water using the following criteria:
 - a. Section 9.37.030 (4): If the Permit Application is for a well that will pump water from a known and definite channel, it is not pumping groundwater as defined by the Groundwater Ordinance, and the prohibitions of the Ordinance do not apply. (A copy of the "Application to Appropriate Water" submitted to the California State Water Resources Control Board (SWRCB) is required.)
 - b. Section 9.37.045 (A): The prohibition against unsustainable groundwater extraction does not apply to an application for a well designed to replace an existing well permitted prior to November 25, 2014, provided the replacement well has no greater capacity than the well it is replacing. (Construction details and groundwater extraction capacities for the original and replacement well are required to confirm the well has a similar location, depth and capacity.)
 - c. Section 9.37.045 (D): The prohibitions and requirements of the Groundwater Ordinance do not apply to Permit Applications for wells located in an incorporated city of the County.
 - d. Section 9.37.050 (A1) Permit Applications for wells on property served by a public water agency that is in compliance with an adopted Groundwater Management

Plan or Groundwater Sustainability Plan are not subject to the prohibitions in the Groundwater Ordinance. (Current proof that water delivery charges are being paid by the parcel in question is required.)

- e. Section 9.37.050 (A2): Permit Applications for wells intended to extract 2 acre-feet/year of groundwater or less are exempt from the prohibitions in the Groundwater Ordinance. (Construction and pump details are required.)
- f. Section 9.37.050 (A3): Groundwater extraction or water export in compliance with a permit previously granted by the DER is exempt from the prohibitions in the Groundwater Ordinance. (A copy of the permit is required.)

Based on this review, if the Permit Application is exempt, it is processed and a permit is issued by DER for construction of the well after receipt of the required permit fees.¹

- 3. If the Permit Application is not exempt, the Applicant must submit a Supplemental Application for Non-Exempt Wells with information to demonstrate that groundwater pumped from the well is being sustainably extracted and will not cause any of the “Undesirable Results” listed in Section 97.030 (9) the Ordinance. This Supplemental Application is reviewed to determine whether the information provided is complete and adequate to demonstrate that the Permit Application complies with the Groundwater Ordinance. The review is completed over an approximately 30-day period and is conducted at the expense of the Applicant. Additional permit application fees may be due at the time the supplemental information is provided and/or prior to issuance of the permit.
 - a. A copy of the Supplemental Application for Non-Exempt Wells is attached. The DER will contact the Applicant to review what is required, which may vary depending on location and well depth.
 - b. After the Applicant submits the supplemental information, an Completeness Review is done to verify that all of the required information has been provided. The Applicant will be notified if any additional information is required before review of the Permit Application for compliance with the Groundwater Ordinance can begin. This may include requirements for special studies that are triggered under some circumstances.
 - c. Next, the Permit Application and supplemental information provided by the applicant is subjected to a Compliance Review to determine whether the Applicant has met the requirement to demonstrate by “Substantial Evidence” (Section 97.045 (A)) that the proposed groundwater extraction will not result in “Unsustainable Groundwater Extraction” as defined in Sections 97.030 (6) and 97.030 (8) of the Groundwater Ordinance. To do this, a technical review is conducted to verify whether the information submitted by the Applicant demonstrates that groundwater

¹ After adoption of a Groundwater Sustainability Plan (GSP), the prohibition against unsustainable groundwater extraction will be applicable to any well for which the County reasonably concludes that the extraction of groundwater constitutes unsustainable extraction of groundwater. This would include applications for wells that are found not to be in compliance with a GSP. In addition, if a proposed well is intended to be used for the export of water as defined in the Groundwater Ordinance, a separate review is conducted to determine whether such export is exempt from the Ordinance prohibition against export.

extraction from the well will not cause, or substantially contribute to, any of the “Undesirable Results” listed in Section 97.030 (9) of the Groundwater Ordinance. These Undesirable Results may include the following:

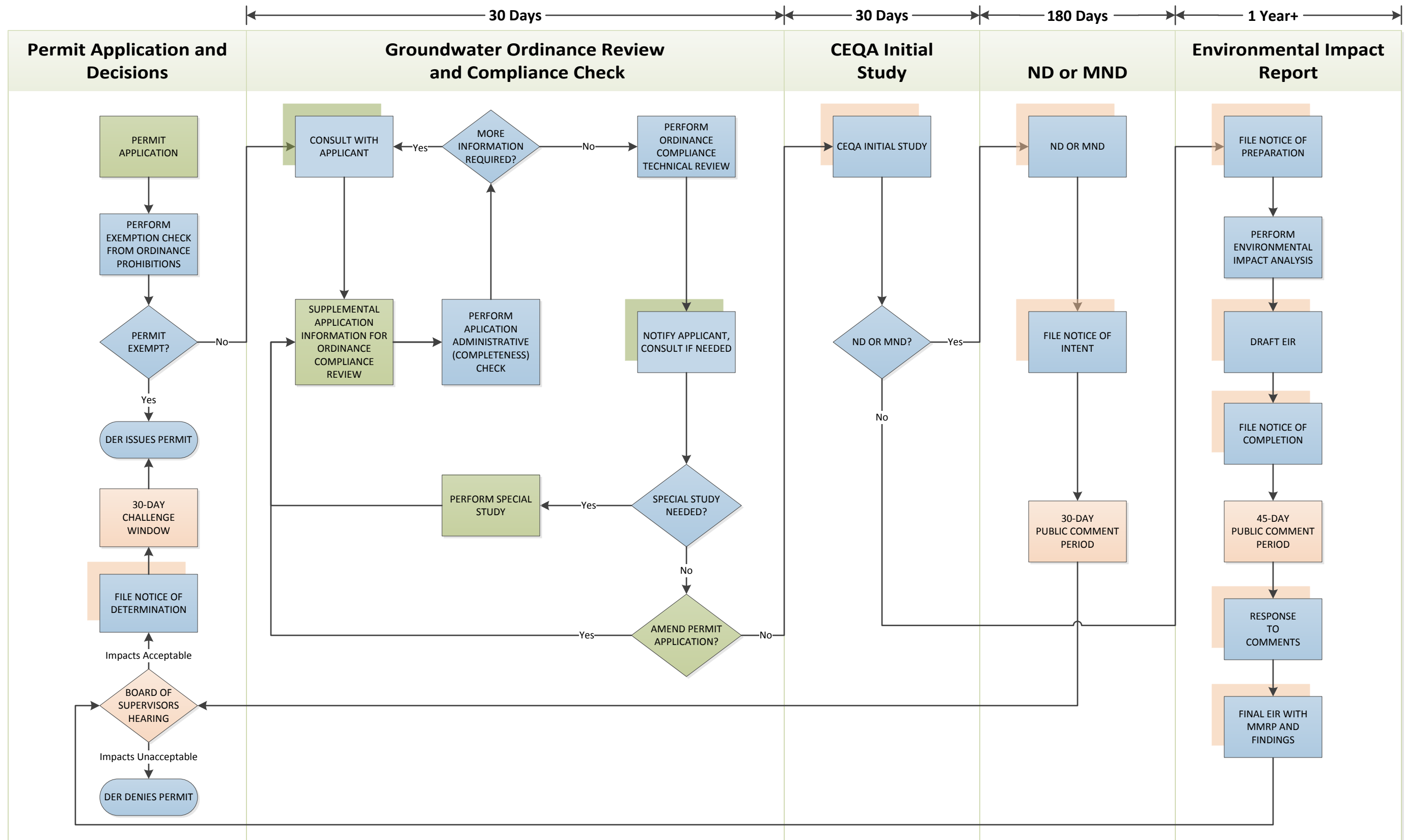
- i. Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.
 - ii. Significant and unreasonable reduction of groundwater storage.
 - iii. Significant and unreasonable degradation of water quality, including the migration of contaminant plumes that impair water quality.
 - iv. Significant and unreasonable land subsidence that substantially interferes with surface land uses.
 - v. Surface water depletions that have significant and unreasonable adverse impacts on the beneficial uses of the surface water.
- d. If the review finds the proposed new well may cause or substantially contribute to any of the above-listed Undesirable Results, the application is discussed with the Applicant, and they are given the opportunity to submit additional data, prepare special studies, accept permit conditions that will lessen the Undesirable Results to an insignificant level, or amend their application. Note that the Applicant is not required to submit additional data, perform special studies, amend their application or accept the permit conditions in such a situation; however, if they do not do so, an Environmental Impact Report (EIR) will be required.
4. After completion of the Groundwater Ordinance Completeness and Compliance Reviews, the application is reviewed as required under the California Environmental Quality Act (CEQA) to determine whether construction and use of the proposed well could result in potentially significant environmental impacts, and to determine what type of environmental document is appropriate for evaluation of the project and compliance with the CEQA. This is called a CEQA Initial Study, and is completed during an approximately 30-day period. If the Initial Study finds that construction and operation of the proposed well will not result in potentially significant environmental impacts, or that the impacts will be mitigated to a less-than-significant level, then the application qualifies for processing under a Negative Declaration (ND) or a Mitigated Negative Declaration (MND). If the Initial Study finds that there are potentially significant environmental impacts, then an EIR is required.
 5. If the application qualifies for a ND or MND, then the appropriate CEQA document is prepared and processed. Under the State CEQA Guidelines, the County has 180 days to complete this process. First, the DER prepares the draft document (either a ND or MND) and files a Notice of Intent with the County Clerk; then, a 30-day public comment period is opened.

6. If the application requires preparation of an EIR, the DER will meet with the applicant to review the requirements. EIR's will usually require more in depth studies to evaluate specific impacts and determine whether or not they are significant. Under the CEQA Guidelines, the County has one year to complete an EIR, but this period may be extended depending on the circumstances.
7. After conclusion of the public comment period for the ND, MND or EIR, and preparation of responses to any public or agency comments that are received, the well permit application is approved by the DER. In some cases, if a well permit application is considered controversial, the application may be reviewed for acceptance in a public hearing during a regularly-schedule Board of Supervisors meeting, at which the application would be voted upon. After the application is accepted by the DER or Board of Supervisors, a Notice of Determination is filed with the County Clerk. After the Notice of Determination is filed, there is a 30-day period during which the County's decision can be legally challenged under CEQA. After this period is over, if no challenges are received, the DER will issue a Well Construction Permit and a Groundwater Extraction Permit, pending receipt of any fees that are due for review and processing of the permit application. The term of the Groundwater Extraction Permit will extend until the time that a GSP is adopted in the area in which the well is located, and can be renewed for additional periods coinciding with required updates to the GSP every five years.

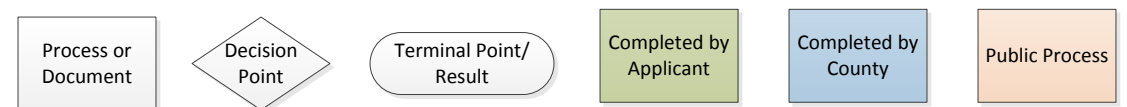
Attachments:

1. Stanislaus County Groundwater Ordinance Well Permitting Process Flow Chart
2. Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance
3. Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance
4. Supplemental Application for Non-Exempt Wells

STANISLAUS COUNTY GROUNDWATER ORDINANCE WELL PERMITTING PROCESS



LEGEND



CEQA – California Environmental Quality Act
 DER – Department of Environmental Resources
 EIR – Environmental Impact Report
 MMRP – Mitigation Monitoring and Reporting Program
 MND – Mitigated Negative Declaration
 ND – Negative Declaration



Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance

Undesirable Result ¹	CEQA Initial Study Checklist Questions ²	County Management Objectives	County Management Thresholds and Actions	Items Required to be Included in the Applicant's Well Permit Application	Potential Well Permit Conditions
<p>Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon.</p>	<p><u>Question IX(b):</u> Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>	<p><u>Objective A:</u> Prevent interference draw-down to existing wells that substantially interferes with the ability to support existing land uses, or land uses for which permits have been granted.</p>	<p><u>Threshold A1:</u> Predicted interference drawdown is greater than 5 feet at existing domestic wells, or greater than 10% of the available drawdown if the well extends more than 50 feet below the standing water level.</p> <p><u>Action A1:</u> If interference drawdown cannot be decreased by moving the well, changing the extraction interval, limiting extraction, or pumping from multiple wells, the Applicant shall implement a Well Interference Drawdown Monitoring and Mitigation Program.</p> <p><u>Threshold A2:</u> Predicted interference drawdown is greater than 20 feet at existing irrigation, industrial or municipal wells.</p> <p><u>Action A2:</u> If drawdown cannot be reduced by moving the well, changing the extraction interval, limiting extraction, or pumping from multiple wells, the Applicant shall implement a Well Interference Drawdown Monitoring and Mitigation Program.</p>	<ol style="list-style-type: none"> Proposed well design, use, pumping rate, schedule and total extraction volume. Distance-drawdown calculations for drawdown at the end of the permit term and the wells usable lifetime (20 years). Calculated using standard equations for confined/unconfined aquifers, spreadsheets, or computer models. Aquifer parameters must be substantiated from available data or based on conservative assumptions inferred from the literature. Locations of existing wells within the predicted 5-foot drawdown radius of the proposed well. 	<p>If required by the County, implementation of a Well Interference Drawdown Monitoring and Mitigation Program.</p>
	<p><u>Question XVII(d):</u> Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</p> <p><u>Question XVIII(b):</u> Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)</p> <p><u>Question XVIII(c):</u> Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<p><u>Objective B:</u> Prevent contribution to regional drawdown that does not recover over a period of years that includes both wet and dry periods, and that, if continued, will interfere with the ability of well operators to support existing or permitted land uses, or substantially increases the cost to extract groundwater.</p>	<p><u>Threshold B1:</u> The proposed well is within an Groundwater Level Management Zone designated by the County, where installation of new wells would contribute to, or, in the absence of direct data can be reasonably inferred to contribute to, a condition of Critical Overdraft, which is "... when present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts" (DWR Bulletin 118-80).</p> <p><u>Action B1:</u> Submit a Groundwater Extraction Offset Plan that describes how groundwater extraction from the well will be 100% offset. Alternatively, the Applicant shall complete a Groundwater Resources Investigation that demonstrate the proposed extraction will not result in, or contribute to, undesirable results.</p> <p><u>Threshold B2:</u> The total water volume pumped from the proposed well during the permit term is projected to exceed 10% of the available aquifer storage volume beneath the contiguous property served by the well.</p> <p><u>Action B2:</u> Implement a Groundwater Level Monitoring Program.</p> <p><u>Threshold B3:</u> The total available aquifer storage volume beneath the contiguous property served by the well has been decreased by 5%.</p> <p><u>Action B3:</u> Submit and implement a Pumping Management Plan to keep storage depletion from exceeding 10% of the available aquifer storage beneath the contiguous property served by the well, or submit a Groundwater Resources Investigation that demonstrates a higher threshold is sustainable.</p> <p><u>Threshold B4:</u> The total available aquifer storage volume beneath the contiguous property served by the well has been decreased by 10%.</p> <p><u>Action B4:</u> Curtail pumping until storage recovers to a level exceeding the threshold, or submit a Groundwater Resources Investigation that demonstrates a higher threshold is sustainable.</p>	<ol style="list-style-type: none"> Well location and boundaries of the property to be served by the well. Proposed water use. For wells located in an Groundwater Level Management Zone, a Groundwater Extraction Offset Plan or Groundwater Resources Investigation acceptable to the County. The total volume of groundwater in storage in the aquifer system beneath the contiguous property to be served by the well, calculated by multiplying the aquifer thickness by the specific yield and the area of the property. For wells located in a Groundwater Level Management Zone or wells projected to extract more than 10% of the available aquifer storage volume beneath the contiguous parcels to be served, a Groundwater Level Monitoring Program acceptable to the County. 	<p>Water Use Accounting of groundwater withdrawals from the proposed well.</p> <p>If required by the County, implementation of a Groundwater Extraction Offset Program</p> <p>If required by the County, implementation of a Groundwater Level Monitoring Program with triggers and response actions.</p> <p>If required by the County, design requirements or pumping restrictions.</p>

Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance

Undesirable Result ¹	CEQA Initial Study Checklist Questions ²	County Management Objectives	County Management Thresholds and Actions	Items Required to be Included in the Well Permit Application	Potential Well Permit Conditions
<p>Significant and unreasonable reduction of groundwater storage.</p>	<p><u>Question IX(b)</u>: Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p> <p><u>Question XVII(d)</u>: Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</p> <p><u>Question XVIII(b)</u>: Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)</p> <p><u>Question XVIII(c)</u>: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<p><u>Objective C</u>: Prevent depletion of groundwater storage to levels that are insufficient to support existing or permitted land uses during dry and critically dry years without potentially causing other undesirable results as defined under the Ordinance.</p>	<p>Thresholds and Actions B1 through B4 apply to Objective C as written.</p>	<p>Application requirements are identical to Objective B.</p>	<p>Potential permit conditions are identical to Objective B.</p>

Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance

Undesirable Result ¹	CEQA Initial Study Checklist Questions ²	County Management Objectives	County Management Thresholds and Actions	Items Required to be Included in the Applicant's Well Permit Application	Potential Well Permit Conditions
Significant and unreasonable degradation of water quality, including the migration of contaminant plumes that impair water quality.	<p><u>Question VIII(b)</u>: Would the project create a significant hazard to the public through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</p> <p><u>Question IX(a)</u>: Would the project violate any water quality standards or waste discharge requirements?</p> <p><u>Question IX(f)</u>: Would the project otherwise substantially degrade water quality?</p>	<p><u>Objective D</u>: Prevent degradation of water quality in excess of Water Quality Objectives for applicable beneficial uses in the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).</p>	<p><u>Threshold D1</u>: Installation of a well within a Groundwater Quality Protection Zone (an area where the County has determined special well design requirements are warranted to protect the existing quality of a ground-water resource) or within 1 mile of a reported contamination or spill incident.</p> <p><u>Action D1</u>: Implementation of well design requirements prescribed by the County, such as prohibitions against cross screening wells between different aquifer systems, or completion of wells to depths near saline groundwater.</p> <p><u>Threshold D2</u>: Installation of a well within a Groundwater Quality Study Zone (an area where the County has determined special studies are warranted to protect the existing quality of a groundwater resource) or within 1 mile of a reported contamination incident or known area of relatively poor water quality.</p> <p><u>Action D2</u>: The Applicant shall complete a Groundwater Quality Investigation sufficient to demonstrate that the proposed well, as designed, constructed and operated, will not result in, or contribute to, significant water quality degradation, significant migration of contamination, or interference with ongoing or planned groundwater remediation or quality protection programs.</p> <p><u>Threshold D3</u>: A Groundwater Quality Investigation determines pumping from a well has the potential to result in, or contribute to, significant water quality degradation, significant migration of contamination, or interference with ongoing or planned groundwater remediation or quality protection programs.</p> <p><u>Action D3</u>: The Applicant shall propose well construction and design specifications, monitoring and/or operating restrictions that prevent the identified water quality degradation, contaminant migration, or interference with groundwater remediation or protection programs.</p>	<p>9. A map showing location of potential sources of contamination near the well (e.g., sewers, septic systems, animal enclosures, CAFOs, etc.).</p> <p>10. The results of a search of public databases of hazardous materials sites and contamination incidents within 1 mile of the proposed well location.</p> <p>11. For wells located inside a Groundwater Quality Protection Zone, or if reported hazardous materials or contamination incidents are identified within 1 mile, a Groundwater Quality Investigation acceptable to the County.</p> <p>12. If recommended in the Groundwater Quality Investigation, proposed well construction and design specifications, setbacks, and/or pumping restrictions.</p>	<p>If required by the County, compliance with well construction requirements for a Groundwater Quality Protection Zone.</p> <p>If required by the County, well construction and design specifications, setbacks, and/or operating restrictions to prevent the capture or spread of groundwater contamination or poor quality groundwater.</p> <p>If required by the County, implementation of a Groundwater Quality Monitoring Program with triggers and response actions.</p>

Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance

Undesirable Result ¹	CEQA Initial Study Checklist Questions ²	Management Objectives	Management Thresholds and Actions	Application Requirements	Permit Conditions
Significant and unreasonable land subsidence that substantially interferes with surface land uses.	<u>Question VI(c)</u> : Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<u>Objective E</u> : Prevent inelastic subsidence that is cumulatively considerable and interferes with surface land uses or infrastructure or increases the potential for flooding.	<p><u>Threshold E1</u>: Installation of a well in a Subsidence Study Zone (within 2 miles of the Corcoran Clay subcrop boundary reported by United States Geological Survey (USGS)).</p> <p><u>Action E1</u>: Submit hydrographs for nearby wells and drawdown calculations to determine whether groundwater levels will fall below historical low levels outside the property boundaries or near potentially sensitive infrastructure.</p> <p><u>Threshold E2</u>: Threshold E1 applies, groundwater levels are projected to fall below historical low levels, and the well will either (a) extract groundwater from the confined aquifer system, or (b) from the shallow aquifer system, if it contains more than 50 feet of clay strata.</p> <p><u>Action E2</u>: Conduct a Geotechnical Subsidence Investigation that establishes significant subsidence will not occur or provides recommendations to prevent significant subsidence.</p> <p><u>Threshold E3</u>: If (a) the well is proposed to be completed in the confined aquifer system, and drawdown is projected to exceed 5 feet at the property boundary or beneath sensitive infrastructure; or, (b) the well is completed in the unconfined aquifer system and drawdown is projected to 10 feet beneath the property boundary or at sensitive infrastructure.</p> <p><u>Action E3</u>: Implement a Groundwater Level and Subsidence Monitoring Program acceptable to the County.</p> <p><u>Threshold E4</u>: Measured inelastic subsidence near the site exceeds 2 inches.</p> <p><u>Action E4</u>: Curtail groundwater extraction and perform a Geotechnical Subsidence Investigation to determine the cause of the subsidence and the likelihood of continued subsidence, and that provides recommendations for prevention of subsidence that will significantly damage or interfere with surface land uses and infrastructure.</p>	<p>13. For wells located inside a Subsidence Study Zone, (a) a map showing the locations of infrastructure that may be sensitive to subsidence (canals, ditches, roads, utility lines, floodways, etc.) within 2 miles of the well or within the predicted 5-foot drawdown contour, whichever is greater; (b) drawdown calculations for seasonal maximum drawdown and drawdown at the end of the permit term and after 20 years of operation at the nearest property boundary and at potentially sensitive infrastructure; (c) hydrographs for nearby wells completed in the aquifer the well will extract groundwater from; (d) projection of groundwater level trends; and (e) comparison of predicted groundwater levels to historical lows.</p> <p>14. If required, a Geotechnical Subsidence Investigation acceptable to the County.</p> <p>15. If required, a Groundwater Level and Subsidence Monitoring Program acceptable to the County.</p>	<p>If required by the County, well design and/or operating requirements to prevent or minimize potential for subsidence.</p> <p>If required by the County, implementation of a Groundwater Level and Subsidence Monitoring Program with triggers and response actions.</p>

Discretionary Well Permitting Framework under the Stanislaus County Groundwater Ordinance

Undesirable Result ¹	CEQA Initial Study Checklist Questions ²	Management Objectives	Management Thresholds and Actions	Application Requirements	Permit Conditions
<p>Surface water depletions that have significant and unreasonable adverse impacts on the beneficial uses of the surface water.</p>	<p><u>Question IV(a)</u>: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p> <p><u>Question IV(b)</u>: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?</p> <p><u>Question IV(c)</u>: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p> <p><u>Question XVIII(b)</u>: Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)</p> <p><u>Question XVIII(c)</u>: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<p><u>Objective F1</u>: Prevent depletion of surface water resources in excess of depletion thresholds established for the protection of aquatic life, and as necessary to maintain existing surface water uses.</p> <p><u>Objective F2</u>: Prevent drawdown that has a significant adverse effect on groundwater-dependent ecosystems (GDEs).</p>	<p><u>Threshold F1</u>: Installation of a well in channel deposits within a stream floodplain.</p> <p><u>Action F1</u>: Wells meeting the criteria of Threshold F1 are presumed to pump water from the stream unless demonstrated otherwise, unless determined otherwise by the SWRCB Division or Water Rights. These wells are not pumping groundwater as defined under the Groundwater Ordinance, but must be operated within the requirements of an existing surface water right</p> <p><u>Threshold F2</u>: Installation of a well in a Surface Water Protection Zone: (a) within 2,500 feet of a groundwater-connected stream or reservoir if the well is completed within the upper 200 feet of the aquifer system; or (b) within 1 mile of a groundwater-connected stream or reservoir if the well is completed below the upper 200 feet of the aquifer system.</p> <p><u>Action F2</u>: The Applicant shall conduct a Surface-Groundwater Interaction Study to evaluate surface water impacts from well operations at the end of the permit term and over the lifetime of the well (assumed 20 years). The study shall include an evaluation of aquifer conditions based on site-specific testing, and a streamflow depletion estimate using analytical or numerical models. The report shall compare streamflow depletion and drawdown to acceptable thresholds that are protective of beneficial surface water uses, and recommend appropriate well construction and operating requirements such that significant surface water depletion will not occur. In addition, the report shall include recommendations for implementation of a Surface-Groundwater Monitoring and Reporting Program with proposed thresholds and response actions, as appropriate.</p> <p><u>Threshold F3</u>: Installation of a well within the projected 0.5 foot drawdown at the end of the permit term or 3 miles (whichever is greater) of a seep, spring, wetland, riparian habitat, phreatophyte woodland or other GDE.</p> <p><u>Action F3</u>: The Applicant shall evaluate whether any of the GDEs may be hydraulically connected to the pumped aquifer and, if so, estimate the drawdown at the GDE as the end of the permit term.</p> <p><u>Threshold F4</u>: The maximum predicted drawdown beneath a GDE that is hydraulically connected to the pumped aquifer exceeds 0.5 foot at the end of the permit term.</p> <p><u>Action F4</u>: The Applicant shall conduct a GDE Impact Study that evaluates the proposed well's impacts on groundwater levels, flows and surface discharges, as well as potential impacts on groundwater dependent vegetation, habitat and fauna. If necessary, the impact study shall recommend appropriate well construction and operating requirements such that significant impacts will not occur, or shall include recommendations for appropriate mitigation measures. In addition, the study shall include recommendations for implementation of a GDE Monitoring Program, as appropriate.</p>	<p>16. For wells completed within channel deposits within a stream floodplain, a copy of the Application to Appropriate Water filed with the SWRCB for extraction from a known and definite channel or determination by the SWRCB Division of Water Rights that the well is not pumping water from a subterranean stream.</p> <p>17. Location of all surface water bodies and streams within 2 miles of the proposed well.</p> <p>18. For proposed wells inside a Surface Water Protection Zone, a Surface-Groundwater Interaction Study acceptable to the County.</p> <p>19. A map showing all springs, seeps, wetlands, riparian habitats and phreatophyte (e.g. blue oak) woodlands and other GDEs within the projected 0.5 foot drawdown contour at the end of the permit term or within 3 miles of the proposed well (whichever is greater), based on the Applicant's knowledge of the area, publically available maps and databases, and aerial photography.</p> <p>20. An evaluation of GDEs within the above areas to determine if they may be hydraulically connected to the pumped aquifer, and further evaluation of drawdown beneath any such GDEs at the end of the permit term.</p> <p>21. If the predicted drawdown beneath a GDE that may be hydraulically connected to the pumped aquifer exceeds 0.5 foot at the end of the permit term, a GDE Impact Study acceptable to the County that assesses whether the proposed pumping will have a significant effect on the GDE and provides recommendations for mitigation, if needed.</p>	<p>If required by the County, well construction, setback and/or operating requirements to minimize potential surface water interaction.</p> <p>If required by the County, implementation of a Surface-Groundwater Interaction Monitoring Program, with appropriate thresholds and response actions.</p> <p>If required by the County, well construction, setback and/or operating requirements to minimize potential GDE impacts.</p> <p>If required by the County, implementation of a GDE Monitoring Program with triggers and response actions.</p> <p>If required by the County, other mitigation measures for potential impacts to surface water resources or GDEs.</p>

Notes:

1. Undesirable results as listed in Section 9.37.030(9) of the Stanislaus County Groundwater Ordinance
2. Applicable questions from the CEQA Initial Study Checklist contained in Appendix G of the CEQA Guidelines.

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objective	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p>Objective A: Prevent interference drawdown to nearby well operators that substantially interferes with their ability to support existing or permitted land uses.</p>	<p>Threshold A1: Predicted interference drawdown is greater than 5 feet at existing domestic wells, or greater than 10% of the available drawdown if the well extends more than 50 feet below the standing water level.</p>	<p>Adequately functioning domestic wells in Stanislaus County may be assumed to generally have an available drawdown of at least 50 feet. Reduction of the available drawdown in a domestic well by less than 10% is not expected to significantly affect a domestic well's usability.</p>	<p>Use of 5 feet as an interference drawdown threshold is relatively common in adopted CEQA and NEPA documents, and has been adopted as a screening criterion by some jurisdictions (CEC, 2010; San Diego County, 2010). Other jurisdictions have adopted well interference screening thresholds of 10 to 15 feet drawdown (Napa County, 2015).</p>	<p>A threshold of 5 feet is a relatively conservative trigger for implementation of a monitoring and mitigation program. The program would be designed to identify significant undesirable effects to nearby domestic wells and implement appropriate mitigation.</p>	<p>A threshold of 5 feet is protective, but not unduly burdensome as a trigger for implementation of a monitoring and mitigation program. It is reasonable to utilize a lower threshold for domestic wells than for higher capacity wells, because they are more vulnerable to interference drawdown. As a first course of action, Applicants are encouraged to move the location of their wells, change well completion intervals or spread out pumping among multiple wells in order to lessen impacts below the threshold.</p>
	<p>Threshold A2: Predicted interference drawdown is greater than 20 feet at existing irrigation, industrial or municipal wells.</p>	<p>An available drawdown of 200 feet is a reasonable minimum for a production well in Stanislaus County. Reduction of the available drawdown by less than 10% or 20 feet in a production well is not expected to significantly affect such a well's usability.</p>	<p>Use of 20 feet as an interference drawdown threshold has been adopted in some areas in California and is appropriate for wells with significant available drawdown, such as production wells. (San Diego County, 2010). Other jurisdictions have adopted well interference screening thresholds of 10 to 15 feet drawdown (Napa County, 2015).</p>	<p>A 20-foot threshold is a modest amount of additional drawdown in a typical moderate to high capacity production well. It is unlikely that such a well would lose significant capacity prior to reaching this trigger. The monitoring program would be designed to identify significant undesirable effects to nearby production wells and implement appropriate mitigation.</p>	<p>A threshold of 20 feet is protective, but not unduly burdensome as a trigger for implementation of a monitoring and mitigation program. As a first course of action, Applicants are encouraged to move the location of their wells, change well completion intervals or spread out pumping among multiple wells in order to lessen impacts below the threshold. Increased pumping expenses are assumed to be mutually offsetting and are not considered.</p>
	<p>Action A1: If interference drawdown cannot be decreased by moving the well, changing the extraction interval, limiting extraction, or pumping from multiple wells, the Applicant shall implement a Well Interference Drawdown Monitoring and Mitigation Program.</p> <p>Action A2: If drawdown cannot be reduced by moving the well, changing the extraction interval, limiting extraction, or pumping from multiple wells, the Applicant shall implement a Well Interference Drawdown Monitoring and Mitigation Program.</p>	<p>Owners of wells within areas where the drawdown thresholds are exceeded will be notified and invited to register their wells for participation in the Monitoring and Mitigation Program. Baseline condition data will be gathered for these wells and selected wells will be used for groundwater level monitoring. This data will form the basis for determining whether nearby wells are being significantly affected, and for distinguishing the effect of interference drawdown from regional groundwater-level changes and pre-existing well conditions. Mitigation can then be prescribed in an equitable manner in proportion to the contribution of the Applicant's well to the undesirable result.</p>	<p>Similar well interference drawdown monitoring and mitigation programs are relatively common in adopted CEQA and NEPA environmental documents and have been implemented throughout the State (for example, CEC, 2010; Sotoyome RCD, 2012). Other states (for example, Iowa, South Dakota and Minnesota) have adopted well interference mitigation programs (for example Iowa, 2007).</p>	<p>The triggers for implementation well interference monitoring are relatively conservative, assuring that programs are in place to provide mitigation for undesirable results before they are observed.</p>	<p>The program provides a means for affected well owners to be equitably reimbursed for expenses potentially arising from interference drawdown, with the level of mitigation proportional to the contribution of the Applicant's groundwater extraction to the undesirable result. Baseline conditions are documented. If a monitoring and mitigation program is implemented, property owners must agree to provide baseline information regarding their wells and access for future inspections and monitoring in order to be eligible for mitigation.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective B:</u> Prevent contribution to regional drawdown that does not recover over a period of years that includes both wet and dry periods, and that, if continued, will interfere with the ability of well operators to support existing or permitted land uses, or substantially increases the cost to extract groundwater.</p>	<p><u>Threshold B1:</u> The proposed well is within an Groundwater Level Management Zone designated by the County, where installation of new wells would contribute to, or, in the absence of direct data can be reasonably inferred to contribute to, a condition of Critical Overdraft, which is "... when present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts" (DWR Bulletin 118-80).</p> <p><u>Action B1:</u> Submit a Groundwater Extraction Offset Plan that describes how groundwater extraction from the well will be 100% offset. Alternatively, the Applicant shall conduct a Groundwater Resources Investigation that demonstrate the proposed extraction will not result in, or contribute to, undesirable results.</p>	<p>The County uses available data regarding groundwater levels and trends, and reported undesirable results to designate Groundwater Level Management Zones based on an assessment of whether historical groundwater level trends indicate a "<i>chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon</i>" (JJ&A, 2017). Additional groundwater extraction in such areas can be reasonably expected to contribute incrementally to existing and future undesirable results as defined under the Ordinance and under the Sustainable Groundwater Management Act (SGMA).</p>	<p>Other jurisdictions in California have adopted thresholds for CEQA Initial Studies in special groundwater management areas that consider any contribution to drawdown as a potentially significant impact that triggers an EIR (Ventura County, 2011; Napa County, 2012). Some jurisdictions have developed zoning overlays that require 100% offset of additional groundwater use (Napa County, 2012; San Diego County, 2007), or require studies to prove adequate water supply prior to issuing a permit (Sonoma County, 2014). Recent CEQA case law indicates <i>de minimis</i> contribution to a significant cumulative impact must be considered cumulatively considerable (Kings County Farm Bureau v. City of Hanford [(1990) 221 Cal. App. 3d 692, 270 Cal. Rptr. 650]; Communities for a Better Environment, 103 Cal. App. 4th at 117-118). Groundwater offset plans are a relatively commonly used mitigation method (for example Genesis, 2011).</p>	<p>Designation of Groundwater Level Management Zones that are subject to requirements for more detailed study or groundwater extraction offset is protective against further potential damage and is forward looking to sustainable groundwater management practices that must be implemented under SGMA.</p>	<p>In areas where undesirable results are already occurring or can be reasonably predicted if current groundwater management practices are continued, it is reasonable to place the burden of proof on an applicant that either the proposed groundwater extraction is sustainable, or to require full offset.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective B:</u> Prevent contribution to regional drawdown that does not recover over a period of years that includes both wet and dry periods, and that, if continued, will interfere with the ability of well operators to support existing or permitted land uses, or substantially increases the cost to extract groundwater.</p>	<p><u>Threshold B2:</u> The total water volume pumped from the proposed well during the permit term is projected to exceed 10% of the available aquifer storage volume beneath the contiguous property served by the well.</p> <p><u>Action B2:</u> Implement a Groundwater Level Monitoring Program.</p> <p><u>Threshold B3:</u> The total available aquifer storage volume beneath the contiguous property served by the well has been decreased by 5%.</p> <p><u>Action B3:</u> Submit and implement a Pumping Management Plan to keep storage depletion from exceeding 10% of the available aquifer storage beneath the contiguous property served by the well, or submit a Groundwater Resources Investigation that demonstrates a higher threshold is sustainable.</p> <p><u>Threshold B4:</u> The total available aquifer storage volume beneath the contiguous property served by the well has been decreased by 10%.</p> <p><u>Action B4:</u> Curtail pumping until storage recovers to a level exceeding the threshold, or submit a Groundwater Resources Investigation that demonstrates a higher threshold is sustainable.</p>	<p>Ultimately, the maximum drawdown that is sustainable will be determined by the most drawdown-sensitive undesirable result; however, in the absence of other undesirable results, the loss of 10% of available aquifer storage is not likely to significantly interfere with a groundwater pumper's ability to meet the water demand for existing or permitted land uses. A threshold based on available aquifer storage beneath a property will limit groundwater extraction in proportion to property size, aquifer conditions, and local ground-water balance. As such, it incorporates a range of key technical factors that are expected to be investigated as part of groundwater basin management under SGMA, but which are not yet known.</p>	<p>In groundwater resources planning (i.e., under the Ordinance, CEQA and SGMA), drawdown is acceptable as long as it is not chronic and does lead to undesirable results (San Diego County, 2010; Ventura County 2011; Santa Barbara County, 2009). Groundwater extraction that is proportional to property size would be consistent with the concept of correlative groundwater rights.</p> <p>In groundwater resources planning (i.e., under the Ordinance, CEQA and SGMA), storage depletion is acceptable as long as it is not chronic and does lead to an inability to meet water demand for existing and permitted land uses during dry or critically dry periods. This concept is consistent with the California Water Action Plan, which embraces the concept of groundwater as a storage buffer against periods of drought. Groundwater level monitoring is typically used to assess change and trends in groundwater storage.</p>	<p>A threshold of 10% of the available aquifer volume as a trigger to implement groundwater monitoring is relatively conservative and will help to assure that groundwater management decisions are timely and based on reliable data. A cumulative storage depletion of less than 10% of the thickness in a pumped aquifer system relative to pre-pumping baseline conditions is not, by itself, expected to result in significant and unreasonable impacts, as long as other, potentially more drawdown-sensitive undesirable results are managed and preventive. As such, this threshold may be considered protective as long as the other thresholds and management actions in the well permitting program are being effectively implemented.</p>	<p>Groundwater levels and drawdown are key indicators of the health of an aquifer, and a direct way to demonstrate that groundwater extraction is sustainable under the Ordinance. A threshold of 10% of the pumped aquifer system thickness is probably near the upper range of what can be reasonably accepted prior to the performance of additional studies. An applicant has the opportunity to perform additional studies that establish more site specific management thresholds and actions which may be less restrictive.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective C:</u> Prevent depletion of available groundwater storage to where supplies are insufficient to support existing or permitted land uses during dry and critically dry years without potentially causing other undesirable results.</p>	<p>Thresholds and Actions B1 through B4 apply to Objective C as written.</p>	<p>Same as Thresholds and Actions B1 through B4</p>	<p>Same as Thresholds and Actions B1 through B4</p>	<p>Same as Thresholds and Actions B1 through B4</p>	<p>Same as Thresholds and Actions B1 through B4</p>
<p><u>Objective D:</u> Prevent degradation of water quality in excess of Water Quality Objectives for applicable beneficial uses in the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).</p>	<p><u>Threshold D1:</u> Installation of a well within a Groundwater Quality Protection Zone (an area where the County has determined special well design requirements are warranted to protect the existing quality of a ground-water resource) or within 1 mile of a reported contamination or spill incident.</p> <p><u>Action D1:</u> Implementation of well design requirements prescribed by the County, such as prohibitions against cross screening wells between different aquifer systems, or completion of wells to depths near saline groundwater.</p>	<p>The County designates Groundwater Quality Protection Zones where special well design requirements are warranted to protect the existing quality of groundwater from being. Such a zone has been designated to prevent the cross connection of the shallow and deeper aquifer systems in the area underlain by the Corcoran Clay as determined by the USGS. Other Groundwater Quality Protection Zones may be established in the future areas where pockets or strata of lower quality groundwater are found. This could include strata with elevated concentrations of nitrate, arsenic or uranium; areas near known groundwater contamination plumes; or areas where wells are completed to depths near the base of freshwater. The County will use available data regarding groundwater quality and hydrogeology, to identify Groundwater Quality Protection Zones where key resources may be at risk of degradation if special well design requirements are not implemented.</p>	<p>Special well design/completion requirements have been adopted by other jurisdictions including, for example, a prohibition in Fresno County and Merced County against screening new wells both above and below the Corcoran Clay.</p>	<p>Designation of Groundwater Quality Protection Zones subject to well design standards is a proactive means to prevent degradation of the water quality of key resources.</p>	<p>Well design standards are not unduly burdensome, but would provide a key benefit to the County's groundwater resources, and help to assure the high quality of groundwater is maintained for existing and future uses.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective D:</u> Prevent degradation of water quality in excess of Water Quality Objectives for applicable beneficial uses in the RWQCB Basin Plan.</p>	<p><u>Threshold D2:</u> Installation of a well within a Groundwater Quality Study Zone (an area where the County has determined special studies are warranted to protect the existing quality of a groundwater resource) or within 1 mile of a reported contamination incident or known area of relatively poor water quality.</p> <p><u>Action D2:</u> The Applicant shall conduct a Groundwater Quality Investigation sufficient to demonstrate that the proposed well, as designed, constructed and operated, will not result in, or contribute to, significant water quality degradation, significant migration of contamination, or interference with ongoing or planned groundwater remediation or quality protection programs.</p>	<p>One mile is the maximum search radius prescribed in ASTM Standard 1527 for assessing the potential of contamination-related impacts on sites under the EPA’s “All Appropriate Inquiry” standard. It is not likely that contamination incidents or groundwater impacts at greater distances will have an impact on a supply well. Groundwater Quality Investigations will identify potential migration pathways for contaminants and natural solutes, and aid in specifying design and operation requirements for supply wells that will avoid inducing capture and migration of contamination or degraded water. Formal Groundwater Quality Study Zones may be established in areas surrounding known and reported contamination incidents in the future. Pending the establishment of formal Groundwater Quality Study Zones, the need for such actions is determined by the County on a case-by-case basis during the well permitting process.</p>	<p>Groundwater protection zones have been designated by other jurisdictions in the San Joaquin Valley to protect key groundwater resources from contamination (e.g., City of Dinuba, 2004). Other jurisdictions in California have adopted guidelines and thresholds for evaluation of water quality impacts associated with groundwater extraction (San Diego County, 2007; Ventura County, 2011), and deed restrictions governing the installation of water supply wells are a common means to prevent potential migration of contamination that are adopted as part of groundwater remedial actions. Groundwater Quality investigations vary in scope depending on the issues at hand. See for example WorleyParsons Komex 2007a and 2007b.</p>	<p>Designation of Groundwater Quality Protection Zones is a proactive means to prevent degradation of key resources, interference with remedial actions, and potential exposure to hazardous chemicals.</p>	<p>Study and well completion requirements would be consistent with the level of potential risk by a proposed well and in most cases would not be unduly burdensome, but would provide a key benefit to the County’s groundwater resources. The database search required under the well permitting program is not overly burdensome, and will help to avoid potentially expensive impacts that have occurred at other well sites throughout the region.</p>
	<p><u>Threshold D3:</u> A Groundwater Quality Investigation determines pumping from a well has the potential to result in, or contribute to, significant water quality degradation, significant migration of contamination, or interference with ongoing or planned groundwater remediation or quality protection programs.</p> <p><u>Action D3:</u> The Applicant shall propose well construction and design specifications, monitoring and/or operating restrictions that prevent the identified water quality degradation, contaminant migration, or interference with groundwater remediation or protection programs.</p>	<p>Mobilization of contamination can result in groundwater degradation and complicate remediation efforts. To avoid this, reported contamination incidents are identified in proximity to the proposed well. Identified incidents are further evaluated to determine whether well completion requirements, coordination with remedial activities, and/or monitoring should be implemented to protect groundwater resources. The effectiveness of means to avoid entraining contamination by modifying well location, completion intervals or pumping patterns can be evaluated if the local hydrogeology is understood and the contamination incident or area of poor quality water is adequately characterized.</p>	<p>Assessment of contaminant fate and transport in proximity to wells is an established practice in groundwater quality management and remediation.</p>	<p>Proactive identification of reported contamination incidents allows implementation of protective well completion standards, coordination with remediation efforts and, where necessary, monitoring to verify that water quality degradation is not occurring.</p>	<p>A proactive, preventative approach to well design and operation saves considerable cost compared to implementation of remedial actions once contamination or poor quality water have been entrained or captured by a well, and can avoid the need to curtail pumping due to unexpected contamination in the future.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective E:</u> Prevent inelastic subsidence in that is cumulatively considerable. This is assumed to be subsidence in excess 2 inches. Inelastic subsidence less than this amount is not reasonably expected to interfere with surface land uses.</p>	<p><u>Threshold E1:</u> Installation of a well in a Subsidence Study Zone (within 2 miles of the Corcoran Clay subcrop boundary reported by United States Geological Survey (USGS)).</p> <p><u>Action E1:</u> Submit hydrographs for nearby wells and drawdown calculations to determine if groundwater levels will fall below historical lows outside property boundaries or near sensitive infrastructure.</p> <p><u>Threshold E2:</u> Threshold E1 applies and groundwater levels are projected to fall below historical low levels and the well will extract groundwater from the confined aquifer system or from the shallow aquifer system, if it contains more than 50 feet of clay strata.</p> <p><u>Action E2:</u> Conduct a Geotechnical Subsidence Investigation that establishes significant subsidence will not occur or provides recommendations to prevent significant subsidence.</p> <p><u>Threshold E3:</u> Drawdown beneath the property boundary is projected to exceed 5 feet at the property boundary or beneath sensitive infrastructure in the confined aquifer system, or 10 feet in the shallow, unconfined aquifer system.</p> <p><u>Action E3:</u> Implement a Groundwater Level and Subsidence Monitoring Program acceptable to the County.</p> <p><u>Threshold E4:</u> Measured inelastic subsidence near the site exceeds 2 inches.</p> <p><u>Action E4:</u> Curtail groundwater extraction and perform a Geotechnical Subsidence Investigation to determine the cause of the subsidence and the likelihood of continued subsidence, and that provides recommendations for prevention of subsidence that will significantly damage or interfere with surface land uses and infrastructure.</p>	<p>Reported subsidence in Stanislaus County has been limited to areas underlain by the Corcoran Clay, where groundwater extraction from highly confined aquifers beneath the clay has resulted in the dewatering of compressible clay deposits. The aquifers overlying the Corcoran Clay are not confined, so wells completed in these deposits are at substantially less risk of inducing subsidence, although it remains possible. In the eastern part of the County, most groundwater production is from semi-confined aquifers in the Mehrten Formation that are well consolidated and do not tend contain compressible clay deposits. Similarly, the alluvial fan deposits between the Mehrten Formation outcrops to the east and the Corcoran Clay subcrop area to the west tend to be unconfined to semi-confined, and not to contain significant compressible deposits.</p> <p>Establishement of thresholds</p>	<p>County designation of special study zones is a common way to address geologic hazards such as subsidence either through General Plan elements, other planning documents, implementation guidelines or zoning overlays. A subsidence threshold of 2 inches has been applied in CEQA mitigation monitoring programs at other sites (e.g., Genesis, 2011).</p>	<p>Requiring the performance of subsidence investigations will be protective of groundwater extraction in recognized subsidence hazard areas. In other portions of the County, subsidence has not been documented and is geologically unlikely. Subsidence of 2 inches is unlikely to result in significant interference with surface land uses or damage to infrastructure, and curtailing pumping at this threshold provides an appropriate degree of protection against a well potentially contributing to future significant impacts.</p>	<p>In subsidence hazard areas, investigations are warranted to evaluate the potential for undesirable results and modify the project or scale mitigation as appropriate. Investigations and mitigation can be scaled to the level of hazard involved (e.g., they would be more stringent for high volume pumping at depth in an area underlain by the Corcoran Clay and close to critical infrastructure, and less stringent elsewhere). Subsidence is an irreversible impact, so pumping curtailment is appropriate if monitoring indicates potentially significant subsidence may be in progress.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective F1:</u> Prevent depletion of surface water resources in excess of depletion thresholds established for the protection of aquatic life and as necessary to maintain existing surface water uses.</p>	<p><u>Threshold F1:</u> Installation of a well in channel deposits within a stream floodplain.</p> <p><u>Action F1:</u> Wells meeting the criteria of Threshold F1 are presumed to pump water from the stream unless demonstrated otherwise. These wells are not pumping groundwater as defined under the Groundwater Ordinance, but must be operated within the requirements of an existing surface water right.</p>	<p>Wells completed in a “known and definite channel” are regulated by the SWRCB as pumping surface water and are not regulated under the Ordinance. Such wells are typically located in floodplains close to streams.</p>	<p>It is not uncommon for pumping from wells in close proximity to streams to be regulated in this manner.</p>	<p>Shallow wells completed in channel deposits near streams have a strong and near-term effect on streamflow depletion. Regulation of groundwater extraction from such wells within the framework of surface water rights is protective of beneficial surface water uses.</p>	<p>Regulation of groundwater extraction from wells that pump from a known and definite channel under SWRCB’s surface water rights program is required by law. SRWQCB typically initiates this determination; however, it is not unreasonable for the County to require an applicant to approach the SWRCB water rights division as a first step to determining whether a new well should be regulated in this fashion.</p>
	<p><u>Threshold F2:</u> Installation of a well in a Surface Water Protection Zone: within 2,500 feet of a groundwater-connected stream or reservoir if the well is completed within the upper 200 feet of the aquifer system, or within 1 mile of a groundwater-connected stream or reservoir if the well is completed below the upper 200 feet of the aquifer system.</p> <p><u>Action F2:</u> The Applicant shall conduct a Surface-Groundwater Interaction Study to evaluate surface water impacts from well operations over the lifetime of the well. The study shall include an evaluation of aquifer conditions based on site-specific testing and include streamflow depletion estimated using analytical or numerical models. The report shall compare streamflow depletion and drawdown to acceptable thresholds that are protective of beneficial surface water uses, and recommend appropriate well construction and or operating requirements such that significant surface water depletion will not occur. In addition, the report shall include recommendations for implementation of a Surface-Groundwater Monitoring and Reporting Program with proposed thresholds and response actions, as appropriate.</p>	<p>Surface Water Protection Zones were established based on conservative aquifer models. In the absence of more specific studies, the determination where to set the boundaries of these zones was based on a conservative assessment that streamflow depletion by wells outside these zones would be well below measurable levels, and unlikely to cause significant and unreasonable effects. As such, wells outside these will not be further evaluated. Ten new wells were simulated to be located at the boundary of a Surface Water Projection Zone, and the projected stream flow depletion was found to be less than half of the typical error in stream flow measurements at gaging station. Although a more rigorous threshold is expected to be developed during development of GSPs, this threshold is considered conservative enough to prevent undesirable results in the interim because (1) the number of new wells installed prior to adoption of GSPs is likely to be far less, (2) streamflows are mandated to be maintained at minimum levels for protection of beneficial uses for habitat and species using reservoir releases, and (3) anticipated effects are well below measurable levels.</p>	<p>Surface water protection zones have been established under CEQA and NEPA studies, and proximity screening thresholds have been adopted in California in some jurisdictions (Napa County, 2015) and proposed for others (USGS, 2008).</p>	<p>Until thresholds for acceptable streamflow depletion are established, the use of thresholds developed based on the absence of measurable impacts is conservative and protective, especially since they are based on a level of groundwater development that is unlikely to be realized.</p>	<p>In order for an impact to be significant, it is generally accepted that it must be observable and measurable; however, with streamflow depletion, it is common to use calculated impacts. Establishing an interim threshold that triggers further study for wells with a potentially measurable impact on streamflow is reasonable in order to meet the requirements of the Ordinance, as long as the threshold is conservative enough to be protective in the interim period prior to adoption of GSPs.</p>

Rationale for Management Objectives and Thresholds used in Discretionary Well Permitting Under the Stanislaus County Groundwater Ordinance

Management Objectives	Management Thresholds and Actions	Technical Justification	Precedent (Example References)	Protectiveness	Reasonableness
<p><u>Objective F2:</u> Prevent drawdown that has a significant effect on groundwater-dependent ecosystems (GDE).</p>	<p><u>Threshold F3:</u> Installation of a well within 3 miles of a seep, spring, wetland, riparian habitat, phreatophyte woodland or other GDE.</p> <p><u>Action F3:</u> The Applicant shall conduct drawdown calculations to evaluate the amount of drawdown induced by the proposed well in the pumped aquifer beneath each GDE.</p> <p><u>Threshold F4:</u> The maximum predicted drawdown in the pumped aquifer beneath a GDE exceeds 0.5 foot at the time GSPs are scheduled to be adopted.</p> <p><u>Action F4:</u> The Applicant shall conduct a GDE Impact Study that shall evaluate the proposed well's impacts on groundwater levels, flows and surface discharges, as well as potential impacts on groundwater dependent vegetation, habitat and fauna. The impact study shall recommend appropriate well construction and or operating requirements such that significant impacts will not occur, or shall include recommendations for appropriate mitigation measures. In addition, the study shall include recommendations for implementation of a GDE Monitoring Program, as appropriate.</p>	<p>GDE flora and fauna tends to adapt to seasonal/periodic natural fluctuations in groundwater level and discharge. Seasonal groundwater level fluctuation in the shallow aquifer system in Stanislaus County is typically 5 to 10 feet, but may be as low as 2 feet and may exceed 40 feet in some areas, depending on local conditions and pumping patterns. Wells permitted under the program will draw water from the aquifer at depths of at 100 feet or more below ground level, and the actual drawdown experienced by GDEs at the ground surface will attenuate through sediments overlying the pumped aquifer.</p> <p>The ecological water requirements and thresholds of response to changes in groundwater levels differ among GDEs. Obligate phreatophytes, such as oak trees, are not expected to be significantly affected by less than 0.5 foot of drawdown. Similarly, the effect of the predicted amount of drawdown on riparian woodlands and wetlands that have significant surface water inflows from area streams, canals and drains is expected to be less than significant.</p> <p>A compilation of studies by The Nature Conservancy examined plant response of 17 herbaceous wetland indicator species to groundwater drawdown. Gradual loss of indicator species started with as little as 0.66 feet drawdown, with a median of 2.99 feet, and complete loss occurred at 6.23 feet (Gerla, P.A. et al. 2015. <i>Environmental Flows and Levels for Groundwater-Dependent Swale Wetlands of the Shiyenne National Grasslands, North Dakota</i>. The Nature Conservancy and the USDA Forest Service. Portland, Oregon).</p>	<p>GDE impacts caused by groundwater extraction are commonly evaluated under CEQA and NEPA and are required to be evaluated in some states (New Jersey, 2012). Screening thresholds for evaluation of groundwater impacts to GDEs have been adopted in California in some jurisdictions (Napa County, 2015). Risk assessment guidelines for GDEs developed by the state of New South Wales in Australia characterize impact risks associated with drawdowns that are less than seasonal fluctuations as low (NSW, 2012).</p>	<p>The drawdown threshold for further study is less than typical seasonal groundwater level fluctuations in the shallow aquifer in the county. Requiring the identification of GDEs within 3 miles of proposed well or the predicted 0.5 foot drawdown contour, and applying a threshold of 0.5 foot of drawdown in the pumped aquifer system to require detailed study and evaluation of mitigation will be protective of most GDEs while more detailed regional studies are undertaken. Impacts to potentially more sensitive wetlands will be evaluated on a case by case basis during the CEQA review process.</p>	<p>GDEs are sensitive to water table drawdown. The application of conservative assumptions to the establishment of zones where additional evaluation will be required in warranted in order to meet the requirements of the Ordinance.</p>

References: The examples referenced may be accessed at the following link: <https://www.dropbox.com/sh/36i328f657wlb09/AAAC2Ca03NXklWeYwghd-1U6a?dl=0>



DEPARTMENT OF ENVIRONMENTAL RESOURCES

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SUPPLEMENTAL APPLICATION FOR NON-EXEMPT WELLS

The following supplemental information is required for all wells that are determined not to be exempt from the prohibitions and requirements of the County Groundwater Ordinance effective November 25, 2014.

Applicant Information			
Name of Applicant:		Firm (if applicable):	
Address:	City:	State:	Zip Code:
Daytime Phone Number:	Fax Number	Email:	
Name of Owner (if different from Applicant):		Firm (if applicable):	
Address:	City:	State:	Zip Code:
Daytime Phone Number:	Fax Number	Email:	
Licensed Professional Information (Professional Engineer or Geologist)			
Name of Licensed Professional:		Firm:	
Address:	City:	State:	Zip Code:
Daytime Phone Number:	Fax Number	Email:	
License Type and Number:	Sections of Application Completed:		
Name of Licensed Professional:		Firm:	
Address:	City:	State:	Zip Code:
Daytime Phone Number:	Fax Number	Email:	
License Type and Number:	Sections of Application Completed:		
For County Use Only			

I. Location Map
<p>Provide a map or maps showing the following:</p> <ul style="list-style-type: none">A. Well locationB. Outline of property to be served by the well, and APN number(s)C. Outline of contiguous owned property surrounding the well location, and APN number(s)D. Streams and lakes within 2 milesE. Springs, seeps, wetlands and other Groundwater-Dependent Ecosystems (GDEs) within 3 miles or within the predicted area of 0.5 feet of drawdown on the date that a Groundwater Sustainability Plan will be adopted. (Use the drawdown analysis in Section IV, USGS topographic maps, aerial photo imagery available from the internet or other sources, state and federal wetland and hydrology databases, studies, County resources, or knowledge of the area to identify any areas where groundwater may be discharging to surface water or groundwater-dependent vegetation may exist.)F. Existing sewer lines, cisterns, septic disposal systems and animal confinements within 250 feetG. Concentrated Animal Feeding Operations (CAFOs) within 1 mileH. Reported hazardous materials and hazardous waste sites or release incidents within 1 mile (from Section VI.A.)I. Existing wells on the property, keyed to a table that provides well use, depth, diameter, screen interval, and pumping rate. If available, attach information regarding any specific capacity or other pumping tests completed.J. Predicted area of drawdown exceeding 0.5 and 5 feet (from Section IV, below).K. For proposed wells within 2 miles of areas underlain by the Corcoran Clay and completed below the depth of the Corcoran Clay, the location of any infrastructure within 2 miles that is potentially sensitive to subsidence. This includes, but is not necessarily limited to, canals, ditches, pipelines, utility corridors, and roads.
<p><u>For County Use Only</u> Data Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No Comments:</p>

NON-EXEMPT WELL CONSTRUCTION PERMIT SUPPLEMENTAL APPLICATION

II. Pumping and Water Use Data

Provide the following information regarding groundwater extraction from the proposed well.

A. For irrigation wells, use the following table to calculate the water demand to be served by the proposed well.

Crop Type	Irrigated Acres	Irrigation System Type	Irrigation Season Length (days)	Average Annual Demand (AFY)	Maximum Monthly Demand (MGM)	Peak Daily Demand (GPM)

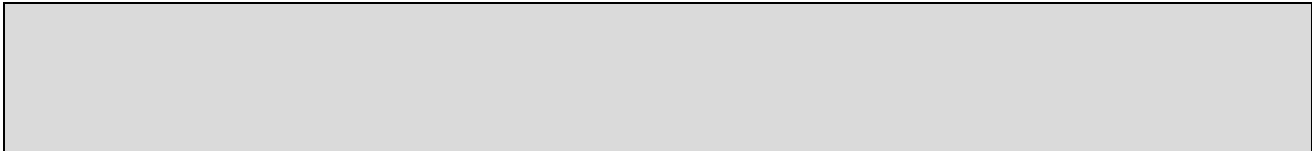
- B. Estimated pumping rate of proposed well: _____ gpm
- C. Anticipated pumping schedule for proposed well (hours per day, days per week, approximate annual start date and stop date for seasonal pumping):
- D. Estimated annual extraction volume: _____ gal
- E. Estimated cumulative extraction volume prior to January 1, 2022: _____ gal
- F. Estimated cumulative extraction volume in 20 years: _____ gal
- G. Planned water use: Irrigation Stock Domestic Municipal
 Industrial Other (describe): _____
- H. Size of area to be served by the well: _____ acres
- I. Size of contiguous owned property on which the well is located: _____ acres

For County Use Only

Data Adequate? Yes No

Comments:

III. Water Export
<p>A. Will groundwater extracted from the well be exported from the County, or substituted for surface water that will be exported from the County,</p> <p>B. If the attach a Groundwater Export Proposal that includes, at a minimum, the following:</p> <ol style="list-style-type: none">1. List the exemptions from Section 9.37.050 of the Groundwater Ordinance that apply and provide any substantiating evidence.2. Provide specific timeframes and conveyance mechanisms by which the groundwater will be conveyed out of the County.3. Indicate the purpose and use of such water at the terminal point of delivery.4. Indicate the methods used to monitor and report the volume of water to be exported.5. Explain whether the project involves exporting water during periods of emergency. (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.)6. Groundwater extraction for the purpose of emergency relief shall be monitored so that the volume of water exported can be determined.7. The duration of groundwater extraction for the purpose of emergency relief shall not exceed the time frame of the emergency.8. Groundwater extraction for the purpose of emergency relief does not set precedents or entitles the exporter to future exports.
<p><u>For County Use Only</u></p> <p>Data Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Comments:</p>



IV. Local Groundwater Level Decline

Provide distance-drawdown calculations for groundwater extraction from the proposed well. The approach taken may include calculations, spreadsheets, analytical computer models or numerical computer models, at the discretion of the Applicant. The DER can provide additional guidance if needed. Evaluation may consist of a simple one dimensional distance-drawdown calculation using the Theiss Equation, or more complex two and three dimensional approaches may be taken when the applicant feels that doing so is warranted and presents a more realistic assessment of potential impacts. Input parameters for aquifer properties (Transmissivity and Storativity) may be derived from local pump and aquifer tests, other site investigation data, the County’s well database, literature, or professional judgment based on the materials in which the well is completed. A description of the conceptual approach taken to the analysis must be provided, and justification must be provided for all inputs and assumptions to assure that impacts are not underestimated.

- A. Method used: Calculations Spreadsheet Computer Model
- B. Describe Approach (attach additional sheets, calculations and results):

C. Provide drawdown estimates for January 1, 2020 or 2022 (depending on subbasin as determined by DER) and after 20 years of pumping:

- 1. Distance to 0.5 feet drawdown: _____ feet (2020 or 2022 only)
- 2. Distance to 5 feet drawdown: _____ feet
- 3. Distance to 20 feet drawdown: _____ feet
- 4. Drawdown at the nearest property line: _____ feet
- 5. If the well is in a Subsidence Study Zone (within 2 miles of an area underlain by the Corcoran Clay) and completed in a confined aquifer system, maximum drawdown at the nearest ditch, canal, utility easement or other sensitive infrastructure: _____ (feature); _____ feet
- 6. Maximum drawdown at each GDE within 3 miles or less of the proposed well: _____ feet

For County Use Only

Data Adequate? Yes No

Comments:

V. Wells in a Groundwater Level Management Zone

If the proposed well is in a County-designated Groundwater Level Management Zone, the Applicant shall provide the following:

A. A Groundwater Extraction Offset Plan that demonstrates that the proposed groundwater extraction will be 100% offset. The scope of the Groundwater Extraction Offset Plan must be discussed with the DER and agreed to prior to implementation. The Plan shall include, at a minimum, the following:

1. The proposed method and location of offset;
2. The proposed timing and duration of offset;
3. Supporting calculations to demonstrate offset volume; and
4. Any assurances and/or agreements with other parties that verify their agreement to support the proposed offset.

OR B. A Groundwater Resources Investigation that demonstrates the proposed groundwater extraction will not cause or contribute to Undesirable Results in the Groundwater Level Management Zone. The scope of the Groundwater Resources investigation must be discussed with the DER and agreed to prior to implementation and, at a minimum, shall include the following:

1. A summary of previous studies and reports;
2. A summary of available information regarding undesirable results in the area;
3. Analysis of local and regional groundwater level trends based on available well hydrographs within no less than 5 miles of the proposed well;
4. Methods and data from any additional site specific hydrogeologic investigation;
5. An analysis of the local groundwater balance;
6. A prediction of future groundwater level drawdown and trends in the area with and without the proposed well;
7. Evaluation whether the proposed well will cause or contribute to undesirable results, and recommendations prevent them as needed; and
8. Signature by a Registered Professional Geologist or Registered Professional Engineer in California.

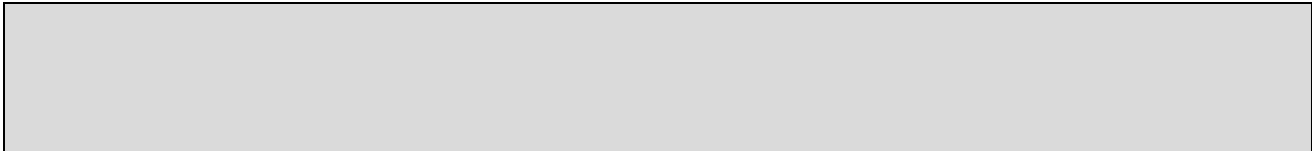
AND C. A Groundwater Level Monitoring Plan that includes, at a minimum, the following:

1. A description of the aquifers to be monitored;
2. A description of any existing or new wells to be used, their locations, construction specifications and completion depths; and
3. Water level measurement methods and frequency (minimum spring and fall).

For County Use Only

Data Adequate? Yes No

Comments:



VI. Regional Groundwater Level Decline and Storage Reduction

For all proposed well not located within a County-designated Groundwater Level Management Zone, the Applicant shall provide the following:

- A. Calculate available aquifer storage beneath the contiguous property owned by the Applicant on which the proposed well is located: _____ acre-feet

<u>Parameter</u>	<u>Value</u>	<u>Source/Justification (attach additional information as needed)</u>
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Size of Property (acres)

Aquifer Thickness (feet)

Specific Yield (assume 0.25 or provide justification for alternate value)

- B. Divide the cumulative groundwater extraction volume prior to January 1, 2020 or 2022 by the available aquifer storage calculated above: _____ %

- C. Divide the cumulative groundwater extraction volume for the first 20 years of well operation by the available aquifer storage calculated above: _____ %

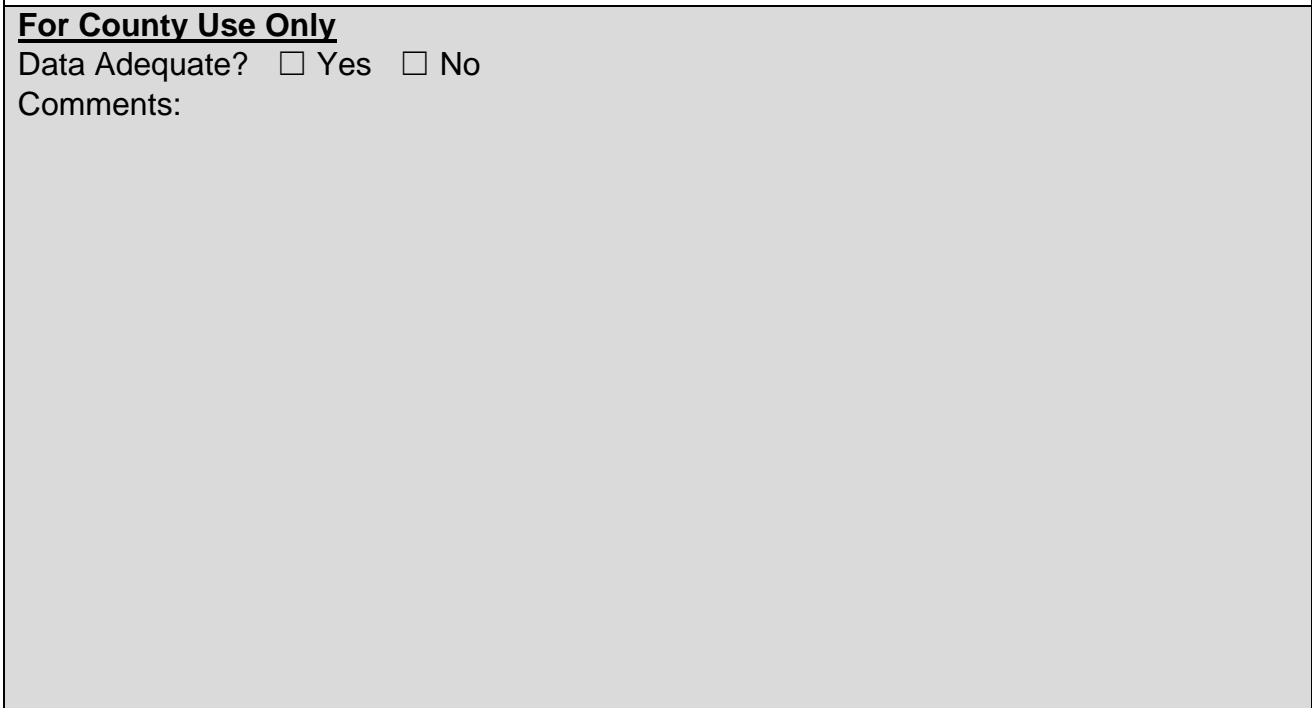
- D. If the cumulative extraction volume after 20 years exceeds 10% of available aquifer storage, submit a Groundwater Level Monitoring Plan that includes, at a minimum, the following:

- a. A description of the aquifers to be monitored;
- b. A description of any existing or new wells to be used, their locations, construction specifications and completion depths; and
- c. Water level measurement methods and frequency (minimum spring and fall).

For County Use Only

Data Adequate? Yes No

Comments:



VII. Water Quality Degradation
<p>A. Provide a database search for reported hazardous materials and waste sites and release incidents near the proposed well with search radii that comply with ASTM Standard 1527. (Commercial database search services provide this service.)</p> <p>B. Provide water quality data available within 1 mile of the proposed well for small water supply systems regulated by the County or the State, and from the State Geotracker website (http://geotracker.waterboards.ca.gov/) and from the USGS NWIS Database (http://maps.waterdata.usgs.gov/mapper/index.html).</p> <p>C. If the well is located in a County-designated Groundwater Quality Protection Zone (in an area underlain by the Corcoran Clay), the Applicant shall provide data regarding the well seals and construction methods used to prevent communication between the unconfined aquifer system overlying the Corcoran Clay with the confined aquifer system underlying the Corcoran Clay.</p> <p>D. If the well is located in a County-defined Groundwater Quality Study Zone (within 1 mile of a well that produces water with solute concentrations that exceed primary or secondary MCLs or other applicable Water Quality Objectives), or within 1 mile of a reported contamination incident identified by the database search, the Applicant shall submit a Groundwater Quality Investigation. The scope of the Groundwater Quality investigation must be discussed with the DER and agreed to prior to implementation. At a minimum, the Groundwater Quality Investigation shall include the following:</p> <ol style="list-style-type: none"> 1. A summary of relevant data, studies and/or reports regarding the local aquifer system, groundwater quality and contaminant transport; 2. Analysis of local and regional groundwater quality trends based on available data in the area; 3. The methods and results of any additional site-specific hydrogeologic and groundwater quality investigation; 4. Evaluation of the potential effect of the proposed well on future groundwater quality trends and contaminant migration; 5. Evaluation whether the proposed groundwater extraction will cause or contribute to groundwater quality degradation in excess of applicable standards for beneficial uses, or will interfere with groundwater quality management or remediation efforts overseen by State or Federal agencies; and 6. Signature by a Registered Professional Geologist or Registered Professional Engineer in California.
<p><u>For County Use Only</u></p> <p>Data Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Comments:</p>



VIII. Land Subsidence

- A. If the well is in a Subsidence Study Zone (i.e., it is within 2 miles of an area underlain by the Corcoran Clay), the Applicant shall provide the following:
1. The estimated maximum drawdown on January 1, 2020 and 2022 and after 20 years of pumping at the nearest property line, ditch, canal, utility easement other sensitive infrastructure: _____ ft on January 1, 2022 and _____ feet after 20 years.
 2. Attach hydrographs for nearby wells showing lowest historical groundwater levels. (Hydrographs are available from <https://www.casgem.water.ca.gov> and <http://maps.waterdata.usgs.gov/mapper/index.html>.)

Well ID	Distance and Direction from Proposed Well	Date Range of Data	Lowest Groundwater Level and Date

3. Attach data relevant to subsidence from the Groundwater Information Center Interactive Map Application (<https://gis.water.ca.gov/app/gicima/>)
4. If the above information indicates the predicted drawdown will lower groundwater levels below historical lows and the well will be completed in the confined aquifer system, or inelastic subsidence has been measured near the proposed well, the Applicant shall submit a Geotechnical Subsidence Investigation. The scope of the Geotechnical Subsidence Investigation must be discussed with the DER and agreed to prior to implementation. At a minimum, the Geotechnical Subsidence Investigation shall include the following:
 - a. A description of the local geology and hydrogeology, especially as it relates to potential compression of fine grained strata;
 - b. A summary of data, studies and/or reports regarding subsidence in the area;
 - c. Analysis of historical and current local and regional groundwater level trends based on available well hydrographs;
 - d. Prediction of future groundwater level drawdown and level trends;
 - e. Any additional site specific investigation performed by the Applicant of conditions related to subsidence;
 - f. Evaluation of whether, and to what extent, the proposed groundwater extraction will cause, or contribute to, subsidence, with recommendations as appropriate to assure that such subsidence will not be significant; and
 - g. Signature by a Registered Professional Civil or Geotechnical Engineer.

For County Use Only

Data Adequate? Yes No

Comments:

IX. Surface Water Depletion

If the well is in a Surface Water Protection Zone (within 1 mile of groundwater-connected streams, tributaries or reservoirs associated with the Calaveras, Stanislaus or Tuolumne Rivers if the well screen and gravel pack are completed within 200 feet of the streambed elevation, and within 2,500 feet if the well screen and gravel pack are completed at least 200 feet below the streambed elevation) the Applicant shall submit a Surface-Groundwater Interaction Study. The scope of the Surface-Groundwater Interaction Study must be discussed with the DER and agreed to prior to implementation. At a minimum, the Surface-Groundwater Interaction Study shall include the following:

- A. A summary of previous data, reports and/or studies relevant to hydrostratigraphy and surface-groundwater interaction;
- B. Additional site-specific investigation of conditions related to surface-groundwater interaction as may be required by the County, including but not necessarily limited to well-log interpretation or pumping tests;
- C. Evaluation of the predicted surface water depletion by the proposed groundwater extraction using on-line analytical models available from the USGS (<http://mi.water.usgs.gov/software/groundwater/strmdopl08/>) or other methods approved by the County; and
- D. Signature by a Registered Professional Geologist or Engineer in California.

For County Use Only

Data Adequate? Yes No

Comments:

X. Impacts to Groundwater Dependent Ecosystems (GDEs)

If drawdown at any GDE is projected to exceed 0.5 foot beneath a GDE based on the drawdown analysis in Section IV, the Applicant shall submit a GDE Impact Study. The scope of the GDE Impact Study must be discussed with the DER and agreed to prior to implementation. At a minimum, the GDE Impact Study shall include the following:

- A. A summary of applicable previous groundwater resources and GDE studies;
- B. A description of the groundwater flow regime and aquifer system, and the nature of the hydraulic connection between the pumped aquifer and the GDE;
- C. A description of the GDE based on literature review and site investigation, including species present, presence and condition of habitat, and potential presence of any sensitive, threatened, or endangered species or rare plants;
- D. Analysis of local and regional groundwater level trends based on available well hydrographs within no less than 5 miles of the proposed well;
- E. Any additional site specific hydrogeologic or biologic investigation performed;
- F. An analysis of the local groundwater balance and the impact of the proposed groundwater extraction on surface water discharge, including evapo-transpiration, if applicable;
- G. A prediction of future groundwater level drawdown and trends in the area with and without the proposed well;
- H. Evaluation and conclusions regarding the impact of the proposed groundwater extraction on the GDE, and recommendations to decrease impacts to a less than significant level; and
- I. Signatures by a Registered Professional Geologist or Engineer in California, and a qualified biologist.

For County Use Only

Data Adequate? Yes No

Comments:

INDEMNIFICATION

In consideration of the County's processing and consideration of this application for approval of the groundwater project being applied for (the "Project"), and the related CEQA consideration by the County, the Owner and Applicant, jointly and severally, agree to indemnify the County of Stanislaus ("County") from liability or loss connected with the Project approvals as follows:

1. The Owner and Applicant shall defend, indemnify and hold harmless the County and its agents, officers and employees from any claim, action, or proceeding against the County or its agents, officers or employees to attack, set aside, void, or annul the Project or any prior or subsequent development approvals regarding the Project or Project condition imposed by the County or any of its agencies, departments, commissions, agents, officers or employees concerning the said Project, or to impose personal liability against such agents, officers or employees resulting from their involvement in the Project, including any claim for private attorney general fees claimed by or awarded to any party from County. The obligations of the Owner and Applicant under this Indemnification shall apply regardless of whether any permits or entitlements are issued.
2. The County will promptly notify Owner and Applicant of any such claim, action, or proceeding, that is or may be subject to this Indemnification and, will cooperate fully in the defense.
3. The County may, within its unlimited discretion, participate in the defense of any such claim, action, or proceeding if the County defends the claim, actions, or proceeding in good faith. To the extent that County uses any of its resources responding to such claim, action, or proceeding, Owner and Applicant will reimburse County upon demand. Such resources include, but are not limited to, staff time, court costs, County Counsel's time at their regular rate for external or non-County agencies, and any other direct or indirect cost associated with responding to the claim, action, or proceedings.
4. The Owner and Applicant shall not be required to pay or perform any settlement by the County of such claim, action or proceeding unless the settlement is approved in writing by Owner and Applicant, which approval shall not be unreasonably withheld.
5. The Owner and Applicant shall pay all court ordered costs and attorney fees.
6. This Indemnification represents the complete understanding between the Owner and Applicant and the County with respect to matters set forth herein.

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

NON-EXEMPT WELL CONSTRUCTION PERMIT SUPPLEMENTAL APPLICATION

additional information is needed or requested, this will trigger another 30-day review period.

IN WITNESS WHEREOF, by their signature below, the Owner and Applicant hereby acknowledge that they have read, understand and agree to perform their obligations under this Indemnification.

Signature of Applicant/Date

Signature of Owner(s)/Power of
Attorney/Legal Representative/Date •

Note: Applications are not valid without the property owner's signature.

NOTICE TO ALL APPLICANTS

Pursuant to California Fish and Game Code §711.4, the County of Stanislaus is required to collect filing fees for the California Department of Fish and Wildlife for all projects subject to the California Environmental Quality Act (CEQA) unless a fee exemption is provided in writing from the California Department of Fish and Wildlife. Pursuant to California Fish & Game Code §711.4(d), all applicable fees are required to be paid within 5 DAYS of approval of any project subject to CEQA. These fees are subject to change without County approval required and are expected to increase yearly. Please contact the Department of Environmental Resources or refer to the current fee schedule for information on current fee amounts.

If a required filing fee is not paid for a project, the project will not be operative, vested or final and any local permits issued for the project will be invalid. (Section 711.4(c)(3) of the Fish and Game Code.)

Under the revised statute, a lead agency may no longer exempt a project from the filing fee requirement by determining that the project will have a de minimis effect on fish and wildlife. Instead, a filing fee will have to be paid unless the project will have no effect on fish and wildlife. (Section 711.4 (c)(2) of the Fish and Game Code). If the project will have any effect on fish and wildlife resources, even a minimal or de minimis effect, the fee is required.

A project proponent who believes the project will have no effect on fish and wildlife should contact the California Department of Fish and Wildlife. If the California Department of Fish and Wildlife concurs the project will have no such effect, the Department will provide the project proponent with a form that will exempt the project from the filing fee requirement. Project proponents may contact the Department by phone at (916) 651-0603 or through the Department's website at www.dfg.ca.gov.

Pursuant to California Fish and Game Code §711.4(e)(3) , the department (CDFW) shall assess a penalty of 10 percent of the amount of fees due for any failure to remit the amount payable when due. The department may pursue collection of delinquent fees through the Controller's office pursuant to Section 12419.5 of the Government Code.

Additionally California Fish and Game Code §711.4(f) states the following:
Notwithstanding Section 12000, failure to pay the fee under subdivision (d) is not a misdemeanor. All unpaid fees are a statutory assessment subject to collection under procedures as provided in the Revenue and Taxation Code.

Failure to pay the necessary fee will also extend the statute of limitations for challenging the environmental determination made by the County, thus increasing exposure to legal challenge. The type of environmental determination to be made by the County may be discussed with the project reviewer following the environmental review stage of the project and will be outlined in a Board of Supervisor's staff report.

NON-EXEMPT WELL CONSTRUCTION PERMIT SUPPLEMENTAL APPLICATION

REQUIRED ADDITIONAL FEE: STANISLAUS COUNTY RECORDER

Upon approval of the proposed project, Stanislaus County will record either a “Notice of Exemption” or a “Notice of Determination” pursuant to CEQA Guidelines. The Clerk Recorder charges an additional fee of \$57.00 for recording these documents. A separate check made payable to “Stanislaus County” is due and payable within 5 DAYS of approval of the project.