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SOUTH FORK KINGS
SUBSIDENCE MANAGEMENT PLAN

(revised 3/4/2026 version 0.7)

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1. Background and Purpose

The South Fork Kings Groundwater Sustainability Agency (SFK GSA or GSA) has prepared this Subsidence Management Plan to minimize and avoid subsidence across the GSA.

1.1. The Groundwater Sustainability Plan (GSP) establishes Measurable Objective (MOs), and Minimum Thresholds (MTs) related to land subsidence, as required by the Sustainable Groundwater Management Act (SGMA).

1.2. The Measurable Objectives and Minimum Thresholds in the GSP are described as annual rates of subsidence (measured as feet of change in ground level elevation per water year) and total cumulative feet of subsidence (change in ground level elevation) relative to 2023 land surface elevations and elevations in 2040. The GSA has also established Interim Milestones to reflect decreasing rates of subsidence over time on a glide path to minimize subsidence by the year 2040.

1.3. The GSP requires quarterly subsidence monitoring. If measured subsidence exceeds the annual Interim Milestone rate in any given year or critical infrastructure is impacted, the GSA will implement management actions in order to prevent further exceedance of subsidence rates that would prevent the GSA from limiting cumulative land subsidence within the allowable Minimum Thresholds. Exceedance of a Minimum Threshold is an undesirable result under SGMA that the GSA must manage groundwater pumping to avoid. Critical infrastructure is identified in the GSP.

1.4. The purpose of this Plan is to establish enforceable management actions to address subsidence, avoid exceeding the Minimum Thresholds, and minimize significant and unreasonable impacts to critical infrastructure.

1.5. The data evaluated over the last few years has shown that subsidence rates differ across the Tulare Lake Subbasin. Higher rates of subsidence appear to occur in or adjacent to areas where there is pumping from the lower aquifer. Therefore, this Plan implements subsidence management actions by area with priority given to areas where historical subsidence rates suggest a greater risk for exceeding the subsidence management goals.

1.6. To manage subsidence in the GSA, there is a need to gather more specific information about the pumping occurring in areas of the GSA where subsidence rates are highest.

1.7. Local and regional analyses of subsidence across the San Joaquin Valley have shown that the majority of observed subsidence is the result of pumping from the lower aquifer and the resulting compaction of the Corcoran Clay. Some subsidence may also result from pumping in the upper aquifer that may cause some compaction in shallower clay zones. This Plan will allow for tailored actions that reduce subsidence through pumping reduction.

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1.8. The SFK GSA has reviewed the Land Subsidence BMP developed by DWR and prepared this Plan, along with supporting policies, to be in general compliance with BMP guidelines.

1.9. The GSA recognizes that further technical data and analysis is needed including collection of data on pumping in the upper and lower aquifer. Therefore, the Plan may need to be amended over time to address new information or understanding regarding this challenging issue.

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2. Subsidence Monitoring and Management Areas (Areas):

The SFK GSA will use the Subsidence Monitoring Areas (Areas) as set forth in Exhibit A to address subsidence caused by groundwater pumping. This will allow for targeted monitoring, focused early actions, and corrective management to address specific wells or areas that are experiencing subsidence. SFK may adjust the Areas in the future as warranted at a noticed meeting.

3. High Risk Areas and Implement Early Action Management Plans

3.1. *Designation*: The SFK GSA Board will identify and designate High-Risk Subsidence Monitoring Areas based on based on measured subsidence data. An area will be considered "High Risk" if the cumulative subsidence exceeds 40% of the minimum threshold or if there are subsidence impacts to critical infrastructure. The High-Risk Areas, along with supporting information, will be presented at a public meeting and the GSA will maintain a record of the data supporting the designation. At a minimum, the Board will revisit the designations annually.

3.2. *Notice of Designation*: Within 60 days of the designation of a High-Risk Area, SFK GSA will provide notice of the designation to all landowners within the Area. The notice will provide the technical basis for the determination of the area as a High-Risk Area and will indicate the GSA's intention to develop and adopt a proposed Early Action Management Plan applicable to the Area.

3.3. *Early Action Management Plan*: SFK GSA will develop a proposed Early Action Management Plan for High Risk Areas. The Early Action Management Plan will include both landowner requirements and specific actions by SFK GSA, including one or more of the following:

3.3.1. *Landowner Well Registration and Metering*: The GSA shall require compliance with the Well Registration and Metering policies for all non-domestic wells within the High-Risk Areas. Landowners will also have to submit a third-party certification that an in-line flowmeter is installed correctly on the discharge pipeline of each well and is calibrated. The landowner is then required to upload month-end meter readings by the 10th of the following month to the GSA portal. From time to time, the GSA will conduct site visits to verify meter readings and meter installations.

3.3.2. *GSA-initiated Actions*: SFK GSA will identify and implement specific management actions to reduce pumping, increase recharge, and improve infrastructure to minimize further impacts from subsidence. Funding for these actions is intended to come from pumping fees collected by the GSA as well as grant funding that may be obtained. Priority actions that will be investigated by SFK GSA include:

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- Land repurposing programs in some areas. These actions will be coordinated with Kings County Planning Department.
- Deep aquifer injection to the lower aquifer (Aquifer Storage and Recovery) in suitable areas. These actions will be coordinated with SWRCB, RWQCB and Division of Drinking Water.
- Projects. These actions will likely occur primarily on private land but may include projects that will need to be coordinated with Kings County.

3.4. *Notice of Proposed Management Plan:* Concurrently with the Notice of Designation of a High-Risk Area, the GSA will provide notice of intent to adopt the proposed Early Action Management Plan to affected landowners, and provide a period of at least 45 days to submit written or verbal comment and input on the proposed Early Action Management Plan.

3.5. *Public Hearing/Adoption of Management Action*: After the public comment period, the GSA will hold a public hearing, at the conclusion of which it may adopt, amend, or decline to adopt the proposed Early Action Management Plan. In making its decision, the Board will consider technical data and information provided by the GSA staff and consultants and members of the public.

3.6. *Enforcement*: The GSA will establish an administrative record supporting its decision to adopt an Ealy Action Management Plan. Any landowner regulatory actions included in a plan will be considered an administrative enforcement decision, which can be appealed or enforced through judicial action.

4. Corrective Subsidence Management Orders

In areas where pumping is causing exceedances, the GSA will issue Corrective Subsidence Management Orders (CSMO) as part of an enforcement effort.

4.1. *Investigation*: The GSA will review subsidence monitoring data in all subsidence management areas quarterly to determine the threat of exceedance of Interim Milestones, Measurable Objectives and Minimum Thresholds. If the GSA determines that an Interim Milestone has been or could be exceeded across an Area, GSA staff will conduct an investigation to determine if pumping from one or more wells is contributing to the exceedance. A report on the investigation will be made available for public review.

4.2. *Notice of Exceedance*: If it is determined that pumping from one or more wells are causing the exceedance, the GSA will provide notice within 30 days to the identified well owner(s). This notice will indicate that, based on the draft report, the GSA intends to adopt a Corrective Subsidence Management Order for the identified well or wells. Landowners will then be given the opportunity to appeal the draft determination with a suitable technical analysis. Landowners will have 60 days to review and comment on the draft report.

4.3. *Corrective Subsidence Management Order*: GSA staff will develop a proposed Corrective Subsidence Management Order (CSMO) to be proposed for adoption by the Board, subject to review and comment by affected property owners and members of the public. The Corrective Subsidence Management Order will include the following elements:

4.3.1. If not already metered and registered, all non-domestic wells within the affected area shall be required to be metered and registered. Registration shall include

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designation of whether the well is extracting from the upper or lower aquifers or combination of both. Registration must also include delineation of areas that receive irrigation from each registered well.

4.3.2. Wells subject to the CSMO shall have the following restrictions of use:

(1) When 50% of the allowable cumulative subsidence in a subsidence management area has been documented to have occurred or impacts to critical infrastructure are noted that cannot be mitigated, no recharge credits pumping will be allowed in the lower aquifer. No transfers of groundwater credits into the affected area will be allowed. If surface water is available to the areas that receive groundwater irrigation, it must be used first, prior to any groundwater pumping. No new wells will be permitted in the lower aquifer.

(2) When 75% of allowable cumulative subsidence in a subsidence management area is documented to have occurred or impacts to critical infrastructure are noted that cannot be mitigated, no transitional pumping allocations will be allowed However, landowners may pump the remainder of their transitional allocation from the upper aquifer.

(3) When 100% of allowable cumulative subsidence in a subsidence management area has been documented to have occurred, landowners will be required to cease pumping from wells contributing to subsidence. To help the landowner mitigate or offset these impacts, the GSA will work with the landowners in these areas to take actions as described in Section 3.3.2 of this Plan.

4.4. *Reporting Data*: Landowners with wells subject to a CSMO shall directly report metered pumping data from designated wells and associated irrigated areas for accounting within the GSA groundwater accounting system. The GSA may conduct site visits from time to time to verify readings.

4.5. *Notice of proposed CSMO*: Either concurrently with the Notice of Determination of an Exceedance, or separately, the GSA will provide notice of intent to adopt the proposed CSMO to affected landowners and provide a period of at least 45 days to submit written or verbal comment and input on the proposed CSMO.

4.6. Public Hearing/Adoption of Management Action: After allowing at least 45 days of public review of a proposed CSMO, the GSA will hold a public hearing, at the conclusion of which it may adopt, amend, or decline to adopt the proposed CSMO. In making its decision the Board will consider technical data and information provided by the GSA staff and consultants as well as any technical data and information provided by affected property owners or interested members of the public.

4.7. Enforcement: The GSA will establish an administrative record supporting its decision to adopt a Corrective Subsidence management Order. Any adopted plan or order, including any landowner or well-owner obligations, will be considered an administrative enforcement decision, appealable and enforceable through judicial action.

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5. Impacts to Infrastructure

In order to effectively monitor and manage land subsidence under SGMA, the GSA will actively identify critical infrastructure that is likely to be impacted by decreasing ground surface elevations. In the context of SGMA and land subsidence, critical infrastructure refers to any land use or property interest within the Subbasin. In addition to identification of critical infrastructure, the GSA will actively track the magnitude of local subsidence to curtail imminent damaging impacts to critical infrastructure.

5.1. Infrastructure Management Action: The GSA will evaluate existing or potential impacts on infrastructure, by implementing the following actions:

(1) Identification of Critical Infrastructure: The Critical Infrastructure as identified in the GSP.
(2) On-going discussion with Infrastructure owners: The GSA will meet regularly with infrastructure owners to evaluate if impacts from subsidence are occurring.
(3) Impacts to infrastructure: If impacts to infrastructure are identified, then the GSA will launch an investigation to determine the source of the impacts.
(4) If the investigation determines that the impacts to the infrastructure are due to GSA activities, the GSA will review pumping allocations in the area of the impacts and implement targeted reductions.

5.2. Damaging Impacts: The impact criteria affecting critical infrastructure functionality includes but is not limited to:

- Physical damage
- Disruption of any design operating conditions
- Increased maintenance resulting from reduced operational flexibility
- Capacity reductions for either water conveyance or flood control
- Broader impacts to a subbasin reliant upon critical infrastructure

6. Data Gaps

This policy recognizes that additional data will be collected as SGMA implementation occurs across the GSA. In addition, the GSA will continue to evaluate the guidance suggestions presented in DWR Land Subsidence BMP as the document is finalized. The additional data and guidance from the BMP may require modifications to this Plan.

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7. Definitions

7.1. "Aquifer" means a body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant quantities of groundwater to wells and springs.

7.2. "Cumulative Subsidence" means the total measured decrease in ground surface elevation per water year relative to 2020 land surface elevations.

7.3. "Critical Infrastructure or Infrastructure" means any land use or property of interest that has been or is likely to be affected by land subsidence.

7.4. "Damaging Impacts or Impacts" means any impacts that disrupt the design functionality of critical infrastructure.

7.5. "Lower Aquifer" means the aquifer beneath the Corcoran clay (E-clay).

7.6. "Management Areas" means any land area(s) defined by natural or jurisdictional boundaries selected by the GSA to administer groundwater management policies or actions.

7.7. "Measurable Objectives" means the quantitative goals that reflect the basin's desired groundwater conditions and allow the GSA to achieve their sustainability goal by 2040.

7.8. "Minimum Threshold" means the quantitative value that represents the groundwater conditions at a representative monitoring site that, when exceeded individually or in combination with minimum thresholds at other monitoring sites may cause an undesirable result(s) in the basin.

7.9. "Subsidence" means inelastic subsidence which is the irreversible and permanent decline in the earth's surface due to the collapse or compaction of the pore structure within the fine-grained portions of an aquifer system.

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Exhibit A