

Technical Proposal

This Technical Proposal outlines the Geosyntec team's approach to developing and implementing the GWUMP Action Plan for the County's Non-District East (NDE) Management Area. Our focus is to deliver an implementable Action Plan by October 31, 2026, with a functional Phase 1 program in place by January 31, 2027.

The approach emphasizes a clear groundwater accounting framework, practical demand reduction strategies, stakeholder engagement, and a regulatory structure that can be implemented and expanded over time. We will work closely with the County, stakeholders, and the Stanislaus and Tuolumne Rivers Groundwater Basin Association (STRGBA) Groundwater Sustainability Agency (GSA) to develop a transparent, technically sound program that supports long-term implementation and adaptation.

Task 1 – Project Management

Project Manager – Len Mason, PG; Project Director – Mark Hanna, PhD, PE

Geosyntec, led by Project Manager Len Mason, will be responsible for day-to-day administration, client communication, and team coordination. The Project Director will provide high-level support to the Project Manager and team to maintain Project progress and alignment. The Project Team will provide project management services to support development and implementation of the GWUMP Action Plan for the NDE Management Area. Project management will focus on maintaining schedule, budget awareness, and coordination across technical tasks, stakeholder engagement, and County decision-making processes.

Key activities include project coordination, schedule tracking, budget monitoring, and regular communication with County staff. The Project Manager will lead biweekly or as-needed coordination calls with the County to review progress, discuss upcoming activities, and address challenges as they arise.

The Project Team will coordinate with County staff, subconsultants, and stakeholders to maintain alignment across workstreams and support timely delivery of key milestones. This approach allows for early identification of issues and clear communication to support informed decision-making. Project management costs, including assumptions, are included in the Cost Proposal.

Task 1 Deliverables:

- Preparation for and participation in a 30-minute biweekly or as needed progress status / check-in calls with the County, including:
 - Meeting agendas, project status summaries, and other meeting materials as necessary;
 - Meeting summaries and action items.
- Monthly invoicing, including Project Budget and Status Summary Report.

Task 2 – Technical Review of the Groundwater Use Management Program

Technical Leads: Mike Tietze Claudia Faunt, George Paul, Tara Rolfe

An independent technical review of the GWUMP will be conducted, including:

- Characterizing baseline land and groundwater use conditions.
- Evaluating the basis for the allocation allotment and management approach contained in the GWUMP.

Exhibit A: Technical Proposal

- Analysis of EKI's Technical Evaluation of Proposed Groundwater Allocation and Demand Management Framework.

Development of a baseline demand characterization is necessary to provide a context for the independent review and for development of demand reduction strategies and measurement approaches. The following tasks would be included:

- Evapotranspiration data available from OpenET would be assessed over a suitable baseline period that includes wet, dry, and normal years and that encompasses a relatively stable degree of agricultural development. The period is initially estimated to be from 2012 through 2021, but may be adjusted, as appropriate. A flow chart presenting the general approach is included in *Figure 1*.
- The data would be used to develop an understanding of baseline consumptive groundwater use in the NDE Management Zone.
- Analysis would include evaluation of spatial patterns, average cropped acre demand, average parcel area demand, and average demand for each major crop type.

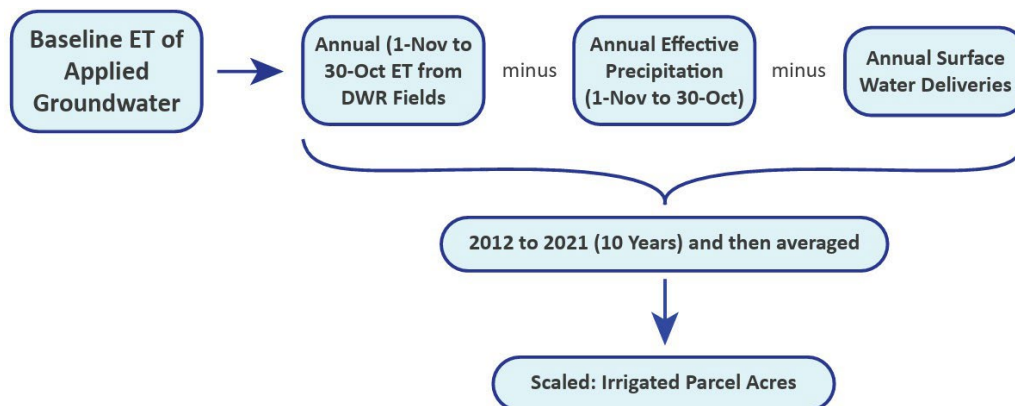


Figure 1 - Historical baseline groundwater use estimation

The next step in the independent review process will be to evaluate the basis for water budget, sustainable yield, and allocation development. This will include the following steps:

- The calibration and performance of the groundwater flow model used to develop the sustainable yield estimate and allocations will be reviewed, with a focused evaluation of the NDE Management Area.
- Evaluation of the model inputs and boundary conditions for reasonableness and compatibility with baseline ET, precipitation, recharge, and land use data.
- Analysis of zone water budgets and cross boundary flow conditions.
- Evaluation of potential gaps and uncertainties and resultant implications on modeling results.

The purpose of this technical review is to evaluate the technical basis of the GWUMP, including assumptions, methodologies, and development of sustainable yield and allocation approaches at both the subbasin and management area scales. The evaluation will consider whether the proposed allocations are technically sound, equitable, and feasible, and will inform development of the Action Plan. In making this evaluation, the comments and critique prepared by EKI will be considered, and recommendations will be provided, as appropriate.

In addition, the existing monitoring network will be reviewed to identify data gaps and assess

whether additional monitoring may be needed to support sustainability indicators and implementation of the Action Plan.

The results would be memorialized in a Technical Memorandum, discussed with the County, and considered during development of the Action Plan, as appropriate.

Critical to this task is a clear and transparent evaluation process. Key steps, datasets, assumptions, and limitations will be documented so the County and other stakeholders understand how conclusions are developed. This includes defining evaluation objectives, identifying data gaps, and clearly communicating how the evaluation results support Action Plan development.

Two coordination meetings will be conducted with the County, GSA, stakeholders, and associated consultants:

- The first meeting will present the evaluation approach, datasets, assumptions, and schedule.
- The second meeting will present preliminary findings, data gaps, and recommendations, along with a framework and timeline for Action Plan development and implementation.

Task 2 Deliverables:

- Technical Memorandum summarizing the GWUMP evaluation, including review of the EKI Technical Analysis, key findings, baseline groundwater use evaluation, data gaps, and recommendations to support Action Plan development and potential GWUMP/GSP refinements.

Task 3 – Development of an Action Plan for GWUMP Implementation in the NDE Management Area

Technical Leads: Mike Tietze, Len Mason, and Savannah Tjaden

Consistent with the Modesto Subbasin GSP, the County is committed to developing a GWUMP NDE Action Plan for County Board of Supervisors (Board) adoption by October 31, 2026, and implementation of the accounting and allocation program by January 31, 2027. Taking into consideration the tentative contract start date of August 6, 2026, the project team has approximately three months to prepare an Action Plan ready to be submitted to County staff and an additional three months to finalize the Action Plan, facilitate Board adoption, and incorporate its elements into an operational landowner facing groundwater accounting platform. Our proposed approach is organized to deliver an implementable Action Plan and functioning account platform by the January 31, 2027, timeline.

Accordingly, the consultant team recommends the Action Plan include a phased approach (*Figure 2*). The first phase would be centered on initial implementation of foundational program rules to meet the January 31, 2027 implementation deadline. The Action Plan will include a framework and timeline for a second phase focused on refining the program to include expanded policies and enforcement mechanisms as the first phase of the program is operational. The Action Plan will be developed and vetted through the input of an Ad Hoc working group of landowners and other stakeholders that the team will assist the County in forming and facilitating. The working group will first focus on developing a program that can be implemented during the first phase including establishing core program processes and procedures:

- How groundwater use will be monitored
- Preliminary allocation distribution
- Accounting methodologies and water accounts.

A beta version of the GAP will be available to the working group during Action Plan development, allowing discussions to access live data and workflows. A clear roadmap that describes that processes, milestones, and processes required to expand the program and enforcement and management actions during a second phase will be provided. The Action Plan will wrap up into a landowner-facing GAP that is ready for Phase 1 roll-out to growers in the NDE Management Area by January 31, 2027.

If requested by the County, the Ad Hoc working group will continue working during Phase 1 program implementation to refine the operational regulations and evaluate developing more complex policy elements for Phase 2 Action Plan development, including:

- Water transfers
- Demand management incentives
- Monitoring and enforcement
- Groundwater use fees or overdraft penalties
- Appeals policy.

If requested by the County, our targeted outreach and public engagement will expand during Phase 2 development to solicit broader landowner input for supporting transparent and iterative refinement as the program begins operation. If the County requests that Phase 2 Action Plan development be undertaken, a separate proposal will be prepared to cover the expanded scope of work.

Development of the Action Plan for GWUMP Implementation in the NDE Management Area includes the following subtask:

Subtask 3.1 – Development of a Groundwater Accounting Platform and Allocation Program

Technical Leads: John Burns, Savannah Tjaden, George Paul, Tara Rolfe

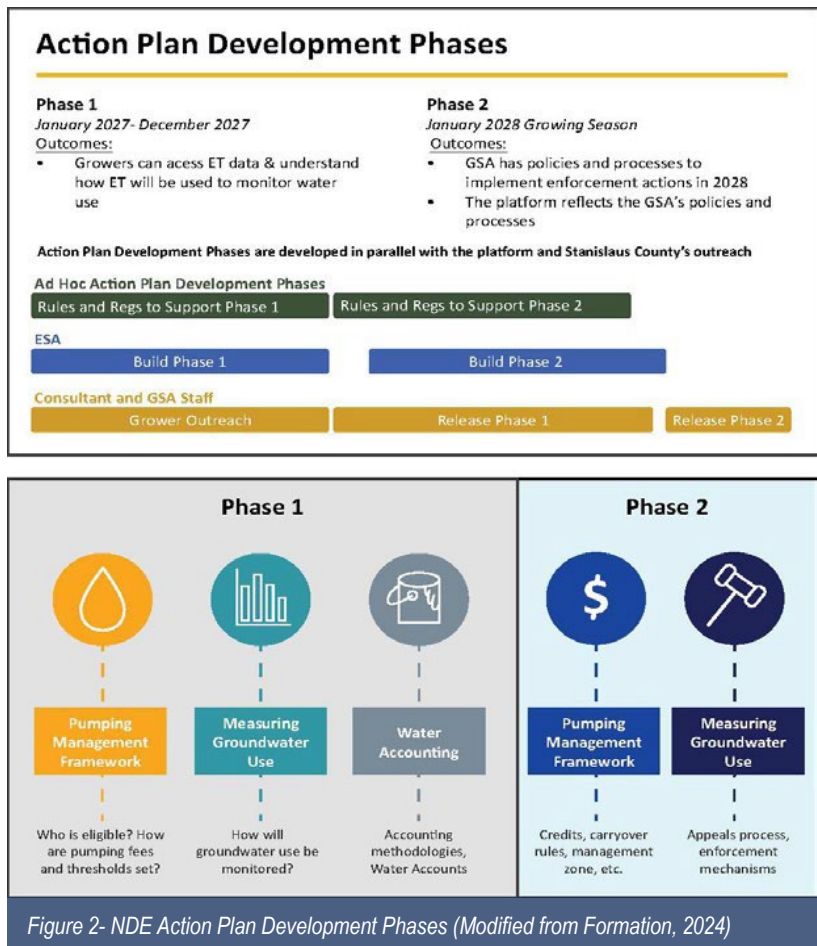


Exhibit A: Technical Proposal

The team will develop a landowner facing parcel- and field-level groundwater accounting and allocation program platform for the NDE Management Areas using the open-source GAP. The GAP will be configured specifically for NDE Management Area conditions, populated with parcel and field data, and integrated with ET-based consumptive use estimates and surface water delivery information. A beta configuration of the platform will be made accessible to staff and working group members to allow access to live data and workflows while developing the Action Plan.

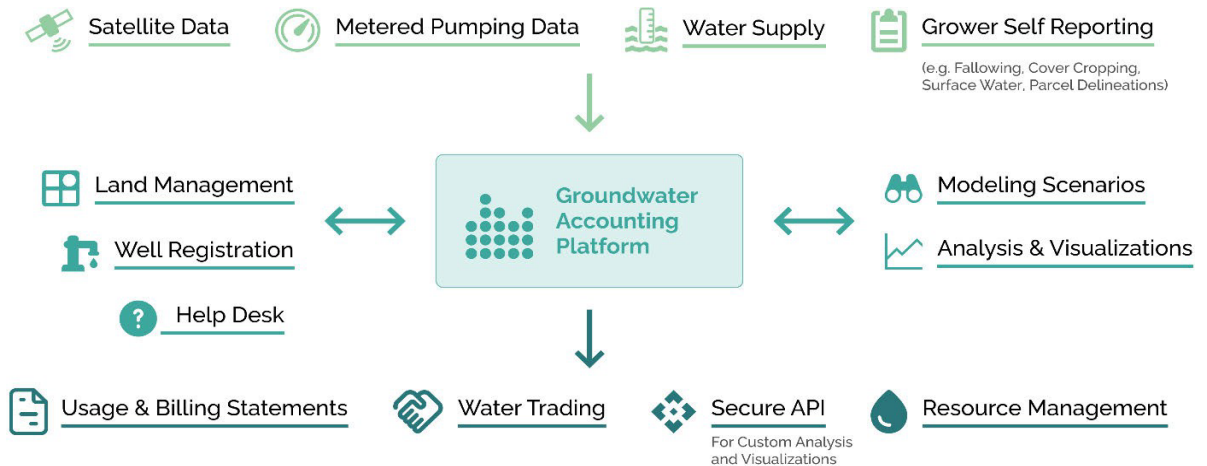


Figure 3. Groundwater Accounting Platform Framework (Source: ESA, 2026)

The GAP will support allocation administration, carryover provisions, and a transparent credit system addressing surface water use, groundwater recharge activities, and landowner trades, consistent with the Action Plan framework. Landowner-facing dashboards will display allocations, consumptive use, available credits, and parcel- and field-level water budgets, while administrative tools will support County and GSA review workflows, reporting, and compliance tracking. The consulting team will provide technical support to the Ad Hoc workgroup through Action Plan Development by demonstrating how proposed allocation methodologies, accounting rules, and credit structures function within the Platform, creating alignment between policy decisions and implementable system capabilities.

The consulting team will support early onboarding of the GAP for participants in the Ad Hoc workgroup during Action Plan development, with a full landowner rollout at program launch in 2027. Support will include delivery of an internal training session for County staff and consultants covering platform navigation, administrative workflows, and reporting features needed to support Action Plan development and facilitation of the Ad Hoc workgroup. The team will configure Water Account Personal Identification Numbers (PINs), allowing for secure distribution to landowners, enabling connection of their parcels to individual Water Accounts. In addition, the platform will be configured to produce clear, landowner-friendly Usage Statements that can be mailed to demonstrate groundwater accounting balances and illustrate how allocations, usage, and credits will be reflected under the program.

The consultant team will host and operate the GAP for the NDE Management Area, including providing database backups, uptime monitoring, security administration, and software updates. Platform hosting will begin January 1, 2027, and continue through June 30, 2027, with options for extension. Data within the Platform will be owned by the County and will not be shared with other parties without written consent of the County. Data will be accessible only by County staff, the Platform team, and users directly granted access by the County to their own data or as approved by the County. The County is entitled to a full export of all Platform data at any time.

Task 3 Deliverables

- Configured GAP for the NDE Management Area for implementation beginning January 31, 2027, that includes:
 - Loaded parcel and field special data
 - Configured water demand measurement sources and historical datasets
 - Water account administration tools and landowner-facing dashboards
 - Staff and consultant training sessions and supporting documentation.
- An Administrative Draft, Final Draft, and Final GWUMP NDE Early Action Plan that will provide a framework, milestones, and schedules for development of the full GWUMP NDE Action Plan for adoption by the County.
- A draft Administrative Procedures Handbook that consolidates all policies, rules, and regulations necessary for the full implementation and operation of the GWUMP NDE Action Plan, including GAP-related procedures.
- A summary outline detailing the staffing and program requirements, program cost estimates, and funding strategies for the long-term administration of the GWUMP NDE Action Plan.

Task 4 – Public Outreach

Another key component for successful Action Plan development and implementation will be outreach to NDE Management Area stakeholders and landowners. Not only will it be critical to inform the public and stakeholders about the goals of the Project, but potentially more difficult and critical will be to inform the public and stakeholders why we are working to collaboratively develop the GWUMP NDE Action Plan, and the potential implications and consequences if the goals are not met. As such, the consultant team will support and participate in public stakeholder and Board meetings as requested as described under Task 5.

The team will also assist with open and inclusive public workshops and meetings. To facilitate, the team will prepare meeting notifications and communication materials related to the project and develop and present technical materials on both lay and technical levels. There will likely be significant stakeholder comments, questions, and feedback throughout the development and implementation of the Action Plan and the team will document and respond to these communications.

Task 4 Deliverables:

- Preparation of outreach materials for both targeted landowner and stakeholder outreach and promotion of workshops and meetings. Two (2) workshops are included in the cost estimate for this task.
- Preparation of meeting agendas, discussion and presentation materials, and action items.
- Documentation and response to stakeholder comments, questions, and feedback.

Task 5 – Public Meetings and Meetings with County Staff

The consultant team will provide technical and policy support related to Action Plan adoption and implementation by attending and participating in Water Advisory Committee (WAC), STRGBA GSA committee, Board or other Public meetings, and/or County staff meetings, as necessary. The team will provide recommendations and support to County staff for Board of Supervisors agenda items pertaining to the adoption of the GWUMP NDE Action Plan and related policies, rules, and regulations.

Task 5 Deliverables:

- Preparation of meeting agenda items, discussion and presentation materials for public meetings and meetings with County staff and needed. Six (6) meetings are included in the cost estimate for this project.

Task 6 – As-Needed Technical Services

At the direction of the County, Consultant team will provide unforeseen support as needed related to GWUMP Action Plan development and implementation, including, but not limited to, the following:

- Coordination with qualified professionals, regional consultants, and Groundwater Sustainability Agencies (GSAs) to acquire representative data for subbasin conditions within the GSP that are relevant to this project.
- Provision of hydrogeological services as required to support GWUMP NDE Action Plan development and implementation.
- Preparation of a draft technical memorandum per year for County review and comment, including:
 - Incorporation of recommended County revisions and finalization of the technical memorandum as requested by the County.
- Identification of funding opportunities and support for grant applications, administration, and reporting, as requested by the County.

Task 6 Deliverables:

- Preparation of a Technical Memorandum as requested by County Staff.
- Deliverables for this task are dependent on as-needed technical services and could include technical studies, additional hydrogeological services, identification of funding opportunities and support for grant applications and administrative grant support. Prior approval from the County is required before any services are performed under this task. Actual costs shall be billed on a time and materials basis.