

**Pixley Irrigation District Groundwater
Sustainability Agency**

WATER MEASUREMENT & METERING

The landowners within the GSA utilize both surface water and groundwater to meet the needs of the business operations and producing agricultural products. A key component to manage the sustainability of groundwater is to measure quantitatively the total amount of water used by each landowner within the GSA. This will allow the GSA to track groundwater water usage by landowner which can then be correlated to the amounts allowed to achieve sustainability. The GSA will utilize satellite imagery to determine crop demands at the landowner level

Per the Pixley Irrigation District Surface Water Allocation Policy, adopted 8/8/19, the District has determined that imported surface water should be allocated proportionally to lands within the District on an annual basis. Since not all lands in the District are connected to the District canal system, the District policy is to accomplish such an allocation by annually allocating surface water as groundwater credits. Surface water, once actually delivered to lands with access to the District canal system and consumed by those lands through crop production would then be accounted for as a reduction against their allocated groundwater credits.

Total Crop Demand (Evapotranspiration or ET) is calculated by Cal Poly – ITRC – METRICS Program and will be provided by Cal Poly to the District on a monthly basis.

Consumption, based on the ET calculations will be tracked and will be available in the following sequencing:

- i. Precipitation Yield
- ii. Sustainable Yield
- iii. District allocated groundwater credits (per surface water allocation policy)
- iv. Transitional groundwater credits**
- v. Landowner developed groundwater credits**

**The sequencing of the Transitional water credits and Landowner developed groundwater credits can be switched at the landowner's discretion.

The satellite imagery used to determine the ET values, will be audited by the GSA through spot checking land use for cropping patterns and compared to District metered data.

**Pixley Irrigation District Groundwater Sustainability
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GROUNDWATER BANKING AT THE LANDOWNER LEVEL

Irrigation District Recharge

The irrigation district oversees and manages the surface water for the district, separate and apart for the Groundwater Sustainability Agency. The irrigation district recognizes the surface water supplied is very important to achieve groundwater sustainability and needed for the landowners to continue operations of their farms and that landowners need to be able to balance all of these resources to achieve sustainability under SGMA.

When Millerton Reservoir is in flood control operations and surface water beyond what is needed to meet irrigation demands is available, the irrigation district will maximize the use of these surface waters and divert these waters into the natural waterways, open channel canals, and district owned recharge basins. This will occur most often during above average water years when those waters cannot be stored and are released from local reservoirs. The surface water diverted and recharged into groundwater into district owned facilities is done to benefit all the landowners within the district without regard for specific credits under SGMA. Additionally, the irrigation district will continue to optimize the distribution systems to maximize the recharge of surface water while supplying surface water to landowners as efficiently as possible.

Landowner Groundwater Banking

During these periods of flood operations, and where surplus surface waters are deemed to be available by the District, landowners within the GSA can divert surface water into landowner owned designated recharge facilities for future groundwater credits as follows:

1. Water the landowner purchases from the irrigation District through regular surface water purchase procedures.
2. The District has established the following priority order of water service and related canal capacities:
 - Deliveries for irrigation demand
 - District recharge/banking for the benefit of all landowners
 - Landowner recharge/banking

When these periods occur, the landowner can bank this surface water that is recharged to groundwater under the following conditions:

Policy 2: Groundwater Banking at the Landowner Level

1. The surface water purchased must be applied directly to a specific groundwater recharge basin that meets the minimum GSA requirements for a groundwater recharge basin. The location of the basin must be registered with the GSA to receive any credits.
 - All surface water diverted to the landowner is required to be metered per GSA metering requirements.
 - Surface water diverted will be credited to the landowner at 90% of the surface water diverted. The remaining 10% credit will remain with the GSA for the benefit of all the landowners.
 - The groundwater credits issued to the landowners will be available and carried over to subsequent years. The term of the credits will be perpetual. The groundwater credits can also be transferred, sold, or leased to other landowners based upon the GSA groundwater transfer criteria.
2. Landowners can apply surface water above irrigation demand and generate groundwater credits as follows:
 - All surface water diverted to the landowner is required to be metered per GSA metering requirements.
 - Surface water diverted will be credited to the landowner at 90% of the surface water diverted. The remaining 10% credit will remain with the GSA for the benefit of all the landowners.
 - The groundwater credits issued to the landowners will be available and carried over to subsequent years. The term of the credits will be perpetual. The groundwater credits can also be transferred, sold, or leased to other landowners based upon the GSA groundwater transfer criteria.

Pixley Irrigation District Groundwater Sustainability Agency

WATER ACCOUNTING AND WATER TRANSFERS

To effectively achieve groundwater sustainability within the GSA and the Tule Subbasin, while maintaining the agriculture operations during the implementation of SGMA, each landowner within the GSA will be provided a baseline groundwater credit. These groundwater credits act as an individual water bank account for each landowner, allowing each landowner to decide how to feasibly and economically manage their farm operation within the rules established by the GSA and the Tule Subbasin.

Water Accounting:

To adequately track, monitor, and account for the water credits within the GSA, the following water budget will be established and monitored for each landowner¹ in the GSA:

Groundwater Credit Inputs:

Definition:

Tule Subbasin Sustainable Yield

Common Groundwater available to all landowners within Tule Subbasin, defined under Subbasin Coordination Agreement

Precipitation Yield

Annual average precipitation in the GSA, calculated from 1991 going forward. Precipitation yield credits are not transferrable.

Districted Allocated Groundwater Credits

Allocated by the Board annually. Based on water diverted for recharge by the District, along with canal seepage losses in District canals. Allocated amounts will be credited to landowners proportionally based on assessed acres.

Landowner Developed Credits

- Surface Water diverted by the landowner into a specified recharge basin, credited per criteria set forth in Policy 2: Banking at Landowner Level
- Surface Water over-applied by landowner beyond crop demand, credited per criteria set forth in Policy 2.
- Groundwater credits obtained from other landowners.

A credit or deficit for each landowner account will be accounted for on a monthly basis by the GSA.

Water Transfers:

Landowners may transfer groundwater water credits through either a direct sale or lease. The process for transferring groundwater credits is as follows:

1. Transfers within the GSA;

- Groundwater credits will be tracked at a land-based level. Transfers of any credits accrued to the land requires the written approval of the landowner to transfer.
- Groundwater credits can only be transferred by a landowner that has a positive balance in their groundwater budget. Deficit groundwater credit transferring is not allowed.
- For every one acre-foot of groundwater credit a Landowner transfers out of their account, they cannot use one acre-foot of Transitional Groundwater Credit in that year. They will regain access to the restricted Transitional Pumping amounts in the next year.
- A groundwater credit transfer is a one to one transfer within the GSA. Transfers outside the GSA are subject to the Coordination with other Tule Subbasin GSAs.
- All groundwater credit transfers require formal notification (GSA approved transfer template) and approval of the GSA. The GSA will keep an account of all transfers within the GSA Water Accounting Program. The sale or lease terms of the groundwater credits is between landowners and not subject to disclosure.

2. Transfers to other GSAs;

- General Provisions;
 - o Groundwater credits will be tracked at a land-based level.
 - o Groundwater credits can only be transferred by a landowner that has a positive balance in their groundwater budget. Deficit groundwater credit transferring is not allowed.
 - o For every one acre-foot of groundwater credit a Landowner transfers out of their account, they cannot use one acre-foot of Transitional Groundwater Credit in that year. They will regain access to the restricted Transitional Pumping amounts in the next year.
 - o Groundwater Credits can only be transferred and used in GSAs within the Tule Subbasin that have similar landowner-based groundwater accounting systems as the LTRID and Pixley GSAs.
 - o Groundwater credits may not be transferred or used outside of the Tule Subbasin.
 - o A groundwater credit transfer is a one to one transfer ratio.

- The maximum amount of groundwater transfers out of the GSA per year will be limited to 10,000 AF.
- The maximum amount of groundwater transfers accepted into the District per year will be limited to 10,000 AF.
- The annual Deadline to submit transfer requests is May 1 of each year.
- If the total transfers requested are in excess of the 10,000 AF annual limit, the transfers approved will be allocated on a per acre owned basis.
 - Example:
 - Grower A requests 6,000 AF transfer
 - Grower B requests 6,000 AF transfer
 - Grower C requests 6,000 AF transfer
 - Grower A owns 1,000 acres
 - Grower B owns 500 acres
 - Grower C owns 250 acres
 - Each landowner will be allowed to transfer 5.71 AF/AC (10,000 AF limit / 1,750 acres)

3. Administration and Approval

- a. All groundwater credit transfers require formal notification (GSA approved transfer template) and approval of the GSA. The GSA will keep an account of all transfers within the GSA Water Accounting Program. The sale or lease terms of the groundwater credits is between landowners and not subject to disclosure.
- b. There will be a \$100 fee, per transfer, charged by the GSA for administration and coordination with the other GSAs.
- c. In order to avoid undesirable results and avoid localized impacts, transfers in to certain areas may be limited or restricted even further by the GSA.
 - i. The Groundwater Planning Commission and Board of Directors will annually review the hydrographs at each Representative Monitoring Site in the GSA to determine such restrictions for that year.

4. Implementation of the terms of this entire policy will be reviewed and determined annually by the Groundwater Planning Commission and Board of Directors. The Board of Directors reserves the right to change terms of this policy at any time.

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TRANSITIONAL GROUNDWATER CONSUMPTION

To assist landowners with the transition to implementation of the Sustainable Groundwater Management Act, groundwater use and extraction above basin wide sustainable yield will be phased based on periodic reviews of the GSP per the guidelines of SGMA.

The GSA will provide access to a water accounting program to track all water credits including District allocated groundwater credits, landowner developed groundwater credits, sustainable yield credits, precipitation yield credits, surface water allocations and transitional water consumption.

During the period of GSP implementation, transitional water credits (groundwater consumption above other available credits), may be consumed consistent with the following criteria:

1. Use will be consistent with the policies established for avoiding the undesirable effects under SGMA;
2. Transitional water will be available based on the following sequencing:
 - i. Precipitation yield credits
 - ii. Sustainable yield groundwater credits
 - iii. District allocated groundwater credits
 - iv. Transitional water credits**
 - v. Landowner developed groundwater credits**

**The sequencing of the Transitional water credits and Landowner developed groundwater credits can be switched at the landowner's discretion.

3. Transitional water credits will be available based on assessed acres and made available in 5-year blocks.
4. Transitional water credits stay with the landowner to be used on properties within the GSA and cannot be transferred to other landowners. Tier 1 transitional water allocations can be transferred to lease tenants on an annual basis.
5. An upper limit for net groundwater use, including transitional water allocations, will be established. Exceeding this limit will result in fines and reduced allocations in the next year, per Policy #8 Implementation & Enforcement of Plan Actions.
6. There will be a phased approach to the availability of groundwater for transitional water. The GSP will provide for levels of groundwater consumption that will be higher during the initial phases and decreasing over time to reach sustainable consumption levels (as required by SGMA) by 2040. The amount of Transitional water available will be determined at the beginning of each phase.
 - a. The first phase of transitional water will be from 2020 through the 2025 (2 AF/Acre/year)
 - b. The second phase of transitional water will be from 2026 through 2030

Policy 4: Transitional Groundwater Credits

- (1.5 AF/Acre/year)
- c. The third phase of transitional water will be 2031 through 2035
(1 AF/Acre/year)
 - d. The final phase of transitional water will be from 2031 through 2040
(0.5 AF/Acre/year)
7. There will be a fee schedule for transitional water consumption. The fee schedule will be implemented as described below in 2020.
- i. Tier 1 of transitional water consumption is 50% of the total transitional water allocated for the period and shall be assessed a fee of \$90 per acre foot starting in 2021. The price will be adjusted annually by the Board based on a formula using the change in the Friant Class 1 water rate.
 - ii. Tier 2 is transitional water consumption over Tier 1, up to the total transitional water allocation and shall be charged a fee of two times the rate of tier 1 transitional water consumption.
 - iii. There will be no fee applied during 2020 for the first 2 acre-feet of Transitional water consumed. Consumption over 2 acre-feet during 2020 will follow the fee schedule above.

The above fee schedule is intended to serve as both a disincentive mechanism while also relating to the cost of mitigating the impacts of use of transitional pumping allocations. The above amounts, being based on the cost of Friant Class 1 water, were based in part on an analysis of replacement water costs, and in part on the costs of groundwater production as the basis for an effective economic disincentive. Further analysis and additional justifications for the level of the fee may be considered by the GSA between adoption of this policy and full implementation of the fee in 2021.

8. Revenues will be used to mitigate impacts and implement projects and programs including, but not limited to:
- Friant Kern Canal capacity correction
 - Surface water development
 - Additional recharge basin construction
 - Water conservation grants to GSA members
 - Land conservation and set-aside programs
 - Monitoring impacts and effects of groundwater pumping.
 - Other projects that may be identified by the GSA.

A specific plan of mitigation will be developed prior to full implementation of the fee in 2021 and will be based on relative levels of impacts that can be shown to be associated with transitional pumping. Additional analysis, including technical analysis of projected impacts together with costs of effective and reasonable mitigation measures, will be completed as part of GSP implementation.

Policy 5: Landowner Surface Water Imported Into the GSA

Pixley Irrigation District Groundwater Sustainability Agency

LANDOWNER SURFACE WATER IMPORTED INTO THE GSA

District Landowners may participate in water exchanges or transfers outside of the GSA boundary that result in surface water being available for direct use by the landowner. Use of that water by the landowner within the GSA requires the use of Irrigation District infrastructure to divert this surface water to their land.

This surface water that is brought into the GSA by the landowner will be tracked and accounted by the GSA and applied to the landowner's water budget according to the following procedures:

1. Surface water brought into the GSA and credited to the landowner will be subject to a loss/reduction factor as determined by the Irrigation District Board of Directors.
2. Surface water brought into the GSA will be delivered to the landowner based upon canal capacity. No surface water delivery brought into the GSA will interrupt or interfere with scheduled allocations of the District surface water supplies.
3. Imported surface water may be used for groundwater recharge subject to the policies of the GSP.

Pixley Irrigation District Groundwater Sustainability Agency

DISTRICT ALLOCATED GROUNDWATER CREDITS

One of the primary purposes of the Pixley Irrigation District is to enhance the groundwater resources that underlie the District through the importation of surface water. The District overlies the Tule Subbasin Groundwater Basin, which has been defined by the State of California as being in a state of critical overdraft. Since its formation in 1958, the District has imported as much surface water as possible to offset the use of groundwater for irrigation purposes and to replenish the aquifer through direct recharge via sinking basins, river channels and unlined canals. The District's efforts are funded through assessments and water charges paid by landowners in the District. The lack of access to a reliable surface water supply for Pixley means that providing water to landowners through both direct and in-lieu recharge in wetter years becomes a method for stabilizing access to water for the landowners of the District.

In 2014, the State of California passed the Sustainable Groundwater Management Act (SGMA), which regulates the use of groundwater in the State of California. Groundwater Sustainability Plans, under SGMA, are to be implemented by January 1, 2020. As part of the SGMA process, and consistent with the provisions of the California Water Code that are applicable to Irrigation Districts related to distribution of water resources among District lands, the District has determined that imported surface water should be allocated proportionally to lands within the District on an annual basis.

Historically, proportional distribution of the District's available surface water has presented a challenge in that not all the lands in the district have direct access to surface water. However, with the development of a GSP as required by SGMA, distribution of surface water on a District-wide proportional basis can now be accomplished by coordination with a groundwater allocation system. The approach taken in this Surface Water Allocation Policy is designed to provide proportional access of imported surface water to all lands in the District and not just those with access to the District's distribution system. To meet this goal, the surface water is allocated to all lands as an additional groundwater credit. Surface water actually delivered to lands with access to the canal system and consumed by those lands through crop production would then be accounted for as a debit against their groundwater credit balance.

Any District groundwater credit allocations will not be allocated to the landowners until a determination is made by the GSA Board that minimum threshold amounts identified in the GSP have been met.

1. Allocation will occur annually on January 1 based on the prior year surface water supply received by the District.
 - Allocation will be made in the form of groundwater credits.

Policy 6: District Allocated Groundwater Credits

- The amount of the allocation will be a maximum of 90% of prior year surface water deliveries to account for evaporation and the ability to meet the goals of the Groundwater Sustainability Plan.
 - The Board will address a variety of factors related to meeting the goals of the Groundwater Sustainability Plan before finalizing the allocation. As an example, if minimum thresholds of groundwater elevations have been exceeded, the leave behind factor may have to be greater and less water will be allocated.
 - Once the allocation is made, bills will be sent out at a per acre-foot rate set by the Board of Directors. If, in the future, the water costs become part of the land-based assessment, there will be no bills sent out with the allocation.
2. Allocations will be made to total developed, assessed acres. Class 6 lands will not receive an allocation.
 3. Use and transfers of groundwater credits must follow the policies adopted by the GSA.
 4. When surface water is made available, the District will make it available for irrigation purposes on a first come first served basis.
 - Each acre-foot of water consumed (ETc) by a landowner's crop through surface water delivered will result in an acre-foot of groundwater credit reduction from their groundwater account
 - Any water not delivered as irrigation demand, will be recharged by the District
 - Taking surface water will be on a voluntary basis
 - The price to access surface water will be set by the District and may be based on the approximate cost to pump groundwater, or other factors as deemed appropriate by the Board.
 5. During flood release and unlimited uncontrolled season operations, based on the amount of water available to the District, the District may make water available to landowners for purchase by the landowner, for on-farm recharge per Policy #2.

Pixley Irrigation District Groundwater Sustainability Agency

CSD & PUD Water Use within the GSA

A community service district (CSD) is an entity formed by residents of an unincorporated area to provide a wide variety of services to its residences, particularly water and wastewater management, along with many others. A CSD may be formed and operated in accordance with the Community Services District Law (Government Code §61000-61850), which was created to provide an alternate method of providing services in unincorporated areas.

The Public Utility District Act authorizes the formation of public utility districts (PUD) and authorizes a district to acquire, construct, own, operate, and control works for supplying its inhabitants with water and other critical components for everyday life.

Within the Pixley GSA boundary are the following CSDs and PUDs ("Community):

- Teviston CSD
- Pixley PUD

Each Community entered into an MOU with the Pixley GSA to cooperate on SGMA implementation. Consistent with Section 3 of the MOU, the Community will be considered within the boundaries of the Pixley GSA and included in the Pixley Groundwater Sustainability Plan.

Consistent with Section 6 of the MOU, Pixley will identify the Community as a separate management area. As its own management area, Pixley will specifically address the minimum thresholds and measurable objectives for the Community to achieve sustainable management.

Reporting of Community Water Use

Consistent with Section 7 of the MOU, the Community will provide Pixley the following information for determining the net groundwater usage of the Community:

On a quarterly basis:

- Each Community will submit the total of groundwater pumped from Community wells.
- Each Community will submit the total of water discharged to the wastewater treatment system that is treated and diverted to percolation/evaporation ponds

Minimum Thresholds and Measurable Objectives

The following will be considered the minimum thresholds and measurable objectives required by the Community to meet the sustainability for the implementation of the Pixley GSP for the period from January 2020 to January 2026:

Policy 7: CSD & PUD Water Use within the GSA

- The net of water pumped minus water discharged will be considered total Community water use
- The total of all treated water discharged to percolation/evaporation ponds, less 10%, will be available to the Pixley GSA for calculation and use in total Pixley GSA water balance.
- If the Community is providing any treated discharge to adjacent lands, the Community shall provide a regular accounting to the Pixley GSA that includes total volume amount discharged and APN(s) receiving the discharge.
- The water use will be reviewed through periodic updates to the GSP and will be compared to the available sustainable yield for the community and pumping limits acceptable to the GSA, as allowed under the regulatory code of SGMA.
- Community wells will include all wells used by the Community that are connected to the Community water distribution system.
- The Community and the GSA Board of Directors agree to cooperate on conditions of approval for future growth to ensure they are consistent with GSA and Community policies including pursuing grant funding opportunities, outreach and joint projects for developing additional water supply for the Community.

Pixley Irrigation District Groundwater Sustainability Agency

IMPLEMENTATION & ENFORCEMENT OF PLAN ACTIONS

This Groundwater Sustainability Plan (GSP) establishes the actions, which include the policies, projects, and implementation schedule, to achieve groundwater sustainability, in accordance with the Sustainable Groundwater Management Act (SGMA).

A major element of implantation is the establishment of the accounting system, the enforcement of regulatory fees related to that system of accounting, and identification of mitigation items to be funded through those fees. Regulatory fees, and the process for establishing them, are discussed in greater depth in Policy 4 related to Transitional Pumping policies. As noted in that policy, the level and justification for fees for transitional pumping are subject to continued analysis and decision making by the GSA governing body, and will be a major element of implementation of the GSP.

Regarding enforcement, for those landowners within the GSA who do not comply with the Actions of the GSP established to achieve sustainability, SGMA provides the GSA with the authority to enforce the approved actions. The Action of the GSP which are enforceable under the GSP include:

1. Failure to pay GSA assessments or groundwater consumption fees
2. Consumption of groundwater beyond the allowable limits set forth in the GSP
3. Failure to provide the GSA with required information

In the event of noncompliance by a landowner of the GSA, the following enforcement process will be implemented:

- At time a landowner is identified as not complying with the approved Actions of the GSP, a Notice of Non-Compliance (NONC) letter will be issued to the landowner. The NONC will identify the area(s) of non-compliance and request formal response from the landowner identifying plan to get back into compliance within 30 days.
- If the landowner does not respond to the NONC letter within 30 days, a Notice of Violation (NOV) will be issued to the landowner, stating that the landowner is now in violation of the GSP implementing SGMA. The NOV will request a meeting within 15 days to discuss a plan of action to meet compliance. At the time of issuing a NOV, an administrative fine of \$5 per acre fee will be assessed to that parcel(s) in violation, to be paid within 15 days.
- If a landowner has been determined to have consumed groundwater beyond the allowable limits, the landowner will receive a penalty of \$1,000 per acre-foot and a

Policy 8: Implementation & Enforcement of Plan Actions

reduction of groundwater credits will be applied to the landowner account. The reduction shall be the overage of consumption plus an additional factor of 1.5 times.

- If a landowner does not correct a NOV, a lien against the property will be filed by the GSA and the GSA will pursue action according to Water Codes Sections 25500- 26677

- If a lien has been filed against the property for outstanding balances (amounts added to assessments) from the previous year, then the landowner will not be served any surface water pursuant to Irrigation District policy.

- All fees collected will be used to for GSP implementation activities, including but not limited to, GSA administration and GSP project funding and implementation.

As with regulatory fees, all enforcement actions are subject to further refinement and definition as technical data and monitoring results are collected through the various management actions identified in the GSP.