Lower Tule River 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 as described in more detail below:

Calculate Groundwater Consumed using Evapotranspiration

To calculate the amount of groundwater consumed by the crop, the following equation is applied:

1. Total Applied Surface Water is supplied and metered by the Irrigation District.

2. Total Crop Demand (Evapotranspiration or ET) is calculated by a third party, using NASA LandSat satellite imagery.

    a. Consumption, based on the ET calculations will first be reduced by surface water deliveries, then accounted for in the following sequencing:
        i. Precipitation Yield
        ii. Sustainable Yield credits
        iii. District allocated groundwater credits
        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.

    b. If surface water applied is more than ET, the landowner will receive a credit for over application of surface water according to the following schedule:

        Over Application of Surface Water for Irrigation Purposes

i. The credit calculated using this equation will be tracked and will increase the landowner groundwater account managed by the GSA. For every acre-foot of over applied surface water,

   90% credit goes to the landowner account, 10% to the GSA.

ii. For all groundwater credits issued to the landowners from over application of irrigation water, the credits 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 policy.

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 available District metered data.

Lower Tule River Irrigation District Groundwater Sustainability Agency

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 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 districts 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 periods where surplus surface waters are available, landowners within the GSA can divert surface water into landowner owned designated recharge facilities for future groundwater credits. Surface water for banking can be:

1. Water the landowner purchases from the irrigation District through regular surface water purchase procedures.
2. Water rights water available to the landowner. E.g. Poplar Ditch share water
3. 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 this occurs, the landowner can bank this surface water that is recharged to groundwater under the following conditions:

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 also use District owned recharge facilities to generate groundwater credits subject to the following criteria:
    - The landowner provides water from available allocation, purchase or water rights
    - Use of the District recharge facility is subject to available capacity as determined by the District
    - Groundwater credits will be credited to the landowner account at 75% of the surface water diverted. The remaining 25% credit will remain with the GSA for the benefit of all the landowners.

Lower Tule River 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 landowner[1] 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.

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;
    1. 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.
    2. 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.
    3. 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.
    4. 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.
    5. 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;
        - Groundwater credits will be tracked at a land-based level.
        - 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.
        - 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.
        - Groundwater credits may not be transferred or used outside of the Tule Subbasin.
        - 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 into 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.

Lower Tule River Irrigation District Groundwater Sustainability Agency

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. Surface water allocation
    ii. Precipitation yield credits
    iii. Sustainable yield groundwater credits
    iv. District allocated groundwater credits
    v. Transitional water credits**
    vi. 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.
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 2024 (2 AF/Acre/year)
    b. The second phase of transitional water will be from 2025 through 2029

(1.5 AF/Acre/year)

c. The third phase of transitional water will be 2030 through 2034 (1 AF/Acre/year)
d. The final phase of transitional water will be from 2035 through 2039 (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 annually by the GSA.

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
    - Monitoring impacts and effects of groundwater pumping.
    - Other projects that may be identified by the GSA. (examples could include water conservation grants to GSA members, land conservation and set-aside programs, or any other projects the GSA deems appropriate to help meet the sustainability goal).

A specific plan of mitigation will be developed 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.

Lower Tule River 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.

Lower Tule River Irrigation District Groundwater Sustainability Agency

DISTRICT ALLOCATED GROUNDWATER CREDITS

The Irrigation District (District) owns and operates existing recharge basins. These basins, along with the open channel canal distribution systems, provide for both direct and indirect groundwater recharge. During times when surface water supplies beyond the irrigation needs of the landowners are available, the District uses the basins to divert the surface water for groundwater recharge. This happens most often in wetter years and comes in the form of Class Two under the Friant Contracts and flood releases from Lake Success. Recharge through channel loss in the distribution system occurs at all times when water is in the canals. These District owned facilities create additional opportunities for establishing groundwater credits beyond the Safe Yield of the Tule Subbasin.

Any groundwater credits developed through recharge basins and through loss in the distribution system remains with the District and will not be allocated in full to the landowners if a determination is made by the GSA Board that minimum threshold amounts identified in the GSP have not been met.

District Owned Land Based Groundwater Recharge Credits:

The lands owned through fee title by the irrigation district are allocated a sub basin wide Sustainable Yield. The Sustainable Yield allocated to District owned lands by virtue of being in the Tule Subbasin, may be re-allocated back to the District Landowners proportionate to the landowner's assessed acreage in the GSA.

Surface Water Recharge Groundwater Credits:

The imported surface water that is diverted for recharge by the District into District owned facilities (both recharge basins and canals) will be tracked and accounted as groundwater credits belonging to the District. The District will allocate these credits to lands within the GSA in the following manner:

- Up to 90% of the water diverted into the District groundwater recharge basins, and water accounted for as channel loss in the canals, will be available for allocation. The remaining 10% of the recharge water will not be allocated to landowners in the District as it is used to account for evaporation and other losses. Adjustments to the percent of recharge water allocated as groundwater credits may occur based on groundwater monitoring, avoiding undesirable results, and to help avoid minimum thresholds.
- The District will allocate the groundwater recharge credits proportionally to all landowners within the District by assessed acres. All District landowners pay an equal land based assessment and each landowner will be provided an equal groundwater credit based upon gross acreage owned within the District and irrespective of any

access to surface water that landowners may have through water rights, riparian water or any other surface water.

- The transfer or sale of the District groundwater recharge credits within the GSA will be permitted in accordance with Policy 3.

Lower Tule River 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 LTRID GSA boundary are the following CSDs and PUDs ("Community):

- Tipton CSD
- Woodville PUD
- Poplar CSD

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

Consistent with Section 6 of the MOU, LTRID will identify the Community as a separate management area. As its own management area, LTRID 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 LTRID 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 LTRID GSP for the period from January 2020 to January 2026:

- 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 LTRID GSA for calculation and use in total LTRID GSA water balance.

- If the Community is providing any treated discharge to adjacent lands, the Community shall provide a regular accounting to the LTRID 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 pursing grant funding opportunities, outreach and joint projects for developing additional water supply for the Community.

Lower Tule River 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 implementation 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 the 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

reduction of groundwater credits will be applied to the landowner account. The reduction shall be the overage of consumption plus a 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.