Definitions

Calculated Sustainable Yield: The average safe yield of the polygons in a combined safe yield area (af) divided by the total irrigated acres within a combined safe yield area (af/ac). For the purpose of Groundwater Demand Management, Calculated Sustainable Yield will be updated every 5 years.

Combined Safe Yield Area: The grouping of polygons in relation to their estimated quantity of groundwater that can be extracted. In each managed subbasin polygons within the same range (af) of safe yield will be grouped together for the purpose of demand management. The ranges are: -5000 or less, -5,000 to -1,000, -1,000 to -500, -500 to 500, 500 to 1,000, 1,000 to 5,000, 5,000 to 50,000, 50,000 to 100,000, 100,000 to 500,000 and greater than 500,000.

Demand Management: GSA actions, rules or programs that are intended to avoid minimum thresholds, prevent undesirable results, and incentivize long-term sustainability by reducing the pumping of groundwater.

GSA: Groundwater Sustainability Agency. The Flood Control and Water Conservation District is the GSA for Tehama County.

GSP: Groundwater Sustainability Plan. Each managed subbasin in Tehama County has an associated GSP.

Management Action: A specific action taken by the GSA to reduce the use of groundwater.

Measurable Objective: (MO) As defined in each subbasin GSP.

Minimum Threshold: (MT) As defined in each subbasin GSP.

Polygon: Flat, two-dimensional shape bounded by straight lines. For the purpose of Groundwater Demand Management, polygons are the specific areas by which the resource is managed and are created using the Thiessen method surrounding (a single point) RMP/RMS.

RMP/RMS: Used interchangeably within the various GSPs, Representative Monitoring Points or Representative Monitoring Sites are facilities that are monitored for groundwater level at least twice per year (spring and fall). RMP/RMS are the single point used in the creation of Thiessen Polygons. Prior to December 30, 2030, and reviewed in five-year intervals thereafter, the Tehama County Flood Control and Water Conservation District Board of Directors, based on recommendations from the Groundwater Commission and staff, will ratify by resolution a network of RMP/RMS, with appropriate MO and MT, for the purpose of Groundwater Demand Management. RMS/RMP should contain 10 years of somewhat consistent monitoring.

Safe Yield: The estimated quantity of groundwater (in af) that can be safely extracted in a polygon. Safe Yield is calculated as average pumping +/- average change in storage. For the purpose of Groundwater Demand Management averages are 10-year rolling ending with the previous water year data.

Target Assumed Maximum Pump Rate: Each Groundwater use type (ex; crop variety, commercial, residential etc.) will be assigned, as part of the GSA fee structure and prior to December 30, 2030, an assumed pump rate (af/ac). The use type assigned with the highest assumed pump rate will be the Target Assumed Maximum Pump Rate. Any assumed pump rate can be replaced with actual reported volume via meter.

Trigger: A set point at which a Demand Management Action is initiated.

Fees And Actions Associated With Trigger based Demand Management

In the interest of achieving sustainable groundwater extraction within all Subbasins partially or entirely within Tehama County. The Flood Control and Water Conservation District (District), acting as the GSA, has created a secondary level of demand management, consisting of two Management Actions, to be adopted immediately but become effective on January 1, 2031. This will allow the primary method of demand management, incentive based demand reduction, to be initiated and tested.

Management Action Number 1 is intended to reasonably distribute the costs of more intensive administrative actions, by the District associated with persistent groundwater overdraft in defined areas. Examples of these costs are automated monitoring systems for RMP/RMS sites, increased efficiency and reduction measures, study, design and implementation of other project and management actions along with public education on next steps. It is assumed that an increase in the cost to manage groundwater along with greater action by the District will result in less total extraction.

Management Action Number 2 is a legal restriction on extraction greater than the calculated sustainable yield. This action will result in reduced extraction by ordinance. By recalculating the sustainable yield on a five year basis it creates flexibility and allows for the application of new data as it is collected.

The ordinances for both management actions will have a means for the effected party to contest them.

This program does not address water trading, except contiguous parcels as would be allowed in current Tehama County water use ordinances. A separate water trading ordinance will be adopted by the District Board of Directors prior to December 30, 2030.

Management Action Number 1: Reduce Use of Groundwater When Groundwater Levels Decline Below Measurable Objectives. The following management action will reduce the likelihood of undesirable results related to the chronic lowering of groundwater levels, reduction in groundwater storage, and land subsidence through increased administrative action by the GSA. This management action will take place in a series of steps according to how far groundwater levels deviate from the measurable objective.

Step 1: If greater than 20% of the annual range (spring maximum measurement to fall minimum measurement) of groundwater elevation declines below the measurable objective levels established at 50% or more of the RMPs for two consecutive years in a combined safe yield area, then the target assumed maximum pump rate (af/ac) will be reduced by ten percent (10%). All measured or assumed pumping greater than the target assumed maximum yield will incur an increased administrative fee as detailed in the Tehama County Flood Control and Water Conservation District groundwater management fee structure.

Step 2: If greater than 40% of the annual range (spring maximum measurement to fall minimum measurement) of groundwater elevation declines below the measurable objective levels established at 50% or more of the RMPs for two consecutive years in a combined safe yield area, then the target assumed maximum pump rate (af/ac) will be reduced by 20 percent (20%). All measured or assumed pumping greater than the target assumed maximum yield will incur an increased administrative fee as detailed in the Tehama County Flood Control and Water Conservation District groundwater management fee structure.

Step 3: If greater than 80% of the annual range (spring maximum measurement to fall minimum measurement) of groundwater elevation declines below the measurable objective levels established at 50% or more of the RMPs for two consecutive years in a combined safe yield area, then the target assumed maximum pump rate (af/ac) will be reduced by forty percent (40%). All measured or assumed pumping greater than the target assumed maximum yield will incur an increased administrative fee as detailed in the Tehama County Flood Control and Water Conservation District groundwater management fee structure.

Step 4: If greater than 100% of the annual range (spring maximum measurement to fall minimum measurement) of groundwater elevation declines below the measurable objective levels established at 50% or more of the RMPs for two consecutive years in a combined safe yield area, then the target assumed maximum pump rate (af/ac) will be reduced by eighty percent (80%). All measured or assumed pumping greater than the target assumed maximum yield will incur an increased administrative fee as detailed in the Tehama County Flood Control and Water Conservation District groundwater management fee structure.

Administrative activity is expected to decrease as groundwater levels increase. If groundwater levels recover to a higher step (lower in number) for two consecutive years, then the target assumed maximum pump rate will be adjusted to that step. If Groundwater levels rise above the measurable objective for two consecutive years, then the target assumed maximum pump rate will be removed entirely.

Upon adoption of this Demand Management Plan, the Board of Directors of the Tehama County Flood Control and Water Conservation District will, within 180 calendar days, adopt an ordinance creating the steps outlined above and initiating the process to place fees for increased administrative actions required due to falling groundwater levels with a start date of January 1, 2031.

Management Action Number 2: Sustainable Yield Pumping. This action will occur in conjunction with action number 1 and is intended to prevent extraction above sustainable yield from causing undesirable results and sustained water levels below the measurable threshold.

If, over any two year period, in any RMP the groundwater falls below the Measurable Threshold of that RMP; the entire combined safe yield area containing that RMP will be restricted to the average safe yield of all polygons within the combined safe yield area. Independently of measurable threshold, if undesirable results, as defined in the GSP containing the combined safe yield area, occur at any time, within any combined safe yield area, the entire combined safe yield area will be restricted to the average safe yield of all polygons within the combined safe yield area.

The average safe yield of the combined safe yield area will be the calculated sustainable yield for the entire combined safe yield area and will be calculated as follows:

1. Each Thiessen Polygon within a combined safe yield area will be assigned a calculated total safe yield (acre-feet).

2. The calculated total safe yield will be divided by the total irrigated acres.

3. The resulting acre-feet/acre will be the safe yield in a polygon.

4. The safe yield for each polygon within a combined safe yield area will be added together and divided by the total number of polygons within the combined safe yield area.

5. The resulting number (acre-feet/acre) will be the calculated sustainable yield for the entire combined safe yield area.

6. The sustainable yield will be recalculated every five years starting January 1, 2031 to account for changes in land use and projects within the combined safe yield area.

Under Sustainable yield pumping, all groundwater extractors will be limited to the calculated sustainable yield, total acre-feet/acre for all acreage within contiguous Assessor Parcel Numbers, under one ownership, serviced by one or more extraction facilities. Total extraction may be either reported or assumed. Contiguous Assessor Parcel Numbers, under one ownership, that fall within multiple combined safe yield areas will fall under the most restrictive combined safe yield area.

If Sustainable Yield Pumping is triggered, it will remain in effect until three conditions are met: Condition 1, no existing undesirable results as defined in the GSP containing the combined safe yield area. Condition 2, a minimum of two years with groundwater levels in all RMPs within the combined safe yield (SY) area remaining above the Measurable Threshold. Condition 3, conditions for Step 1 of Management Action Number one are **not** met.

Upon adoption of this Demand Management Plan, the Board of Directors of the Tehama County Flood Control and Water Conservation District will, within 180 calendar days, adopt an ordinance creating an, up to, $500 per acre foot fine for all groundwater, either assumed or measured, extracted beyond the sustainable yield for all extractors within any combined safe yield area under sustainable yield pumping restriction.