

Tracy Subbasin Groundwater Sustainability Plan Technical Committee Meeting

Thursday, October 15, 2020

1:00 PM to 3:00 PM

Teleconference Meeting Only

Teleconference Link: <https://global.gotomeeting.com/join/516953669>

Phone Number : +1 (571) 317-3122

Access Code: 516-953-669

AGENDA

I. Introductions

II. Scheduled Items

- A. Review of Technical Committee September 17, 2020 Meeting Minutes –
Discussion Item (5 min)
- B. Discussion on Public Outreach and Engagement Activities – *Discussion Item (10 mins)*
- C. Discussion of Public Comments Received on Groundwater Sustainability Plan Chapters 1-3 and Chapter 4 – *Discussion Item (5 min)*
- D. Discussion of Groundwater Sustainability Agency Comments on Groundwater Sustainability Plan Chapter 5 – *Discussion Item (15 min)*
- E. Briefing on Groundwater Management Area Approach – *Discussion Item (25 min)*
- F. Discussion on Chapter 7 – Groundwater Monitoring Network and Chapter 8 – Overview and Process for Sustainable Management Goals, Criteria and Setting Thresholds – *Discussion Item (10 min)*
- G. Discussion on Groundwater Sustainability Plan Development Status and Schedule – *Discussion Item (5 min)*

III. Agency Updates

IV. Next Groundwater Sustainability Plan Coordination Meeting Date – November 19, 2020

V. Next Groundwater Sustainability Plan Technical Committee Meeting Date – December 17, 2020

Meeting Notes
Tracy Subbasin
Groundwater Sustainability Plan Technical Working Committee

September 17, 2020
1:00 PM to 3:00 PM

Teleconference Meeting Only

Teleconference Link: <https://global.gotomeeting.com/join/560738109>

Phone Number: +1 (646) 749-3122

Access Code: 560-738-109

I. Introductions

- i. David Weisenberger, Banta-Carbona Irrigation District Groundwater Sustainability Agency (GSA)
- ii. Nick Janes, Byron-Bethany Irrigation District GSA
- iii. Bill Brewster, California Department of Water Resources
- iv. Greg Gibson, City of Lathrop GSA
- v. Lemar Saffi, City of Tracy GSA
- vi. Michael Callahan, San Joaquin County GSA
- vii. Matt Zidar, San Joaquin County GSA
- viii. Kirsten Pringle, Stantec

II. Scheduled Items

A. Technical Coordination Meeting Minutes, July 16, 2020.

- The draft minutes from the July 16 Technical Coordination Meeting were included in the meeting packet. There were no comments or suggested revisions on the draft minutes.

B. Public Outreach and Engagement Activities.

- The next public workshop will be held in November and focus on sustainable management criteria and the groundwater monitoring network.
- There was a reminder that outreach activities, including presentations to governance bodies and boards of directors, should be recorded through the Tracy Subbasin website.

C. Public Comments Received on Groundwater Sustainability Plan Chapters 1-3 and Chapter 4.

- There were no public comments received on Chapters 1 – 3 or Chapter 4.

D. GSA Comments on Groundwater Sustainability Plan Chapter 5.

- Richard Shatz, GEI, provided an overview of the comments provided by the GSA representatives on the draft Groundwater Sustainability Plan (GSP) Chapter 5. Mr. Shatz received comments from Greg Young, Byron-Bethany Irrigation District and Westside Irrigation District, and Greg Gibson, City of Lathrop. Comments from San Joaquin County are pending. Comments on the draft GSP chapter addressed multiple topics included managed wetlands and groundwater-dependent ecosystems, groundwater quality, and seawater intrusion.
- Mr. Shatz described the differences his team identified between the groundwater contours included in the draft Tracy Subbasin GSP and Final Delta-Mendota Subbasin GSP. The contours suggest a difference in inter-basin flows between the two subbasins. The group decided to schedule a meeting with representatives of the Delta-Mendota Subbasin to discuss further.
- Mr. Shatz also described the differences between the groundwater contours included in the draft Tracy Subbasin GSP and Final Eastern San Joaquin Subbasin GSP. The group decided that the differences were not significant enough to pursue a meeting with the Eastern San Joaquin Subbasin.

E. Chapter 7 – Groundwater Monitoring Network.

- Chapter 7 of the Tracy Subbasin GSP will discuss the groundwater monitoring network. Mr. Shatz provided an overview of the purpose of representative monitoring wells.

F. Chapter 8 – Overview and Process for Setting Sustainable Management Goals, Criteria and Thresholds.

- Chapter 8 of the Tracy Subbasin GSP will discuss the sustainable management criteria (SMC) for the Subbasin. Mr. Shatz provided an overview of the content, purpose, and process for developing the SMC.
- The group discussed approaches for setting SMC for the portion of the Subbasin located in the Sacramento-San Joaquin River Delta (Delta), due to the region's unique hydrologic and geologic conditions. One approach is to define management areas and set different SMC for each management area. Another approach is to provide a clear explanation in the GSP of why the SMC for the Delta area is set differently. Any approach should take into account the input of the beneficial users and other stakeholders in the Delta area.

G. Discussion on Groundwater Sustainability Plan Development Status and Schedule.

- Next steps to development the draft GSP include developing the SMC and identifying representative groundwater wells for the groundwater monitoring network.
- Development of the water budget is on hold due to the delay in release of the CV2SIM Fina Grid Model Version 1 from DWR. Mr. Shatz suggesting using the CV2Sim Beta Model. The group agreed with this approach.

III. Agency Updates

- Greg Gibson, City of Lathrop, noted that new Urban Water Management Plan Guidebook identifies the need for coordination between urban water management plans and groundwater sustainability plans. Mr. Gibson noted that the updated water demand factors for the City of Lathrop would not be available until July 2021. Mr. Shatz and Matt Zidar, San Joaquin County, suggested using the existing water demand factors and including the new factors in future GSP updates.

IV. Next Groundwater Sustainability Plan Technical Committee Coordination Meeting Date – October 15, 2020**V. Next Groundwater Sustainability Plan Coordination Meeting Date – November 19, 2020**

Agenda Item E – Briefing on Groundwater Management Area Approach

As described in the previous chapters, the Delta and non-Delta areas at the Tracy Subbasin have different hydrogeologic and hydraulic conditions. In consideration of these different conditions, two management areas are defined for the Tracy Subbasin. The following information from the GSP Emergency Regulations are provided for guidance for the development of Management Areas and whether monitoring would be required along with establishment of sustainability criteria. According to the GSP's Emergency Regulations Monitoring Network and Sustainable Management Criteria Subarticles, monitoring networks, minimum thresholds, and measurable objectives do not have to be established if undesirable results are not present or likely to occur:

Section 354.20. Management Areas.

(a) ...Management areas may define different minimum thresholds and be operated to differently measurable objects than the basin at large, provided that undesirable results are defined consistently throughout the basin.

(b) A basin that includes one or more management areas shall describe the following in the Plan:

(1) The reason for the creation of each management area.

(2) The minimum thresholds and measurable objectives established for each management area, and an explanation of the rationale for selecting those values, if different from the basin at large.

(3) The level of monitoring and analysis appropriate for each management area.

(4) An explanation of how the management area can operate under different minimum thresholds and measurable objectives without causing undesirable results outside the management area

(c) If a Plan includes one or more management areas, the Plan shall include descriptions, maps and other information required by this Subarticle sufficient to describe conditions in those areas.

Subarticle 4. Monitoring Networks. Section 354.34 (j) An agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26 shall not be required to establish a monitoring network related to those sustainability indicators.

Subarticle 3. Sustainable Management Criteria. Section 354.26(d) An Agency that is able to demonstrate that that undesirable results related to one or more sustainability indicators and are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.

The Tracy Subbasin has described conditions, in the previous sections, as Delta and non-Delta areas, similar to areas defined by Water Code 12200, but with the non-Delta area extended to the edge of the Subbasin. The Subbasin encompasses an area of about 540 square miles in San Joaquin and Alameda counties. The Delta area consists of numerous islands within an area of about 194 square miles. Waterways surrounding each island provide a constant source of recharge to the groundwater system.

Most of the Tracy Subbasin is within the legally defined Delta Boundary (Figure 7-1) and is divided into Lowland and Upland areas. Water Code 12200 enacts a law specific to this area and is necessary for the protection, conservation, development, control and use of the waters in the Delta for the public good. Flows in the Delta waterways are maintained at levels to maintain freshwater in these waterways and prevent salinity intrusion. For this GSP, the Delta area is similar to Lowland areas within the Legal Delta Boundary, but the Non-Delta area includes both the Upland areas and those areas that extend outside of the Legal Delta Boundary to the edge of the Subbasin.

Delta Management Area

The Delta islands are a unique area in the state of California, where groundwater is a nuisance because it has to be drained or pumped away because crops cannot live with roots under water constantly. Most of the Delta islands ground surfaces are below mean sea level. The water is pumped back into the adjacent waterways. There is always a direct and constant connection between surface water and groundwater, requiring management of groundwater levels (dewatering) within the islands. There are hundreds of diversions that divert surface water from the adjacent waterways surrounding the islands for agricultural purposes, as shown on Figure 7-2, and therefore groundwater use in these areas is minimal.

Beneficial users of the minimal groundwater use in the Delta islands are agriculture, domestic, municipal, and environmental uses. However, the users of groundwater are sparse:

- About 60 percent of the area (about 110 square miles) have no domestic wells and another 20% of the area (36 square miles) have only one domestic well per square mile (Figure 3-12).
- Over 80 percent of the area (155 square miles) have no agricultural wells. Where present, 15% of the area has a density of 1 well per square mile (29 square miles) and only 6 square miles have 2 to 3 wells per square mile (Figure 3-14).
- Over 96 percent of the area (187 square miles) have no municipal supply wells (only 7 wells in the entire area and where present occur at a frequency of 1 per square mile) (Figure 3-16).
- Most potential GDEs and managed wetlands in the Subbasin occur in this area, due to the shallow and stable groundwater and plentiful surface water (Figure 5-24).
- Most of the DACs in the Subbasin are in this area and rely upon domestic wells or are importing water as many areas have no domestic wells. No wells were reported to have gone dry during the 2012 to 2016 drought years.

There are no foreseeable changes to land use in the area (no new urban area developments within the islands) other than the current planned River Islands development in the Stewart Track. If the Delta Tunnels are constructed, dewatering and increased groundwater use will have to be mitigated by the owners, and therefore is not a short- or long-term impact to the Subbasin.

There have been no undesirable results (as defined in Chapter 8 Monitoring Network) as related to sustainability indicators and not are likely to occur in this management area:

- There have been no chronic lowering of groundwater levels. Groundwater levels fluctuate with tidal levels in the adjacent waterways, always remaining within a narrow range. Because of the adjacent waterways the groundwater level (shown in yellows and green colors) trends are flat (Figure 7-3). River gage stage data are also shown on some of these hydrographs (blue color) to illustrate the relatively constant heads.
- There has been no reduction in storage (as shown by hydrographs on Figure 7-3).
- There is no surface water depletion. The entire area is connected to surface water and water that is pumped out of the islands is returned to the adjacent waterways. Otherwise the islands would become submerged.
- Land subsidence has not occurred due to groundwater extraction. Subsidence is due to natural oxidization of naturally occurring peat (decaying organic layers) (as described in Section 5.8 Subsidence).
- Groundwater quality is of naturally poor quality (TDS and manganese exceeding the MCLs, along with other elements as shown on Figures 4-15 and 4-22) due to natural conditions (peat deposits). There are no manmade contamination plumes within the Delta and therefore groundwater would not be degraded with Projects or Management Actions.
- No seawater intrusion. The area is not in a coastal area near sea water. Surface water invasion of brackish water has been resolved by construction and managed releases from

dams to maintain freshwater in the waterways (as discussed in Section 5.7 Seawater Intrusion) and is not likely to reoccur in the future.

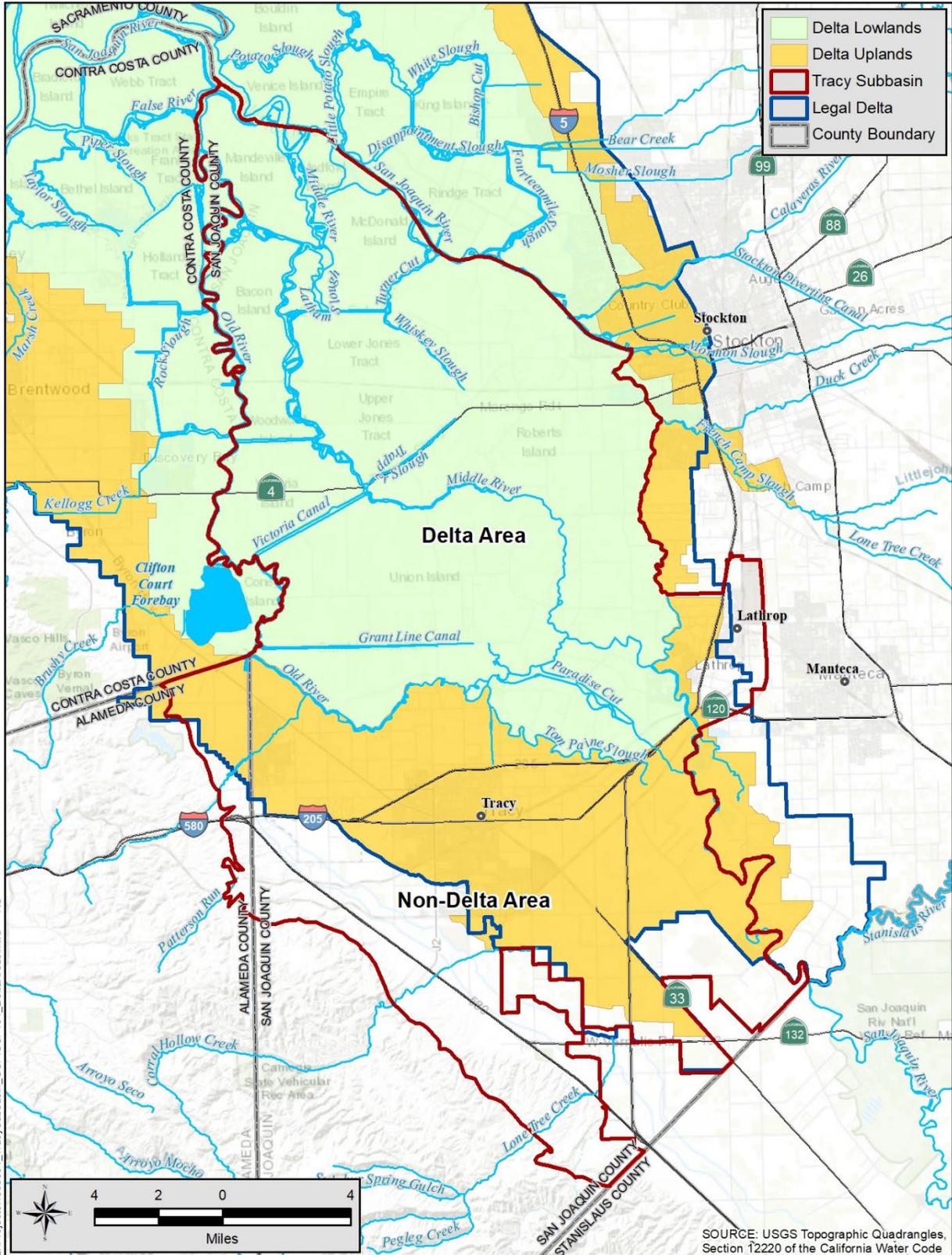
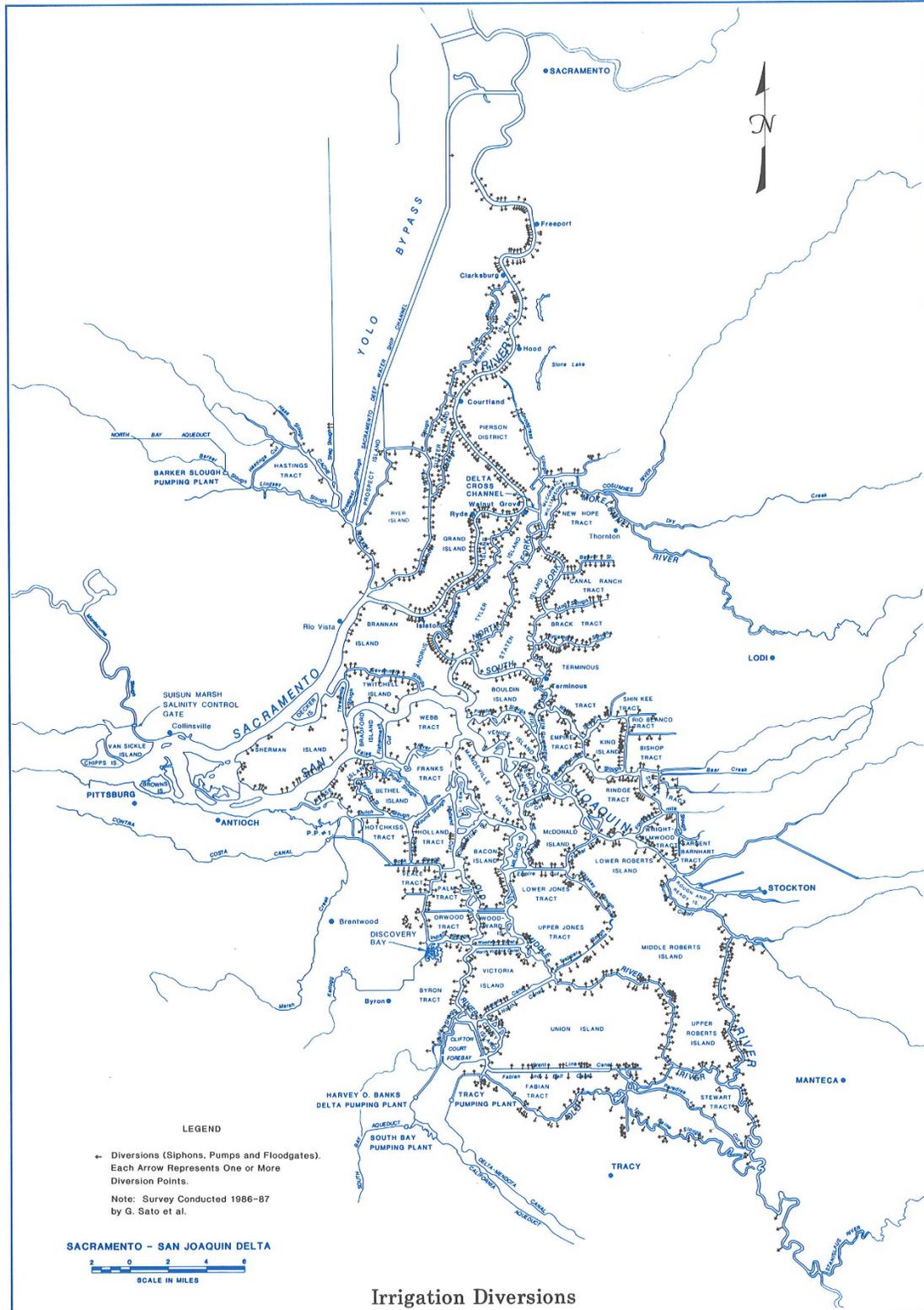


Figure 7-1. Delta and Non-Delta Areas



Sacramento-San Joaquin Delta Atlas

Department of Water Resources

Figure 7-2. Surface Water Diversions

Monitoring

Because there have been no undesirable results for each of the sustainability indicators in this area and none are likely to occur in the future, groundwater monitoring is not necessary to have this portion of the Subbasin remain sustainable. As such, minimum thresholds and measurable objectives will not be established for this management area.

A monitoring network and representative wells with minimum thresholds and measurable objectives will be established for the adjacent non-Delta area.

Non-Delta Management Area

The non-Delta areas of the Subbasin is where most agricultural, domestic and municipal wells are present and where groundwater is used. The area may have had potential impacts from groundwater use.

Each of the sustainability indicators in the non-Delta areas are summarized below and described in detail in Chapter 9:

- There has been some lowering of groundwater levels and some areas are experiencing a downward trend.
- There has been a slight reduction in storage, but this has been refilling and is being used for aquifer storage and recovery program.
- There may be surface water depletion. The Upper aquifer is interconnected with groundwater along the Old River and Tom Payne Slough and the Lower aquifer is interconnected potentially north of the Corcoran Clay extent. Groundwater pumping in these aquifers could deplete surface water.
- Land subsidence has occurred due to groundwater extraction.
- Groundwater quality is of naturally poor quality (TDS and manganese exceeding the MCL, along with other elements) due to natural conditions.
- No seawater intrusion as explained above and in Section 5.7 Seawater Intrusion.

As such, excessive groundwater use in the non-Delta area could have undesirable results on beneficial groundwater uses: domestic, agricultural and municipal well owners, along with surface water, and GDEs. A groundwater monitoring network with representative wells with minimum thresholds and measurable objectives will be established for this management area as described in Chapters 8, Monitoring Network and Chapter 9, Sustainable Management Criteria.

Minimum thresholds and measurable objectives for this area can be different than in the adjacent Delta area. For the non-Delta areas, groundwater gradients in the Upper aquifer will be maintained to continue contributions to Old River, Tom Payne Slough and the San Joaquin River. In the Lower aquifer, groundwater levels will be maintained to prevent additional surface water depletion from the Delta area, in those areas beyond the extend of the Corcoran clay.

Summary

In conclusion, the Delta area will not require active groundwater management to achieve sustainability while the non-Delta areas will require management to be sustainable. Table 7-1 compares Delta and Non-Delta areas as related to the sustainability indicators.

Table 7-1 Delta and non-Delta Comparison of Sustainability Indicators

Sustainability Indicators	Delta Area	Non-Delta Area
Chronic Lowering of Groundwater Levels	No chronic lowering	Some lowering of groundwater levels
Reduction of Storage	No reduction in storage	Slight reduction in storage
Surface Water Depletion	No surface water depletion	May be surface water depletion
Degraded Water Quality	Naturally poor quality	Naturally poor quality
Sea Water Intrusion	No sea water intrusion	No sea water intrusion
Subsidence	No land subsidence due to groundwater extraction	Land subsidence due to groundwater extraction

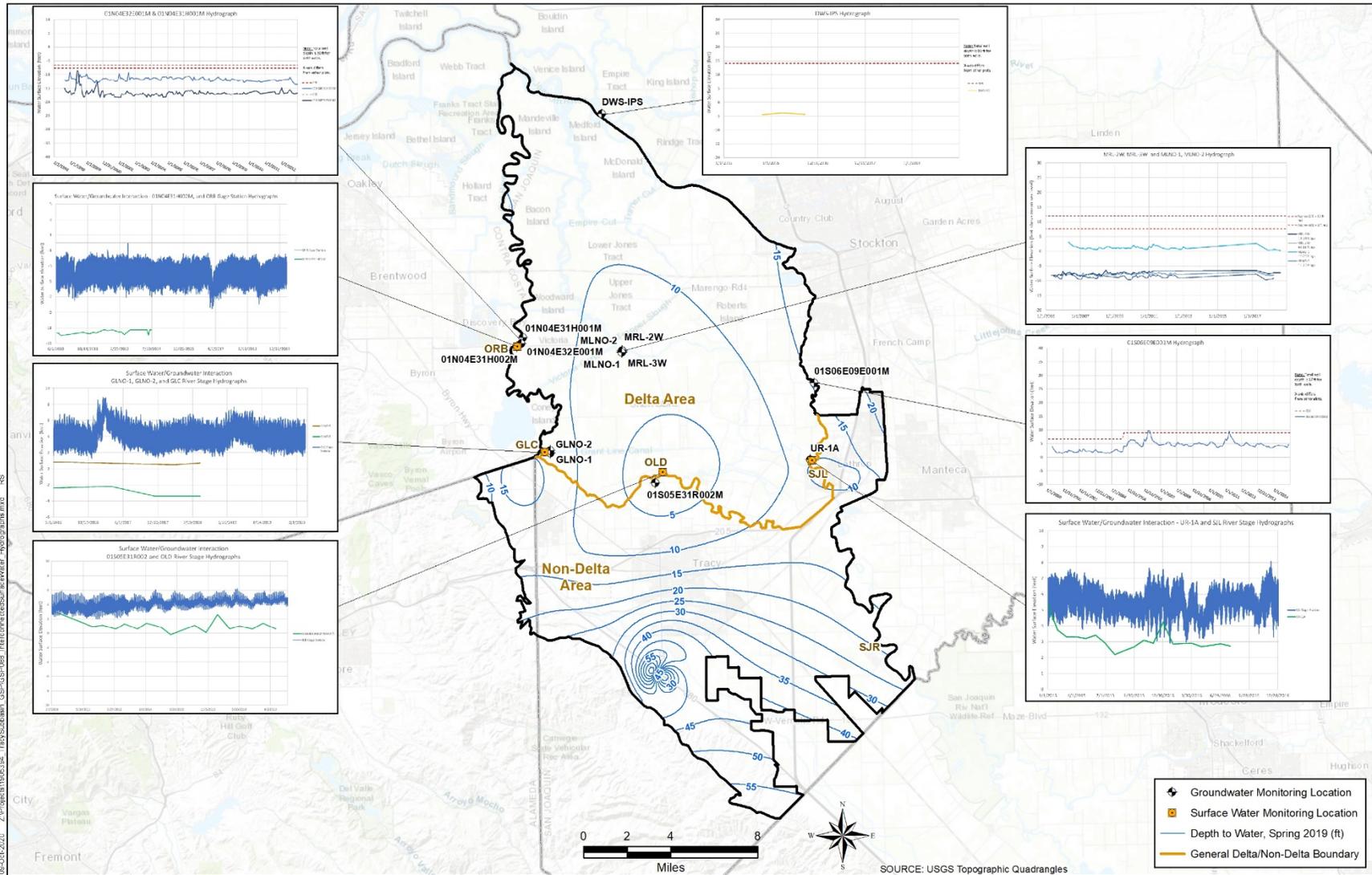


Figure 7-3. Delta Area Hydrographs

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