



Department of Public Works
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December 23, 2014

Ms. Anne Olson
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive #200
Ranch Cordova, CA 95670

Subject: Comments On the Tentative Order For Renewal of the City of Lathrop's Waste Discharge Requirements and Master Reclamation Permit

Dear Ms. Olson,

Thank you for the opportunity to comment on the Tentative Order for the City of Lathrop Consolidated Treatment Facility and Water Recycling System Waste Discharge Requirement and Master Reclamation Permit. The City would like to thank your staff for their diligence and care in preparing the document. Our comments are shown on the attached document, roughly in the order the items appear in the permit. Please feel free to contact me should you have any questions or require additional information. Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in blue ink that reads "Patrick Flynn for".

Patrick Flynn, Director of Public Works

Copy To: Dave Richardson, RMC

Attachments:

Revised figures: Attachments E, F, G, H and I

**City of Lathrop Consolidated Treatment Facility and Water Recycling System, San Joaquin County
Comments Regarding Tentative Order For Renewal of the City of Lathrop’s Waste Discharge
Requirements and Master Reclamation Permit**

December 23, 2014

The City of Lathrop (City) appreciates the opportunity to submit the following comments on the Tentative Order (TO) issuing the joint Waste Discharge Requirements and Master Reclamation Permit. In order to assist Regional Water Board staff in locating the sections of the Tentative Order being commented on, the page numbers are provided prior to the comment and redline/strikeout sections of the Tentative Order are provided. Where appropriate, an explanation has been provided to describe why a change is recommended.

1. The City requests inclusion of Pond S3 in the Findings section of the permit.

Pond S3 is an existing pond that was inadvertently left out of Table B-7, Existing and Planned CTF Tertiary Effluent Storage Basins (TSBs) of the Report of Waste Discharge (ROWD). Pond S3 is currently out of service but will be put back in service, and thus the City desires the flexibility to continue to use this pond. Pond S4 is currently being converted to an emergency storage basin and thus would no longer be available for recycled water storage.

TO Permit - Page 1, Item 4

Description	Acres	Assessor’s Parcel Numbers
Consolidated Treatment Facility (including Pond S4 and S5)	33 <u>10.5</u>	198-130-35, 198-130-36, 198-130-46, 198-130-46, 198-130-47, 198-130-48,
Pond S1	13	191-190-32
Pond S2	7	191-190-33
<u>Pond S3</u>	<u>10</u>	<u>19813035</u>
Pond S6	34	198-060-16, 198-060-17

TO Permit - Attachment B

Add boundary around Pond S3 to show it is a “Lined Effluent Storage Pond.”

TO Permit – Page 30, Item 76.a

“The CTF MBR plant and recycled water storage ponds S1, S2, S3, S4, S5, and S6 are exempt pursuant to Title 27, section 20090(a) because they are treatment and storage facilities associated with a municipal domestic wastewater treatment plant.”

2. The City requests clarification of the storage pond operations.

TO Permit - Page 4, item 14.h.

“Disinfected effluent is discharged into Pond S5 for immediate storage, and then transferred to off-site to Ponds S1, S2, S3 (currently out of service), or S6. ~~one of four lined recycled water storage ponds (S1, S2, S5, and S6) owned by the Discharger.~~ Recycled water is pumped from the ponds as needed and conveyed to recycled water Use Areas.”

3. The City requests clarification of the backup supply for alarms.

TO Permit - Page 4, item 14.j.

“The CTF is equipped with an electronic management and control system (SCADA) that provides remote monitoring, alarms, and notifications to prevent bypass or failure of the treatment processes. ~~All The~~ alarms have backup power provided by a standby generator and an uninterruptible power supply ~~independent backup power supplies....~~”

4. The City requests clarification of the current capacity of the CTF.

TO Permit - Page 4, item 15.

“The CTF currently has a permitted treatment capacity of 0.75 mgd monthly average ~~dry weather~~ flow ~~(ADWF)~~. The monthly average ~~dry weather~~ flow rate for 2009 through 2013 was 0.27 mgd. Design parameters for the current treatment system are summarized below.”

Treatment System Design Basis	Flow
Monthly Average Dry Weather Flow	0.75 mgd

5. The City requests to revise the Finding to clarify timing of recycled water irrigation.

TO Permit - Page 6, item 20.

The City does not currently irrigate public landscaped areas and thus text has been deleted.

“The recycled water storage and distribution system is sized to meet irrigation demands for the existing agricultural and public area landscape Use Areas within the Mossdale and River Island developments. ~~Public area landscape irrigation takes place between 10:00 p.m. and 6:00 a.m.~~ The agricultural Use Areas within the Mossdale and River Island development areas is are irrigated ~~during the daytime~~ anytime during the day or night.”

6. The City requests to revise the Finding to clarify site specific conditions regarding flood protection.

TO Permit - Page 10, item 35

“According to Federal Emergency Management Agency (FEMA) flood zone mapping, areas immediately east of the San Joaquin River (i.e., the CTF, Northern Lathrop, CLSP, and Mossdale) are in Flood Zone X, which is outside of the currently-defined 100-year flood zone.

A developed portion of River Islands bordered by Stewart Road on the west and south and the San Joaquin River on the east is also identified as within Flood Zone X. These areas are protected from the 100-year flood by levees, dikes, or other structures that may be subject to possible failure or overtopping during larger flood events. The western half of River Islands is in Zone AE, which is within the 100-year floodplain. However, the elevations of future recycled water storage pond sites are above the 100-year floodplain. ~~Reclamation District 17 is currently in the process of providing community wide 200 year flood protection for the Lathrop region. In response to the mandate from Senate Bill 5, the cities of Lathrop and Manteca are pursuing improvement of the Reclamation District (RD) 17 levees to provide the new central valley standard of 200-year Urban Level of Flood Protection. This cannot be achieved as a Lathrop only effort, and requires improvement of the entire 20 miles of RD 17 levees, including sections within the City of Manteca, City of Stockton and unincorporated San Joaquin County. Work will be started by July 2016, and will be completed by the deadline year of 2025.~~

7. The City proposes minor editorial changes as shown below.

TO Permit - Page 8, item 27, 3rd paragraph

“The Discharger relies entirely on water recycling for the disposal of treated effluent, effluent storage and recycled water Use Areas must increase to accommodate increases in influent flows to the CTF. Based on the water balance, the required storage volume and recycled water Use Areas for three different influent flow scenarios are summarized in the table below.”

TO Permit - Page 9, item 30

“Lathrop Municipal Code Title 13, Chapter 13.09 establishes the authority to enforce rules and/or regulations for Users governing the design and construction of recycled water use facilities and the use of recycled water. As such, the Discharger may issue water recycling permits to Users of treated effluent from the CTF. Future Use Areas not identified in the Findings and Information Sheet as “existing” will require Executive Officer approval of certain reports described in the Provisions of this Order to satisfy Water Code section 13264.”

TO Permit - Page 10, item 34

“The CTF and recycled water Use Areas lie within the San Joaquin Delta Hydrologic Unit Area No. 544.00, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986. Surface drainage is to the San Joaquin River, which flows ~~south~~ north along the western boundary of CLSP and Mossdale. Other nearby surface water courses that drain into the San Joaquin River include Paradise Cut that borders River Islands to the southwest, and Old River, which divides Mossdale and River Islands.”

TO Permit - Page 11, item 37

“Based on climate data from the California Irrigation Management Information System (CIMIS), the average annual precipitation for the nearby area (Manteca Station) is

approximately 13 inches per year. The 100-year, 365-day precipitation event is approximately 23 inches, and the average reference evapotranspiration (ETo) rate is approximately ~~52.51~~ inches per year.”

TO Permit - Page 11, item 38

“Land uses surrounding the CTF include the Crossroads WWTF immediately to the ~~west~~south, the Crossroads Industrial Park to the north, and other commercial development to the east and south. Interstate highway 5 separates the Northern Lathrop, CLSP, Mossdale and River Islands development areas from the rest of the City. Surrounding land uses in these areas are primarily agricultural, but some areas have recently transitioned to residential, commercial, and industrial land uses.”

TO Permit - Page 11, item 41

“...In the Northern Lathrop, CLSP, Mossdale and River Islands areas, shallow groundwater generally flows laterally away from the San Joaquin River, Old River, and Paradise Cut, whereas the groundwater flow direction east of Interstate 5 is generally to the ~~north-northwest~~south-southwest (towards the river).”

TO Permit - Page 23, item 62.c

“Mossdale – Use Area A23: Groundwater quality in the Mossdale area is generally of lower quality than the treated effluent. Pre-discharge groundwater monitoring data collected from monitoring well MWM-12, which is located within recycled water Use Area A23, reflects mean TDS, chloride, and sodium concentrations of 2,820 mg/L, 948 mg/L, and 1,010 mg/L, respectively. These pre-discharge concentrations greatly exceed their corresponding water quality objectives.”

TO Permit - Page 35, item C.3

“Compliance with this requirement shall be determined based on samples obtained at the sampling locations listed in the Monitoring and Reporting Program and shown on Attachment ~~ED~~.”

8. The City requests modification of the existing capacity of the use areas under the current 0.75 mgd CTF.

TO Permit - Page 8, item 27, Table

The information for the “Storage Volume and Use Area Required” table below are included in the “Summary Tab” of the Water Balance (titled Att1-Lathrop Recycled Water Balance (Sep 19 2014)-all-to RWQCB.xls provided by email on September 22, 2014 at 1:33 PM from RMC Water and Environment. The revisions below are needed due to a minor error in the reporting of the irrigated area for A30, which is much less than reported in earlier versions of the Water Balance. The City has since checked and confirmed the irrigated areas for all of the Use Areas.

Storage Volume and Use Area Required	Current (0.75 mgd)		Near-Term (1.0 mgd)	Planned (6.0 mgd)
	Required	Available	Required	Required
Storage Volume (acre-feet)	34 57	429	502	2,677
Storage Volume (MG)	11 23	140	164	872
Use Areas (acres)	1 6570	418 172	207	1,381

9. The City requests modification of the “Groundwater Conditions” section to provide more accurate information.

TO Permit - Page 12, item 43

“There are currently 65 existing shallow groundwater monitoring wells near the CTF and the Northern Lathrop, CLSP, Mossdale, and River Islands recycled water Use Areas. Additionally, there are five monitoring wells near recycled water storage Pond S6 on ~~East Lathrop Road~~McKinley Avenue...”

In addition to the above change, the City requests revisions to the below table for accuracy. In the following table, CLSP-1 and MW-1 (CLSP) are the same well. MWM-2 (Mossdale) was repaired approximately 5 to 6 years ago and is part of the active monitoring network. MWM-10 and MWM-18 (Mossdale) were abandoned in 2006. MWR-1 and MWR-2 (River Islands) were abandoned in November 2014 (as approved by the Regional Water Board, specified in its letter to the City of Lathrop dated 24 November 2014). MWR-13 -15, -18, and -20 are incorrectly noted as presumed destroyed (River Islands); they were last reported as damaged and in moderate to poor condition.

Land Use Area	Existing Monitoring Wells
Northern Lathrop	MW-N1, MW-N2, MW-N3, MW-N4, MW-N5, MW-N6, NMW-1, NMW-2, NMW-3, NMW-4, NMW-5
CLSP	CSLP-1, (MW-1) , MW-2 ¹ , MW-3, MW-4, MW-5 ² , MW-6 ² , MW-7 ² , CLSP-8 (MW-8) , CLSP-9 (MW-9) , CLSP-10 (MW-10)
CTF, Ponds S4 and S5	MBRMW-1, MBRMW-2, MBRMW-3, MBRMW-4
Pond S6	RMW-1, RMW-2, RMW-3, RMW-4, RMW-5
Mossdale	MWM-1, MWM-2 ⁴ , MWM-3, MWM-4, MWM-5, MWM-6, MWM-7, MWM-8, MWM-9, MWM-10² , MWM-11, MWM-12, MWM-13, MWM-14, MWM-15, MWM-16, MWM-17, MWM-18² , MWM-19, MWM-20, MWM-21, MWM-22, MWM-23, MWM-24, MWM-25, MWM-26, MWM-27
River Islands	MWR-1 ³ , MWR-2 ³ , MWR-3, MWR-4, MWR-5, MWR-6, MWR-7, MWR-8, MWR-9, MWR-10, MWR-11, MWR-12, MWR-13 ² , MWR-14 ² , MWR-15 ² , MWR-16 ² , MWR-17 ² , MWR-18 ² , MWR-19 ² , MWR-20 ² , MWR-21 ² , MWR-22 ² , MWR-23, MWR-24, MWR-25, MWR-26, MWR-27, MWR-28, MWR-29, MWR-30, MWR-31, MWR-32

South of Mossdale	MW-S1, MW-S2, MW-S3, MW-S4, MW-S5
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¹ Damaged.

² Unable to locate; presumed destroyed by equipment.

³ Abandoned in November 2014

TO Permit - Page 13, item 44

For the following table, please note the added footnote and that KMW-7 was abandoned on October 24, 2014 per the approved workplan (“Approval of Groundwater Monitoring Well Abandonment and Installation Workplan, City of Lathrop Crossroads Wastewater Treatment Facility, San Joaquin County [September 8, 2014]).

Use Area	Compliance Wells ¹	Background Wells
Mossdale		
A23	MWM-12	MWM-11, MWM-13
Pond S1	MWM-4	MWM-1, MWM-2, MWM-3
Pond S2	MWM-5	
River Islands		
A28	MWR-24	MWR-3, MWR-23, MWR-25
A30/A31	MWR-28	MWR-11, MWR-12,
	MWR-32	MWR-27, MWR-29, MWR-31
Pond S6	RMW-4 RMW-5	RMW-1 ² , RMW-2 ² , RMW-3 ²
<u>CTE/MBR Facility</u>	MBRMW-1 MBRMW-2 MBRMW-3 MBRMW-4	KMW-4 ¹ , KMW-7¹

¹ Compliance wells are those that are well located within an active recycled water Use Area or immediately downgradient of an active recycled water storage pond or Use Area.

² Wells are monitored for water levels only.

TO Permit - Page 15, item 47.b

“Central Lathrop Specific Plan: Currently, this area is primarily in agricultural use, with the exception of the Lathrop High School site. Ten groundwater monitoring wells (CLSP-1 through CLSP-10) were installed in January 2003 to collect pre-discharge groundwater data for planned Use Areas (see Attachment F), although three of those wells have been abandoned...”

TO Permit - Page 16, item 47.c

“Mossdale: The Mossdale area is now a partly developed residential area. A total of 27 monitoring wells (MWM-1 through MWM-27) were installed at various locations within the Mossdale development area beginning in 2001 near planned recycled water Use Areas (see Attachment H). Most of the wells are currently part of the quarterly groundwater monitoring network...”

TO Permit - Page 17, item 47.d

“River Islands: A total of 32 monitoring wells (MWR-1 through MWR-32) were installed at the River Islands development area between 1998 and 2005 near planned recycled water Use Areas (see Attachment G). ~~Since that time, Most of the wells have been used for quarterly groundwater monitoring data has been collected quarterly.~~”

10. The City requests the inclusion of a new finding.

TO Permit, Page 27, After Finding 63

The City suggests the inclusion of a new finding, number 64 that specify monitoring is not needed for small planned and future Recycled Water Use areas because groundwater degradation is not expected to occur.

“For small, planned and future Recycled Water Use Areas where discharge would be limited, the impact of recycled water use is expected to be inconsequential as compared to the existing groundwater conditions where constituents of concern already exceed water quality objectives. Therefore, monitoring in these areas is not necessary because groundwater monitoring data collected may not accurately indicate whether an impact to groundwater has occurred.”

TO Permit, Page 43, Provision H.1.f

To correspond to above new finding, the City recommends inclusion of a new sub-bullet k to Provision H.1.f as follows:

“k. A determination whether groundwater monitoring is necessary based on the size of the planned or future recycled water Use Area.”

11. The City requests the following revision to the “Discharge Prohibitions”.

TO Permit - Page 33, item A.3

Based on concerns by the City’s CTF operators, the City recommends the following revision be made to the condition.

“Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements. Temporary diversion of waste to emergency storage does not constitute a bypass.”

12. The City requests the following revision to the “Flow Limitations” section to clarify the proposed components that would require Executive Officer approval.

TO Permit - Page 34, item 1

The total annual flow has been revised to accommodate the infiltration and inflow (I/I) of eight percent.

“**Effectively immediately**, influent flows to the CTF shall not exceed the following limits:

Influent Flow Measurement	Flow Limit
Total Annual Flow ¹	275 <u>297</u> MG
Average Dry Weather Flow ²	0.75 MGD

“**Effective on the date of the Executive Officer’s approval** of each successive CTF Expansion Completion Report submitted pursuant to Provision H.1.g~~d~~, influent flow limits greater than 0.75 MGD average dry weather flow and 297 MG total annual flow will be allowed. Approval is subject to the following conditions:..”

13. The City requests the following revision to the “Effluent Specifications” section.

TO Permit - Page 35, item C.3

The maximum total coliform requirement has been included in this condition to be complete.

“Prior to discharge to the recycled water storage ponds, disinfected tertiary effluent shall not exceed the following limits for total coliform organisms:

- a. The 7-day median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed a most probable number (MPN) of 2.2 per 100 milliliters. Compliance with this requirement will be determined using the median result of the seven most recent sampling events.
- b. The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30-day period.

c. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.”

14. The City requests the following revision to the “Discharge Specifications” section.

TO Permit - Page 35, item D.3

The following change is made to be consistent with Item F.5 which allows for minor incidental losses.

“The discharge (except for minor, incidental amounts as specified in F.5) shall remain within the permitted waste treatment/containment structures and recycled water Use Areas at all times.”

TO Permit - Page 35, item D.5

As shown in the Figure D-6 of the ROWD, certain of the disposal areas would be located within the 100-year flood zone as designated by FEMA. Thus, the correction below is made.

“All conveyance, treatment, and storage, ~~and disposal~~ systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.”

TO Permit - Page 35, item D.6

The following condition has been revised to be relevant to recycled water and consistent with Title 22.

“Public contact with recycled water wastewater shall be ~~prevented~~ controlled through ~~such means as fences, use of signs, or acceptable alternatives.~~”

15. The City requests the following revision to the “Groundwater Limitation” section.

TO Permit - Page 37, item E.2

Item E.2 specifies that “Release of waste constituents from any portion of the CTF and recycled water Use Areas shall not cause groundwater to [c]ontain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations.” As indicated in the Tentative Order, there are existing areas where the upper range of the secondary MCL has already been exceeded as part of the background condition. As indicated in other parts of the Tentative Order, the Basin Plan’s Controllable Factors Policy has been invoked to apply where salinity constituents in groundwater exceed water quality objectives prior to the discharge. The Policy does not allow controllable factors to cause further degradation of water quality. Thus this Order prohibits any further degradation of groundwater quality and includes a performance based TDS effluent limit that will restrict effluent salinity to ensure compliance with the Controllable Factors Policy. The City would like to note that the condition specified in item E.2 may be misconstrued and request the RWQCB to revise this language, if needed, to reduce confusion.

16. The City requests the following revision to the “Water Recycling Specifications” section.

TO Permit - Page 37, item F.6

It should be noted that crops and vegetation are not 100 percent efficient in taking up all of the nitrogen applied. Thus, the following change has been made.

“Crops or landscape vegetation shall be grown on the Use Areas, and cropping activities shall be ~~sufficient at agronomic rates~~ to take up ~~all of~~ the nitrogen applied, including any fertilizers and manure.”

TO Permit - Page 37, item F.8

It should be noted that irrigation water must be applied at sufficiently high rates to flush salts to below the root zone to maintain the productivity of the soil. A leaching fraction has also been assumed to ensure flushing of the salts occur, as reflected in the revision below.

“Hydraulic loading of recycled water and supplemental irrigation water (if any) shall be at reasonable agronomic rates (including the leaching fraction) designed to:

- a. Maximize crop nutrient uptake;
- b. Maximize breakdown of organic waste constituents in the root zone; and
- c. Minimize the percolation of waste constituents below the root zone.”

TO Permit - Page 38, item F.9

The City proposes the following change to simplify the condition but still retain the intent and allow enforceability.

“Use areas shall be inspected as frequently as necessary to ~~ensure continuous compliance~~ comply with the requirements of this Order.”

TO Permit - Page 38, item F.10

The timing of irrigation has been deleted as it may not occur exactly at the time specified, and the condition has been revised to emphasize the public exposure component.

“Use areas where public access is allowed shall be irrigated during periods of minimal use to reduce public exposure ~~(typically between 9 p.m. and 6 a.m.)~~.”

TO Permit - Page 38, item F.14

The City requests to retain the 50 feet minimum irrigation setback as was specified in the existing permit, to provide flexibility for irrigation of landscaped areas such as medians.

Setback Definition	Minimum Irrigation Setback (feet)
...	
Edge of Use Area to domestic water supply well	50 <u>400</u>
...	

TO Permit - Page 40, item F.27

The City suggests the following changes to be made to be consistent with the existing permit for separation requirements.

“DHS requires that the American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, and adequate separation between the recycled water lines and domestic water lines and sewer lines. The Discharger proposes to fully comply with these requirements with the exception of the pipe installation addressed in the 9 February 2005 DHS letter titled, Recycled Water Main & Sanitary Sewer Force Main Separation Requirements, and as approved by DHS. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting recycled water and those transporting domestic supply, and the domestic supply pipeline shall be located above the recycled water pipeline.”

17. The City requests the following revisions to the Provisions.

TO Permit, Page 41, Item H.1.c

To ensure the *Groundwater Monitoring Well condition Survey Report and Destruction Plan* includes the most updated wells, and that ownership of the wells are specified, changes have been made to this provision, as follows.

“By 30 January 2016, the Dischargers shall submit a *Groundwater Monitoring Well Condition Survey Report and Destruction Plan* that presents a condition survey of all monitoring wells identified in Finding 43 as well as any new groundwater wells that have been installed (wells identified in Finding 43 that have been properly abandoned with RWQCB’s approval up to the submittal date of this Plan do not need to be included in the Plan). The survey shall identify all wells that cannot be recovered in the field and those that have been damaged. For damaged wells, the workplan shall describe proposed abandonment procedures, which shall comply with California Well Standards Bulletin 74-90 (June 1991); State of California Bulletin 94-81 (December 1981); and any more stringent standards adopted by the state or county pursuant to Water Code section 13801. For each monitoring well that will not be destroyed, the workplan shall provide a specific plan if well head improvements are needed to protect the well from equipment and an inspection and maintenance plan to ensure that wells are properly maintained for continued use. In addition, the Plan shall specify ownership of the groundwater wells and the City’s access to these wells.”

TO Permit, Page 44, Provision H.1.g

The City suggests revising the CTF Expansion Completion Report to a Final Design Report to ensure that there is sufficient time to respond to EO comments on the design. This provision has also been revised to more accurately describe the information provided by the existing water balance. For the water balance, it should be noted that on item (i) below, as-built geometry is not available for some of the existing ponds, and thus the proposed change. For item (v) below, an analysis of the 2010 to 2013 monthly wastewater flows data in the ROWD showed no

obvious trend for seasonal variations in the flows, and thus in the water balance, the distribution in flow is divided equally by month. Regarding item (viii), the City is not proposing any unlined ponds.

“**At least 180 days** prior to any planned increase in influent flow to the CTF, the Discharger shall submit a CTF Expansion ~~Completion-Final Design~~ Report that documents ~~completion-the design~~ of facility improvements and provides technical justification for the proposed flow limit increases. Incremental flow rate increases shall be no less than 0.25 mgd.

...

The water balance shall include documentation of, and technical support for, all data inputs used and shall consider at least the following.

i. The as-built geometry of all new recycled water ponds and Use Areas;

...

v. Proposed wastewater generation rates based on historical flows and new development to be served by the expansion distributed equally by month~~ly in accordance with expected seasonal variations~~;

vi. Estimated I/I flows for the 100-year 365-day event based on historical flows,~~new development,~~ and age and type of sewer pipes;

...

~~viii. Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging on all ponds).”~~

TO Permit, Page 45, After Provision H.1.h

To address the change of Provision H.1.g to a CTF Expansion Final Design Report, the City proposes inclusion of a new provision relating to the submittal of a CTF Expansion Completion Report.

“i. At least 60 days prior to any planned increase in influent flow to the CTF, the Discharger shall submit a CTF Expansion Completion Letter Report that documents the design of facility completion of facility improvements. This letter report shall certify the construction of the facilities as designed, or if modifications are made, an explanation of the reasons for the modifications.”

18. The City requests the following revisions to the Attachments.

TO Permit - Attachment A

Revise the label South of Mossdale (near the Highway 120 and Interstate 5 intersection) to “South Lathrop Specific Plan”

TO Permit - Attachment B

Revise the title in the title block as follows: “~~Consolidated~~ Consolidated Treatment Facility Map”

In addition to adding the boundary around Pond S3 to show it is a “Lined Effluent Storage Pond,” as specified above, the City also suggests including a new pattern for Pond S4 to highlight it is an emergency storage basin. Please note that KMW-7 has been abandoned.

TO Permit - Attachment E

This attachment has been revised to exclude abandoned/destroyed wells (please see attached).

TO Permit - Attachment F

This attachment has been revised to exclude abandoned/destroyed wells, proposed monitoring wells and direct push locations (please see attached).

TO Permit - Attachment G

This attachment has been revised to exclude abandoned/destroyed wells and surface water monitoring sites (please see attached).

TO Permit – Attachment H

This attachment has been revised to clarify in the legend that not all recycled water Use Areas are shown (please see attached).

TO Permit - Attachment I

This attachment has been revised to clarify the groundwater wells / grab samples that are used in the interpretation of the TDS zones and the wells that are not used in the interpretation of the TDS zones (please see attached).

19. The City requests clarification of a footnote.

Monitoring and Reporting Program (MRP), Page 2, in the footnote of the table under the “Effluent Monitoring” Heading

Please note that there is no Table 1 in the MRP as specified in Footnote 5 of the table under the “Effluent Monitoring” heading in the MRP. The footnote states the following: “Priority pollutants are listed in Appendix A of 40 Code of Federal Regulations (CFR) Part 423. Monitoring shall include, at a minimum, the constituents listed in Table 1 of this MRP.”

20. The City requests the Monitoring and Reporting Program requirements be consistent with those in the recently adopted Statewide Recycled Water Permit.

The City requests that the monitoring requirements for the effluent storage pond and the recycled water land application area be consistent with the State Water Resources Control Board General Waste Discharge Requirements for Recycled Water Use (Order WQ 2014-0090-DWQ-Corrected) (Statewide Recycled Water Permit), as modified.

Monitoring and Reporting Program, Page 3, under the “Effluent Storage Pond Monitoring” Heading

The Statewide General Recycled Water Permit does not require monitoring of dissolved oxygen and pH, and thus the City proposes to delete these parameters from the below table. In addition, the City suggests sampling the liner and berm conditions quarterly.

Constituent Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
pH	Standard	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Liner condition	--	Observation	Quarterly Weekly	Monthly
Berm condition	--	Observation	Quarterly Monthly	Monthly

Monitoring and Reporting Program, Page 3, under the “Recycled Water Land Application Area Monitoring” Heading

The “Use Areas” are defined as areas with defined boundaries where recycled water is used or discharged. They include agricultural areas as well as small landscaped areas such as turf and medians that would require an extraordinary amount of resources to monitor on a daily level, given the number of sites that would ultimately be established. The Statewide Recycled Water Permit suggests periodic inspections for landscape areas that receive recycled water. As such, we proposed the following changes:

“Monitoring of ~~each~~ the agricultural recycled water land application area (excluding all other public landscape irrigation areas) -shall be conducted daily to quarterly during the irrigation season, and the results shall be included in the monthly-quarterly monitoring report. All land application areas shall be inspected following an irrigation event to identify any equipment malfunction or other circumstance that might allow recycled water to runoff the land application area and/or create ponding conditions that violate the Waste Discharge Requirements. Evidence of erosion, saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. A log of these inspections as well as any public complaints of runoff shall be kept at the facility and made available for review upon request.”

Constituent Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Recycled Water Flow	Gal/day and inches	Continuous	Daily	Quarterly Monthly
Rainfall	Inches	Observation	Daily	Quarterly Monthly
Acreage Applied	Acres	Calculated	Daily	Quarterly Monthly
Water Application Rate	Gal/acre	Calculated	Daily	Quarterly Monthly
Total Nitrogen Loading Rate	Lbs/ac	Calculated	Monthly	Quarterly Monthly
Nuisance Odors/Vectors	--	Observation	Daily	Quarterly Monthly
Off-site Discharge	--	Observation	Daily	Quarterly Monthly
Notification Signs	--	Observation	Quarterly Monthly	Quarterly Monthly

21. The City requests the following changes to the Groundwater Monitoring section of the MRP.

Monitoring and Reporting Program, Page 4, under the “Groundwater Monitoring” Heading

The table below has been revised to provide the most up-to-date data. MWR-1 and MWR-2 have been abandoned so cannot be monitored. More wells have been added to North Lathrop area for water level monitoring.

Land Development Area	Semi-Annual Monitoring Frequency		
	Water Level Monitoring	Water Quality Sampling	
		Compliance Well(s)	Background Well(s)
Mossdale	MWM-1, MWM-2, MWM-3, MWM-4, MWM-5, MWM-6, MWM-7, MWM-8, MWM-9, MWM-11, MWM-12, MWM-13, MWM-15, MWM-17, MWM-19, MWM-20, MWM-21, MWM-22, MWM-23, MWM-24, MWM-25, MWM-27	MWM-12	MWM-11, MWM-13
River Islands	MWR-1, MWR-2 , MWR-3, MWR-4, MWR-5, MWR-6, MWR-7, MWR-8, MWR-9, MWR-10, MWR-11, MWR-12, MWR-23, MWR-24, MWR-25, MWR-26, MWR-27, MWR-28, MWR-29, MWR-30, MWR-31, MWR-32	MWR-24, MWR-28, MWR-32	MWR-3, MWR-23, MWR-25, MWR-12, MWR-27, MWR-29, MWR-11 , MWR-31
CTF/MBR Facility	MBRMW-1, MBRMW-2, MBRMW-3, MBRMW-4	--	--
Pond S6	RMW-1, RMW-2, RMW-3, RMW-4, RMW-5	--	--
Northern Lathrop ²	MW-N1, MW-N2 , MW-N3, MW-N4, MW-N5, MW-N6, NMW-1, NMW-2, NMW-3, NMW-4, NMW-5	MW-N1, MW-N3, MW-N4, MW-N5, MW-N6	
Central Lathrop Specific Plan ²	CLSP-1, CLSP-8 (MW-8), CLSP-9 (MW-9), CLSP-10 (MW-10)	CLSP-1, CLSP-8 (MW-8), CLSP-9 (MW-9), CLSP-10 (MW-10)	

¹ Monitoring wells installed after adoption of this order shall be sampled on a quarterly basis for a minimum of eight consecutive monitoring event. Thereafter the sampling frequency shall be semi-annual.

² ~~Semi-annual monitoring shall commence after recycled water discharge begins in these Land Development Areas. Four (4) independent monitoring events shall be obtained at these wells prior to commencement of recycled discharge in these Land Development areas.~~

Monitoring and Reporting Program, Pages 5

The following changes have been made to be consistent with Groundwater Monitoring table.

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Semi-Annual Quarterly
Groundwater Elevation ¹	0.01 feet	Calculated	Semi-Annual Quarterly
Gradient	feet/feet	Calculated	Semi-Annual Quarterly
Gradient Direction	degrees	Calculated	Semi-Annual Quarterly
Total Dissolved Solids	mg/L	Grab	Semi-Annual ^{2,3}
Nitrate as Nitrogen	mg/L	Grab	Semi-Annual ^{2,3}
Total Coliform Organisms	MPN/100ml	Grab	Semi-Annual ^{2,3}
Chloride	mg/L	Grab	Semi-Annual ^{2,3}
Sodium	mg/L	Grab	Semi-Annual ^{2,3}
Standard Minerals ⁴	mg/L	Grab	Annually ³

¹ Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

² Sample analyses from existing monitoring wells to be conducted on a semi-annual basis for a minimum of eight consecutive monitoring events before a reduction in monitoring frequency can be considered.

³ Sample analyses from new monitoring wells installed after adoption of this order to be conducted on a quarterly basis for eight consecutive monitoring events before a reduction in monitoring frequency can be considered.

⁴ Standard minerals shall include, at a minimum, the following elements/compounds: boron, calcium, magnesium, potassium, sulfate, iron, manganese, total alkalinity (including alkalinity series), and hardness.

22. The City requests modification of the following text in the Information Sheet.

Information Sheet, Page 2, Under “Effluent Storage Ponds” heading

“The Discharger currently uses five ~~concrete-lined-high-density polyethylene (HDPE)-lined~~ effluent storage ponds, which reduces the potential threat to water quality.”

Information Sheet, Page 12

The average precipitation and evapotranspiration data is based on information from 1987 to 2013 California Irrigation Management Information System (CIMIS) station 70 located in Manteca, CA, as specified in the Water Balance (dated September 19, 2014), in the “Water Balance” worksheet.

“The reference evapotranspiration rate (ET_o) is ~~approximately 52.07~~ 50.8 inches per year. The annual average precipitation and 100-year return period annual precipitation ~~is approximately 12.613.34~~ and ~~22.5321.8~~ inches per year respectively.”

Information Sheet, Pages 12 to 14

Table 3 has been updated to provide the most up-to-date information. It should be noted that KMW-1 through KMW-7, MW-5, W-1, and W-2 are part of the Crossroads Facility groundwater well network and not the CTF well network. However, data from KMW-4 and KMW-7 have been used for monitoring Pond S5. MWR-13 is reported missing/destroyed, and not just reported damaged. The City suggests deletion of the proposed wells as they are not part of the current well network.

Well Name	Date Drilled	Well Depth (ft bgs)	Diameter (inches)	Screened interval (ft bgs)	Current Status ¹	Proposed Use/Action
Mossdale						
...						
MWM-10	11/30/01	21.5	2	5-20	Abandoned Destroyed	--
MWM-18	05/16/05	21	4	10-20	Abandoned Destroyed	--
...						
River Islands						
MWR-01	12/02/98	20	2	5-20	Abandoned Existing	-- Monitoring
MWR-02	12/02/98	20	2	5-20	Abandoned Existing	-- Monitoring
...						
MWR-13	Prior to 1999 ²	--	--	--	Reported damaged ² missing/destroyed ²	
CTF/MBR Facility						
KMW-1	6/23/05	--	4	--	Existing	Monitoring
KMW-2	6/23/05	--	4	--	Existing	Monitoring
KMW-3	6/23/05	--	4	--	Existing	Monitoring
KMW-4 ³ (Crossroads)	01/02/01	25	4	--	Existing	Monitoring
KMW-6	8/2002	--	4	--	Existing	Monitoring
KMW-7 ³ (Crossroads)	8/2002	--	4	-0-	Existing Abandoned	-- Monitoring
...						
MW-5	12/1998	--	2	--	Existing	Monitoring
W-1	12/1994	--	4	--	Existing	Monitoring
W-2	12/1994	--	4	--	Existing	Monitoring
...						
Central Lathrop Specific Plan (CLSP)						
...						
MW-5	01/22/03	16.5	2	6.5-16.5	Abandoned Destroyed	--
MW-6	01/14/03	16.5	2	6.5-16.5	Abandoned Destroyed	--

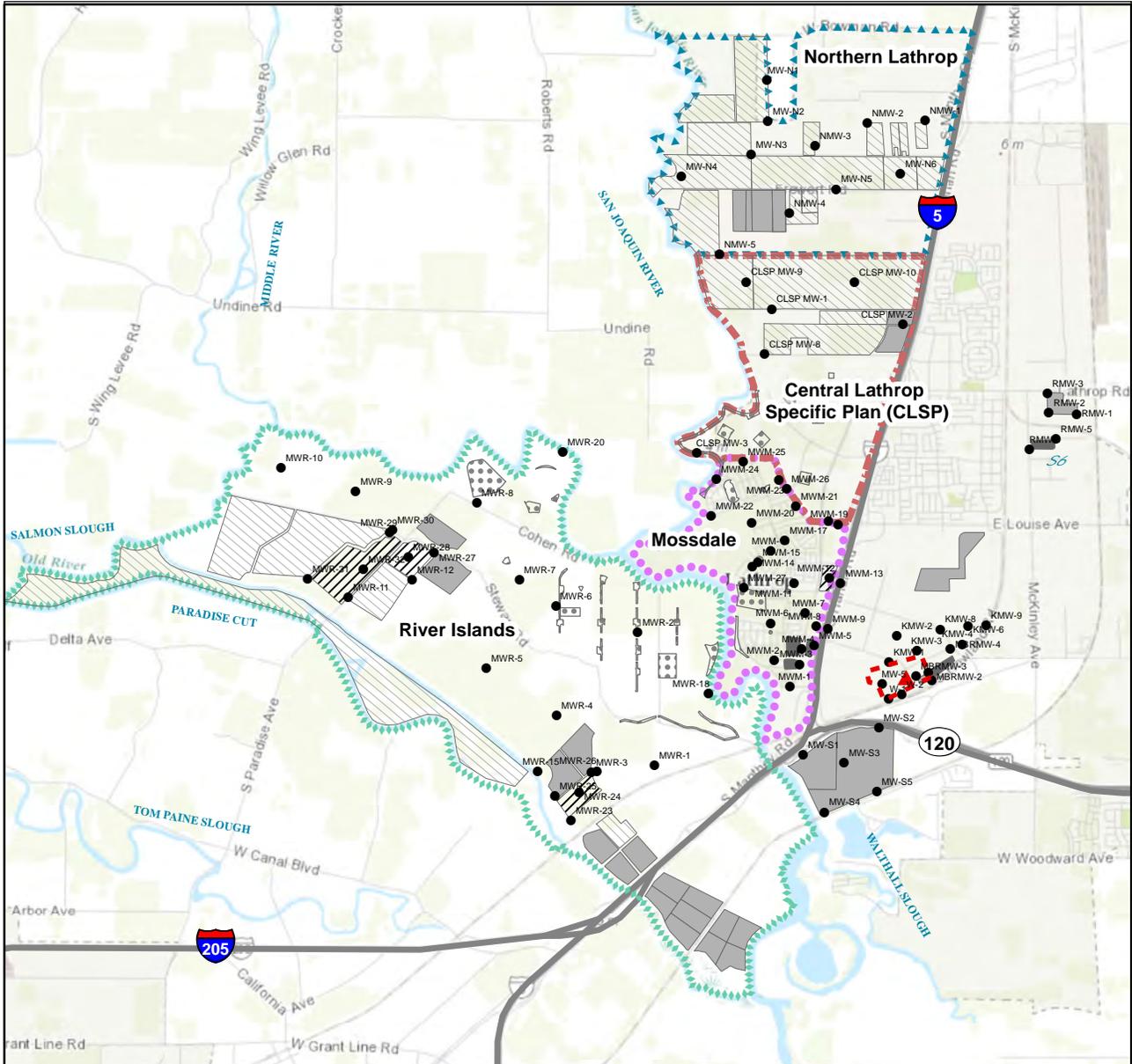
					yeed	
MW-7	01/14/03	16.5	2	6.5-16.5	Abandoned Destroyed	--
...						
CLSP-11	--	--	--	--	Proposed	Pending
CLSP-12	--	--	--	--	Proposed	Pending
CLSP-13	--	--	--	--	Proposed	Pending
CLSP-14	--	--	--	--	Proposed	Pending
CLSP-15	--	--	--	--	Proposed	Pending
CLSP-16	--	--	--	--	Proposed	Pending
North Lathrop						
MW-N1	Drilled 12/2/2004 Pre- Sept 2006	21.5	--	--	Unknown ⁴	Monitoring Unknown
MW-N2	Drilled 12/2/2004 Pre- Sept 2006	21.5	--	--	Unknown ⁴	Potentially Monitoring Unknown
MW-N3	Drilled 12/2/2004 Pre- Sept 2006	21.5	--	--	Unknown ⁴	Monitoring Unknown
MW-N4	Drilled 12/2/2004 Pre- Sept 2006	21.5	--	--	Unknown ⁴	Monitoring Unknown
MW-N5	Drilled 12/2/2004 Pre- Sept 2006	21.5	--	--	Unknown ⁴	Monitoring Unknown
MW-N6	Drilled 12/2/2004 Pre- Sept 2006	26.5	--	--	Unknown ⁴	Monitoring Unknown
NMW-1	Drilled 7/12/2005 Pre- Sept 2006	25.5	4	15.5-25.5	Unknown ⁴	Potentially Monitoring Unknown
NMW-2	Drilled 7/12/2005 Pre- Sept 2006	20	4	10-20	Unknown ⁴	Potentially used Unknown
NMW-3	Drilled 7/13/2005 Pre- Sept 2006	20	4	10-20	Unknown ⁴	Potentially Monitoring Unknown
NMW-4	Drilled 7/13/2005 Pre- Sept 2006	20	4	10-20	Unknown ⁴	Potentially Monitoring Unknown
NMW-5	Drilled 7/13/2005 Pre- Sept 2006	20	4	10-20	Unknown ⁴	Potentially Monitoring Unknown
<u>South Lathrop Specific Plan</u>						
MW-S1	Drilled 5/3/2004 Pre- Sept 2006	21	--	--	Unknown ⁴	-- Unknown
MW-S2	Drilled	21	--	--	Unknown ⁴	-- Unknown

	5/3/2004Pre- Sept 2006					
MW-S3	Drilled 5/3/2004Pre- Sept 2006	21	--	--	Unknown ⁴	--Unknown
MW-S4	Drilled 5/3/2004Pre- Sept 2006	21	--	--	Unknown ⁴	--Unknown
MW-S5	Drilled 5/3/2004Pre- Sept 2006	21	--	--	Unknown ⁴	--Unknown

³ These wells are part of the Crossroads Facility monitoring well network. Data at these wells have been used in the analysis of groundwater quality at CTF.

⁴ These wells were last visited in February 2007. Their current status/conditions are unknown.

k.



Development Areas with Recycled Water Use

-  CLSP
-  Mossdale
-  River Islands
-  Northern Lathrop

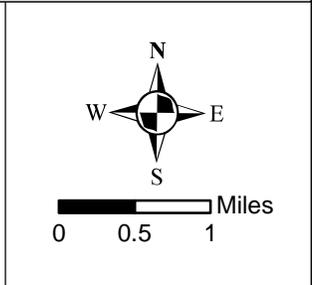
 Consolidated Treatment Facility

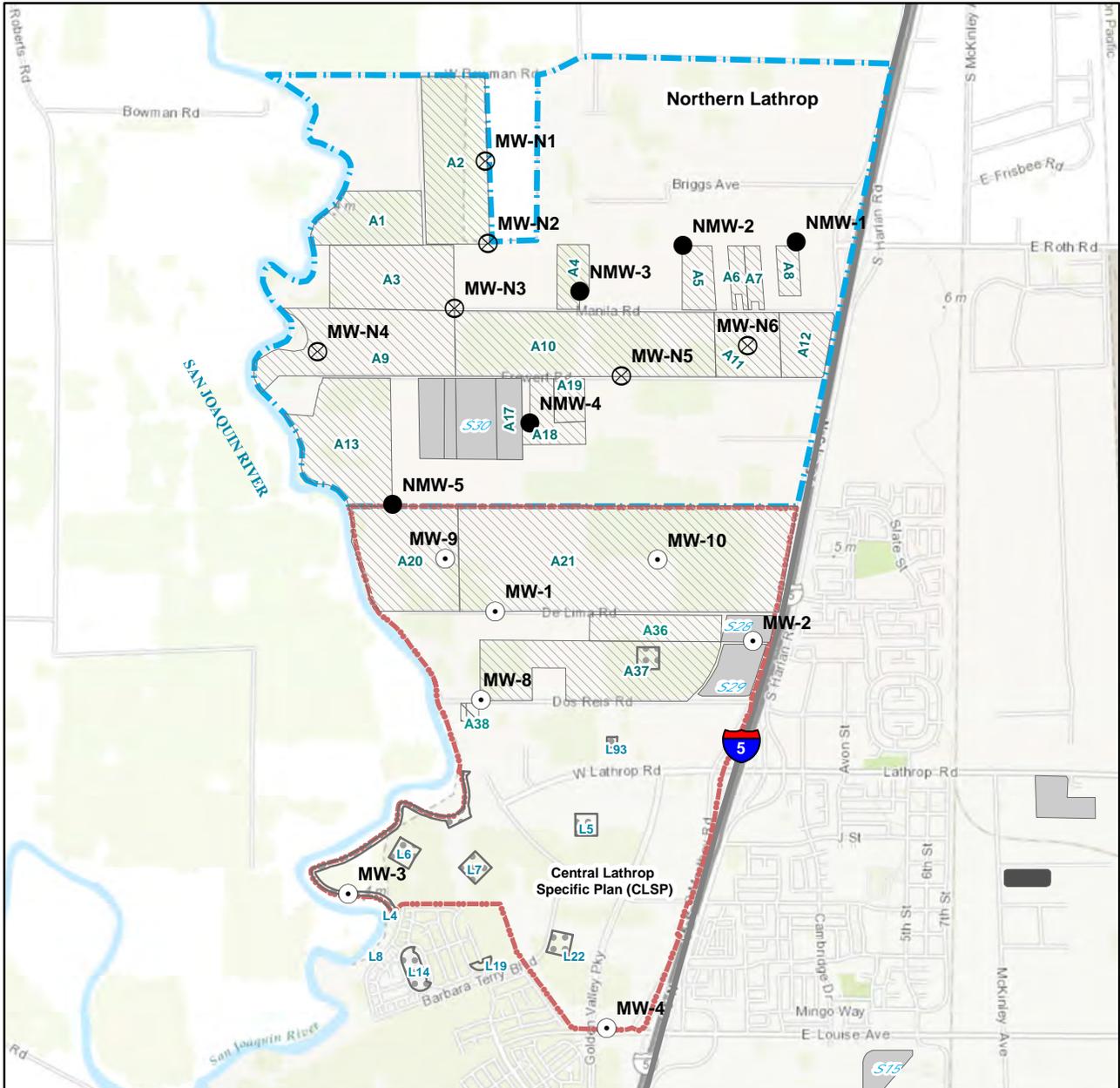
Effluent Storage Pond

-  Future
-  Existing
-  Monitoring Well

Drawing Reference:
 City of Lathrop
 Report of Waste Discharge
 December 2014

GROUNDWATER MONITORING WELL MAP
 CITY OF LATHROP
 CONSOLIDATED TREATMENT FACILITY
 SAN JOAQUIN COUNTY



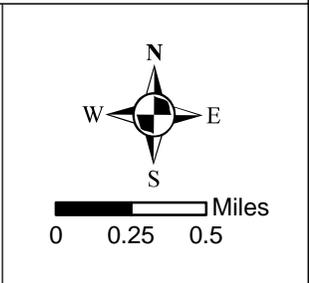


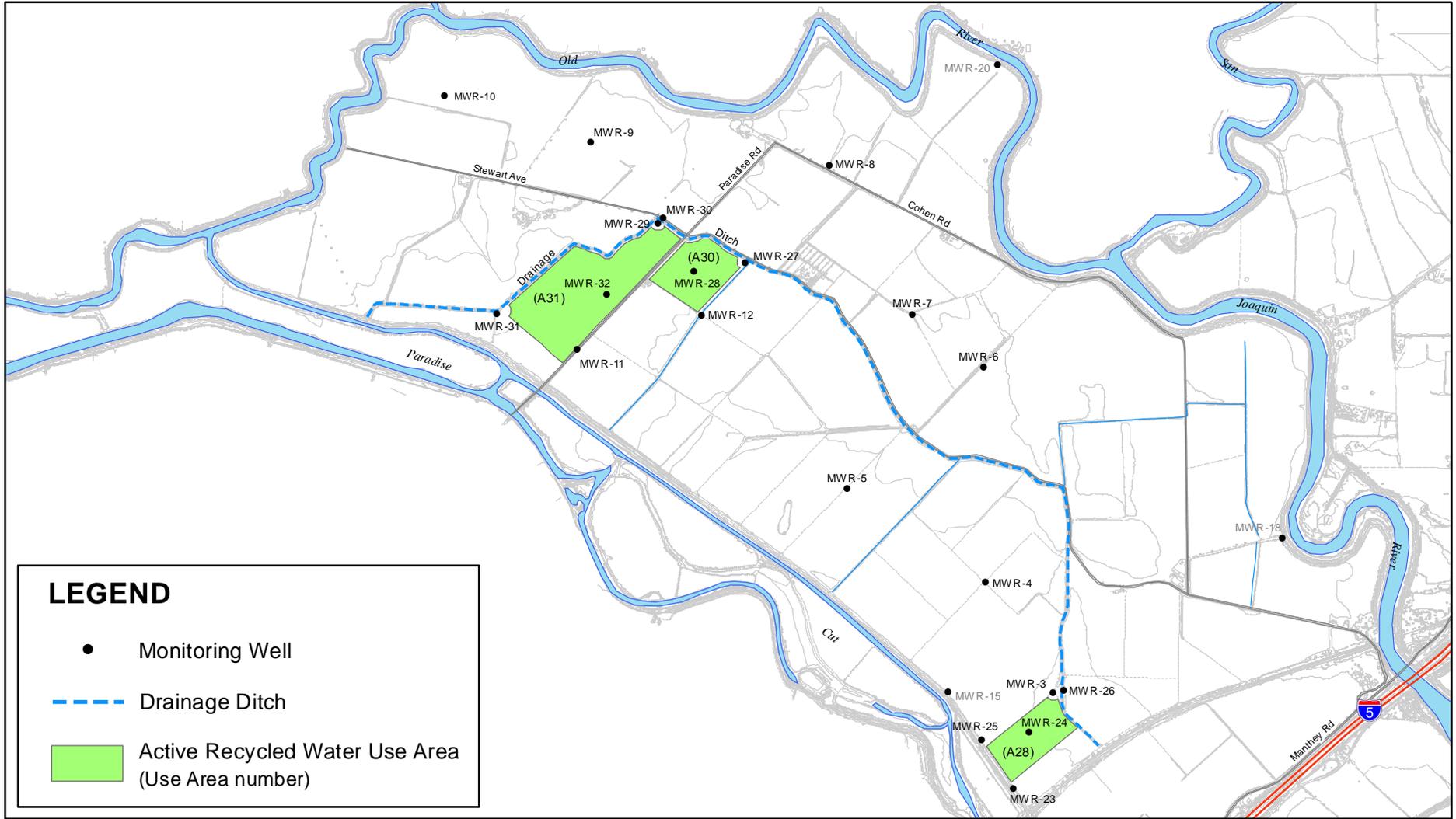
Monitoring Locations	Development Areas with Recycled Water Use	Effluent Storage Pond	Agricultural Use Areas	Landscape Use Areas
○ CLSP Wells	CLSP	Existing	Planned	Planned
⊗ MW-N Wells	Northern Lathrop	Planned		
● NMW Wells				

Drawing Reference:
 City of Lathrop
 Report of Waste Discharge
 December 2014

**PLANNED NORTH LATHROP AND
 CLSP USE AREA SITE PLAN**

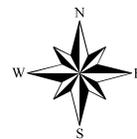
CITY OF LATHROP
 CONSOLIDATED TREATMENT FACILITY
 SAN JOAQUIN COUNTY





Drawing Reference:

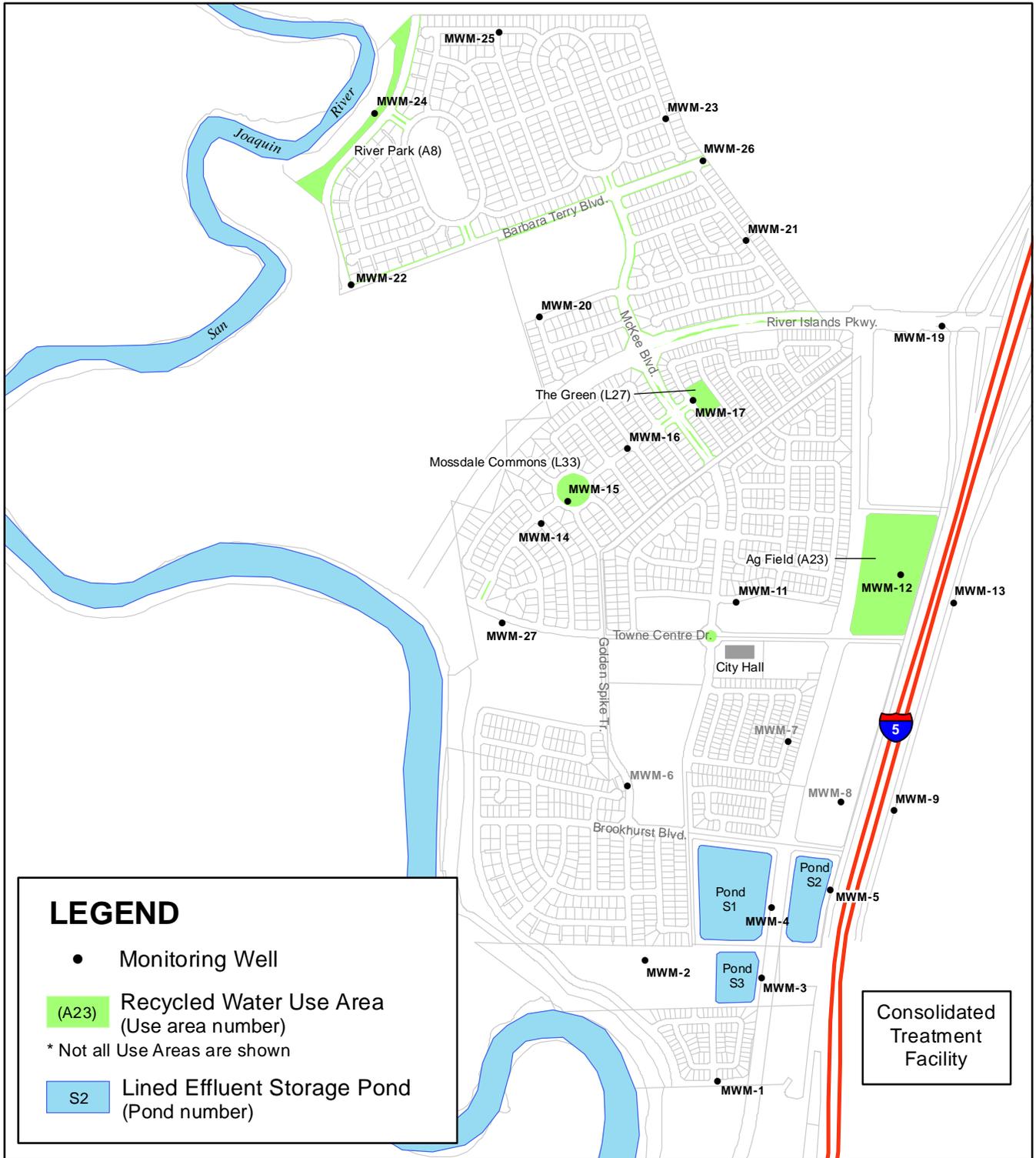
Modified from Figure 2d
 4th Quarter 2012 Groundwater Monitoring Report
 HydroFocus, Inc., 2012



approx. scale
 1 in. = 3,000 ft.

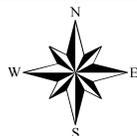
RIVER ISLANDS USE AREA PLAN

CITY OF LATHROP
 CONSOLIDATED TREATMENT FACILITY
 SAN JOAQUIN COUNTY



Drawing Reference:

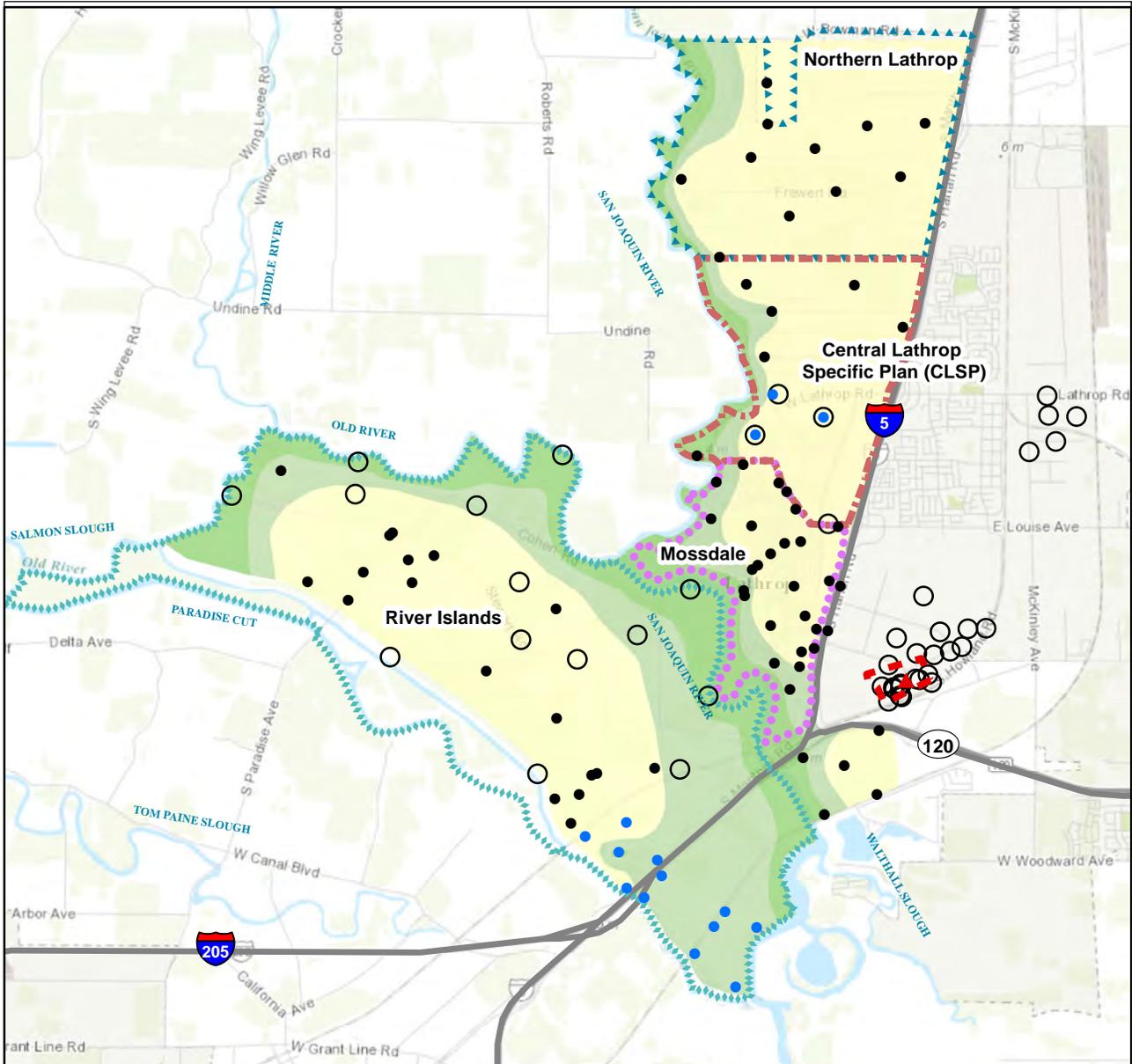
Modified from Figure 2a
4th Quarter 2012 Groundwater
Monitoring Report
HydroFocus, Inc., 2012



approx. scale
1 in. = 1,250 ft.

MOSSDALE USE AREA PLAN

CITY OF LATHROP
CONSOLIDATED TREATMENT FACILITY
SAN JOAQUIN COUNTY



Development Areas with Recycled Water Use	TDS Zones	Wells
 CLSP	 <450 mg/L	 Well, used for TDS mapping
 Mossdale	 450-1000 mg/L	 Grab Sample, used for TDS mapping
 River Islands	 >1000 mg/L	 Well, not used for TDS mapping
 Northern Lathrop	Groundwater TDS concentration data from 2004 to 2013	 Consolidated Treatment Facility

Drawing Reference:
 City of Lathrop
 Report of Waste Discharge
 December 2014

GROUNDWATER TDS MAP
 CITY OF LATHROP
 CONSOLIDATED TREATMENT FACILITY
 SAN JOAQUIN COUNTY

