INFORMATION SHEET

ORDER R5-2015-____
CITY OF LATHROP
LATHROP CONSOLIDATED TREATMENT FACILITY
SAN JOAQUIN COUNTY

Current Facility Description

The City of Lathrop owns and operates a domestic wastewater treatment facility located at 18800 Christopher Way in Lathrop. The Consolidated Treatment Facility (CTF) receives domestic and a relatively small amount of commercial wastewater from master planned communities on the western portion of the City of Lathrop. Communities serviced by the CTF includes Central Lathrop Specific Plan (CLSP), Mossdale Landing (Mossdale), and River Islands. The service area currently includes approximately 8,400 acres consisting of a population of approximately 7,000 residents.

The CTF provides secondary treatment, tertiary filtration, and disinfection prior to storage and discharge. The CTF currently has two Membrane Bioreactor (MBR) treatment trains that each have a treatment capacity of 0.375 mgd, for a combined treatment capacity of 0.75 mgd as an average dry weather flow (ADWF). Disinfected effluent is stored in five concrete-lined storage reservoirs between the months of October and March prior to discharge as recycled water for irrigation to agricultural areas in the Mossdale and River Island developments. Upon adoption of these WDRs, the Discharger plans to expand the use of recycled water to additional agricultural fields and for landscape irrigation in residential areas.

WDRs Order R5-2006-0094 allows an average dry weather flow of up to 0.75 million gallons per day (MGD). Order R5-2006-0094 also allows treatment, storage and disposal capacity expansions to be made in increments of 0.75 MGD or greater, after a Recycled Water Expansion Report (RWER) has been approved in writing by the Executive Officer. The Discharger plans to incrementally increase wastewater treatment capacity and expand the use of recycled water Use Areas under these WDRs.

Proposed Changes to the Facility and Discharge

The Discharger requested revised WDRs and a Master Recycling Permit to allow additional recycled water use. The Discharger is expanding the treatment capacity of the MBR facility to increase effluent dry weather flow capacity from 0.75 mgd to 1.0 mgd by February 2015 and then incrementally increase effluent flow up to 6.0 mgd to keep pace with growth of the community.

The proposed facility expansion to be completed in February 2015 will include modifying the existing MBR system to accommodate increased flow, treatment, storage, and disposal. Facility upgrades include installing additional grit removal equipment, influent pumps, and flow meters; anoxic pumps and diffusion equipment, aeration blowers, additional MBR modules, and converting an existing lined effluent storage pond into an emergency influent storage basin.

The Discharger proposes expanding the distribution of recycled water Use Areas for agricultural and landscape irrigation in the Northern Lathrop, Mossdale, CLSP, and River Islands developments. Landscape irrigation and ancillary recycled water uses include irrigation of parks; greenbelts; playgrounds; athletic fields; and street landscaping.

Effluent Storage Ponds

The Discharger currently uses five high-density polyethylene (HDPE)-lined-lined effluent storage ponds, which reduces the potential threat to water quality. Table 1 provides a summary of existing and planned effluent storage ponds as proposed in the Report of Waste Discharge. A list of corresponding CEQA documentation with respect to each pond location is cross-referenced below the table.

Table 1: Existing and Planned Effluent Storage Ponds

Site ID	APN	Development Area	Parcel Area (Acres)	Capacity (Mgal) [1]	Use Status	Project Level CEQA Completed [2]
S1	191-190-32	Mossdale	13.26	41	Existing	a, b
S2	191-190-33	Mossdale	6.89	15	Existing	a, b
S3	198-130-35	Mossdale South	9.91	12	Existing	c
S5	198-130-47	East Lathrop	9.96	28	Existing	a
	198-130-48	East Lathrop	0.59		Existing	a
S6	198-060-16	East Lathrop	5.61	34	Existing	e
	198-060-17		6.06		Existing	e
S7	198-040-14	East Lathrop	18.15	57	Planned	f
S8	241-020-70	East Lathrop	60.59	182	Planned	d
S9	241-030-13	East Lathrop	159.92	457	Planned	d
S11	213-300-07	River Islands	72.5	102	Planned	h, j
	213-300-08		86.83		Planned	h, j
S12	213-300-07	River Islands	72.5	97	Planned	h, j
	213-300-08		86.83		Planned	h, j
S13	213-210-06	River Islands	290.81	116	Planned	a
S14	213-22-001	River Islands	96.16	90	Planned	h
S15	198-120-08	East Lathrop	116.99	135	Planned	a, f
	198-120-09		48.64		Planned	a, f
	198-140-16		19.96		Planned	a, f
S16	213-290-02	River Islands	121.88	78	Near Term	a, h, k
S17				61	Planned	a, h, k
S18				71	Planned	a, h, k

Table 1: Existing and Planned Effluent Storage Ponds						
Site ID	**APN**	**Development Area**	**Parcel Area (Acres)**	**Capacity (Mgal) [1]**	**Use Status**	**Project Level CEQA Completed [2]**
S19	239-040-04	River Islands	142.25	55	Planned	f, h
S20				66	Planned	f, h
S21				67	Planned	f, h
S22				71	Planned	f, h
S23				74	Planned	f, h
S24	239-040-07	River Islands	137	65	Planned	f, h
S25				56	Planned	f, h
S26				63	Planned	f, h
S27				58	Planned	f, h
S28	191-220-14	CLSP	89.82	25	Near Term	i
S29				95	Near Term	i
S30	191-270-05	Northern Lathrop	20	172	Planned	g
	191-270-04		7.6		Planned	g
	191-260-22		31.4		Planned	g

[1] Assuming two feet of freeboard
[2] Corresponding environmental documentation:

a. City of Lathrop. 2002. Draft Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. December 31. Prepared by EDAW. AND City of Lathrop. 2003. Final Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. February 28. Prepared by EDAW.

b. City of Lathrop. 2002. Draft Environmental Impact Report for the Mossdale Landing Urban Design Concept. SCH# 2001052059. 2002. Volume I: DEIR. August 29. Prepared by EDAW. AND City of Lathrop. Draft Environmental Impact Report for the Mossdale Landing Urban Design Concept. SCH# 2001052059. 2003. Volume I: DEIR. January. Prepared by EDAW.

c. City of Lathrop. 2003. Public Review Draft Supplemental Environmental Impact Report for Mossdale Landing East. December 6. Prepared by InSite Environmental, Inc. AND City of Lathrop. 2004. Public Review Draft Supplemental Environmental Impact Report for Mossdale Landing East. January 30. Prepared by InSite Environmental, Inc.

d. City of Lathrop. 2004. Draft Environmental impact Report for the CLSP (CLSP). SCH# 2003072132. July. Prepared by EDAW. and City of Lathrop. 2004. Final Environmental impact Report for the CLSP (CLSP). SCH# 2003072132. October. Prepared by EDAW.

e. City of Lathrop. 2004. Addendum the Environmental Impact Report for the City of Lathrop Wastewater Recycling Plant No. 1 (SCH#2001122108) relative to the Nurisso Road Recycled Water Storage Ponds. November 17. Prepared by InSite Environmental, Inc.

f. City of Lathrop. 2005. Addendum to the City of Lathrop Water, Wastewater, and Recycled Water Master Plan Environmental Impact Report. December 14. Prepared by EDAW.

g. City of Lathrop. 2006. Addendum the Environmental Impact Report for the City of Lathrop Wastewater Recycling Plant No. 1 (SCH#2001122108) relative to the Frewert Road Recycled Water Storage Pond. May 5. Prepared by InSite Environmental. Prepared by InSite Environmental, Inc.

h. City of Lathrop. 2002. Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project. Volume 1a. (SCH#1993112027). October 16. AND Prepared by EDAW. AND City of Lathrop. 2003. Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project. Volume 1a. #1993112027). January 22. Prepared by EDAW

i. City of Lathrop. 2014. CLSP Environmental Impact Report Addendum II (SCH#2003072132). March. Prepared by Ascent.

j. City of Lathrop. Initial Study for River Islands Disposal Fields Expansion. 2004. November. Prepared by the City of Lathrop Public Works Department.

k. City of Lathrop. 2014. River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV. SCH#1993112027. Prepared by Ascent.

The Discharger currently uses recycled water for agricultural irrigation in Mossdale and River Islands. The Discharger plans to expand using recycled water for agricultural irrigation in River Islands, CLSP, and the North Lathrop areas. Table 2 provides a summary of existing and planned agricultural irrigation Use Areas as proposed in the Report of Waste Discharge. A list of corresponding CEQA documentation with respect to each agricultural irrigation Use Area is cross-referenced below the table.

Table 2: Existing and Planned Agricultural Irrigation Use Areas

Site ID	APN	Development Area	Parcel Area (Acres)	Irrigated Area (Acres)	Phase	Project Level CEQA Completed [1]
A 01	191-280-10	Northern Lathrop	49.49	42.1	Planned	d
A 02	191-280-09	Northern Lathrop	101.2	86.0	Planned	d
A 03	191-270-33	Northern Lathrop	58.56	49.8	Planned	d
	191-270-32	Northern Lathrop	8.2			d
A 04	191-260-25	Northern Lathrop	18.09	15.4	Planned	f
A 05	191-260-13	Northern Lathrop	19.52	16.6	Planned	f
A 06	191-250-03	Northern Lathrop	8.83	7.5	Planned	f
A 07	191-250-12	Northern Lathrop	9.48	8.1	Planned	f
A 08	191-250-06	Northern Lathrop	10.3	8.8	Planned	f
A 09	191-270-24	Northern Lathrop	95.18	80.9	Planned	d
	191-270-25	Northern Lathrop	3.26			d

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Site ID	**APN**	**Development Area**	**Parcel Area (Acres)**	**Irrigated Area (Acres)**	**Phase**	**Project Level CEQA Completed [1]**
A 10	191-260-27	Northern Lathrop	154.77	131.6	Planned	d
	191-270-26	Northern Lathrop	4.82			d
A 11	191-230-01	Northern Lathrop	40	34.0	Planned	d
A 12	191-230-02	Northern Lathrop	29.33	24.9	Planned	d
A 13	191-270-21	Northern Lathrop	95.54	81.2	Planned	f
A 17	191-260-21	Northern Lathrop	20	17.0	Planned	f
A 18	191-260-28	Northern Lathrop	22.89	19.46	Planned	f
	191-260-29	Northern Lathrop	13.14			f
A 19	191-260-23	Northern Lathrop	12.75	10.8	Planned	f
A 20	191-220-04	CLSP	99.1	84.2	Planned	d
A 21	191-220-05	CLSP	313.88	266.8	Planned	d
A 23	191-190-49	Mossdale	12.4	10.5	Existing	a, h
A 28	213-300-09	River Islands	33.71	28.7	Existing	a, j
A 29	213-130-05	River Islands	231.4	444.2	Planned	a
	213-130-06	River Islands	74.7			a
	213-130-07	River Islands	12.5			a
	213-200-01	River Islands	153			a
	213-200-02	River Islands	229.42			a
A 30	213-210-06	River Islands	294.72	250.5	Existing	a, h
A 31	213-110-03	River Islands	151	128.4	Existing	a, f
A 32	213-110-02	River Islands	178.12	151.4	Planned	h
A 33	213-110-01	River Islands	221.21	188.0	Planned	h
A34	213-210-06	River Islands	294.72	250.5	Planned	a, h
A 35	213-290-02	River Islands	25.44	21.6	Near Term	h, k
A 36	191-220-10	CLSP	5.15	34.5	Near Term	i
	191-220-11		10.43			i
	191-220-12		0.96			i
	191-220-13		16.38			i
	191-220-37		7.72			i

Table 2: Existing and Planned Agricultural Irrigation Use Areas						
Site ID	**APN**	**Development Area**	**Parcel Area (Acres)**	**Irrigated Area (Acres)**	**Phase**	**Project Level CEQA Completed [1]**
A 37	191-220-15	CLSP	19.48	125.5	Future	i
	191-220-17		9.80			i
	191-220-35		8.96			i
	191-220-18		19.61			i
	191-22014		89.82			i
A38	191-220-44	CLSP	1.74	2.6	Near Term	i
	191-220-45		1.26			i

[1] Corresponding environmental documentation:

a. City of Lathrop. 2002. Draft Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. December 31. Prepared by EDAW. AND City of Lathrop. 2003. Final Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. February 28. Prepared by EDAW.

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k. City of Lathrop. 2014. River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV. SCH#1993112027. Prepared by Ascent.

The Discharger plans to use recycled water for landscape irrigation in the Mossdale, River Islands, and CLSP residential areas. Table 3 provides a summary of existing and planned agricultural irrigation Use Areas as proposed in the Report of Waste Discharge. A list of corresponding CEQA documentation with respect to each agricultural irrigation Use Area is cross-referenced below the table.

Table 2: Existing and Planned Landscape Irrigation Use Areas

Site ID	APN(s)	Acres	Land Development Area	Land Use	Phase	Project Level CEQA Completed [1]
L01	191-220-35; 191-220-17	3.38	CLSP [2]	Park	Planned	a d
L02	191-22015	7.80	CLSP [2]	K-8(2)	Planned	d
L03	191-22017	3.38	CLSP [2]	Park	Planned	d
L04	191-21032	11.10	CLSP	Park	Planned	d
L05	191-21032; 191-210-07; 191-210-33; 191-210-07; 191-210-33; 191-210-23; 191-210-17	3.38	CLSP	Park	Planned	d
	191-210-05	3.75	CLSP	Park	Planned	d
L07	191-210-23	3.75	CLSP	Park	Planned	d
L08	191-210-32	3.36	Mossdale	Park	Planned	a, b, d
L09	Right of Way	0.05	Mossdale	Median	Planned	a d
L10	Right of Way	0.21	CLSP	Parkway	Planned	a, b, d
L11	Right of Way	0.74	Mossdale	Parkway	Planned	b
L12	Right of Way	0.05	Mossdale	Median	Planned	b
L13	Right of Way	0.45	Mossdale	Parkway	Planned	c
L14	191-330-09	6.00	Mossdale	Park	Near Term	a b
L15	Right of Way	0.10	Mossdale	Parkway	Planned	b

Table 2: Existing and Planned Landscape Irrigation Use Areas

Site ID	APN(s)	Acres	Land Development Area	Land Use	Phase	Project Level CEQA Completed [1]
L16	Right of Way	0.23	Mossdale	Parkway	Planned	b
L17	Right of Way	0.04	Mossdale	Median	Planned	b
L18	Right of Way	0.26	Mossdale	Parkway	Planned	b
L19	191-540-61	1.20	Mossdale	Park	Planned	b
L20	191-350-04	6.20	Mossdale	Park	Near Term	a b
L21	Right of Way	0.29	Mossdale	Parkway	Planned	b
L22	191-210-17	3.38	Mossdale	Park	Planned	b
L23	Right of Way	0.14	Mossdale	Parkway	Planned	b
L24	Right of Way	0.91	Mossdale	Parkway	Planned	b
L25	Right of Way	0.04	Mossdale	Median	Planned	b
L26	Right of Way	0.40	Mossdale	Median	Planned	b
L27	191-360-68	0.75	Mossdale	Park	Planned	b
L28	Right of Way	0.32	Mossdale	Parkway	Planned	b
L29	Right of Way	0.34	Mossdale	Parkway	Planned	b
L30	Right of Way	0.10	Mossdale	Median	Planned	b
L31	Right of Way	0.09	Mossdale	Median	Planned	b
L32	Right of Way	0.04	Mossdale	Median	Planned	b
L33	191-380-67	1.05	Mossdale	Park	Planned	b
L34	Right of Way	0.06	Mossdale	Median	Planned	a
L35	Right of Way	0.10	Mossdale	Median	Planned	b
L36	Right of Way	0.10	Mossdale	Median	Planned	b
L37	Right of Way	0.03	Mossdale	Median	Planned	b
L38	Right of Way	0.09	Mossdale	Parkway	Planned	a
L39	Right of Way	0.37	Mossdale	Parkway	Planned	a
L40	Right of Way	0.28	Mossdale	Parkway	Planned	b
L41	Right of Way	0.18	Mossdale	Median	Planned	b
L42	Right of Way	0.31	Mossdale	Parkway	Planned	b
L43	191-190-32; 191-190-33	5.50	Mossdale	Pond Berm	Near Term	a, b
L44	Right of Way	2.30	Mossdale	Park/Median	Planned	a, b
L45	241-0020-52	2.10	Mossdale	Pond Berm	Near Term	a, b
L46	198-060-16	3.00	Not Applicable [3]	Pond Berm	Near Term	(e)
L47	213-300-06	0.30	River Islands	Median	Planned	(h)
L48	213-300-06	6.00	River Islands	Park	Planned	(h)

Table 2: Existing and Planned Landscape Irrigation Use Areas						
Site ID	**APN(s)**	**Acres**	**Land Development Area**	**Land Use**	**Phase**	**Project Level CEQA Completed [1]**
L49	213-300-06	1.60	River Islands	Park	Planned	(h)
L50	213-300-06	0.20	River Islands	Median	Planned	(h)
L51	213-300-06	0.40	River Islands	Park	Planned	(h)
L52	213-300-06	0.40	River Islands	Park	Planned	(h)
L53	213-300-06	15.00	River Islands	Park	Near Term	(h)
L54	213-300-06; 213-310-10	0.20	River Islands	Median	Planned	(h)
L55	213-300-06	0.50	River Islands	Median	Planned	(h)
L56	213-300-06	0.10	River Islands	Median	Planned	(h)
L57	213-300-06	0.40	River Islands	Median	Planned	(h)
L58	213-300-06	0.40	River Islands	Median	Planned	(h)
L59	213-300-06	1.50	River Islands	Median	Planned	(h)
L60	213-300-06	2.70	River Islands	Park	Planned	(h)
L61	213-300-06	1.20	River Islands	Median	Planned	(h)
L62	213-300-06	1.10	River Islands	Median	Planned	(h)
L63	213-300-08; 213-300-09; 213-300-11; 213-300-07; 213-300-06; 213-310-10	2.10	River Islands	Park	Planned	(h)
L64	213-310-10	0.40	River Islands	Median	Planned	(h)
L65	213-310-10	1.90	River Islands	Park	Planned	(h)
L66	213-310-10	2.00	River Islands	Park	Planned	(h)
L67	213-310-10; 213-310-09	2.30	River Islands	Park	Planned	(h)
L68	213-310-10	0.40	River Islands	Median	Planned	(h)
L69	213-310-10	0.90	River Islands	Park	Planned	(h)
L70	213-310-10; 213-310-08	2.50	River Islands	Park	Planned	(h)
L71	213-310-09	0.40	River Islands	Median	Planned	(h)
L72	213-310-09; 213-310-08	2.30	River Islands	Park	Planned	(h)
L73	213-310-09	2.00	River Islands	Park	Planned	(h)
L74	213-310-08	6.00	River Islands	Park	Planned	(h)
L75	213-310-08; 213-310-10	0.10	River Islands	Median	Planned	(h)
L76	213-310-10	0.50	River Islands	Median	Planned	(h)
L77	213-220-02	2.80	River Islands	Park	Planned	(h)
L78	213-220-02; 213-310-08	0.50	River Islands	Median	Planned	(h)
L79	213-230-05	1.10	River Islands	Park	Planned	(h)
L80	213-230-05	0.80	River Islands	Median	Planned	(h)

Table 2: Existing and Planned Landscape Irrigation Use Areas						
Site ID	**APN(s)**	**Acres**	**Land Development Area**	**Land Use**	**Phase**	**Project Level CEQA Completed [1]**
L81	213-230-06	4.40	River Islands	Park	Planned	(h)
L82	213-230-01	34.00	River Islands	Park	Planned	(h)
L83	213-220-02	1.10	River Islands	Park	Planned	(h)
L84	213-310-08	2.20	River Islands	Park	Planned	(h)
L85	191-200-13; 191-210-05	0.94	CLSP	Median	Planned	d
L86	191-200-13; 191-210-05	1.37	CLSP	Parkway	Planned	d
L87	191-200-13; 191-210-05	2.50	CLSP	Open Space	Planned	d
L88	191-220-42	0.44	CLSP	Median	Planned	d
L89	191-220-42	0.64	CLSP	Parkway	Planned	d
L90	191-210-04; 191-220-42	0.41	CLSP	Median	Planned	d
L91	191-210-04; 191-220-42	0.96	CLSP	Parkway	Planned	d
L92	191-210-05	1.28	CLSP	Median	Planned	d
L93	191-210-05	1.82	CLSP	Parkway	Planned	d
L94	191-210-05	1.50	CLSP	Open Space	Planned	d
L95	191-210-05	0.13	CLSP	Median	Planned	d
L96	191-210-05	1.29	CLSP	Parkway	Planned	d
L97	191-210-05; 191-210-04	1.43	CLSP	Parkway	Planned	d
L98	191-200-13	1.11	CLSP	Parkway	Planned	d
L99	191-200-13	1.05	CLSP	Parkway	Planned	d
L100	191-210-05; 191-210-04	1.71	CLSP	Parkway	Planned	d

[1] Corresponding environmental documentation:

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f. City of Lathrop. 2005. Addendum to the City of Lathrop Water, Wastewater, and Recycled Water Master Plan Environmental Impact Report. December 14. Prepared by EDAW.

g. City of Lathrop. 2006. Addendum the Environmental Impact Report for the City of Lathrop Wastewater Recycling Plant No. 1 (SCH#2001122108) relative to the Frewert Road Recycled Water Storage Pond. May 5. Prepared by InSite Environmental. Prepared by InSite Environmental, Inc.

h. City of Lathrop. 2002. Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project. Volume 1a. (SCH#1993112027). October 16. AND Prepared by EDAW. AND City of Lathrop. 2003. Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project. Volume 1a. #1993112027). January 22. Prepared by EDAW.

i. City of Lathrop. 2014. CLSP Environmental Impact Report Addendum II (SCH#2003072132). March. Prepared by Ascent.

j. City of Lathrop. Initial Study for River Islands Disposal Fields Expansion. 2004. November. Prepared by the City of Lathrop Public Works Department.

k. City of Lathrop. 2014. River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV. SCH#1993112027.Prepared by Ascent.

Because the proposed landscape Use Areas are typically small in application area, widely spaced, and typically receive small volumes of recycled water, the use of recycled water in these areas is unlikely to cause identifable groundwater degradation as compared to baseline conditions.

Site-Specific Conditions

The City of Lathrop is bisected by tributaries to the San Joaquin River. Laud uses include agricultural, commercial, and residential developments. Surrounding land uses are zoned for agriculture (typically cattle ranching). According to a 2008 Flood Insurance Rate Map for the area, the CTF, CSLP, Mossdale, and the eastern half of River Islands are in Flood Zone X, which is outside and protected from the currently-defined Federal Emergency Management Agency (FEMA) 100-year flood zone. These areas are within an area that is 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 drinking water supply for the City of Lathrop is provided from a series of water supply wells, where groundwater is drawn from approximately 160 to 270 feet below ground surface (bgs). This drinking water supply overlies the Laguna Formation. Drinking water is supplemented with surface water from the Woodward Reservoir, which is distributed by the

South San Joaquin Irrigation District (SSJID) as part of the South County Water Supply Program. Municipal supply water is treated prior to distribution to the community.

The reference evapotranspiration rate (ET_o) is approximately 52 inches per year. The annual average precipitation and 100-year return period annual precipitation is approximately 13and 22 inches per year respectively.

Groundwater Conditions

Shallow groundwater in the Lathrop area occurs within the alluvial flood plain deposits at depths of less than15 feet bgs. Shallow groundwater depth and flow conditions can vary depending on location, season, land use, nearby pumping (i.e. construction dewatering, agricultural irrigation, etc.), and the proximity and flow stage of nearby surface water bodies and recycled water Use Area. As a result, changes in agricultural land use, irrigation practices, and regional pumping have likely altered groundwater flow and the distribution of salinity resulting from on-site or regional agricultural practices.

There are currently over 65 existing shallow groundwater monitoring wells near the CTF, 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. The current monitoring well network was installed between 1998 and 2005 with wells located to monitor shallow groundwater conditions near existing and planned recycled water storage or Use Areas. Several wells were identified in the RWD as damaged, missing, or abandoned. A summary of the existing groundwater monitoring well network is provided below, however many of these wells will only be used for the collection periodic water level measurements.

Table 3: Groundwater Monitoring Well Details and Operational Status

Well Name	Date Drilled	Well Depth (ft bgs)	Diameter (inches)	Screened Interval (ft bgs)	Current Status [1]	Proposed Use / Action
Mossdale						
MWM-01	05/16/05	21.5	4	10-20	Existing	Monitoring
MWM-02	05/16/05	21	4	10-20	Existing	Monitoring
MWM-03	07/01/05	21	4	10-20	Existing	Monitoring
MWM-04	05/16/05	21	4	10-20	Existing	Monitoring
MWM-05	05/17/05	21	4	10-20	Existing	Monitoring
MWM-06	05/17/05	21	4	10-20	Existing	Monitoring
MWM-07	05/17/05	21	4	10-20	Existing	Monitoring
MWM-08	05/16/05	21	4	10-20	Existing	Monitoring
MWM-09	05/19/05	30	4	18-29	Existing	Monitoring
MWM-10	11/30/01	21.5	2	5-20	Abandoned	--
MWM-11	05/18/05	21	4	10-20	Existing	Monitoring

Table 3: Groundwater Monitoring Well Details and Operational Status

Well Name	Date Drilled	Well Depth (ft bgs)	Diameter (inches)	Screened Interval (ft bgs)	Current Status [1]	Proposed Use / Action
MWM-12	06/20/05	21	4	10-20	Existing	Monitoring
MWM-13	05/20/05	21	4	10-20	Existing	Monitoring
MWM-14	05/17/05	21	4	10-20	Existing	Abandon
MWM-15	05/16/05	21	4	10-20	Existing	Monitoring
MWM-16	05/17/05	21	4	10-20	Existing	Abandon
MWM-17	05/16/05	21	4	10-20	Existing	Monitoring
MWM-18	05/16/05	21	4	10-20	Abandoned	--
MWM-19	05/18/05	21	4	10-20	Existing	Monitoring
MWM-20	05/18/05	21	4	10-20	Existing	Monitoring
MWM-21	05/18/05	21	4	10-20	Existing	Monitoring
MWM-22	01/17/01	20	2	--	Existing	Monitoring
MWM-23	07/01/05	21	4	10-20	Existing	Monitoring
MWM-24	05/16/05	21	4	10-20	Existing	Monitoring
MWM-25	05/19/05	21	4	10-20	Existing	Monitoring
MWM-26	05/18/05	21	4	10-20	Existing	Abandon
MWM-27	04/21/09	24	4	13-23	Existing	Monitoring
River Islands						
MWR-01	12/02/98	20	2	5-20	Abandoned	--
MWR-02	12/02/98	20	2	5-20	Abandoned	--
MWR-03	12/09/98	20	2	5-20	Existing	Monitoring
MWR-04	12/09/98	20	2	5-20	Existing	Monitoring
MWR-05	12/02/98	20	2	5-20	Existing	Monitoring
MWR-06	12/02/98	20	2	5-20	Existing	Monitoring
MWR-07	12/02/98	20	2	5-20	Existing	Monitoring
MWR-08	12/09/98	20	2	5-20	Existing	Monitoring
MWR-09	12/09/98	20	2	5-20	Existing	Monitoring
MWR-10	12/02/98	20	2	5-20	Existing	Monitoring
MWR-11	12/02/98	20	2	5-20	Existing	Monitoring
MWR-12	12/02/98	20	2	5-20	Existing	Monitoring
MWR-13	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-14	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-15	Prior to 1999 [2]	--	--	--	Reported in moderate condition [2]	
MWR-16	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-17	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-18	Prior to 1999 [2]	--	--	--	Reported in poor condition [2]	
MWR-19	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	

Table 3: Groundwater Monitoring Well Details and Operational Status						
Well Name	**Date Drilled**	**Well Depth (ft bgs)**	**Diameter (inches)**	**Screened Interval (ft bgs)**	**Current Status [1]**	**Proposed Use / Action**
MWR-20	Prior to 1999 [2]	--	--	--	Reported in moderate condition [2]	
MWR-21	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-22	Prior to 1999 [2]	--	--	--	Reported missing/destroyed [2]	
MWR-23	08/15/05	22	4	11-21	Existing	Monitoring
MWR-24	08/15/05	21.5	4	10.5-20.5	Existing	Monitoring
MWR-25	08/15/05	22	4	11-21	Existing	Monitoring
MWR-26	08/15/05	21.7	4	11-21	Existing	Monitoring
MWR-27	08/16/05	22	4	11-21	Existing	Monitoring
MWR-28	08/16/05	22	4	11-21	Existing	Monitoring
MWR-29	08/16/05	22	4	11-21	Existing	Monitoring
MWR-30	08/17/05	22	4	11-21	Existing	Monitoring
MWR-31	08/17/05	22	4	11-21	Existing	Monitoring
MWR-32	08/17/05	22.3	4	11.5-21.5	Existing	Monitoring
CTF / MBR Facility						
KMW-4 [3]	01/02/01	25	4	--	Existing	Monitoring
MBRMW-1	05/18/05	24	4	13-23	Existing	Monitoring
MBRMW-2	05/18/05	26	4	14-25	Existing	Monitoring
MBRMW-3	05/17/05	21	4	10-20	Existing	Monitoring
MBRMW-4	09/29/05	31	4	15-30	Existing	Monitoring
Pond S6						
RMW-1	03/31/04	30	2	15-30	Existing	Monitoring
RMW-2	03/30/04	30	2	15-30	Existing	Monitoring
RMW-3	03/30/04	30	2	15-30	Existing	Monitoring
RMW-4	09/27/05	31	4	15-30	Existing	Monitoring
RMW-5	09/27/05	31	4	15-30	Existing	Monitoring

Table 3: Groundwater Monitoring Well Details and Operational Status						
Well Name	**Date Drilled**	**Well Depth (ft bgs)**	**Diameter (inches)**	**Screened Interval (ft bgs)**	**Current Status [1]**	**Proposed Use / Action**

Central Lathrop Specific Plan (CLSP)						
CLSP-1	01/22/03	16.5	2	6.5-16.5	Existing	Monitoring
CLSP-2	01/22/03	16.5	2	6.5-16.5	Damaged	Abandon
CLSP-3	01/22/03	16.5	2	6.5-19.5	Existing	Abandon
CLSP-4	01/22/03	16.5	2	6.5-16.5	Existing	Abandon
CLSP-5	01/22/03	16.5	2	6.5-16.5	Abandoned	--

Table 3: Groundwater Monitoring Well Details and Operational Status						
Well Name	**Date Drilled**	**Well Depth (ft bgs)**	**Diameter (inches)**	**Screened Interval (ft bgs)**	**Current Status [1]**	**Proposed Use / Action**
CLSP-6	01/14/03	16.5	2	6.5-16.5	Abandoned	--
CLSP-7	01/14/03	16.5	2	6.5-16.5	Abandoned	--
CLSP-8	01/14/03	16.5	2	6.5-16.5	Existing	Monitoring
CLSP-9	01/17/03	16.5	2	6.5-16.5	Existing	Monitoring
CLSP-10	01/17/03	16	2	6-16	Existing	Monitoring
North Lathrop						
MW-N1	12/02/04	21.5	--	--	Unknown	Unknown
MW-N2	12/02/04	21.5	--	--	Unknown	Unknown
MW-N3	12/02/04	21.5	--	--	Unknown	Unknown
MW-N4	12/02/04	21.5	--	--	Unknown	Unknown
MW-N5	12/02/04	21.5	--	--	Unknown	Unknown
MW-N6	12/02/04	26.5	--	--	Unknown	Unknown
NMW-1	07/12/05	25.5	4	15.5-25.5	Unknown	Unknown
NMW-2	07/12/05	20	4	10-20	Unknown	Unknown
NMW-3	07/13/05	20	4	10-20	Unknown	Unknown
NMW-4	07/13/05	20	4	10-20	Unknown	Unknown
NMW-5	07/13/05	20	4	10-20	Unknown	Unknown
South Lathrop Specific Plan (SLSP)						
MW-S1	05/03/04	21	--	--	Unknown [4]	Unknown
MW-S2	05/03/04	21	--	--	Unknown [4]	Unknown
MW-S3	05/03/04	21	--	--	Unknown [4]	Unknown
MW-S4	05/03/04	21	--	--	Unknown [4]	Unknown
MW-S5	05/03/04	21	--	--	Unknown [4]	Unknown

[1] Status as of December 2014
[2] As documented in Monitoring Well Location Study, 13 January 2006, ENGEO.
[3] Monitoring well associated with Crossroads Wastewater Treatment Facility.[4] Condition last observed in February 2007.

Groundwater monitoring data has been collected from many of these well locations for nearly ten years or more. The resulting groundwater monitoring data illustrate high spatial and temporal variability, as reflected by the variability of shallow groundwater gradient directions and water quality. Baseline groundwater conditions were identified as impacted by salinity constituents TDS, chloride, and sulfate; along with sulfates, iron, and manganese. Groundwater pollution is likely the result of local and regional long term

agricultural practices. Thus, baseline conditions were used to evaluate pre-discharge groundwater quality.

Basin Plan, Beneficial Uses, and Regulatory Considerations

Local drainage is to San Joaquin River, which is a tributary to the Sacramento-San Joaquin Delta. The beneficial uses of San Joaquin River as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; industrial process supply; industrial service supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; wildlife habitat; and navigation. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

Antidegradation Analysis

Groundwater in the western Lathrop area has been severely compromised through a combination of long term agricultural practices and regional drainage from the Central Valley into the San Joaquin Delta. The land development areas described in this Order that receive recycled water are located in close proximity to surface water courses that influence shallow groundwater flow and water quality conditions, creating a complex hydrogeologic model.

The primary constituents of concern from the treated effluent that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride). The presence of elevated iron and manganese in groundwater near the River Islands recycled water Use Areas indicates that reducing conditions not associated with the use of recycled water have mobilized these metals in shallow groundwater. Elevated concentrations of nitrate as nitrogen in North Lathrop are indicative of agricultural practices, as there has not been any discharge of recycled water in that area.

For TDS, sulfate, iron, manganese, and nitrate; groundwater monitoring data indicate that groundwater has not been degraded further by the discharge, and that the expanded discharge does not pose a threat of significant degradation in the future. This Order contains effluent limits that will ensure that the use of recycled water does not cause groundwater quality to get any worse. The use of recycled water at the Use Areas does not pose a threat of significant degradation because of the high quality of the effluent and the ability of landscaping and crops to consume nitrogen.

Based on the foregoing findings, this Order requires continued groundwater monitoring only for selected recycled water Use Areas that have the greatest potential to impact groundwater quality, and are of a sufficient size that such an impact will be recognizable above background conditions. Groundwater monitoring may also be required for new recycled water Use Areas, but not near existing or future lined effluent storage ponds.

This Order includes groundwater limitations that implement Resolution 68-16 and the Controllable Factors Policy as applicable. If effluent or other future monitoring data indicate an increased threat to groundwater quality, groundwater monitoring may be required in other areas at the Executive Officer's discretion.

Discharge Prohibitions, Specification, and Provisions

This Order establishes effluent and groundwater limitations for the CTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

This Order restricts influent flows to the CTF as an average dry weather flow (ADWF) of 0.75 MGD until the Discharger can demonstrate that the CTF has the treatment, storage, and disposal capacity to accommodate an ADWF of 1.0 MGD. The flow limit can be increased up to a maximum of 6.0 MGD upon approval by the Executive Officer.

This Order contains effluent limits that ensure that the discharge will not cause exceedance of a water quality objective in groundwater and comply with Title 22. This Order prescribes groundwater limitations that ensure the discharge does not affect present and anticipated future beneficial uses of groundwater.

This Order is also a Master Recycling Permit with requirements consistent with the Water Code section 13523.1, including the requirement to establish and have authority to enforce rules and/or regulations for recycled water Users governing the design and construction of recycled water use facilities and the use of recycled water in accordance with water recycling criteria established in Title 22, California Code of Regulations and this Order.

The Monitoring and Reporting Program is designed to verify compliance with effluent limitations and operational requirements of the WDRs.