ATTACHMENT A
ADDITIONAL INFORMATION REQUIREMENTS
FOR REPORT OF WASTE DISCHARGE

Provide a technical report prepared by a California registered Civil Engineer that presents the following information:

A. General Information

1. Is this a new or existing facility?
2. If this is an existing facility, is the discharge currently regulated under Waste Discharge Requirements (WDRs) issued by the Central Valley Water Board?
   a. If so, provide the WDRs order number.
   b. If not, provide the name of the local agency that issued the current permit.
3. Provide the following for the facility that generates the waste and the site where the waste is discharged:
   a. Street address (provide street name and distance from nearest cross street if there is no street number)
   b. Township, Range, and Section
   c. Assessor's parcel numbers

B. Proposed Facility and Discharge (for new facilities only)

1. A description of the sources and types of wastewater flowing into the system from:
   a. residential (population served and number of connections or equivalent dwelling units)
   b. commercial (number of connections by type)
   c. industrial (number of connections by type)
2. Design influent flow rates (average daily, dry weather daily, peak hour, peak day, and peak month), and the design treatment capacity of the system with respect to each of these. Discuss the methods used to estimate these design parameters.
3. A description of all proposed wastewater conveyance, treatment, and disposal systems. Use site plans and conceptual drawings as appropriate to illustrate locations and typical construction.
4. The following maps, plans, and illustrations:
   a. A facility location map showing local topography, the facility location and/or boundaries, streets, and surface waters;
   b. A process flow diagram for the entire treatment and disposal system;
   c. A scaled treatment plant site plan;
   d. A scaled map showing the limits of all proposed wastewater treatment and effluent storage and disposal areas.

5. Chemical characterization of the drinking water supply, including total dissolved solids; electrical conductivity, standard minerals (boron, bromide, calcium, chloride, fluoride, magnesium, phosphate, potassium, sodium, sulfate, alkalinity series, and hardness), and metals (aluminum, arsenic, cadmium, copper, lead, iron, manganese, nickel, and zinc). Include supporting analytical data.
6. Expected treatment system influent quality and effluent quality at the point of discharge to the disposal system (BOD, total suspended solids, settleable matter, total dissolved solids, sodium, chloride, nitrogenous compounds, fixed dissolved solids, electrical conductivity, pH, and total coliform organisms). Discuss the methods used to estimate these parameters.
7. A description of the proposed sewer system, materials and lift station details (type, location, capacity, backup systems, and alarm features). Provide a scaled plan of all proposed conveyance systems and discuss potential inflow and infiltration (I/I) rates in light of local groundwater conditions and sewer system materials/design.
8. A description of proposed alarm systems, emergency wastewater storage facilities, and other means of preventing system bypass or failure during reasonably foreseeable overload conditions (e.g., peak flows, power failure, sewer blockage). Consider both potential problems at the plant and within the sewer system.
9. For debris, grit and screenings, sludge, and biosolids the following:
    a. A description of expected solids generation rates and handling/storage procedures; and
    b. A description of proposed solids disposal practices.
10. For each wastewater treatment, storage, or disposal pond and containment structure, provide the following information:
    a. Identification (name) and function of the pond;
    b. Surface area, depth, and volumetric capacity at two feet of freeboard;
    c. Height (relative to surrounding grade), crest width, interior slope, and exterior slope of each berm or levee;
    d. Materials used to construct each berm or levee;
    e. Description of engineered liner, if any;
    f. Estimated steady state percolation rate for each unlined pond;
    g. Depth to shallow groundwater below the base;
    h. Overfilling/overflow prevention features; and
    i. Operation and maintenance procedures.
11. For proposed subsurface disposal systems, provide the design basis and documentation demonstrating that the system has been designed in accordance with applicable regulations, codes, ordinances, and guidelines. If the design deviates from these requirements, provide justification in terms of system longevity, maintainability, and groundwater protection.

12. If treated domestic effluent will be recycled for landscape irrigation or other beneficial reuse, provide a complete description the proposed discharge including:
    a. Effluent disinfection system;
    b. Reclaimed water conveyance systems;
    c. Water reclamation areas;
    d. Cropping plans;
    e. Planned reclamation operations (planting and harvest, irrigation method, irrigation frequency, irrigation amounts);
    f. Expected nutrient loadings (pounds per acre per year total nitrogen);
    g. Expected salt loadings (pounds per acre per year total dissolved solids);
    h. Tailwater management methods;
    i. Storm water runoff management methods; and
    j. Plans that illustrate items 12.b, 12.c, 12.h, and 12.j.

    Note: A Title 22 Engineering Report is required only if the wastewater will be recycled to grow crops. To the extent this information is already presented in the Title 22 Engineering Report, the RWD may incorporate that report by reference. The Title 22 Engineering Report must also be submitted to the California Department of Public Health for review and approval.
13. Projected monthly water balances demonstrating adequate containment capacity for both the average rainfall year and the 100-year return period total annual precipitation, including consideration of at least the following.
    a. Initial baseline influent and I/I flows as well as baseline influent and I/I flows at full build out with an aging sewer system.
    b. A minimum of two feet of freeboard in each pond at all times (unless a registered civil engineer determines that a lower freeboard level will not cause overtopping or berm failure);
    c. Historical local evapotranspiration, pan evaporation, and lake evaporation data (monthly average values);
    d. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns;
    e. Proposed reclamation area/disposal system loading rates distributed monthly in accordance with expected seasonal variations based on crop evapotranspiration rates; and
    f. Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging on all ponds).
14. Proposed flow limits and basis for the limit. Consider dry weather flows vs. peak flows and seasonal variations. Include the technical basis for the proposed flow limit (e.g., design treatment capacity; hydraulic capacity of a main lift station, headworks, or other system element; and demonstrated effluent disposal capacity).
15. A narrative description of plant operation and maintenance procedures to be employed, including those associated with effluent storage and disposal.

C. Existing Facility and Discharge

1. A description of the sources and types of wastewater flowing into the system, design flow rates (average daily, dry weather daily, peak hour, peak day, and peak month), and the design capacity of the system with respect to each of these.
2. A summary table of monthly influent flow totals and monthly precipitation totals for the last five years. Explain any data gaps, outliers, and/or unusual circumstances that might affect measured flow rates. If I/I contributes significantly to influent flow, provide an I/I analysis to project I/I as a function of precipitation and/or groundwater level as appropriate.
3. A detailed description of the facilities that will generate wastewater, and all existing and proposed wastewater conveyance, treatment, and disposal systems. Use site plans and conceptual drawings as appropriate to illustrate locations and typical construction.
4. A process flow diagram, scaled treatment plant site plan, and a scaled map showing the limits of all existing and proposed wastewater treatment and effluent storage and disposal areas.
5. Chemical characterization of the drinking water supply, including total dissolved solids; standard minerals (boron, bromide, calcium, chloride, fluoride, magnesium, phosphate, potassium, sodium, sulfate, alkalinity series, and hardness), and metals (aluminum, arsenic, cadmium, copper, lead, iron, manganese, nickel, and zinc). Include supporting analytical data. For public water supply systems, provide the last three years of Consumer Confidence Reports.
6. Influent quality and effluent quality at the point of discharge to the disposal system (BOD, total suspended solids, settleable matter, total dissolved solids, sodium, chloride, nitrogenous compounds, electrical conductivity, pH, and total coliform organisms). Include a summary table of all data obtained in the last five years.
7. A description of the existing sewer system, materials and lift station details (type, location, capacity, backup systems, and alarm features). Provide a scaled plan of all existing and proposed conveyance systems.
8. A description of existing emergency wastewater storage facilities or other means of preventing system bypass or failure during reasonably foreseeable overload conditions (e.g., peak flows, power failure, sewer blockage). Consider both potential problems at the plant and within the sewer system.
9. For debris, grit and screenings, sludge, and biosolids the following:
    a. A description of expected solids generation rates and handling/storage procedures; and
    b. A description of proposed solids disposal practices.
10. For each pond and other waste containment structure, provide the following information:
    a. Identification (name) and function of the pond;
    b. Surface area, depth, and volumetric capacity at two feet of freeboard;

c. Height (relative to surrounding grade), crest width, interior slope, and exterior slope of each berm or levee;

d. Materials used to construct each berm or levee;

e. Description of engineered liner, if any;

f. Estimated steady state percolation rate for each unlined pond;

g. Depth to shallow groundwater below the planned base of the ponds;

h. Overfilling/overflow prevention features; and

i. Operation and maintenance procedures.

11. For subsurface disposal systems, provide documentation demonstrating that the system has been designed in accordance with applicable regulations, codes, ordinances, and Guidelines. If the design deviates from these requirements, provide complete justification in terms of system longevity, maintainability, and groundwater protection.

12. If treated effluent is currently recycled for landscape irrigation or other beneficial reuse, provide a complete description the discharge including:

    a. Effluent disinfection system;

    b. Reclaimed water conveyance systems;

    c. Water reclamation areas;

    d. Cropping plans;

    e. Typical reclamation operations (planting and harvest, irrigation method, irrigation frequency, irrigation amounts);

    f. Nutrient loadings for each of the last five years (pounds per acre per year total nitrogen);

    g. Salt loadings for each of the last five years (pounds per acre per year fixed or total dissolved solids);

    h. Tailwater management methods; and

    i. Storm water runoff management methods.

    Is reclamation performed pursuant to an approved Title 22 Engineering Report? If not, a Title 22 Engineering Report is required if the wastewater is recycled to grow crops. If required, the Title 22 Engineering Report must also be submitted to the California Department of Public Health separately for review and approval.

13. Projected monthly water balances demonstrating adequate containment capacity for both the average rainfall year and the 100-year return period total annual precipitation, including consideration of at least the following.

    a. Current baseline influent and I/I flows as well as baseline influent and I/I flows at full build out with an aging sewer system.

    b. A minimum of two feet of freeboard in each pond at all times (unless a registered civil engineer determines that a lower freeboard level will not cause overtopping or berm failure);

c. Historical local pan evaporation data (monthly average values);

d. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns;

e. Proposed reclamation area/disposal system loading rates distributed monthly in accordance with expected seasonal variations based on crop evapotranspiration rates; and

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

14. Proposed flow limits and basis for the limit. Consider dry weather flows vs. peak flows and seasonal variations. Include the technical basis for the proposed flow limit (e.g., design treatment capacity; hydraulic capacity of a main lift station, headworks, or other system element; and demonstrated effluent disposal capacity).

15. A narrative description of plant operation and maintenance procedures to be employed, including those associated with effluent storage and disposal.

D. Planned Changes in the Facility and Discharge (for existing facilities only)

1. Describe in detail any and all planned changes in the facility or discharge, addressing each of items listed in C.1 through C.15 above.

E. Local and Site-Specific Conditions (Illustrate with maps as appropriate)

1. Neighboring land uses.
2. Typical crops grown (if agricultural area).
3. Primary irrigation water source (if agricultural area).
4. Terrain and site drainage features.
5. Nearest surface water drainage course.
6. FEMA floodplain designation(s).
7. Average Annual precipitation (inches)
8. 100-year 365-day precipitation (inches)
9. Reference evapotranspiration (monthly and annual total)
10. Pan evaporation (monthly and annual total)
11. A description of the types and depths of soil underlying ponds and/or effluent disposal areas (include a copy of the geotechnical report and/or NRCS soil report).

F. Groundwater Conditions

1. Description of the site hydrogeology including stratigraphy, groundwater elevation and gradient, transmissivity, and influence of all recharge and pumping sources (i.e., a site conceptual model).
2. What is the groundwater elevation and gradient at the existing facility?
3. What is background shallow groundwater quality for typical domestic waste constituents?
4. What are subsurface conditions at the proposed new disposal site(s)? [1]

[1] This must be based on at least one groundwater monitoring event. If permanent monitoring wells will be installed to obtain this data, a workplan must first be approved.

5. What is the character of groundwater quality at the proposed new disposal site(s) with respect to total dissolved solids, major ions, nitrogenous compounds, electrical conductivity, pH, and total coliform organisms?

G. Antidegradation Analysis

The State Water Resources Control Board Resolution No. 68-16 (the Antidegradation Policy) requires that the Central Valley Water Board maintain the high quality of waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the state, will not unreasonably affect beneficial uses, and will not result in exceedances of one or more water quality objectives. If a discharge will degrade groundwater quality but not cause exceedance of one or more water quality objectives, the discharger must demonstrate that all feasible best practicable treatment and control (BPTC) measures have been implemented or will be implemented to justify allowing the current level of degradation to continue or increase (as applicable), or allowing any degradation in the case of a new discharge.

1. Provide a technical report by a Professional Geologist or Certified Hydrogeologist that provides an assessment of the following:

   - Description of the geology and hydrogeology of the area;
   - Groundwater quality at the site and any wastewater disposal site(s);
   - For existing facilities, whether the discharge has caused degradation. If so, for which constituents, to what degree, and whether the discharge has caused exceedance of a water quality objective.
   - The potential for the discharge to degrade groundwater quality (for new discharges) or further degrade groundwater quality (for existing discharges, whether or not the discharge is expanding).

   The assessment must be made based on site-specific data and shall include the following items:

   a. Characterization of all waste constituents to be discharged that have the potential to degrade groundwater quality;

   b. Characterization of shallow groundwater quality (i.e., the uppermost layer of the uppermost aquifer) for typical waste constituents[2] upgradient and downgradient of the site and comparison to established water quality objectives [3] (include tabulated historical groundwater monitoring data and groundwater elevation contour maps for the last eight monitoring events);

   c. A description of the geology and hydrogeologic conditions of the site including groundwater elevation and gradient, transmissivity, influence of all known recharge and pumping sources, and subsurface conditions at the facility, including any proposed new disposal site or storage ponds;

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[2] Include analyses for the following: total coliform organisms, total dissolved solids, fixed dissolved solids, electrical conductivity, nitrate nitrogen, total nitrogen, and an anion/cation scan.

[3] Compare to drinking water standards and Basin Plan numeric water quality objectives.

d. Groundwater degradation , if any, that has resulted from existing operations, other nearby discharges, or natural occurrences;

e. The extent the discharge has impacted or will impact the quality of the shallow groundwater, if any;

f. The expected degree of degradation, if any.

g. If degradation has occurred or is expected to occur describe the following:

   i. Any facility design features and operational practices that reduce the potential for groundwater degradation (best practicable treatment and control). Such features might include salinity source control, other pollutant source control, advanced treatment, disinfection, concrete treatment structures, and pond lining systems;

   ii. Additional best practicable treatment and control (BPTC) measures that could be implemented and a preliminary capital and annual operations and maintenance cost estimate for each;

   iii. How current treatment and control measures are justified as BPTC (i.e., what justifies not implementing additional BPTC measures);

   iv. How no water quality objectives will be exceeded; and

   v. Why allowing existing and/or anticipated degradation is in the best interest of the people of the state.

H. Water Recycling Regulatory Compliance (Title 22, CCR)

I. Compliance With Other Applicable Laws and Regulations

1. **California Environmental Quality Act (CEQA)**. Is the project that will create or significantly change the wastewater treatment and disposal facility subject to CEQA review? If not, provide a written determination from the local planning agency. If so, provide a copy of the final certified CEQA document.

2. **Industrial Storm Water Permit**. The State Water Resources Control Board adopted Order No. 97-03-DWQ (NPDES General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. Some wastewater treatment facilities are required to obtain coverage under this permit. Provide evidence that the facility is exempt or has applied for coverage under the Industrial Storm Water Permit.

3. **General WDRs for Sanitary Sewer Systems**. State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems General Order No. 2006-0003-DWQ. The permit requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to obtain coverage. Provide evidence that the facility is exempt or has applied for coverage under the General WDRs for Sanitary Sewer Systems.

4. **Department of Water Resources Well Standards**. California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells. Discuss whether existing monitoring wells at the facility were constructed in accordance with the Department of Water Resources Well Standards.