CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0037

WASTE DISCHARGE REQUIREMENTS
FOR
PRIMA BELLA PRODUCE, INC. AND MARK BACCHETTI
PRIMA BELLA FOOD PROCESSING FACILITY
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board) finds that:

1. Prima Bella Produce, Incorporated and Mark Bacchetti, (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 10 September 2007 to allow treatment and land application of wastewater generated at its processing facility. Additional information was submitted on 7 September 2007 and 11 April 2011.
2. The facility is located at 11104 Tracy Boulevard, Tracy in San Joaquin County. The location of the facility is presented on Attachment A, which is attached hereto and made part of this Order by reference. The Assessor's Parcel is 212-130-019.
3. The facility consists of an office, warehouse, paved parking areas, a wastewater pond, and a land application area (LAA). The LAA consists of 16.3 acres divided into irrigation checks.
4. Prima Bella Produce, Inc. operates the processing facility and adjoining land application area. Mark Bacchetti is president of Prima Bella Produce, Inc. and owns the property where the facility is located. Activities at the facility include receiving, washing, and packaging fresh corn for commercial sale.

WASTEWATER SYSTEM

5. Food processing wastewater is generated during corn processing, and equipment and floor cleaning. A wastewater system schematic is presented on Attachment B, which is attached hereto and made part of this Order by reference.
6. Prima Bella Produce, Inc. packages approximately 26,000 tons/year of fresh corn. Corn processing includes conveyance, washing, trimming, and husking. Water is used to transport the corn in conveyance troughs, washing removes sediment from the corn, trimming removes corn silk, and husking removes the husk from the corn.
7. Historically, the facility operated 5 days a week for 52 weeks/year. Because the company is now operating a second facility in southern California, the San Joaquin County facility will not operate during the winter months. Processing will occur from May through October. Equipment cleaning occurs daily, Monday through Friday after each day's processing activities.
8. Wastewater is collected in floor drains, screened, and then discharged to a sump before being pumped to the aerated cell of the wastewater pond. In addition to the facility wastewater, the following additional sources are added to the wastewater system:

a. Storm water is collected from paved areas and roof down-spouts; it is mixed with wastewater at the sump.

b. Some supplemental irrigation water is added to the wastewater pond as described below.

9. Wastewater is recycled before discharge to the wastewater system. The recycling activities reduce the pumping rate at the supply well from 250 gallons per minute (gpm) to 50 gpm. Reducing the volume of water pumped reduces the Fixed Dissolved Solids (FDS) load that originates in the source water.

10. The wastewater treatment and storage pond is equipped with a 60 mil thick HDPE liner and provides approximately 4.5 million gallons of storage capacity with two feet of freeboard. The pond is divided into treatment and storage cells. The treatment cell is equipped with mechanical aerators.

11. When the storage provided by the larger (storage) cell is not needed, wastewater is conveyed from the aerated cell through a low flow section to the irrigation pumps. The low flow configuration is designed to allow supplemental irrigation water to flush the pond and remove settled solids to prevent odor generation.

12. Wastewater generation rates for 2009 and 2010 are presented in the table below.

		2009		*2010*	
Month	Units	Monthly Total	Daily Average	Monthly Total	Daily Average
Jan	gal	869,012	28,033	1,025,355	33,076
Feb	gal	813,031	29,037	686,307	24,511
Mar	gal	693,476	22,370	693,574	22,373
Apr	gal	1,163,516	38,784	746,622	24,887
May	gal	1,844,349	59,495	731,666	23,602
June	gal	1,530,196	51,007	1,034,023	34,467
July	gal	2,611,631	84,246	1,571,188	50,683
Aug	gal	2,547,471	82,176	1,656,952	53,450
Sept	gal	1,277,336	42,578	1,821,181	60,706
Oct	gal	604,845	19,511	1,306,271	42,138
Nov	gal	240,869	8,029	261,658	8,722
Dec	gal	829,584	26,761	420,348	13,560

13. Wastewater quality was characterized both before and after treatment. Treated wastewater quality results represent the average of several samples collected each year and are presented below:

Constituent		*Pretreatment*	*Post Treatment Averages*	
Sample Date	Units	6/19/2007	2009	2010
pH	s.u.	6.0	8.3	8.3
Alkalinity Total (as CaCO3)	mg/L	NA	260	140
Biochemical Oxygen Demand	mg/L	1,300	68	66

Constituent		*Pretreatment*	*Post Treatment Averages*	
Sample Date	Units	6/19/2007	2009	2010
Boron	ug/L	530	1	0.5
Disinfection Byproducts				
Bromodichloromethane	ug/L	<0.5	NA	NA
Bromoform	ug/L	<0.5	NA	NA
Chloroform	ug/L	<0.5	NA	NA
Dibromochloromethane	ug/L	<0.5	NA	NA
Chlorate	mg/L	0.64	NA	NA
Chlorite	mg/L	<0.2	NA	NA
Calcium	mg/L	34	58	41
Chloride	mg/L	72	109	105
Electrical Conductivity	umhos/cm	2,390	1,215	976
Fixed Dissolved Solids	mg/L	430	595	330
Total Dissolved Solids	mg/L	1,300	775	540
Iron	ug/L	2,000	5.1	2
Magnesium	mg/L	17	31	25
Manganese	ug/L	180	NA	NA
Phosphorus	mg/L	NA	16	4
Potassium	mg/L	75	43	15
Residual Chlorine	mg/L	<0.02	NA	NA
Sodium	mg/L	47	105	74
Sulfate	mg/L	100	113	97
Ammonia as Nitrogen	mg/L	<0.2	1.6	2.4
Nitrate as Nitrogen	mg/L	0.1	0.1	0
Total Kjeldahl Nitrogen	mg/L	1.2	17	6
Total Nitrogen	mg/L	1.3	17	6
Total Organic Carbon	mg/L	690	NA	NA
Total Phosphorous	mg/L	6	NA	NA
Total Suspended Solids	mg/L	550	217	254

14. The Discharger uses a number of chemicals in the processing, cleaning and sanitation processes at the facility. The chemicals and quantities used at the facility are identified below:

Product Name	Primary Ingredient	Use	Quantity (gal/yr)
Perasan 15%	Peroxyacetic Acid	Processing	300
Enviro Bac #2	Alkyl Dimethyl Benzyl Ammonium Chloride	Cleaning	200
Foam Chlor 50	Potassium Hydroxide	Cleaning	400
Enviro Chlor	Sodium Hypochlorite	Cleaning	100
IPA	Isopropyl Alcohol	Cleaning	50
Turbo Kleen	Dipropylene Glycol Methyl Ether	Cleaning	50

15. The Discharger has implemented water conservation and source control at the facility. Each of the measures is discussed below:

    a. Potassium based chemicals rather than sodium based chemicals are used where possible. Potassium hydroxide is used for cleaning activities. Potassium is a plant nutrient and therefore is more readily taken up by crops than sodium.

    b. Peracetic acid rather than chlorine based chemicals is used. The switch minimizes the possibility of disinfection byproducts in the waste stream. Peracetic acid (also known as peroxyacetic acid) breaks down to acetic acid and hydrogen peroxide.

LAND APPLICATION SYSTEM

16. The land application area (LAA) consists of 16.3 acres of cropped land divided into irrigation checks. The LAA will be cropped with orchard grass, rye grass, and fescue hay (or similar crop). The crop will be cut and removed from the LAA as often as needed to maintain crop health and crop production. The location of the LAA is presented on Attachment C, which is attached hereto and made part of this Order by reference.

17. Because wastewater will not be sufficient to meet the crop irrigation needs during the summer months, supplemental irrigation water will be applied. Supplemental water will be provided by the Naglee Burke Irrigation District, the source water is Old River. Supplemental irrigation water will be required in the months of June through October during normal precipitation years.

18. Although processing activities will occur from May through October, wastewater generated in September and October will remain in the wastewater pond until it is applied to the LAA the following season beginning in March. Normally, wastewater will not be applied from November through February, but winter month climatic conditions may require irrigation of the crop. This order does not prohibit application of wastewater or supplemental irrigation water except when conditions do not allow application as described in the Discharge Prohibitions, Specifications, and Land Application Requirements.

19. Supplemental irrigation water will be applied to the LAA. There are two connections to the same irrigation canal, but at different locations. The connections are named Supplemental Water Connection West, and Supplemental Water Connection East (SWC-West, and SWC-East). Water from SWC-West is discharged directly to the LAA. Water from SWC-East is discharged into the wastewater pond and subsequently applied to the LAA.

20. To characterize supplemental irrigation water quality, samples were collected from the irrigation canal. A summary of the results are presented below:

Constituent	Units	8/23/2007	2009 [1]	7/21/2010
Electrical Conductivity	umhos/cm	650	980	577
pH	std	8.5	8.0	8.7
Biochemical Oxygen Demand	mg/L	54.0	6.0	5.3
Fixed Dissolved Solids	mg/L	320	290	200
Total Dissolved Solids	mg/L	460	400	300

Constituent	Units	8/23/2007	2009 [1]	7/21/2010
Total Suspended Solids	mg/L	22	70	35
Alkalinity ($CaCO_3$)	mg/L	130	110	80
Boron	mg/L	0.32	0.3	0.3
Calcium	mg/L	48	36	28
Chloride	mg/L	120	118	75
Iron	mg/L	0.51	2.5	1.35
Magnesium	mg/L	22	18	14
Ammonia as Nitrogen	mg/L	<0.2	0.2	0.2
Nitrate as Nitrogen	mg/L	1.2	0.7	0.4
Total Kjeldahl Nitrogen	mg/L	1.8	1.0	0.5
Total Nitrogen	mg/L	3.0	2.0	0.4
Phosphorus	mg/L	0.3	0.5	0.2
Potassium	mg/L	4.3	5.0	3.0
Sodium	mg/L	87	81	59
Sulfate	mg/L	<0.5	74	65

[1] Values reported for year 2009 are the average of samples collected in January, February, April, and July.

21. The supplemental irrigation water application method depends upon the intake location, both of which draw from the same irrigation canal. Supplemental irrigation water from the western connection (SWC-West) is applied to the LAA using siphon tubes drawing from an LAA irrigation ditch. Supplemental irrigation water from the eastern connection (SWC-East) is discharged to the wastewater pond. Wastewater and wastewater/supplemental irrigation water mixtures from the wastewater pond are applied to the LAA by surface irrigation.

22. Wastewater and/or supplemental irrigation water may be applied by flood irrigation, sprinkler system, or drip irrigation as long as the wastewater is applied consistent with the requirements in this Order, is evenly applied and prevents spills outside the LAA. Reapplying tailwater to the LAA or returning it to the wastewater pond is acceptable.

23. Crops will be cut and removed from the LAA. Removal of the crop will remove the nitrogen and dissolved solids that are taken up by the crop. Based on flow rates for wastewater (11.40 Mgal/year) and supplemental irrigation water (4.68 Mgal/year) estimated loading rates are discussed below.

24. TDS is composed of both Volatile Dissolved Solids (VDS) and FDS. The proportion of VDS to FDS in wastewater varies with the source, but 50-percent of the TDS in food processing wastewater may be in the volatile form. The VDS can be biologically treated by soil microorganisms in a well-managed wastewater treatment and land application system, when wastewater is not over-applied. The estimated FDS concentration in wastewater is approximately 430 mg/L. Based on the flow rate, approximately 40,687 pounds/year of FDS will be applied to the LAA (2,496 lbs/ac/year).

25. The estimated FDS concentration in supplemental irrigation water is approximately 320 mg/L. Based on the flow rate, approximately 12,435 pounds/year of FDS will be

applied to the LAA (763 lbs/ac/year). The total FDS loading rate is approximately 3,259 lbs/ac/year. It is anticipated that cropping will take up approximately 700 to 1,000 lbs/ac/year of dissolved solids. Based on the flow-weighted average of applied wastewater and supplemental irrigation water FDS concentration (398 mg/L), the discharge water quality is substantially better than the underlying groundwater quality which averages 3,440 mg/L. The discharge is unlikely to cause groundwater degradation.

26. Nitrogen is present in both the wastewater and in the supplemental irrigation water. The estimated nitrogen concentration in wastewater is approximately 2.6 mg/L. Based on the flow rate, approximately 246 pounds/year of total nitrogen will be applied to the LAA (15 lbs/ac/year). The estimated nitrogen concentration in supplemental irrigation water is 6.0 mg/L. Based on the flow rate, approximately 233 lbs/year will be applied to the LAA (14.3 lbs/ac/year). The approximate total nitrogen loading rate is 29.4 lbs/ac/year. The mixture of orchard grass, rye grass, and fescue hay crop grown in the LAA will take up approximately 300 pounds per acre of nitrogen. Other crops are acceptable if they provide similar uptake capacity. Due to the nitrogen deficiency, additional nitrogen may be required to support crop health.

27. The RWD included a water balance that was based on an annual wastewater discharge of 11.40 Mgal, 100-year annual return rainfall amounts, a wastewater storage capacity of 4.5 Mgal, and a total of 16.3 acres of LAA. During 100-year annual return rainfall year, the wastewater pond is large enough to store wastewater through the months of November through March. Supplemental irrigation water is needed to meet evapotranspiration demand from June through August.

28. Solid wastes consisting of corn husks, kernels, stems, etc. are generated by the processing operations. Such wastes are removed from the wastewater during screening and conveying processes and are transported offsite for animal feed. Approximately 84 tons/day of solids are generated during peak processing activities.

GROUNDWATER CONDITIONS

29. Process water is provided to the facility by one onsite supply well. The total well depth is 231 feet below ground surface (bgs) and is screened from 201 to 231 feet bgs. The supply well location is presented on Attachment C.

    a. The supply well was constructed in January 1996 using mud rotary drilling technique.

    b. The perforated interval of the supply well is below an aquitard that exists from approximately 94 to 199 feet bgs.

    c. The supply well was sampled on 1 November 2006. The monitoring data are presented below:

Constituent	Units	2006	2009	2010
pH	s.u.	8.0	7.7	7.9
Alkalinity as $CaCO_3$	mg/L	120	110	110
Total Hardness	mg/L	162	NA	NA
Biochemical Oxygen Demand	mg/L	NA	1.0	1.0
Boron	mg/L	0.67	0.6	0.6

Chloride	mg/L	50	50	53
Sodium	mg/L	74	70	69
Sulfate	mg/L	120	118	124
Fixed Dissolved Solids	mg/L	NA	330	250
Ammonia as N	mg/L	NA	0.1	0.7
Nitrate as Nitrogen	mg/L	1.6	1.8	1.9
Total Kjeldahl Nitrogen	mg/L	NA	0.5	0.5
Total Nitrogen	mg/L	NA	2.0	1.9

NA denotes Not Analyzed.

d. Shallow groundwater quality was investigated in 2007 by collecting groundwater samples from hand augered soil borings. Based on the limited groundwater investigation, shallow groundwater exists approximately 6-7 feet bgs. Based on information from fuel leak sites in the area[1], shallow groundwater likely flows to the north-northeast towards Old River.

30. Grab groundwater samples were collected from soil borings at five locations at the site. The soil boring locations are presented on Attachment C. The groundwater quality data is summarized below:

Sample ID	Units	PB AB-1	AB-1	HAB-1	HAB-2	HAB-3
Sample Date		2/28/07	3/9/07	6/27/07	6/27/07	6/27/07
Depth to water	ft	7.00	7.50	NR	NR	NR
Chloride	mg/L	820	670	830	280	1,300
Nitrate	mg/L	240	300	600	160	86
Sulfate	mg/L	NA	NA	700	230	870
pH	s.u.	7.6	7.4	6.9	6.8	6.9
EC	umhos/cm	6,100	5,200	4,520	1,800	5,580
TDS	mg/L	3,600	3,600	3,700	1,400	4,900
FDS [1]	mg/L	2,412 [1]	2,412 [1]	2,479 [1]	938 [1]	3,283 [1]
Boron	ug/L	NA	NA	<1,000	510	<1,000
Trihalomethanes	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5

[1] Fixed Dissolved Solids concentration estimated with following ratio: 1 umho/cm $_{EC}$ = 0.67 mg/L $_{FDS}$
All samples were filtered with a 0.45 micron filter prior to digestion and analysis. NR denotes Not Reported. NA denotes Not Analyzed. "<" denotes less than with detection limit shown.

31. The sample from Boring HAB-2 contained the best groundwater quality. Groundwater in that area may be influenced by the nearby irrigation canal which leaks better quality water into the subsurface. As characterized by the other borings, groundwater quality at the site exceeded typically imposed Water Quality Objectives for TDS, electrical conductivity, nitrate, and sulfate. Because wastewater applied to the LAA is better quality than the shallow groundwater quality, groundwater monitoring is not required.

[1] Spreckles Sugar Company, 20500 Holly Drive, Tracy; Frontier Transport, 425 Larch Road, Tracy; Shell #204-7804-0001, 3725 N. Tracy Blvd., Tracy.

SITE SPECIFIC CONDITIONS

32. Land use in the vicinity consists primarily of agricultural uses; a dairy exists approximately 1,500 feet to the northeast. The dairy and associated LAAs are located hydraulically downgradient of the Prima Bella facility.

33. All portions of the facility are within the 100-year flood plain. The top of the wastewater pond berms were designed to be two feet above the 100-year flood elevation and are lined with a synthetic liner. The base flood elevation is 11.0 feet above mean sea level.

34. Based on the Western Regional Climate Center, the mean annual rainfall is approximately 12.26 inches; the 100-year return annual precipitation is 25.66 inches, and the evapotranspiration rate is 58.40 inches/year.

35. The facility employs approximately 160 employees during the processing season, operating one 8-hour shift a day, Monday through Friday.

36. Domestic waste is discharged to a septic tank and leachfield system regulated by the San Joaquin County Department of Public Health.

37. Surface soils consist of Merritt silty clay loam.

OTHER CONSIDERATIONS FOR FOOD PROCESSING WASTE

38. Excessive application of food processing wastewater to land application areas can create objectionable odors, soil conditions that are harmful to crops and degradation of underlying groundwater by overloading the shallow soil profile and causing waste constituents (organic carbon, nitrate, other salts, and metals) to percolate below the root zone. Ordinarily, it is reasonable to expect some attenuation of various waste constituents that percolate below the root zone within the vadose (unsaturated) zone. Specifically, excess nitrogen can be mineralized and denitrified by soil microorganisms, organic constituents (measured as both BOD and volatile dissolved solids) can be oxidized, and some salinity species will undergo cation exchange with clay minerals, effectively immobilizing them.

39. Loading of BOD should be limited to prevent nuisance conditions. The maximum BOD loading rate that can be applied to land without creating nuisance conditions can vary significantly depending on the operation of the land application system. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency (US EPA Publication 625/3-77-0007) (hereafter *Pollution Abatement*), cites BOD loading rates in the range of 36 lbs/acre/day to 600 lbs/acre/day but indicates the loading rates can be even higher under certain conditions. In no case shall the loadings cause a nuisance.

40. Acidic and/or reducing soil conditions can be detrimental to land treatment system function, and may cause groundwater degradation if the buffering capacity of the soil is exceeded. If soil pH decreases below 5 and the soil remains in a reducing state for prolonged periods, naturally occurring metals (including iron and manganese) could dissolve and degrade underlying groundwater. In practice, prolonged reducing conditions are not likely because: a) the annual cycle of lowered pH during loading with either wastewater or fertilizer is followed by pH recovery during cropping and organic matter cycling and; b) the dose and rest cycling for wastewater application

either in spreading basins or using irrigation creates alternate anoxic and aerobic conditions. *Pollution Abatement* recommends that water applied to crops have a pH within 6.4 to 8.4 to protect crops. The soils and underlying groundwater are expected to adequately buffer the discharge.

a. The RWD reports the pH of the wastewater varies from 6.0 to 6.3. According to the California League of Food Processors, *Manual of Good Practice for Land Application of Food Processing/Rinse Water*, a slightly acidic soil pH from 6.0 to 7.0 is ideal for many plants.

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

41. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to Section 13263(a) of the California Water Code (Water Code), waste discharge requirements (WDRs) must implement the Basin Plan.

42. Surface water drainage is to Old River. The facility is within the San Joaquin Delta Hydrologic Area (No. 544.00), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

43. The beneficial uses of the Sacramento/San Joaquin Delta are municipal and domestic supply; agricultural supply; industrial service supply, industrial process supply; navigation; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

44. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

45. Pursuant to Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

46. The Delta Protection Act of 1992 established the Delta Protection Commission and defined a Primary and Secondary Zone in the Delta. The Secondary Zone is the area outside the Primary Zone and within the Legal Delta. The Secondary Zone is not within the planning area of the Delta Protection Commission, but is subject to the land use authority of local government. The site is located within the Secondary Zone.

ANTIDEGRADATION ANALYSIS

47. State Water Resources Control Board (State Board) Resolution 68-16 (the Antidegradation Policy) requires that the Regional Water Board, in regulating the discharge of waste, must 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 water quality less than that described in the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 also requires that waste discharged to high quality waters be required to meet WDRs that will result in the best practicable treatment or control of the discharge. Resolution 68-16 prohibits

degradation of groundwater quality as it existed in 1968, or at any time thereafter that groundwater quality was better than in 1968, other than degradation that was previously authorized. An antidegradation analysis is required for an increased volume or concentration of waste.

48. The facility was constructed approximately in 1996. A groundwater investigation characterized groundwater quality at the site. The investigation indicated that background groundwater quality is poor. It is reasonable to conclude area groundwater has been impacted by the long history of agricultural activity in the area.

    Limited degradation of high-quality groundwater by some of the typical waste constituents released with discharge from a food processing facility (after effective source control, treatment, and control) may be consistent with maximum benefit to the people of the State at appropriate sites. When allowed, the degree of degradation permitted depends upon many factors (e.g., background water quality, the waste constituent, the beneficial uses and water quality objectives, management practices, source control measures, and waste constituent treatability). The following best practicable treatment and controls have been implemented:

    a. Potassium based chemicals rather than sodium based chemicals are used where possible. Potassium hydroxide is used for cleaning activities. Potassium is a plant nutrient and therefore is more readily taken up by crops than sodium.

    b. Peracetic acid rather than chlorine based chemicals is used. The switch minimizes the possibility of disinfection byproducts in the waste stream. Peracetic acid (also known as peroxyacetic acid) breaks down to acetic acid and hydrogen peroxide.

    c. Wastewater is recycled before discharge to the wastewater system. The recycling activities reduce the pumping rate at the supply well from 250 gallons per minute (gpm) to 50 gpm. Reducing the volume of water pumped reduces the FDS load that originates in the source water.

    d. The wastewater pond is lined with a 60-mil HDPE liner and equipped with aerators to reduce BOD and nitrogen in the wastewater.

    e. The LAA was increased in size from 8.0 to 16.3 acres. The LAA is cropped to take up nitrogen and other dissolved solids in the wastewater.

    f. Use of higher quality surface water for supplemental irrigation water.

    g. Ongoing employee education and training to improve housekeeping practices for storage and clean-up procedures has been implemented.

    h. Site processes have been modified to minimize cleaning activities and conserve water.

    Based on the information on wastewater, supplemental irrigation water, and the water quality of the shallow groundwater zone, the discharge is unlikely to degrade groundwater quality. Section F presents groundwater limits that are effective immediately and require no degradation beyond existing background groundwater quality.

    The Discharger employs 160 employees during processing season. The facility provides an economic benefit to the growers that supply corn to the facility, to equipment suppliers, and transportation companies. The use of wastewater to irrigate

crops in place of higher quality surface or groundwater supplies is a benefit to the people of the State.

This Order establishes requirements to ensure the discharge 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 imposes effluent limitations, and limits land application of nitrogen to agronomic rates. This Order establishes effluent limitations that are protective of the beneficial uses of the underlying groundwater. As characterized by the soil borings, groundwater quality at the site exceeded typically imposed Water Quality Objectives for TDS, electrical conductivity, nitrate, and sulfate. Because wastewater applied to the LAA is better quality than the shallow groundwater quality, groundwater monitoring is not required. Although this Order does not require groundwater monitoring, it does include requirements for monitoring the wastewater and land application areas. If the results of monitoring reveal a previously undetected threat to water quality or indicate a change in waste character such that the discharge poses a threat to water quality, the Executive Officer may require groundwater monitoring and/or the Central Valley Water Board may reopen this Order to consider groundwater limitations and other requirements to comply with Resolution 68-16. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. This Order will be reopened if necessary to reconsider effluent limitations and other requirements to comply with Resolution 68-16. Based on the existing record, the discharge is consistent with the antidegradation provisions of Resolution 68-16.

49. California Water Code Section 13267(b) provides that: "*In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports*."

    The technical reports required by this Order and the attached Monitoring and Reporting Program R5-__ are necessary to assure compliance with these WDRs. The Discharger owns and operates the facility that generates the waste subject to this Order.

50. California Department of Water Resources standards for the construction and destruction of groundwater wells is 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 Water Code Section 13801, apply to all monitoring wells.

CCR TITLE 27 EXEMPTION

51. This discharge is exempt from the requirements of *Consolidated Regulation for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, California Code of Regulations, section 20005 et seq. (hereafter Title 27). The exemption, pursuant to sections 20090(b), 20090(f), and 20090(h) is based on the following:

    a. The operation of the lined wastewater pond, and the application of treated wastewater to the LAA is exempt based on section 20090(b):

        i. The Central Valley Water Board has issued waste discharge requirements.

        ii. This discharge is in compliance with the Basin Plan.

        iii. The wastewater does not need to be managed according to California Code of Regulations, Title 22 as a hazardous waste.

    b. Minimal amounts of solids may pass through the wastewater ponds. Application of the decomposable solids as a soil amendment to the LAA is exempt based on Title 27 section 20090(f). The solids are exempt because:

        i. The solids are nonhazardous.

        ii. The waste constituents in the solids are decomposable.

        iii. Application to land is considered a best management practice. The practice allows the nutrients to slowly decompose, prevents odors or vector issues associated with composting and improves soil tilth.

        iv. The Central Valley Water Board has issued waste discharge requirements.

    c. Discharge of treated wastewater to the LAA is exempt based on Title 27, section 20090(h). Application of treated wastewater to LAA will result in additional waste treatment, water reuse, and nutrient recycling. Natural processes in the LAA provide the additional treatment; percolate wastewater/supplemental irrigation/storm water moving below the crop root zones will recharge groundwater; and nutrients will be taken up by crops, harvested, and removed from the LAA.

52. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. The data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

CEQA

53. Construction of the wastewater treatment pond, expansion of the existing land application area; and the land application of waste thereto constitutes an expansion of the discharge that triggers the CEQA environmental review process. The Central Valley Water Board, as lead agency, developed an Initial Study and Negative Declaration based on information provided by the Discharger in the RWD and a draft Initial Study. The Board determined that the project would not cause any significant environmental impacts if operated in compliance with this Order and adopted a Negative Declaration for the pond and LAA expansion on __.

PUBLIC NOTICE

54. All the above and the supplemental information and details in the attached Information Sheet, incorporated by reference herein, were considered in establishing the following conditions of discharge.

55. The Discharger and interested agencies and persons were notified of the intent to prescribe WDRs for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

56. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that pursuant to Water Code sections 13263 and 13267, Prima Bella Produce, Inc. and Mark Bacchetti, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

Note: Other prohibitions, conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.

A. Discharge Prohibitions:

1. Discharge of wastes, including irrigation tailwater, to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated wastewater is prohibited.
3. Discharge of waste classified as "hazardous," defined in Title 27, section 20164, or "designated," as defined in Water Code section 13173, is prohibited.
4. The discharge of wastewater in a manner other than as described in the findings is prohibited.
5. The discharge of toxic substances into the wastewater pond such that biological treatment mechanisms are disturbed is prohibited.
6. The discharge of wastewater other than to the pond and LAA identified in the findings is prohibited.
7. The discharge of domestic wastewater to the process wastewater treatment system is prohibited.
8. The discharge of process wastewater to a domestic wastewater treatment system (septic system) is prohibited.

B. Discharge Specifications:

1. The discharge of wastewater and/or storm water mixtures to the wastewater pond shall not exceed 100,000 gallons per day as a monthly average. Compliance with this requirement shall be determined based on a standard calendar month.
2. Storm water may be collected from paved areas and roof down-spouts, and then mixed with wastewater at the sump for discharge to the wastewater pond.

3. Neither the treatment nor the discharge of wastewater shall cause a nuisance or condition of pollution as defined by the Water Code section 13050.
4. The discharge shall not cause the degradation of any groundwater.
5. No wastewater constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
6. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the property owned by the Discharger.
7. Sufficient dissolved oxygen shall be maintained in the upper zone (one foot) of the pond to prevent objectionable odors at the facility property boundary.
8. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
9. The pond shall be managed to prevent the breeding of mosquitoes. In particular:
   a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
   b. Weeds shall be minimized through control of water depth, harvesting, and/or use of herbicides.
   c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
10. The wastewater pond shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
11. Pond freeboard shall never be less than two feet, as measured vertically from the water surface to the lowest point of overflow.
12. The wastewater treatment and land application system shall have sufficient capacity to accommodate wastewater flow and seasonal precipitation. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
13. On or about **15 October** each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.11 and B.12.

C. Effluent and Loading Rate Limitations:

1. Treated wastewater applied to land shall not exceed the following effluent and loading rate limits.

Constituent	Units	Daily Maximum	Cycle Average [1]	Annual Average [2]	Annual Total
Biochemical Oxygen Demand	lbs/ac/day	300	100	NA	NA
Fixed Dissolved Solids	mg/L	2,000	NA	1,500	NA
Total Nitrogen	lbs/ac/year	NA	NA	NA	300

[1] The cycle average loading rate shall be determined by dividing the daily loading rate by the number of days since the last wastewater application

[2] Annual average for Total Nitrogen is the sum of all nitrogen applied as described below. NA denotes Not Applicable.

a. The mass of BOD applied to each irrigation check of the LAA on a daily basis shall be calculated using the following formula:

$$M = \frac{8.345(CV)}{A}$$

Where: M = mass of BOD applied in lbs/ac/day
C = concentration of BOD in mg/L (using data from the latest monthly result)
V = volume of wastewater applied in millions of gallons
A = area of the check irrigated in acres
8.345 = unit conversion factor

b. The cycle average loading rate shall be determined by dividing the daily loading rate (as determined above) by the number of days since the last wastewater application. (Note that Land Application Requirement D.15 requires a minimum of 5 days between wastewater applications to any irrigation check.)

c. The mass of total nitrogen applied to each irrigation check on an annual basis shall be calculated using the following formula:

$$M = \sum_{i=1}^{12} \frac{(8.345(C_i V_i) + M_x)}{A}$$

Where: M = mass of nitrogen applied in lbs/ac/yr
C_i = concentration of total nitrogen in month i in mg/L
V_i = volume of wastewater applied during calendar month i in million gallons
A = area of the check irrigated in acres
i = the number of the month (e.g., January = 1, February = 2, etc.)
M_x = nitrogen mass from other sources (e.g., fertilizer) in pounds
8.345 = unit conversion factor

d. The average annual FDS mass loading to each irrigation check shall be calculated using the following formula:

$$C_a = \sum_{i=1}^{12} \frac{C_i}{12}$$

Where: C_a = average annual FDS concentration in mg/L
C_i = FDS concentration for calendar month i in mg/L
i = the number of the month (e.g., January = 1, February = 2, etc.)

2. Wastewater applied to the LAA shall not have a pH of less than 5.5 or greater than 10.0.

D. Land Application Area Requirements:

1. The discharge shall be distributed uniformly on adequate acreage in compliance with the Discharge Specifications and Effluent Limitations.
2. Crops shall be grown on the LAA. Crops shall be selected based on nutrient uptake capacity, tolerance to high soil moisture conditions, consumptive use of water, and irrigation requirements. Cropping activities shall be sufficient to take up the nitrogen applied, and crops shall be harvested and removed from the land at least on an annual basis.
3. Discharge of treated wastewater, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the LAA. Treated wastewater application using sprinklers, flood, or drip irrigation is acceptable if the discharge complies with all requirements of this Order.
4. Hydraulic loading of treated wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the potential impact to groundwater quality by percolation of wastewater and irrigation water below the root zone (i.e., deep percolation).
5. Application of treated wastewater to the LAA using sprinkler irrigation is prohibited when wind velocities exceed 30 miles per hour.
6. The LAA shall be managed to prevent breeding of mosquitoes. More specifically:
   a. All applied irrigation water must infiltrate completely within 24 hours.
   b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.
   c. Low pressure pipelines, unpressurized pipelines, and ditches that are accessible to mosquitoes shall not be used to store wastewater.
7. For surface irrigation, a 10-foot buffer zone shall be maintained between any watercourse and the wetted area resulting from application of treated wastewater.
8. For sprinkler irrigation, a 50-foot buffer zone shall be maintained between any watercourse and the wetted area resulting from application of treated wastewater.
9. A 50-foot buffer zone shall be maintained between any industrial, domestic, or irrigation well and the wetted area resulting from application of treated wastewater.
10. A 50-foot buffer zone shall be maintained between any properties developed with residences and the wetted area resulting from application of treated wastewater.
11. Discharges to the LAA shall be managed to minimize both erosion and runoff from the irrigated area.
12. A berm shall be maintained around the perimeter of the LAA to prevent the runoff of treated wastewater or storm water. Discharge of storm water runoff from the LAA to surface water drainage courses is prohibited.
13. The resulting effect of the wastewater discharge on the soil pH shall not exceed the buffering capacity of the soil profile and shall not cause significant mobilization of soil constituents such as iron and manganese.

14. Effluent shall not be discharged to the LAA during periods of precipitation, and for at least 24 hours after cessation of precipitation, or when soils are saturated.

15. Application of treated wastewater to the LAA via flood irrigation shall only occur on furrows graded or irrigation checks configured so as to achieve uniform distribution, minimize ponding, and provide for tailwater control. Furrow runs and irrigation checks shall not be longer and slopes shall not be greater than what permits reasonably uniform infiltration and maximum practical irrigation efficiency.

16. Wastewater application areas shall be allowed to dry for at least 5 days from the end of wastewater application before the next wastewater application.

17. There shall be no standing water in the LAA 24 hours after treated wastewater is applied, except during periods of heavy rains sustained over two or more consecutive days.

E. Solids/Sludge Disposal Requirements:

1. Collected screenings and other solids removed from wastewater shall be disposed of offsite in a manner that is consistent with Title 27, division 2, subdivision 1 and approved by the Executive Officer.

2. Sludge and other solids shall be removed from sumps, screens, wastewater pond, etc. as needed to ensure optimal operation and adequate hydraulic capacity. Solids drying operations, if any, shall be designed and operated to prevent leachate generation.

3. Storage and disposal of domestic wastewater sludge (septage) shall comply with existing Federal, State, and local laws and regulations, including permitting requirements and technical standards.

4. Sludge and other solids shall be removed from septic tanks as needed to ensure optimal operation and adequate hydraulic capacity. A duly authorized carrier shall haul sludge, septage, and domestic wastewater.

5. Any proposed change in solids use or disposal practice from a previously approved practice shall be reported to the Executive Officer at least 90 days in advance of the change.

F. Groundwater Limitations:

1. Effective immediately the discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than existing background groundwater quality. If groundwater monitoring is required pursuant to a subsequent order, background groundwater quality shall be calculated using the methods provided in Title 27 section 20415(e)(10).

G. Provisions:

1. All of the following reports shall be submitted pursuant to Water Code section 13267, and prepared by a California registered professional as described in Provision G.2.

    a. By **7 September 2012**, the Discharger shall submit a *Nutrient Management Plan* that evaluates the nutrient load to each land application area and develops and implements pollution prevention management practices to restrict nutrient loading

that that necessary for the specified crop and ensures compliance with the effluent limitation.

2. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology, shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.

3. The Discharger shall comply with the Monitoring and Reporting Program R5-2012-0037, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which is attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

5. At least **180 days** prior to any sludge removal and disposal, the Discharger shall submit a *Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried biosolids will be removed form the site prior to the onset of the rainy season **(1 October)**. If the Discharger proposes to land apply biosolids at the effluent recycling site, the report shall include a Report of Waste Discharge and filing fee to apply for separate waste discharge requirements.

6. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by **31 January**.

7. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders

requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

8. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

9. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.

10. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

11. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

12. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

13. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

14. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to Section 313 of the “Emergency Planning and Community Right to Know Act of 1986.”

15. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

16. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

17. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: *http://www.waterboards.ca.gov/public_notices/petitions/water_quality.* or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 7 June 2012.

Original signed by

PAMELA C. CREEDON, Executive Officer

TRO/ALO:6/14/2012

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2012-0037

FOR.
PRIMA BELLA PRODUCE, INC. AND MARK BACCHETTI
PRIMA BELLA FOOD PROCESSING FACILITY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) incorporates requirements for monitoring of wastewater flow, treated effluent, ponds, the land application area, and residual solids. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples shall be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Monitoring of the following parameters is required only in the months in which processing activity is occurring. In all months in which processing is not occurring, a statement describing the facility as inactive shall be submitted.

WASTEWATER FLOW MONITORING

Wastewater flow monitoring shall be performed prior to discharge into the wastewater pond. Monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	gallons	Continuous	Daily[1]	Monthly
Cumulative Annual Flow [1]	gallons	Continuous	Monthly[1]	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection using a meter equipped with a totalizer. Cumulative annual flow means the cumulative total for the calendar year to date.

TREATED EFFLUENT MONITORING

Wastewater samples shall be collected from sampling stations located in an area that will provide representative samples of the treated wastewater that will be applied to land. Samples shall be collected from the storage portion of the wastewater pond when that is being used. During low flow conditions, when the storage portion of the pond is not used, samples shall be collected from the treatment cell portion of the pond. It is recognized that the water may include wastewater, supplemental irrigation water, and/or mixtures of the two water sources.

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Sample Collection Location [1]	NA	Reported	Weekly	Monthly
Electrical Conductivity	umhos/cm	Grab	Weekly	Monthly
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Monthly
Total Nitrogen	mg/L	Grab	Monthly	Monthly
Fixed Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sodium	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly

[1] The monitoring reports shall state whether samples were obtained from the aeration cell or storage cell.

POND MONITORING

Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet. Monitoring of the pond shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
Freeboard	feet (±0.1)	Measurement	Weekly	Monthly
pH [2]	pH Units	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
[2] Samples shall be collected between 0700 and 0900 hours.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor wastewater applied to each irrigation check of the land application area. Monitoring shall be conducted **daily during operation** and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. Loading rates for each check shall be calculated. Monitoring of the land application area shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Wastewater Flow [1]	Gallons	Continuous[1]	Daily	Monthly
Supplemental Irrigation Flow [2]	Gallons	Calculated[2]	Daily	Monthly
Local Rainfall [3]	Inches	Measurement	Daily	Monthly
Acreage Applied [4]	Acres	Calculated	Daily	Monthly
Application Rate	gal/acre/•day	Calculated	Daily	Monthly
BOD Loading Rate [5]	lbs/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate [6]	lbs/acre/month [7]	Calculated	Monthly	Monthly
FDS Loading Rate	lbs/acre/month [7]	Calculated	Monthly	Monthly
Tailwater Control System [8]	NA	Inspection	Monthly	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection and shall define the volume of wastewater discharged to the land application areas from the wastewater pond.
[2] Supplemental irrigation flow amounts and irrigation amounts shall be metered or calculated.
[3] Rainfall can be measured onsite or reported from a nearby government operated rain gauge station.
[4] Irrigation checks in use shall be identified by name or number and the acreage provided. If a portion of an area is used, then the acreage shall be estimated.
[5] Calculate the daily application rate and the 7-day average application rate.
[6] Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water, if used.
[7] Report monthly total and cumulative annual loading rate to date.
[8] Tailwater control system inspection shall consist of determining the presence or absence of tailwater.

At least **once per week** when wastewater is being applied to the land application area, the entire application area shall be inspected to identify any equipment malfunction or other circumstance that might allow irrigation or storm water runoff to leave the area and/or create ponding conditions that violate the Waste Discharge Requirements. A log of these inspections shall be kept at the facility and be submitted with the monthly monitoring reports. If wastewater was not applied to the land application area, then the monthly monitoring report shall so state.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, disposal location, and method of disposal of food processing related solids disposed of during the processing season, as well as during the off-season, if applicable. If solid waste is shipped offsite during the reporting period, then an estimated amount and location of disposal shall be reported in the monthly report and the hauler identified. Paper, plastic, and other trash (e.g. office generated trash) not related to food processing is not included in this requirement.

REPORTING

As previously stated, monitoring of the following parameters is required only in the months in which processing activity is occurring. In all months in which processing is not occurring, a statement describing the facility as inactive shall be submitted.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., wastewater pond monitoring), and reported analytical result for each

sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). The monthly reports shall include the following:

1. Results of wastewater flow, wastewater pond treated effluent, land application area, and solids monitoring;
2. A comparison of monitoring data to the discharge specifications and effluent limitations, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Data shall be presented in tabular format. Wastewater constituent loading rates shall be calculated as presented in WDRs Section C, Effluent Limitations.
3. If requested by staff, copies of laboratory analytical report(s);
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;
5. The cumulative volume of wastewater generated during the year to date;
6. The total pounds of total dissolved solids and fixed dissolved solids (year to date) that have been applied to the land application areas, as calculated from the sum of monthly loadings;
7. The total pounds of nitrogen (year to date, from all sources including fertilizer) applied to the land application area as calculated from the sum of monthly loadings; and
8. A summary of the quantity of solid waste (corn husks, kernels, stems, etc.) generated and disposed of off-site.

C. Annual Report

In addition to the monthly reports, an annual report shall be prepared. The Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year. The Annual Report shall include the following:

1. Tabular and graphical summaries of all data collected during the year.

2. Tabular and graphical summaries of historical monthly total loading rates for wastewater generation, treated wastewater used for irrigation (hydraulic loading in gallons/acre and inches), total nitrogen (lbs/ac/yr), total dissolved solids (lbs/ac/yr), and fixed dissolved solids (lbs/ac/yr). Tabular and graphical summaries of historical annual wastewater flow.
3. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection, including consideration of application management practices (e.g., waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), and groundwater monitoring data.
4. A summary of the vegetative material (crops) removed from the LAAs. The summary shall include harvest dates, crop type, and disposal area/method.
5. A description of salinity source control methods that have been implemented in the calendar year.
6. Estimated flows for the next calendar year.
7. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
8. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: Original signed by

PAMELA C. CREEDON, Executive Officer

18 June 2012
(Date)

INFORMATION SHEET

ORDER R5-2012-0037
PRIMA BELLA PRODUCE, INC. AND MARK BACCHETTI
PRIMA BELLA FOOD PROCESSING FACILITY
SAN JOAQUIN COUNTY

Prima Bella Produce, Inc. and Mark Bacchetti (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 10 September 2007 to allow treatment and land application of wastewater generated at its processing facility. Additional information was submitted on 7 September 2007 and 11 April 2011. Prima Bella Produce, Inc. operates the processing facility and adjoining land application area. Mark Bacchetti is president of Prima Bella Produce, Inc. and owns the property where the facility is located.

The Discharger receives, washes, and packages fresh corn at a facility located in Tracy, San Joaquin County. The facility consists of an office, warehouse, paved parking areas, a wastewater pond, and a land application area (LAA).

The facility employs approximately 160 workers year-round and operates 5 days a week from May through October. Equipment cleaning occurs daily, Monday through Friday after each day's processing activities. Domestic wastewater is treated with an onsite septic system regulated by the San Joaquin County Department of Environmental Health.

Wastewater Generation, Flow Rate, and Quality

Food processing wastewater is generated during corn processing, and equipment and floor cleaning. Prima Bella Produce, Inc. packages approximately 26,000 tons/year of fresh corn. Corn processing includes conveyance, washing, trimming, and husking. Water is used to transport the corn in conveyance troughs, washing removes sediment from the corn, trimming removes corn silk, and husking removes the husk from the corn.

Wastewater is collected in floor drains, screened, and then discharged to a sump before being pumped to the aerated cell of the wastewater pond. In addition to the facility wastewater, stormwater and supplemental irrigation water is added to the wastewater pond.

The wastewater pond is lined with a 60-mil thick HDPE liner and provides approximately 4.5 million gallons of storage capacity. The pond is divided into treatment and storage cells. The treatment cell is equipped with mechanical aerators.

After treatment the wastewater possesses a relatively low biochemical oxygen demand (BOD) (less than 70 mg/L), total nitrogen concentration (ranging from 6 to 17 mg/L), and FDS concentrations (ranging from 330 to 595 mg/L). The wastewater is blended with a substantial amount of supplemental irrigation water.

The wastewater flow limits provide a daily limit as a monthly average (100,000 gallons per day as a monthly average). The flow limits allow the Discharger flexibility in managing wastewater application because in most months the wastewater generation will be less than the monthly average limit. The WDRs include Discharge Prohibitions, Specifications, Effluent Limitations, and Land Application Area Requirements that will prevent nuisance conditions and/or overloading of the LAA.

The WDRs require the Discharger to submit and implement *a Nutrient Management Plan* to ensure the LAA is not overloaded with nutrients.

Supplemental Irrigation Water

Because wastewater will not be sufficient to meet the crop irrigation needs during the summer months, supplemental irrigation water will be applied. It is anticipated that supplemental irrigation water will be required in the months of June through October during normal precipitation years. Normally wastewater will not be applied from November through February; however, climatic conditions may require irrigation of the crop during the winter months.

Supplemental water is provided by the Independent Mutual Water Company; the source water is Old River. The supplemental water quality is significantly better than the shallow groundwater at the site. Although the supplemental water quality fluctuates over time, it has remained better than shallow groundwater quality. Supplemental water quality ranged as follows: FDS concentrations ranged from 200 mg/L to 320 mg/L, and total nitrogen ranged from 0.4 mg/L to 3.0 mg/L.

Background Groundwater Quality

Shallow groundwater exists approximately seven feet below the ground surface and flows to the north-northeast. Shallow groundwater quality at the facility is poor. Underlying groundwater quality was characterized by collecting five grab groundwater samples. The average FDS concentration was 3,440 mg/L, which is much worse than the flow weighted wastewater/supplemental irrigation water average concentration of FDS (398 mg/L). Similarly, the average nitrate concentration in shallow groundwater was (272 mg/L), which is much worse than the flow weighted wastewater/supplemental irrigation water average concentration of (3.6 mg/L).

The site's supply well is screened below a substantial low permeability zone and produces better quality groundwater than the shallow zone. The well produces groundwater with a TDS concentration of 450 mg/L and a total nitrogen concentration of 1.6 mg/L.

Land Application Area

The LAA consists of 16.3 acres of cropped land divided into irrigation checks. The LAA will be cropped with orchard grass, rye grass, and fescue hay or a similar crop. The crop will be cut and removed from the LAA as often as needed to maintain crop health and crop production.

Nitrogen is present in both the wastewater and in the supplemental irrigation water. The estimated nitrogen concentration in wastewater is approximately 2.6 mg/L. The estimated nitrogen concentration in supplemental irrigation water is 6.0 mg/L. The approximate total nitrogen loading rate is 29.4 lbs/ac/year. The mixture of orchard grass, rye grass, and fescue hay crop grown in the LAA will take up approximately 300 pounds per acre of nitrogen. Due to the nitrogen deficiency, additional nitrogen may be required to support crop health.

Solids Disposal

Solid wastes consisting of corn husks, kernels, stems, etc. are generated by the processing operations. Solids are removed from the wastewater during screening and conveying processes and are transported offsite for animal feed. Approximately 84 tons/day of solids are generated during peak processing activities

Stormwater

Stormwater is collected from paved areas and roof down-spouts; it is mixed with wastewater at the sump. The mixture is discharged to the wastewater pond and applied to the LAA.

Site Specific Conditions

Land use in the vicinity consists primarily of agricultural uses. All portions of the facility are within the 100-year floodplain. However, the top of the pond berms are designed to be two feet above the 100-year flood elevation.

Basin Plan, Beneficial Uses, and Regulatory Considerations

Surface water drainage is to Old River. The facility is within the San Joaquin Delta Hydrologic Area (544.00), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

The *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition for The Sacramento River Basin and the San Joaquin River Basin* (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. The receiving water is groundwater. The beneficial uses of groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

The beneficial uses of the Sacramento/San Joaquin Delta are municipal and domestic supply; agricultural supply; industrial service supply, industrial process supply; navigation; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

The site is located within the Delta Protection Commission Secondary Zone. The Secondary Zone is subject to the land use authority of local government. The site activity is acceptable in the Secondary Zone.

Antidegradation

The antidegradation directives of State Water Board Resolution 68-16, “Statement of Policy with Respect to Maintaining High Quality Waters in California,” or “Antidegradation Policy” require that the policy of the State in granting of permits and licenses for unappropriated water and the disposal of wastes into the water of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, and welfare of the people of the State.

In allowing a discharge, the Central Valley Water Board must comply with Water Code section 13263 in setting appropriate conditions. The Board is required, relative to the groundwater that may be affected by the discharge, to implement the Basin Plan and consider the beneficial uses to be protected along with the water quality objectives essential for that purpose. The Regional Board need not authorize the full utilization of the waste assimilation capacity of the groundwater (Water Code section 13263(b)) and must consider other waste discharges and factors that affect that capacity.

Degradation is allowed under Resolution 68-16 if the Central Valley Water Board determines that:

- The degradation is consistent with maximum benefit to the people of the State.
- The degradation will not unreasonably affect present and anticipated future beneficial uses.
- The degradation does not cause exceedance of one or more water quality objectives.
- The Discharger employs best practicable treatment or control to minimize degradation.

The Discharger has submitted data consistent with an Antidegradation Analysis. Groundwater quality has been investigated. The Discharger will utilize a treatment process consisting of physical and biological processes to reduce the residual solids and BOD found in the facility wastewater. The treatment pond is lined, and therefore will minimize wastewater infiltration to groundwater. Biological treatment in lined ponds is consistent with typical industrial food processing best management and treatment control methods.

The Discharger has implemented significant source controls and recycling programs at the facility to minimize the volume and total load of waste constituents applied to land. Those controls include substitution of potassium based chemicals for sodium based chemicals, use of peracetic acid rather than chlorine based chemicals, physical screening of wastewater to lower BOD, recycling wastewater to reduce FDS load originating in the water supply, installing a synthetic liner in the wastewater pond, nearly doubling the LAA acreage, use of higher quality surface water as supplemental irrigation water, employee training regarding wastewater issues, and modifying the site activities to minimize cleaning activities to conserve water.

The use of facility wastewater to irrigate crops in place of higher quality surface or groundwater supplies is a benefit to the people of the state. The facility is an important component of the economic development of the region. The facility provides approximately 160 full time jobs during processing season and will provide state and local revenue. The economic prosperity of the region and associated industry is a benefit to the people of the State.

Title 27

Title 27, CCR, Section 20005 et seq. (Title 27), contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and

specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent is acceptable under Title 27 regulations.

The discharge of wastewater and the operation of storage facilities associated with a wastewater application are exempt from Title 27 if the discharge is in accordance with the WDRs that implement the Basin Plan, Resolution 68-16, and other conditions described below. The exemption, pursuant to Water Code section 20090(b), 20090(f), and 20090(h) is based on the following:

- The operation of the lined wastewater treatment pond and the application of treated wastewater to the LAA are exempt based on Water Code section 20090(b). The Central Valley Water Board has issued waste discharge requirements; the discharge is in compliance with the Basin Plan; and the wastewater does not need to be managed according to California Code of Regulations, title 22 as a hazardous waste.

- Application of decomposable solids as a soil amendment to the LAA is exempt based on Water Code section 20090(f). Because the wastewater is screened prior to discharge to the wastewater pond, only minor amounts of decomposable solids are expected to be applied to the LAA. However, any application of solids is exempt because the material is nonhazardous; the waste constituents are decomposable; application to land is considered a best management practice; the practice allows the nutrients to slowly decompose, prevents odors or vector issues associated with composting vegetable solids, and improves soil tilth; and the Central Valley Water Board is issuing waste discharge requirements.

- Application of treated wastewater to the LAA is exempt based on Water Code section 20090(h) because the discharge will result in additional waste treatment, water reuse, and nutrient recycling. Natural processes in the LAA provide the additional treatment; and nutrients will be taken up by crops, cut, and removed from the LAA.

<u>California Environmental Quality Act (CEQA)</u>
The County issued building permits for the recent facility improvements, including construction of a lined wastewater pond, but these were ministerial because the modifications did not involve any building square footage increase. The Discharger expects that the Central Valley Water Board will be the lead agency for any CEQA review that is required to support adoption of WDRs and has submitted an Initial Study with the RWD.

A Negative Declaration for the expansion at the facility was adopted by the Central Valley Water Board on __ (Resolution__). The Central Valley Water Board determined that the expansion of the facility will not have significant adverse environmental impacts if the Discharger complies with this Order

Effluent Limitations

Effluent limitations for BOD, FDS, and Total Nitrogen are included in the WDRs. Each of the limits is discussed below:

- BOD loading limits were included to minimize the possiblity of odors generated by the land application. BOD loading shall not exceed a daily maximum of 300 lbs/ac/day or a cycle average of 100 lbs/ac/day.

- The FDS limit is intended to prevent degradation of groundwater with respect to salinity. FDS concentrations were set as daily maximum and annual average. The FDS limit is set at 2,000 mg/L (daily maximum) and 1,500 mg/L (annual average). The FDS limits are set well below the existing groundwater quality values.

- The total nitrogen limit is based on the nitrogen uptake value of the proposed crop. The nitrogen limit is set at 300 lb/ac/yr as an annual maximum.

Treatment Technology and Control

Given the character of food processing wastewater, slow rate land treatment and secondary treatment technology is generally sufficient to control degradation of groundwater from decomposable organic constituents.

Food processing wastewater sometimes contains nitrogen in concentrations greater than water quality objectives. Groundwater degradation by nitrogen can be controlled by an appropriate screening, settling, and slow rate land application with cropping activities when crops are harvested and removed from the land application area. The effectiveness varies, but generally best practicable treatment and control is able to control nitrogen degradation of groundwater at a concentration well below the water quality objectives. The Discharger has 16.3 acres of cropped LAA. The crops have the capability to take up the nutrients in the wastewater.

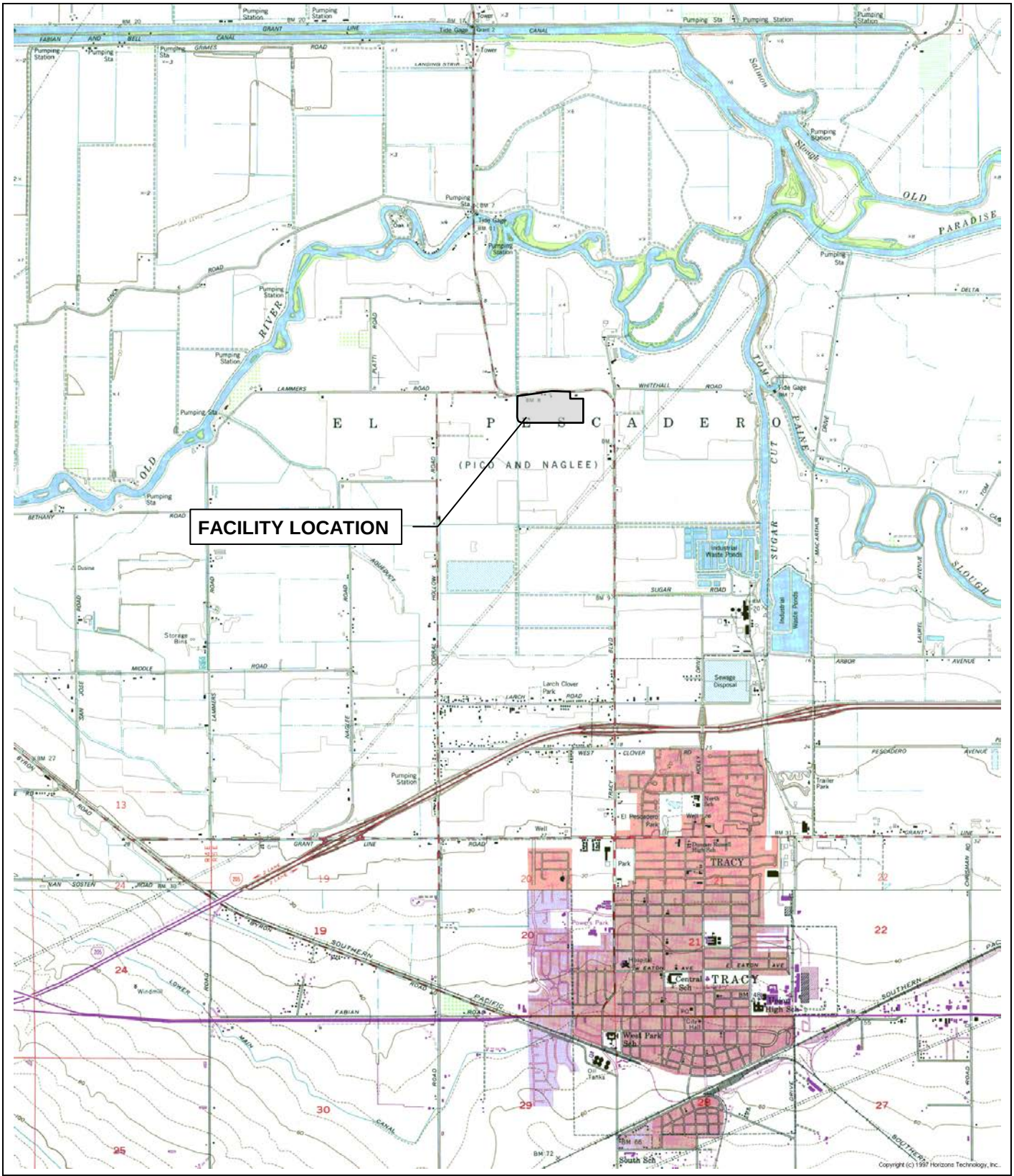
Dissolved solids can pass through the treatment process and soil profile; effective control of such constituents relies primarily upon source control and pretreatment measures. If not managed carefully, long-term land discharge of food processing wastewater can degrade groundwater with dissolved solids (as measured by FDS). Source control is an effective means to prevent groundwater degradation by FDS. The Discharger has implemented a number of best practicable treatment and control measures to minimize groundwater quality degradation.

A discharge of wastewater that overloads soils with nutrients and organics can result in anaerobic conditions in the soil profile, which in turn creates organic acids and decreases soil pH. Under conditions of low soil pH (below 5), iron and manganese compounds in the soil can solubilize and leach into groundwater. Overloading the land application areas is preventable, and the soil is expected to provide adequate buffering of acidic or basic wastewater.

Monitoring Requirements

Water Code section 13267 authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the state. In recent years there has been increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. This Order requires monitoring of wastewater generation rate, wastewater quality, land application area, and residual solids.

TRO/ALO 6/14/2012



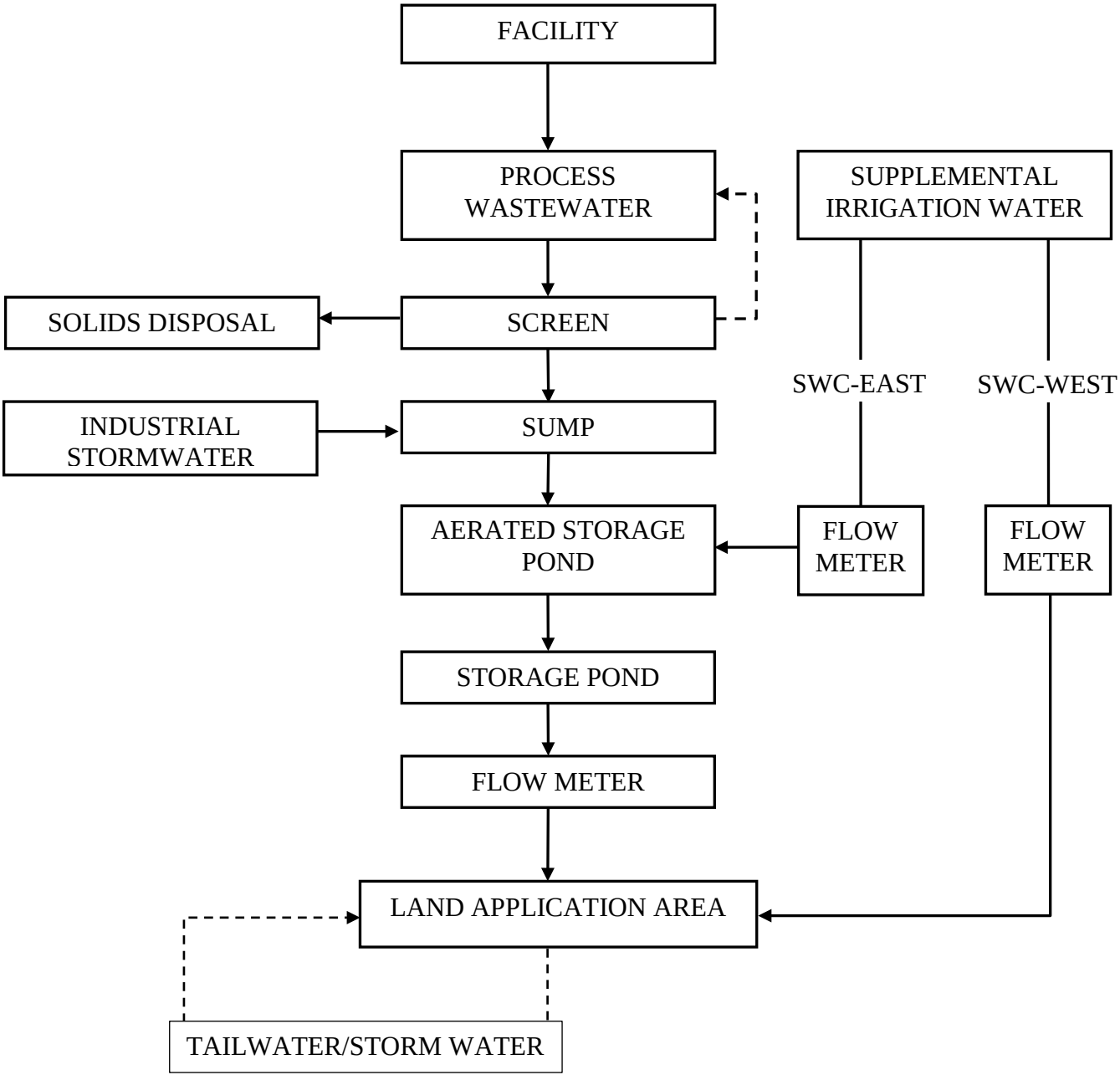
Drawing Reference:
U.S.G.S.
Tracy And Union Island
7.5 Minute Quads

FACILITY LOCATION

PRIMA BELLA PRODUCE, INC. AND MARK BACCHETTI
PRIMA BELLA FOOD PROCESSING FACILITY
SAN JOAQUIN COUNTY

N
W E
S

approx. scale
1 in. = 4,200 ft.

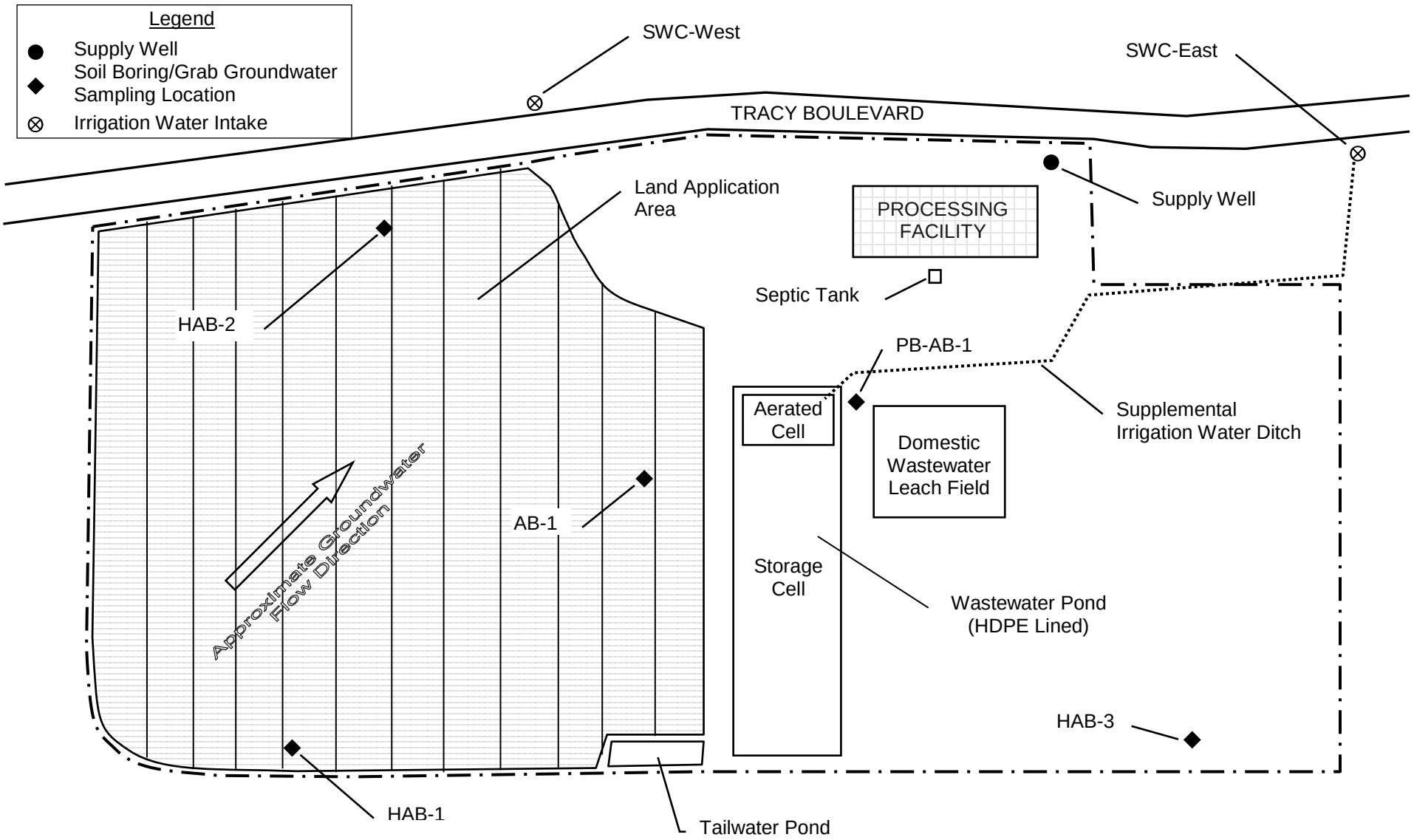


Drawing Reference:

Modified from RWD Figure 3-1
10 September 2007
Brown and Caldwell Consultants

WASTEWATER FLOW SCHEMATIC

PRIMA BELLA PRODUCE AND MARK BACCHETTI
PRIMA BELLA FOOD PROCESSING FACILITY
SAN JOAQUIN COUNTY



Scale 1 in = 200 ft. N W E S	Drawing Reference: Modified from RWD, Figure 2-3 10 September 2007 Brown and Caldwell Consultants	**SITE MAP** PRIMA BELLA PRODUCE AND MARK BACCHETTI PRIMA BELLA FOOD PROCESSING FACILITY SAN JOAQUIN COUNTY