

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2014-XXXX

WASTE DISCHARGE REQUIREMENTS

FOR
CONAGRA FOODS, INC., AND MADDOX FARMS, LLC
HELM TOMATO PROCESSING FACILITY
FRESNO COUNTY

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

1. ConAgra Foods, Inc. (hereafter ConAgra or Discharger), a California Corporation, owns and operates a tomato processing facility (Facility) just east of the community of Helm. Wastewater generated during the tomato processing is comingled with irrigation water and used to irrigate crops on up to 2,646 acres of farmlands owned by Maddox Farms, LLC, (hereafter Maddox Farms or Discharger), a California Limited Liability Company. The Facility has been in operation since 1990. On 18 January 1996, Hunt Wesson, Inc., submitted a Report of Waste Discharge (RWD) that described the expansion of an existing tomato processing facility. In February 2000, Hunt Wesson, Inc., submitted a request for a name change to ConAgra Grocery Products, Inc., now ConAgra Foods, Inc.
2. ConAgra owns and operates the Facility that generates the wastewater, and Maddox Farms owns and operates the land application areas (LAAs) and both are responsible for compliance with these Waste Discharge Requirements (WDRs).
3. The Facility is at 16429 West Kamm Avenue about a half mile east of the Community of Helm in western Fresno County within Section 23, Township(T) 16 South(S), Range(R) 17 East(E), Mount Diablo Baseline and Meridian (MDB&M), as shown on Attachment A, which is attached hereto and made part of this Order by reference. The LAAs are in Sections 11, 12, 13, 14, 23, 24, 25, and 26 of T16S, R17E, MDB&M, and portions Sections 19 and 30 of T16S, R18E, MDB&M.
4. WDRs Order 96-268, adopted by the Central Valley Water Board on 25 October 1996, prescribes requirements for the discharge. During the processing season (July through October), Order 96-268 allows a monthly average wastewater flow of up to three (3.0) million gallons per day (mgd) with a daily maximum of four (4.0) mgd. Off season flows are limited to 0.2 mgd with a daily maximum of 0.3 mgd. The LAAs consisted of 2,396 acres of farmlands in 1996. The existing WDRs are outdated and do not accurately represent the current operations at the Facility. Therefore, Order 96-268 will be rescinded and replaced with this Order.

Existing Facility and Discharge

5. The Facility currently only produces tomato paste, but historically has produced pizza sauce and canned tomatoes. Wastewater is generated from the processing operations, product cooling and condensation, boiler operations, and the washdown and cleaning of the tomato processing equipment. During the processing season (July through October), the Facility operates seven days a week and processes about 5,400 tons of tomatoes per day.
6. The Facility is currently idle during the off-season (November through June) and there is no wastewater discharge during this period. When Order 96-268 was adopted, the Facility processed products during the off season from stored bulk tomato paste and the discharge had an average daily discharge limit of 0.2 mgd with a daily maximum of 0.3 mgd. ConAgra would like to keep this limit in place in case it wishes to resume off-season processing.
7. The Facility is on 48.89-acres and the LAAs for wastewater recycling consist of 2,646 acres, as shown on Attachment B, which is attached hereto and made part of this Order by reference. The Facility is comprised of three main buildings, a production building, two storage warehouses, and associated parking and equipment storage areas.
8. Tomatoes are brought to the Facility in trucks, offloaded, washed, and sorted. Wastewater is initially screened and the screened solids (Pomace) are contained and transported offsite as cattle feed. Wastewater is further screened by parabolic screens and the screened solids (wet waste) are also transported offsite as cattle feed.
9. Wastewater is temporarily contained in a 500,000-gallon unlined wastewater retention pond located on the eastern side of the Facility prior to being discharged to the LAAs. Wastewater is routed via pipelines to three outfalls that discharge into irrigation canals, where the wastewater is diluted with irrigation water and distributed throughout the LAAs via flood irrigation. The 2,646 acres of LAAs are subdivided into 36 individual fields that range in size from 22 to 132 acres.
10. The effluent quality for biochemical oxygen demand (BOD), electrical conductivity (EC), total nitrogen, and total dissolved solids (TDS) in 2013 is summarized in the following table. The averages for BOD, total nitrogen, and TDS were from 15 samples collected from 12 July through 27 October 2013. The data for the EC results consist of 107 measurements/samples collected from 4 July through 22 October 2013. The upper number is the average and the range is shown below in parentheses.

| <u>BOD (mg/L¹)</u> | <u>EC (umhos/cm²)</u> | <u>Total Nitrogen (mg/L¹)</u> | <u>TDS (mg/L¹)</u> |
|-------------------------------|----------------------------------|--|-------------------------------|
| 978 | 1202 | 52 | 917 |
| (560 – 2000) | (700 – 2600) | (23 – 91) | (520 – 1500) |

1. mg/L = milligrams per liter.
2. umhos/cm = micromhos per centimeter.

11. The average EC result is high, but the loadings estimated from the discharge in 2013 are low. Loading estimates for the discharge in 2013 are as follows:
 - BOD loading was 11 pounds per acre per day (lbs/ac/day) on a 12-day cycle average.
 - Salt loading using TDS results was 310 pounds per acre per year (lbs/ac/yr).
 - Nitrogen loading was 17.6 lbs/ac/yr.
12. The average EC of the effluent slightly exceeds the Basin Plan effluent limit for industrial discharges that limits the increase in EC of a point source discharge to 500 umhos/cm (source was 550 umhos/cm in 2013, resulting limit would have been 1,050 umhos/cm using this method), but the discharge qualifies for the exception in the Basin Plan that allows an exception for food processing industries that exhibit a disproportionate increase in EC in the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids.
13. Effluent total nitrogen is relatively high with an average result of 52 mg/L, and is comprised almost entirely of total Kjeldahl nitrogen. However, the area of the LAAs, 2,646 acres, allows the discharge to be spread over a large area and keeps the nitrogen loading low as shown above. Additionally, the tight fine grained soils of the LAAs (Findings 19 through 21) reduce the ability of nitrogen in the wastewater to move through the vadose zone and degrade the underlying groundwater.

Other Considerations for Food processing Waste

14. Excessive application of food processing wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and unreasonably degrade underlying groundwater. 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 the cation exchange capacity of the soil may immobilize some salinity constituents.
15. Irrigation with high strength wastewater can result in high BOD loading on the day of application. If the rate of oxygen transfer into the soil is not adequate, anaerobic or reducing conditions may result and lead to nuisance conditions. In addition, anaerobic conditions in soil can cause dissolution and leaching of some metals and increases in groundwater alkalinity. The maximum BOD loading rate that can be

applied to land without creating the conditions described above can vary significantly depending on soil conditions and operation of the land application system.

16. This Order includes Provision F.12, requiring Con-Agra to complete a Nutrient Management Plan for the LAAs, which at a minimum must include procedures for monitoring the LAAs, and management practices that will ensure wastewater, irrigation water, commercial fertilizers, and soil amendments are applied at agronomic rates.

Site-Specific Conditions

17. Source water is surface water obtained from the Westlands Water District. Source water is sampled annually and the average concentrations since 2011 (three samples) are presented in the following table. The upper number is the average of the three samples and the range is shown below in parentheses.

| EC <u>umhos/cm</u> | Chloride <u>mg/L</u> | Iron <u>mg/L</u> | Manganese <u>mg/L</u> | Sodium <u>mg/L</u> | Sulfate <u>mg/L</u> |
|-------------------------------------|---------------------------------------|-----------------------------------|--|-------------------------------------|--------------------------------------|
| 385 (220 - 550) | 60 (25 – 89) | 0.7 (0.16 -1.6) | 0.54 (nd – 0.54) | 46 (22 – 56) | 29 (17 – 35) |

18. The land surface in the vicinity of the Facility is relatively flat with a very slight natural slope to the north/northwest. The elevation at the Facility is about 185 feet above mean sea level, with the elevation at the southern end of the LAAs being around a 190 feet above mean sea level and the elevation at the northern end of the LAAs being about 185 feet above mean sea level. The Fresno Slough is present along the eastern boundary of the LAAs.
19. According to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service, soils in the vicinity of the WWTF and Land Application Area are predominantly the Tachi clay and the Merced clay slightly saline. These two units comprise about 75 percent of the soil present with lesser amounts of the Merced clay loam, Temple clay loam, Armona loam, and Piper Sandy loam comprising the remainder.
20. The Tachi clay is described as very poorly drained with low to moderately low available water capacity and is a Class 3w soil. It is described as non-saline to slightly saline with EC values of 2 to 8 millimhos per centimeter (mmhos/cm). Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both. The “w” subclass indicates that water in or on the soil interferes with plant growth.

21. The Merced clay (slightly saline) is described as very poorly drained with moderately low to moderately high available water capacity and is a Class 2s soil. It is described as slightly saline with EC values of 4 to 8 mmhos/cm. Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices. The "s" subclass indicates the soil is limited mainly because it is shallow, droughty, or stony.
22. According to Federal Emergency Management Agency map number 06019C2575, the northern 1,721 acres of the LAAs are within a Zone A (no baseline determined) 100-year flood plain. However, 925 acres are on the southern side of a railroad berm and are outside the 100-year flood plain. The discharge occurs during June through October when significant rainfall is not anticipated.
23. The facility is in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and pan evaporation rates in the discharge area are about 7.0 inches and 63 inches, respectively, according to information published by the California Department of Water Resources (DWR). The 25-year, 24-hour precipitation event for the area around the facility is approximately 2 inches, according to National Weather Service data for the Fresno County area near the facility (Mendota).
24. Land use in the vicinity of the Facility is primarily agricultural. The community of Helm is a half mile west of the Facility, but the majority of the surrounding land is used for agricultural purposes. The primary crops grown in the area are field crops like cotton, grain, and hay crops with lesser amounts of pistachios, onions, garlic, and sugar beets, according to the Fresno County 2000 Land Use Map published by the DWR. Maddox Farms blends the wastewater with irrigation water and rotationally grows alfalfa, wheat, cotton, corn, and beets in the various LAAs.

Groundwater Conditions

25. Groundwater in the area occurs in unconfined and confined aquifers. The water quality of the unconfined first encountered groundwater is highly variable, but typically gets better with depth, with better water quality found beneath a confining layer known locally as the Corcoran Clay. EC results for samples collected from wells in the area range from below the recommended maximum contaminant level (MCL) of 900 umhos/cm to those that exceed the upper maximum contaminant level for EC of 1,600 umhos/cm.
26. The depth to groundwater in the unconfined aquifer is approximately 150 to 180 feet below the ground surface (bgs), according to information in *Kings Groundwater Basin, Spring 2010, Lines of Equal Depth to Water In Wells, Unconfined Aquifer* published by DWR, Spring 2010. Regional flow of the unconfined aquifer is generally to the east/southeast in the vicinity of the Facility.

27. Review of regional groundwater data from nearby United States Geological Survey (USGS) wells illustrates the variability of the results. USGS water quality data indicate EC values ranging from about 750 to 1,900 umhos/cm in 19 wells present within a five mile radius of the Facility. The 750 umhos/cm value was from a 300-foot well about three-miles southeast of the Facility, while the 1,900 values was from a well sampled in 1968 about 1.5 miles east of the Facility. A 2000 map depicting shallow groundwater in the Dos Palos Mendota area prepared by the Department of Water Resources (DWR) show the Facility as being just east (two to three miles) of shallow perched groundwater with depths from 10 to 20 feet bgs. The Bureau of Land Management has shallow groundwater monitoring wells about five-miles west of the Facility. The wells are reported to be 40 feet deep and the depth to groundwater in July 2013 was reported to range from 17 to 19 feet bgs. Sample results from a one-time sampling in July 2013 found EC results that ranged from 9,000 to 16,000 umhos/cm.
28. J.R. Simplot operates an agricultural chemical facility about two miles northwest of the ConAgra Facility. J.R. Simplot conducts groundwater monitoring at its site and submits reports that summarize the recent groundwater conditions and provide a detailed description of the water bearing units.
29. According to the J.R. Simplot reports, there are four potential water bearing units above the Corcoran Clay that are divided into A (shallow), B, C and D (deepest) units. The A-Zone reportedly went dry back in the mid-1990's. The depths of the water bearing zones are shown in the table below.

| <u>Aquifer</u> | <u>Depth (feet bgs)</u> |
|----------------|-------------------------|
| A-Zone | ~110 - 140 |
| B-Zone | ~170 - 190 |
| C-Zone | ~230 - 280 |
| D-Zone | ~300 to 500 |

30. J.R. Simplot monitors seven wells completed in the B-Zone, three in the C-Zone, two in the D-Zone, and one well (the Helm Store Well) completed in both the C- and D-Zones. The depth to water in the B-Zone wells in 2013 ranged from about 150 to 175 feet bgs and the interpreted direction of groundwater flow is to the southeast. MW-12 is the background well for the B-Zone wells and is situated about 2.5 miles from the ConAgra Facility. MW-4 is a B-Zone monitoring well downgradient to crossgradient of MW-12 and about a mile upgradient of the ConAgra Facility. MW-14 monitors the B-, C-, and D-Zones and is downgradient of MW-12 and MW-4 and about three quarters of a mile upgradient of the ConAgra Facility. J.R. Simplot also monitors a supply well at the Helm Store that is screened in both the C and D zones (screened intervals from 280 to 300' bgs, and 380 to 400' BGS). This Helm Store well is about a half a mile west/northwest of the ConAgra Facility. Unfortunately, the wellhead setup at the Helm Store well does not allow for the measuring of the depth to groundwater, but groundwater samples can be collected. The average EC and sulfate concentrations in these four wells since 2008 are summarized in the following table.

| <u>Well Number</u> | <u>Well Depth/Zone (feet bgs)</u> | <u>EC (umhos/cm)</u> | <u>Sulfate (mg/L)</u> |
|-----------------------|-----------------------------------|--------------------------|-----------------------|
| MW-12 (background) | 192, B-Zone | 1,474 (1,342 – 1,574) | 405 (390 – 420) |
| MW-4 | 190, B-Zone | 1,106 (937 – 1,240) | 185 (170 – 220) |
| MW-14 | 185, B-Zone | 1,155 (897 – 1,572) | 80 (77 – 82) |
| MW-14 | 285, C-Zone | 949 (938 – 1,013) | 160 (110 – 200) |
| MW-14 | 415, D-Zone | 635 (625 – 647) | 65 (63 – 66) |
| MW-HS (Helm Store) | 400, C & D Zone | 785 (694 – 907) | 91 (65 – 130) |

31. The J.R. Simplot EC results in the B-Zone samples collected from MW-12, MW-4, and MW-14 exceed the recommended Secondary MCL of 900 umhos/cm, but are below the upper MCL of 1,600 umhos/cm. The results from MW-14 set in zones B, C, and D decrease with depth. The C-Zone EC results from MW-14 also exceed the recommended Secondary MCL of 900 umhos/cm, but just barely, and are below the upper MCL of 1,600 umhos/cm. The D-Zone EC results are lowest of the three zones monitored and are less than the recommended Secondary MCL. The decreasing trend with depth is also shown in the results from the Helm Store well. The Helm Store well is set in the deeper C- and D-Zone aquifers and the results indicate better water quality than the overlying groundwater quality of the B-Zone.
32. Uranium appears to be a regional problem in the area groundwater and uranium is included in the monitoring program conducted by J.R. Simplot. The uranium concentrations in four samples collected from the four wells listed since 2008 is summarized in the following table.

| <u>Well Number</u> | <u>Well Depth/Zone (feet bgs)</u> | <u>Uranium (picoCuries per liter)</u> |
|--------------------|-----------------------------------|---------------------------------------|
| MW-12 (background) | 192, B-Zone | 221 (142 – 301) |
| MW-4 | 190, B-Zone | 149 (129 – 177) |
| MW-14 | 185, B-Zone | 97 (34 – 122) |
| MW-14 | 285, C-Zone | 207 (183 – 236) |
| MW-14 | 415, D-Zone | 7.8 (6.0 – 9.5) |
| MW-HS (Helm Store) | 400, C & D Zone | 145 (104 – 173) |

All of the results, with the exception of the results from MW-14 D-Zone, exceed the radionuclide MCL of 20 picoCuries per liter (pCi/L). The data shows that both the B- and C-Zones have high concentrations of uranium, while the underlying D-Zone samples are less than the MCL of 20 pCi/L. The uranium results do not show the

same decreasing concentrations with depth as did the EC and sulfate results with C-Zone results higher than the B-Zone results.

33. To assess the groundwater quality directly upgradient and downgradient of the LAAs, Provision F.13 requires ConAgra to complete a work plan to evaluate groundwater quality beneath and directly downgradient of the LAAs.

Basin Plan, Beneficial Uses, and Regulatory Considerations

34. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2004 (the "Basin Plan") designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State of California Water Quality Control Board. In accordance with Water Code section 13263(a), these waste discharge requirements implement the Basin Plan.
35. Surface drainage is to the north/northeast towards the Fresno Slough, a Valley Floor Water. The Facility and LAAs lie within the South Valley Floor Hydrologic Unit, specifically the Lower Kings River Hydrologic Area (551.80). The Basin Plan designates the following beneficial uses for Valley Floor Waters: agricultural supply, industrial process supply, industrial service supply, water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, rare and endangered species habitat, and groundwater recharge.
36. The Facility and LAAs are in Detailed Analysis Unit 235 within the Kings Basin hydrologic unit. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.
37. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as MUN to meet the State drinking water MCLs specified in Title 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
38. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.
39. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

40. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 umhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 umhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.
41. The Basin Plan encourages the land application of wastewater and identifies crop irrigation as a land application option where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.
42. The Basin Plan also states that the water quality objectives contained therein do not require improvement over naturally occurring background groundwater quality. The baseline for determining background water quality is generally the quality as of 1968. If background water quality exceeded objectives since 1968, then background water quality becomes the objective.
43. Many surface waters and local groundwater supplies have been degraded with salt. In some areas, the high salinity is naturally occurring, but in many areas it is due to the acts of man. In 2006, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program.
44. The list of crops in Finding 24 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but it is representative of current and historical agricultural practices in the area.

Antidegradation Analysis

45. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
 - a. The degradation does not result in water quality less than that prescribed in State and regional policies, including violation of one or more water quality objectives,
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses,

- c. The Discharger employs best practicable treatment or control (BPTC) to minimize degradation, and
 - d. The degradation is consistent with the maximum benefit to the people of the State.
46. Constituents of concern that have the potential to cause degradation of high quality waters include, in part, organics, nutrients, and salts. However, the discharge is not expected to cause groundwater to exceed water quality objectives because:
- a. Organic loading rates of the existing discharge are low and the discharge is not anticipated to degrade groundwater due to organic loading. BOD loading is estimated to add about 11 lbs/ac/day with application at a twelve day cycle average. The discharge with a BOD loading rate of 11 lbs/ac/day and a minimum twelve day cycle average will prevent organic overloading of the LAAs such that the discharge authorized should not contribute to underlying groundwater degradation from organic loading.
 - b. For nitrogen, this Order limits the application of wastewater to agronomic rates for both nutrient and hydraulic loading. Total nitrogen loading estimates indicate the discharge will add about 18 lbs/ac/yr to farmlands used to grow crops that will require additional nitrogen fertilizer to grow the crop. This Order contains Provision F.12 that requires ConAgra to submit a Nutrient Management Plan to assess and implement measures to ensure nitrogen is applied at agronomic rates. The discharge should not contribute to an increase of nitrogen in groundwater.
 - c. For salinity, the Basin Plan effluent limit for industrial discharges limits the increase in EC of a point source discharge to 500 umhos/cm (source was 550 umhos/cm in 2013, resulting limit would have been 1,050 umhos/cm using this method). The average EC of the effluent in 2013 exceeded this value, but the Basin Plan also allows for an exception for food processing industries that exhibit a disproportionate increase in EC in the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids. ConAgra's discharge qualifies for this exception as the discharge often has TDS concentrations higher than the EC of the effluent indicating the effluent is high in organic dissolved solids. Salt loading using average TDS concentrations in effluent estimates the discharge will add about 310 lbs/ac/yr, which should not cause unreasonable degradation of the underlying groundwater with salts. This Order contains Provision F.11 that requires ConAgra to submit a Salinity Management Plan that requires ConAgra to evaluate salinity sources in its discharge and provide recommendations for alternatives that will add less salt to the discharge.

Treatment and Control Practices

47. The Discharger provides treatment and control of the discharge that incorporates:
- a. Screening of solids from the waste stream,
 - b. Application of wastewater to the LAAs at agronomic rates,
 - c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours,
 - d. Resting periods between wastewater applications,
 - e. At least daily inspection of the LAAs during times of discharge,
 - f. Appropriate solids disposal practices,
 - g. Preparation of a Salinity Management Plan to evaluate potential methods to reduce the salinity of its discharge,
 - h. Preparation of Nutrient Management Plan to evaluate the nutrient load of the discharge and how to best manage its application, and
 - i. Appropriate solids disposal practices.
48. These Treatment and Control Practices are reflective of BPTC of the discharge.

Antidegradation Conclusions

49. This Order contains Discharge Specifications B.3 that limits the average daily discharge to 3.0 mgd during the processing season (July through October); and Specification B.4 that limits the average daily discharge to 0.2 mgd during the remainder of the year (November through June). This Order also contains Land Application Area Specifications D.1 and D.2 that limit the discharge to agronomic rates for the types of crops grown and does not allow the discharge to stand for longer than 48-hours after the discharge ceases, respectively. This Order contains Provisions F.11 and F.12 that require the Discharge to prepare Salinity and Nutrient Management Plans, respectively. The application of wastewater to the 2,646-acre LAAs at the loading rates authorized by this Order will not cause unreasonable groundwater degradation with nitrate as nitrogen or salts.
50. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and, therefore, sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. Degradation of groundwater by some of the typical waste constituents released with discharge from a tomato processor after effective source reduction, treatment, and control, and considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the State. Con-Agra contributes to the economic prosperity of the region by directly employing 110 workers at the Plant during the processing season and 30 workers in the offseason, provides incomes for numerous surrounding tomato

growers and associated trucking firms, and provides a tax base for local and county governments. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and, therefore, sufficient reason to accommodate growth and limited groundwater degradation provided terms of the Basin Plan are met.

Designated Waste and Title 27

51. California Code of Regulations, title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to a provision that exempts wastewater under specific conditions. This exemption, found at Title 27, section 20090, is described below:
 - (b) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
 - (1) The applicable regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
 - (2) The discharge is in compliance with applicable water quality control plan; and
 - (3) The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.
52. The discharge authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:
 - a. The Central Valley Water Board is issuing WDRs,
 - b. The discharge is in compliance with the Basin Plan, and;
 - c. The treated effluent discharged to the LAAs does not need to be managed as hazardous waste.

General Findings

53. Based on the threat and complexity of the discharge, the facility is determined to be classified as 3B as defined below:
 - a. Category 3 threat to water quality: “Those discharges of waste that could degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2.”
 - b. Category B complexity, defined as: “Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units.”

54. 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.
55. Water Code section 13267(b) states:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports 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.
56. The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2014-XXXX are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.
57. The 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 Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.
58. The County of Fresno adopted a Negative Declaration on 23 February 1996 in accordance with the California Environmental Quality (CEQA) (Public Resources Code Section 21000, et seq.) and State CEQA guidelines. The Facility has been in use as a tomato processing facility continuously since 1996. This Order for the current facility does not authorize any additional construction activities and imposes regulatory requirements that are protective of the underlying groundwater quality. As a result, the existing discharge is exempt from the requirements of CEQA in accordance with California Code of Regulations, title 14, section 15301.

Public Notice

59. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
60. The Dischargers and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

61. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order 96-268 is rescinded and, pursuant to Water Code sections 13263 and 13267, the Dischargers, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of hazardous wastes, as that term is defined in California Code of Regulations, title 22, section 66261.1 *et seq.*, is prohibited.
4. Application of wastewater in a manner or location other than that described in the report of waste discharge and herein is prohibited.
5. The discharge of tomato processing wastewater to a septic system is prohibited.
6. Discharge of domestic wastewater to the wastewater pond, LAA, or any surface waters is prohibited.

B. Discharge Specifications

1. The Discharger shall measure the volume of the wastewater discharged to the wastewater retention pond and the volume of wastewater discharged to the LAAs. The volume shall be determined at FM-01 and FM-02 as described in Monitoring and Reporting Program R5-2014-XXXX.
2. During the processing season (July through October), the monthly average daily discharge flow to the LAAs shall not exceed 3.0 mgd with a daily maximum of 4.0 mgd.
3. During the remainder of the year (November through June), the monthly average daily discharge flow to the LAAs shall not exceed 0.2 mgd with a daily maximum of 0.3 mgd.
4. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
5. The discharge shall remain within the permitted waste treatment/containment structures and LAAs at all times.

6. No waste 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 groundwater limitations.
7. The treatment, storage, and disposal areas shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. 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.
8. Objectionable odors shall not be perceivable beyond the limits of the Facility and/or the LAAs at an intensity that creates or threatens to create nuisance conditions.
9. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. An erosion control program shall be implemented to ensure 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, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
 - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

C. Solids Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds. Solid waste refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed tomatoes. Residual solids means organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application.

1. Any handling and storage of solids and sludge shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
2. Collected screenings, sludge, and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid WDRs issued by a regional water quality control board will satisfy this specification.
3. Any proposed change in solids disposal practices shall be reported to the Executive Officer in writing at least **90 days** in advance of the change. Screenings (solids removed from the parabolic screens) may be land applied to the disposal area provided that, at least **60 days** prior to application, the Discharger submits a loading analysis that demonstrates the land application of solids will not cause an exceedance of any specification or groundwater limitation of this Order.

D. Land Application Area Specifications

1. Application of waste constituents to the LAAs shall be at reasonable agronomic rates to preclude creation of a nuisance or unreasonable degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the LAAs, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.
2. Wastewater shall not be discharged to the LAAs in a manner that causes wastewater to stand for greater than 48 hours after irrigation ceases.
3. Wastewater shall be applied to the LAAs with appropriate resting periods. The Discharger indicates that the typical cycle period is 12 days (wastewater applied day one, no further application through day 12).
4. Any irrigation runoff shall be confined to the LAAs and shall not enter any surface water drainage course or storm water drainage system.
5. The perimeter of the LAAs shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
6. The volume of wastewater applied to the LAAs on any single day shall not exceed reasonable agronomic rates based on the vegetation grown, pre-discharge soil moisture conditions, and weather conditions.
7. Hydraulic loading of wastewater and supplemental irrigation water including precipitation shall be at reasonable agronomic rates designed to:

- a. Maximize crop nutrient uptake;
 - b. Maximize breakdown of organic waste constituents in the root zone; and
 - c. Minimize the percolation of waste constituents below the root zone.
8. The irrigation with wastewater shall be managed to minimize erosion within the LAAs.
9. The LAAs shall be managed to prevent breeding of mosquitoes. In particular:
- a. All applied irrigation water must infiltrate completely within 48 hours;
 - b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.
10. No physical connection shall exist between wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduce pressure principle device.

E. Groundwater Limitations

Release of waste constituents from any treatment unit, storage unit, delivery system, or LAA associated with the Facility shall not cause or contribute to groundwater containing concentrations of constituents identified below, or natural background quality, whichever is greater.

- a. Nitrate as nitrogen of 10 mg/L.
- b. For constituents identified in Title 22, the MCLs quantified therein.

F. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions), which are a part of this Order.
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) R5-2014-XXXX, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. The Discharger shall keep at the Facility office copies of this Order including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger must at all times properly operate and maintain its respective facilities and systems of treatment and control (and related appurtenances) that are

installed or used to achieve compliance with the conditions of this Order. Proper operation and maintenance also include 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 only when the operation is necessary to achieve compliance with the conditions of the Order.

5. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of a person registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter 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.
7. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall 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.
8. To assume operation 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 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.

9. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate.
10. As described in the Standard Provisions, 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.
11. **By (6 months from the adoption of this order)**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan shall identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan. The Discharger shall implement the plan in accordance with the approved schedule.
12. **By (6 months from the adoption of this order)**, the Discharger shall submit a Nutrient Management Plan for the Land Application Areas for Executive Officer approval. At a minimum the Plan must include procedures for monitoring the LAAs including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or nuisance conditions, a discussion on blending of wastewater and supplemental irrigation water, supporting data and calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, commercial fertilizers and soil amendments are applied at agronomic rates, and in a manner that distributes the wastewater over the entire acreage of the LAAs.
13. **By (6 months from the adoption of this order)**, the Discharger shall submit a work plan to evaluate groundwater quality beneath and directly downgradient of the LAAs and recommend an appropriate groundwater monitoring network.
By (18 months from the adoption of this order), the Discharger shall implement the approved groundwater monitoring work plan and initiate monitoring of its groundwater monitoring well network. Existing off-site monitoring wells, irrigation, and domestic water wells may be considered if criteria are met (i.e., reasonable horizontal and vertical placement of well intake intervals reflect uppermost first encountered groundwater in the area).
14. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

15. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
16. 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.
17. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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 or with the WDRs 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.

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 that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on XX August 2014.

PAMELA C. CREEDON, Executive Officer