

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0112

CEASE AND DESIST ORDER
REQUIRING
THE CITY OF LIVINGSTON
INDUSTRIAL WASTEWATER TREATMENT FACILITY
MERCED COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The Regional Water Quality Control Board, Central Valley Region, (hereafter referred to as "Regional Water Board") finds that:

1. Responsible Party and Facility Location. The City of Livingston (hereafter Discharger or City) owns and operates an industrial wastewater treatment facility (IWWTF). The IWWTF, which has been in operation since 1963, is situated immediately south of the Merced River, one mile northwest of the City of Livingston in Sections 13 and 23, T6S, R11E, MDB&M, as shown in Enclosure A.
2. Foster Farms' Complex. Industrial process wastewater treated at the IWWTF is solely from a chicken-processing complex (hereafter Complex) owned and operated by Foster Poultry Farms, a California corporation (hereafter Foster Farms). Foster Farms reimburses the City for the IWWTF operation and maintenances costs. The Complex consists of a chicken processing plant, a protein conversion plant, a refrigerated distribution center, a truck shop, and a delicatessen plant. Domestic wastewater from the Complex is collected separately and discharged to the City of Livingston's municipal sewerage system.
3. Waste Discharge Requirements. Waste Discharge Requirements (WDRs) Order No. 79-209 for the City, adopted on 28 September 1979, regulates the discharge of poultry processing wastewater from the IWWTF. Wastewater Reclamation Requirements Order No. 93-091 for Foster Farms regulates the discharge of IWWTF effluent to lands (Reclamation Site) owned by Foster Farms. In October 2005, Foster Farms submitted a report of waste discharge (RWD) in support of enlarging the Reclamation Site by approximately 146 acres (hereafter "Expanded Reclamation Site"). Regional Water Board staff letter dated 18 November 2005 determined the RWD complete. On 1 August 2006, the City adopted a mitigated negative declaration for the Expanded Reclamation Site in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) and the State CEQA Guidelines.

4. WDRs Order No. 79-209, states, in part, the following:

“A. Waste Discharge Specifications

1. Neither the treatment nor the discharge shall cause a nuisance or pollution as defined in the California Water Code.
2. The discharge shall not cause degradation of any water supply.
3. The thirty-day mean daily flow shall not exceed 3.5 [million gallons per day].

* * *

B. Prohibitions

1. The discharge of water to surface waters, surface water drainage courses or canals either by direct discharge or runoff from the disposal site is prohibited.”

5. Waste Characterization. The IWWTF consists of 12 interconnected unlined treatment and disposal ponds (Ponds 1 through 12) encompassing 83 acres. Ponds 1 through 9 are located on the Merced River’s flood plain. Influent is split at the headworks and routed through two treatment trains operated in parallel. One treatment train consists of Ponds 1, 3, 8 and 6, and the other, Ponds 2, 4, 5, and 7. Only the first-stage treatment ponds (Pones 1 and 2) are aerated. Effluent from Pond 6 is either discharged directly to the Reclamation Site or combined with effluent from Pond 7, which is discharged to Ponds 9 through 12 and then from Pond 12 to the Reclamation Site. Data in Discharger self-monitoring report (SMRs) from January 2005 through April 2006 for the IWWTF influent and effluent from each treatment train (Ponds 6 and 12) yield the following averages:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Influent</u>	<u>Effluent</u>	
			<u>Pond 6</u>	<u>Pond 12</u>
Biochemical Oxygen Demand (BOD)	mg/L	330	24	64
Total Kjeldahl Nitrogen (TKN)	mg/L	60	49	46
Nitrate (as N)	mg/L	0.9	<0.1	0.3

6. Soil Waste Attenuation Processes. Ammonia and organic nitrogen in percolating wastewater can convert to nitrate in the soil profile and groundwater. If not attenuated in the soil profile, ammonia, organic nitrogen, and nitrate discharge to groundwater. The infiltration of wastewater containing oxygen-demanding substances will result in the natural attenuation within the vadose zone of decomposable waste constituents (e.g., dissolved organic carbon, nitrogen compounds). In this process, biological decomposition generates byproducts including carbon dioxide gas, which dissolves in soil-pore liquid and increases its alkalinity. When the loading of oxygen-demanding

substances is excessive, the depletion of oxygen by soil bacteria causes denitrification, which is desirable, and potentially the mobilization of soil constituents (e.g., manganese, iron, arsenic), which is not. Absent sufficient sustained reliable attenuation of residual decomposable waste constituents and decomposition byproducts in the remaining soil profile, the constituents will eventually discharge into groundwater.

7. Basin Plan. The Regional Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (hereafter Basin Plan), designates beneficial uses of the waters of the state, establishes water quality objectives (WQOs) to protect these uses, and establishes implementation policies to implement WQOs.
8. Designated Uses. Order No. 79-209 lists the beneficial uses of area groundwater as municipal and domestic supply, agricultural supply, and industrial supply, and the beneficial uses of the Merced River as agricultural supply, industrial supply, recreation, freshwater habitat, and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. The beneficial uses cited in Order No. 79-209 are consistent with those established by the Basin Plan for these waters.
9. Water Quality Objectives (WQOs). WQOs established in the Basin Plan include numeric WQOs (e.g., State drinking water maximum contaminant levels) that are incorporated by reference, and narrative WQOs, including the narrative toxicity objective and the narrative tastes and odors objective for surface and groundwater. Chapter IV of the Basin Plan contains the *Policy for Application of Water Quality Objectives*, which provides that "[w]here compliance with these narrative objectives is required (i.e., where the objectives are applicable to protect specified beneficial uses), the Regional Water Board will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives" (Basin Plan, p. IV-17.00). The constituent of concern that implements the cited Basin Plan WQOs in this Order is nitrate, which has a California Primary maximum contaminant level (MCL) of 10 mg/L as NO₃-N (Title 22, California Code of Regulations (CCR), Section 64449, Table 64431-A).
10. Antidegradation Policy. The Basin Plan also describes plans and policies of the State Water Resources Control Board incorporated by reference. The latter includes State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (hereafter Resolution 68-16 or the "Antidegradation" Policy). This policy requires the Regional Water Board, in regulating the discharge of waste, to maintain high quality 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. This policy requires discharges to be conducted in a manner that reflects the implementation of best practicable treatment and control (BPTC).

11. Pollution. Section 13050(l)(1) of the California Water Code (CWC) defines pollution as: “an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses.

Violations

12. Notice of Violation. The Discharger was issued a Notice of Violation (NOV) on 4 August 2000 for, in part, violations or threatened violation of WDRs Order No. 79-209, Waste Discharge Specifications A.1 and A.2, and Prohibition B.1. The NOV also indicated that the existing IWWTF was not reflective of BPTC.
13. Groundwater Quality. The Discharger monitors groundwater at the IWWTF in a network of nine shallow wells (MW-2 through MW-7, and MW-9 through MW-11), the locations of which are depicted on Enclosure A. MW-2, MW-5 and MW-7 are along the Merced River; MW-9 is near an unlined irrigation canal; and the remaining wells are within and around the IWWTF treatment and disposal ponds. Data from Discharger SMRs from October 2000 through October 2005 for these wells yield an average depth to groundwater of 50 feet below ground surface (bgs) and the following averages, minimums, and maximums for nitrogen compounds:

	<u>MW-2</u>	<u>MW-3</u>	<u>MW-4</u>	<u>MW-5</u>	<u>MW-6</u>	<u>MW-7</u>	<u>MW-9</u>	<u>MW-10</u>	<u>MW-11</u>
NO ₃ -N (mg/L)									
Average	10	1	1	<0.1	2	2	13	12	2
Minimum	0.3	0.1	0.1	0.1	0.2	0.2	3	2	0.1
Maximum	15	2.5	7.6	0.2	8.85	12	32	47	11.5
NH ₃ -N (mg/L)									
Average	2	36	7	59	22	24	1	9	3
Minimum	0.2	0.7	0.5	6	2.4	6	0.2	2	0.8
Maximum	12	64	23	103	113	40	2.1	24	6.9

14. Background Groundwater Quality. All wells in the Discharger’s current network monitor groundwater affected by the discharge, except MW-9. While intended to monitor background groundwater quality, MW-9 is adjacent to a surface water irrigation canal and is dominated by seepage of exceptionally high quality canal water and consequently is not representative of natural or ambient background quality.
15. Pollution. Groundwater quality data (Finding 13) compared to numeric WQOs (Finding 9) indicates that waste constituents discharged from the IWWTF (Finding 5) have caused

exceedances of the nitrate WQO. Ammonia in groundwater can convert to nitrate and contribute to exceedances of the nitrate WQO. These exceedances unreasonably affect underlying groundwater for beneficial uses and thus created a condition of pollution for this constituent. This violates Order No. 79-209, Waste Discharge Specification A.1. These exceedances also indicate that the discharge to the IWWTF has degraded a water supply in violation of Waste Discharge Specification A.2. Comparison of other waste constituents in groundwater, including salinity for the protection of other beneficial uses (e.g., municipal and agricultural), will be evaluated as part of a separate future action.

16. IWWTF Deficiencies. The following deficiencies in IWWTF design and maintenance have caused or contributed to violations of Waste Discharge Specifications A.1 and A.2:
 - a. Unlined Ponds. The existing IWWTF features unlined treatment ponds. Groundwater in MW-2, MW-4, and MW-5, which are downgradient or within the immediate vicinity of the first-stage aerated ponds (Ponds 1 and 2), contains low or nondetect concentrations of nitrate and elevated concentrations of ammonia. This reflects anoxic or anaerobic conditions in groundwater resulting from the release to underlying soil and groundwater of organic waste constituents in wastewater impounded in unlined ponds.
 - b. Excessive Sludge Accumulation. At least 190,000 cubic yards of sludge accumulated in the IWWTF ponds, primarily Ponds 1, 2, 3, and 5. Some sludge (2,600 tons by dry weight) has been removed and applied to nearby farmland under Regional Water Board Resolution No. R5-2003-0008. A January 2001 Pond Sludge Survey Report shows sludge TKN concentrations ranging from 220 to 3,400 mg/L. The release of TKN and other waste constituents from accumulated sludge in unlined ponds is a significant contributory factor to the groundwater impacts caused by IWWTF operation.
 - c. Effluent Percolation. Based on information submitted by the Discharger, approximately 30 percent of the wastewater discharged to the IWWTF percolates to underlying groundwater. The percolation of wastewater containing 45 to 60 mg/L total nitrogen (Finding 5) has contributed to the elevated concentrations of total nitrogen in underlying groundwater.
17. Flow. Discharger SMRs from January 2005 through April 2006 document nine months in which the discharge flow exceeded the 3.5 mgd limit prescribed by Order No. 79-209, Waste Discharge Specification A.3. Current flows are about 3.6 mgd, with a maximum reported flow of 4 mgd during this period. Foster Farms has not implemented measures to decrease wastewater flow to the IWWTF and unless it does the Discharger will continue to violate WDRs Order No. 79-209, Waste Discharge Specification A.3.
18. Freeboard Encroachment. The IWWTF 1985 Operations and Maintenance Manual, prepared by Carollo Engineers, states that it is "desirable to maintain two feet of freeboard to prevent erosion of the pond levees." Discharger SMRs from January 2005 through April 2006 report pond freeboard of less than 2 feet in at least two or more ponds

each month, and is frequently less than 1 foot in at least one pond each month. Maintaining less than 2 feet of freeboard could erode pond levees, cause a catastrophic levee failure, and release pollutants to the adjacent Merced River. Due to recurring freeboard encroachment, the Discharger is in threatened violation of Order No. 79-209, Prohibition B.1.

IWWTF Upgrade Project

19. *IWWTF Upgrade Project.* To cease the discharge of poultry processing wastewater that has polluted groundwater by remedying the source of pollution (primarily nitrogen), the Discharger proposed upgrading the IWWTF to implement biological nitrogen removal (hereafter "IWWTF Upgrade Project"). The IWWTF Upgrade Project is described in a 2003 technical report, *Final Industrial Wastewater Treatment Plant Facility Plan* (hereafter "Facility Plan"). The IWWTF Upgrade Project features the replacement of existing treatment ponds with oxidation ditch wastewater treatment technology, and will include construction of new headworks, oxidation ditches and secondary clarifiers, as well as rehabilitation of existing treatment and disposal ponds (e.g., sludge removal, diking, etc.) for use as effluent disposal ponds. The Facility Plan indicated that implementation of the selected oxidation ditch treatment technology would reduce discharge nitrogen concentrations to 10 mg/L or less. It projected to complete the IWWTF Upgrade Project by January 2007. It included an analysis that showed, with further attenuation of nitrogen in the soil profile, total nitrogen discharging to groundwater would range from 2.7 to 5.9 mg/L.
20. *BPTC Determination.* Regional Water Board staff letter dated 9 May 2003 concurred with the Facility Plan stating that it provided sufficient technical justification to determine that the biological nutrient removal technology proposed reflects BPTC. The technology implemented for nitrogen removal will reduce effluent total nitrogen to less than 10 mg/L, and reflects BPTC with respect to nitrogen, but the effluent limitation that will result in BPTC and will minimize degradation consistent with State Water Board Resolution 68-16 shall be determined by the Regional Water Board at a later date.
21. *Implementation of IWWTF Upgrade Project.* The City is the lead agency for evaluating the environmental affects of the IWWTF Upgrade Project in accordance with CEQA and the State CEQA Guidelines. Foster Farms has been funding the IWWTF Upgrade Project. Due to delays resulting from reported disagreements between the City and Foster Farms over the selected biological nitrogen removal (BNR) treatment technology, the City cannot meet its originally-proposed January 2007 completion date. In a 21 June 2006 meeting with Regional Water Board staff, the City committed to completing the IWWTF Upgrade Project by December 2008. This Order imposes a time schedule for the City to complete the IWWTF Upgrade Project in accordance with the City's latest proposed time schedule.

22. Report of Waste Discharge (RWD). On 28 August 2006, the Discharger submitted a RWD in support of an increase in discharge flow and material change in the nature of the discharge (i.e., implementation of the IWWTF Upgrade Project). The RWD is incomplete, in part, because it lacks a water balance demonstrating sufficient effluent disposal capacity for the increase in discharge flow. This Order establishes a task and compliance deadline for submittal of a complete RWD. Even though the Discharger submitted a RWD prior to Order adoption, it is appropriate for the Order to retain the RWD submittal task and compliance deadline to direct the Discharger to provide information necessary to complete the RWD.
23. Violation Resolution. Completion of the IWWTF Upgrade Project will significantly improve discharge quality for nitrogen and reduce the discharge's overall impact to water quality. Removal of accumulated sludge from existing ponds will further reduce this impact. Violations of the flow limit will also be resolved once the IWWTF Upgrade Project is complete and the Regional Water Board authorizes an increase in discharge flow. The threat of a pond levee failure and uncontrolled release of pollutants to surface waters will be immediately reduced once Foster Farms initiates discharge to the Expanded Reclamation Site.

Regulatory Considerations

24. As a result of the events and activities described in this Order, the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution. The Discharger has discharged, and has the potential to discharge, waste in violation of WDRs Order No. 79-209. Investigation of the horizontal and vertical extent of the groundwater degradation and pollution, as well as cleanup measures, will be addressed in a separate future enforcement action.
25. Section 13301 of the California Water Code states, in part, that: "When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist order and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302."
26. Section 13267(b) of the California Water Code 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 having discharged or discharging, or who

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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.”

27. The required technical reports are necessary to evaluate compliance with this Order. The Discharger owns and operates the facility that discharges the waste subject to this Order.
28. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to section 15321(a)(2), Title 14, California Code of Regulations.
29. On 26 October 2006, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Regional Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order.
30. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board to review the action in accordance with section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, CA, 95812-0100, within 30 days of the date on which the Regional Water Board action took place. Copies of the law and regulations applicable to filing petitions are available at www.swrcb.ca.gov/water_laws/index.html and also will be provided upon request.
31. The Regional Water Board may revise or rescind this Order, as appropriate, should the Discharger submit written notification that Foster Farms will terminate wastewater discharges to the IWWTF. In such an event, any order adopted by this Board for Foster Farms will reflect the schedule in this Order.

IT IS HEREBY ORDERED that, pursuant to sections 13301 and 13267 of the California Water Code, the City of Livingston, its agents, successors, and assigns, shall in accordance with the following tasks and time schedule achieve compliance with Waste Discharge Requirements Order No. 79-209.

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 CITY OF LIVINGSTON
 INDUSTRIAL WASTEWATER TREATMENT FACILITY
 MERCED COUNTY

1. Cease and desist discharging wastes in violation and threatened violation of Waste Discharge Requirements Order No. 79-209. No term or condition of Order No. 79-209 is superseded or stayed by this Cease and Desist Order.
2. IWWTF Upgrade Project. Comply with the following tasks no later than the dates specified in the following schedule:

<u>Task</u>	<u>Compliance Date</u>	<u>Report Due</u>
a. Submit a report of waste discharge with accompanying technical report in support of the IWWTF Upgrade Project and increase in discharge flow. The technical report shall include the details of the final design for all projects described as part of the Facility Plan, including plans for the rehabilitation of all ponds proposed for wastewater disposal.		15 Mar 2007
b. Complete the documentation necessary to comply with CEQA and submit written evidence of such.	1 May 07	15 May 07
c. Begin construction of the IWWTF Upgrade Project and submit written evidence of such.	1 Jun 07	15 Jun 07
d. Complete construction of the IWWTF Upgrade Project and submit technical report, subject to written Executive Officer approval, containing a detailed flow schematic of the upgraded IWWTF.	31 Dec 08	15 Jan 09
e. Submit a copy of the O&M Manual for the upgraded IWWTF.		15 Jan 09

3. **By 27 November 2006**, the Discharger shall submit a spill prevention plan (SPP) describing all measures and controls it determines necessary to preclude any preventable discharge of pollutants to the Merced River, and contingencies to minimize any discharge that occurs for reasons beyond its control and that will measure and minimize its affects. The SPP shall include detailed actions to (a) ensure rated storage capacity, (b) monitor the risk and potential means of discharge (i.e., pond freeboard, compromised levees, etc.), and (c) mitigate and control the risk (e.g., timely pumping of wastewater from the pond, reducing flows to the IWWTF, etc.). The contingency portion of the SPP shall provide for appropriate agency notifications, monitoring of pollutants in water in the river, mitigations to protect public health impacts(e.g., posting the Merced River, monitoring upstream and downstream of the spill, etc.)

4. Quarterly Status Reports. The Discharger shall submit written quarterly status reports describing work performed on complying with Task 2. The first report is due by **15 February 2007**. Subsequent reports are due by 45 days following the end of each calendar quarter.

5. Signatory Requirements. Reports submitted pursuant to this Order shall be signed by a principal executive officer or a duly authorized representative if the authorization is made in writing by the principal executive officer. Any person signing a document submitted pursuant to this Order shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

6. Technical Reports. All technical reports 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 persons 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 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.

The Dischargers shall immediately comply with all other Prohibitions, Specifications, and Provisions of Waste Discharge Requirements Order No. 79-209 not specifically mentioned above. In addition to the above, the Discharger shall comply with all applicable provisions of the California Water Code that are not specifically referred to in this Order.

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 or may issue a complaint for administrative civil liability.

Failure to comply with this Order may result in the assessment of an Administrative Civil Liability up to \$1,000 or up to \$10,000 per day of violation, depending on the violation, pursuant to the California Water Code, including sections 13268, 13350, and 13385. The Regional Water Board reserves its right to take any enforcement actions authorized by law.

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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 26 October 2006.

PAMELA C. CREEDON, Executive Officer

26 October 2006

(Date)



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SCALE IN FEET

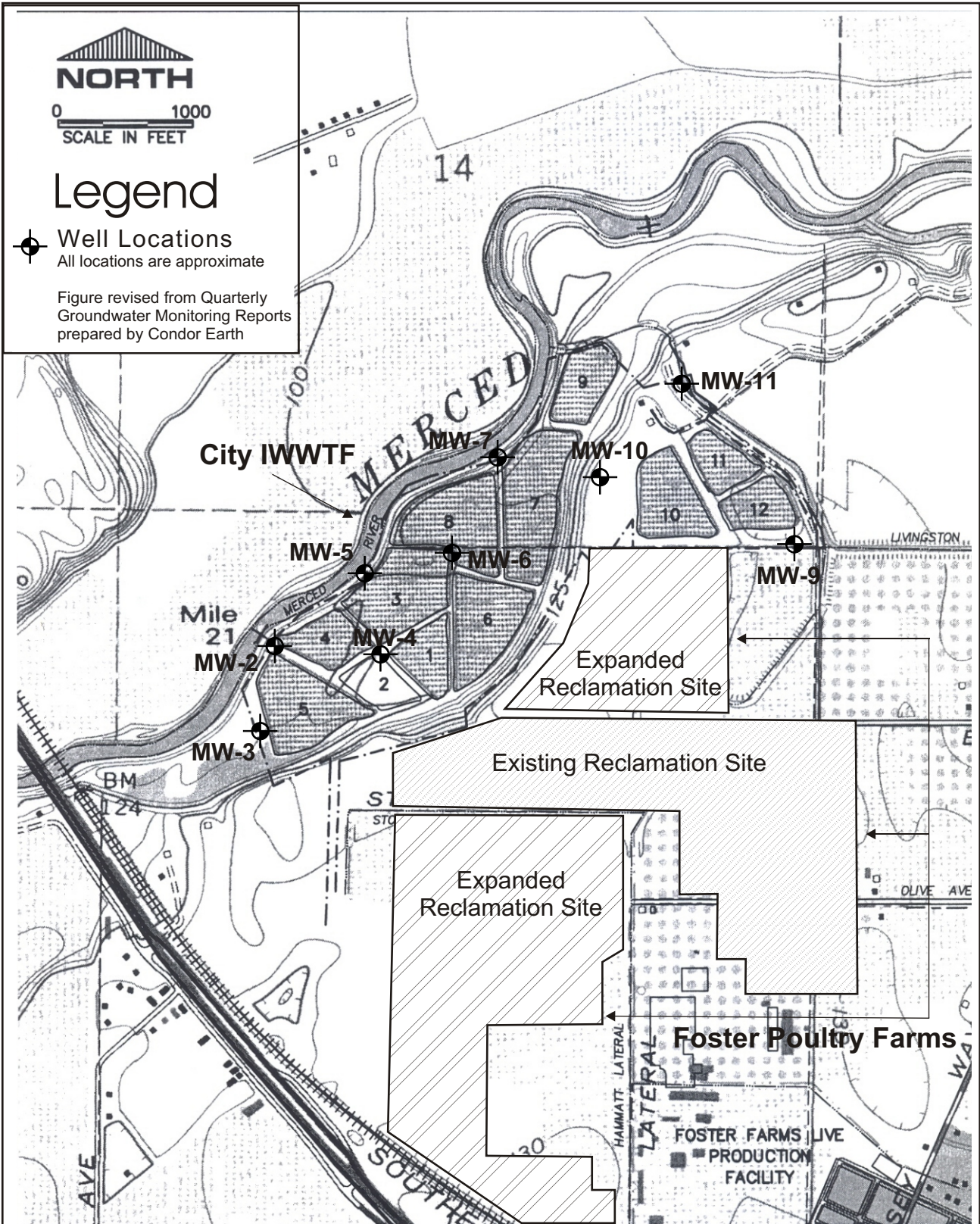
Legend



Well Locations

All locations are approximate

Figure revised from Quarterly
Groundwater Monitoring Reports
prepared by Condor Earth



ENCLOSURE A - VICINITY MAP
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