



California Regional Water Quality Control Board Central Valley Region

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26 August 2009

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**REVISED NOTICE OF APPLICABILITY, WATER QUALITY ORDER NO. 2004-0012-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE DISCHARGE OF BIOSOLIDS
TO LAND, EMIGH SOUZA RANCH (SO-22), SOLANO COUNTY**

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Notice of Intent (NOI) on 15 December 2008 from Synagro West, Inc. and Christine and Dan Mahoney (here after jointly referred to as Discharger) to update their coverage under State Water Resources Control Board (State Water Board) Water Quality Order No. 2004-0012-DWQ, the *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities* (General Order). The Discharger submitted new information to remove a restriction in the Notice of Applicability (NOA) issued on 23 August 2005 which specified that biosolids could be applied "no more than two years out of every five." Based on the information in the NOI and subsequent documentation, Central Valley Water Board staff concurs that the project meets the required conditions for approval under the General Order, without limiting application to two years out of every five. This letter serves as formal notice that the General Order is applicable to the sites and discharge described below. This facility has been assigned a Central Valley Water Board order specific tracking number of No. 2004-0012-DWQ-0006.

A copy of the General Order is enclosed for the Discharger; otherwise it may also be viewed at the following web address:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0012.pdf.

You are urged to familiarize yourself with the contents of the entire General Order. The discharge must be managed in accordance with the requirements contained in the General Order, the information submitted in the RWD and the requirements contained in this NOA.

PROJECT DESCRIPTION

The Discharger's land application area is located in the southeastern portion of Solano County about 6.5 miles northwest of Rio Vista's city boundary as shown in Attachment A, which is seven pages as attached and hereto made part of this NOA by reference. Approximately 815 acres of agricultural land, comprised of five field sites, are owned by Christine and Dan

California Environmental Protection Agency

Mahoney and available for biosolids application. However, due to set back buffer zone boundaries and groundwater elevation considerations this NOA allows biosolid application to 685 acres, as shown in the table below. The application areas are shown in the table below and depicted in Attachment A with their associated set back buffer zone boundaries.

Site ID	Section	Township	Range	Gross Acreage	Applied Acreage
SO 22-1	11	4N	1E	308	282
SO 22-2	11	4N	1E	98	25
SO 22-3	11	4N	1E	149	138
SO 22-4	11	4N	1E	92	88
SO 22-5	14	4N	1E	168	152
Total				815	685

The terrain is gently sloped with elevations ranging from approximately 90 to 150 feet above mean sea level (MSL), and surface water drainage is to intermittent streams that traverse the site. The sites grow small grains and pasture grasses used for cattle grazing. The pastures are not irrigated and receive approximately 15 inches of precipitation per year as the sole water source. Site soils are typically mixtures of clay, silt, and sand and exhibit cation exchange capacities of 17 to 33 meq/100g. Soil pH values range from 5.6 to 6.4.

Biosolids will be applied only between April 15 and October 15 and will be incorporated into the soil on the same day. Biosolids will be applied in accordance with the Solano County ordinance (e.g. no application during precipitation events). Setbacks that comply with the General Order and Solano County Ordinance will be marked prior to each application. The overall facility perimeter and on-site drainage/creeks will have a boundary of at least 33 feet of unmowed grass or similar vegetation. Therefore, storm water retention is not required.

GROUNDWATER CONDITIONS

On 16 July 2005 the Discharger submitted a Groundwater Assessment Report to evaluate depth to groundwater and groundwater quality. A direct push boring was completed for each of the five sites to a depth of 25 feet below the ground surface. Except for SO 22-2, groundwater was not encountered at a depth of 25 feet. At SO 22-2, groundwater was encountered at approximately 10 feet below the ground surface. Unlike the other boring locations, which were at an elevation greater than 100 feet above mean sea level (MSL), SO 22-2 was sampled near a topographic low point at 85 feet above MSL and first groundwater was encountered at an approximate elevation of 75 feet MSL.

Analytical results for the SO 22-2 groundwater sample indicate that groundwater is relatively saline, with 1,100 mg/L total dissolved solids, 300 mg/L chloride, 291 mg/L sodium, 6.7 mg/L nitrate nitrogen, and 9.7 mg/L total Kjeldahl nitrogen. The investigation, although limited and inconclusive, indicates that groundwater beneath the site contains elevated levels of pollutants, which may be naturally occurring.

Since the Discharger is not proposing to install groundwater monitoring wells, it is appropriate to require the Discharger to protect groundwater quality by limiting biosolids application to areas where the elevation will provide at least a depth of 25 feet to groundwater. The

Discharger did not determine the depth to groundwater but did complete borings to a depth of 25 below ground surface. Thus, it is appropriate to limit biosolids application to the correlating elevation that did not reveal groundwater at 25 feet below ground surface as indicated by the direct push borings. Therefore, biosolids application in areas with ground surface elevations less than the elevation investigated by the direct push boring is prohibited until the Discharger submits more current groundwater data or a groundwater monitoring installation work plan, which will require approval by Central Valley Water Board staff. The allowable application elevations are illustrated in Attachment A.

MONITORING AND REPORTING

The Discharger must comply with Monitoring and Reporting Program (MRP) No. R5-2009-0848, which is attached and hereto made part of this NOA by reference. This site specific MRP replaces the requirements of the MRP contained in the General Order. The MRP is effective immediately, and requires the submittal of monthly monitoring reports. Until Central Valley Water Board staff formally terminates your coverage under the General Order, monthly monitoring reports need to be submitted even if there is no biosolid land application during the reporting period. Please reference your unique Order No. 2004-0012-DWQ-0006 and your MRP No. R5-2009-0848, when submitting your monitoring reports.

GENERAL INFORMATION AND REQUIREMENTS

The Provision D.1.a of the General Order requires that after the NOA is issued no discharge shall occur until 15 days after submission of the Pre-Application Report. The submittal of a Pre-Application Report prior to discharging under this NOA is not required because:

1. The Discharger was previously regulated under the General Order, and
2. The Discharger has been following Monitoring and Reporting Program No. R5-2005-0832.

The Discharger is required to implement its Biosolids Spill Response Plan and Monitoring and Reporting Plan. The Discharger may only apply biosolids in areas as indicated in Attachment A. Discharge of material other than what is described in the application is prohibited.

This letter serves as formal notice that Water Quality Order No. 2004-0012-DWQ is applicable, as described above. If the discharge violates the terms or conditions of the General Order, the Central Valley Water Board may take enforcement action, including assessment of administrative civil liability.

Prior to implementing any discharge changes, a new NOI must be submitted for continued coverage under the General Order or a Report of Waste Discharge must be submitted for coverage under individual Waste Discharge Requirements (RWD).

In addition, since the Discharger has not investigated site or field-specific depth to groundwater and background water quality, the Discharger shall complete a groundwater investigation, water quality evaluation and antidegradation analysis and include the results and conclusions

as a component of any future NOI or RWD. The MRP No. R5-2009-0848 includes a Groundwater Monitoring section that will help you accomplish the necessary sampling.

The required annual fee specified in the annual billing from the State Water Board shall be paid until this NOA is officially terminated. Within **60 days** of the time the discharge regulated by this General Order ceases, the Discharger must notify this office in writing using the Notice of Termination form that accompanies the General Order No. 2004-0012-DWQ.

All monitoring reports submittals, discharge notifications, and questions regarding understanding these requirements as well as general compliance and enforcement shall be directed to Ms. Mary Boyd (916) 464-4676 or mboyd@waterboards.ca.gov. Questions regarding submitting an updated NOI for General Order coverage, or making changes to your permitted activities may be directed to Mr. Robin Merod at (916) 464-4697 or rmerod@waterboards.ca.gov.

Pamela C. Creedon
Executive Officer

Attachments: Attachment A, Regional, Site and Field Maps
Attachment B, Monitoring and Reporting Program No. R5-2009-0848

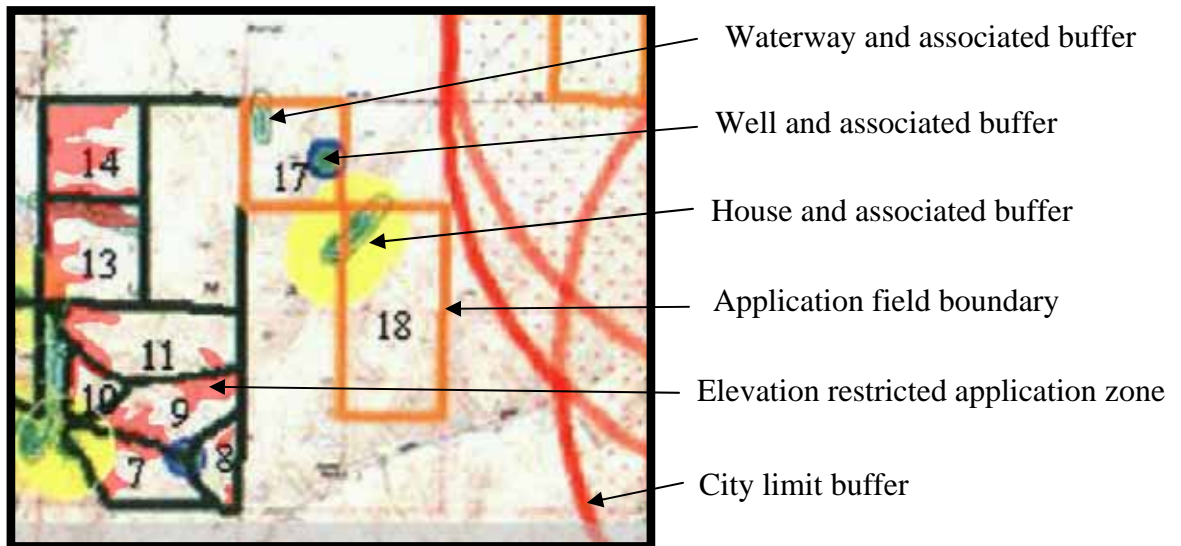
Enclosures: State Water Board Water Quality Order No. 2004-0012-DWQ

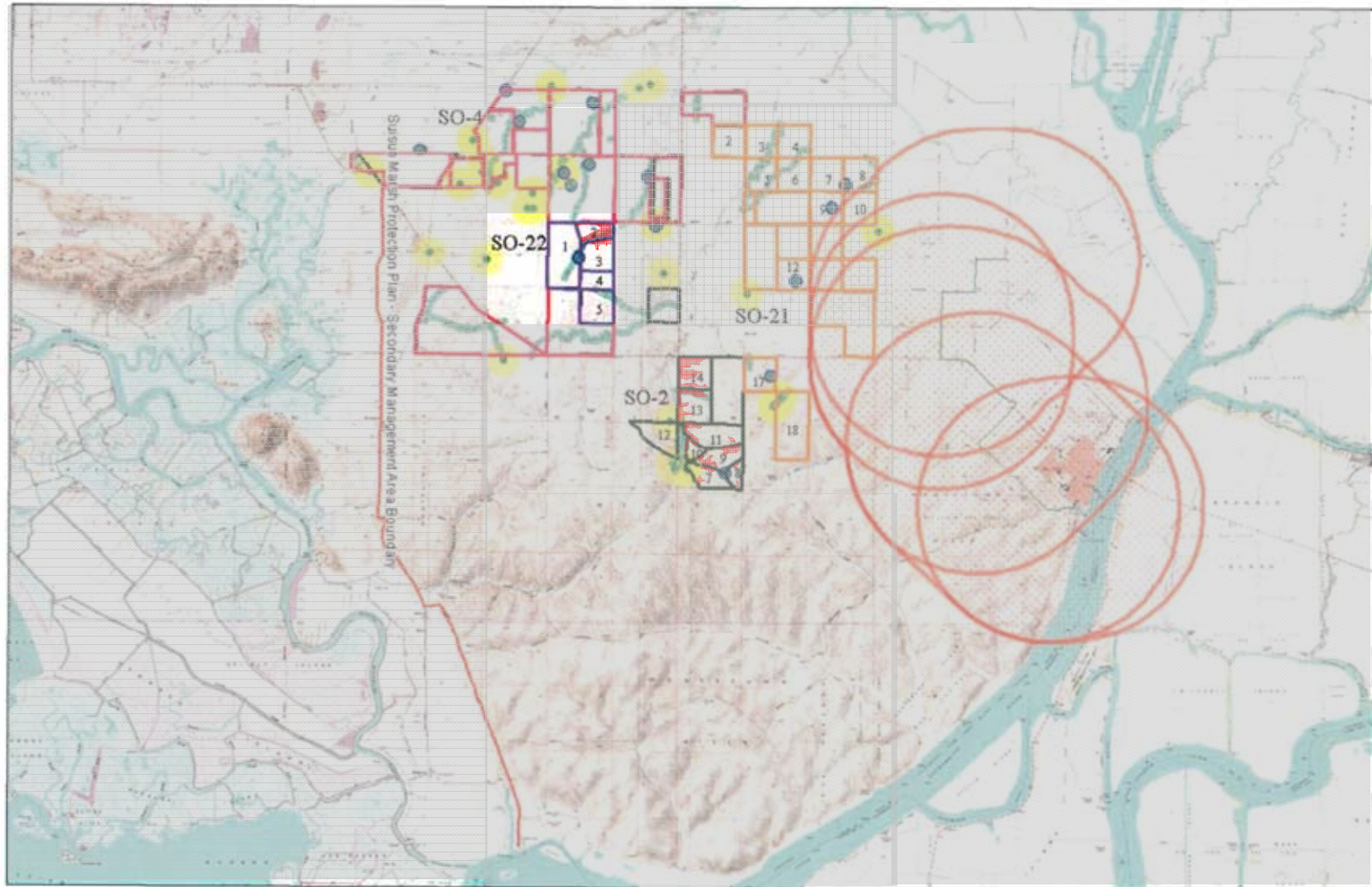
cc w/out enc.: Gordon Innes, Division of Water Quality, State Water Board, Sacramento
Jeffrey Bell, Solano County Environmental Health Department, Fairfield
Ken Johnson, Synagro Southwest, Tolleson, AZ

Attachment A

Index and Legend.....Page 1
Regional Map.....Page 2
SO22 Site Map.....Page 3
SO22-1 Field Map.....Page 4
SO22-2,3 Field Map.....Page 5
SO22-4 Field Map.....Page 6
SO22-5 Field Map.....Page 7

Legend for required set backs:





MN (14.4° E)

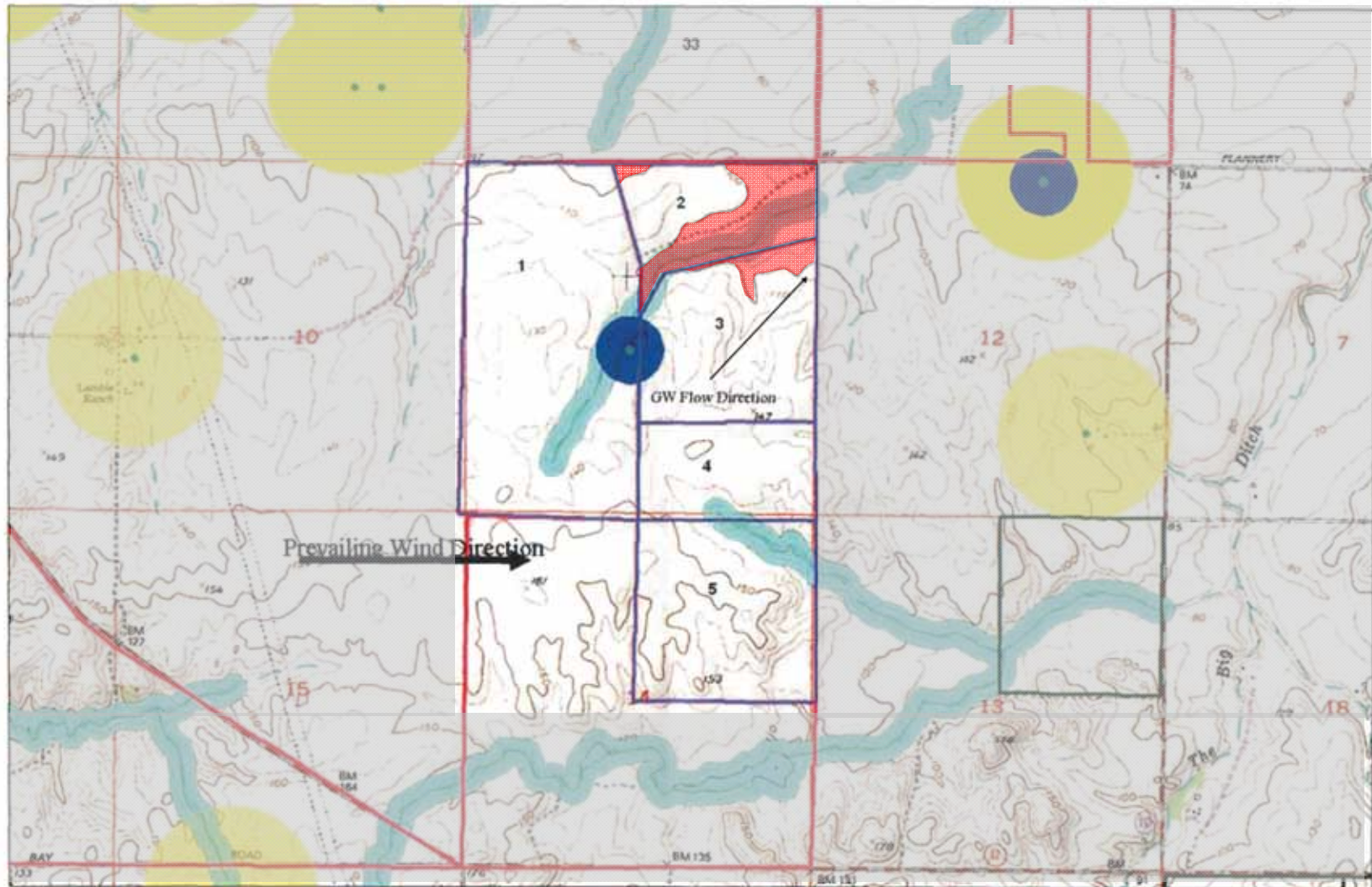
Regional Map



Data Zoom 10-4

Drawing Reference:
DeLorme XMap 5.0 GIS Editor

**MAP OF BIOSOLID APPLICATION AND BUFFERS
SYNAGRO EMIGH SOUZA RANCH (SO-22) SITE
SOLANO COUNTY**



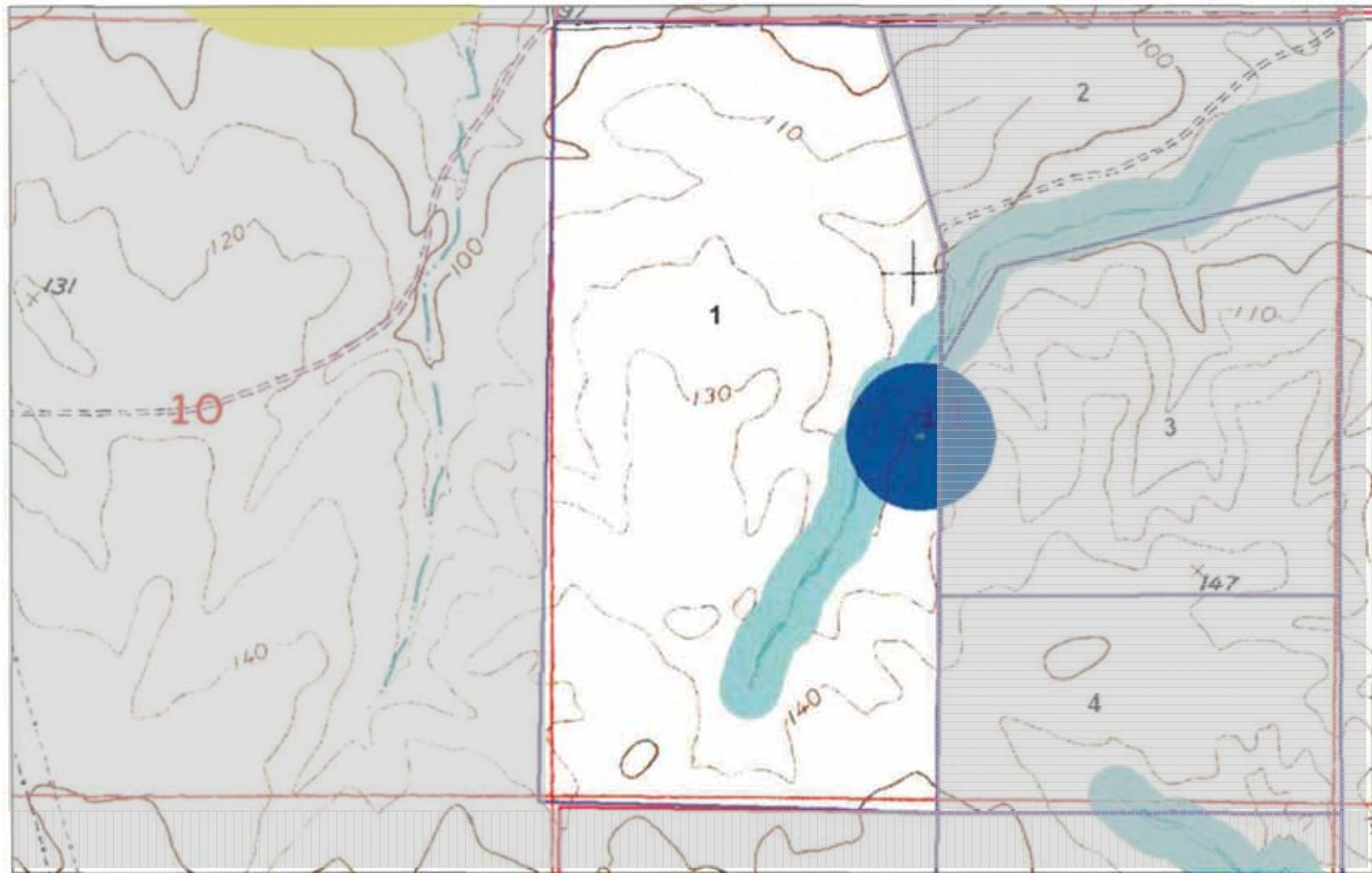
MN / 14 5° E

SO-22 Emigh Souza Ranch



Drawing Reference:
DeLorme XMap 5.0 GIS Editor

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SOLANO COUNTY**



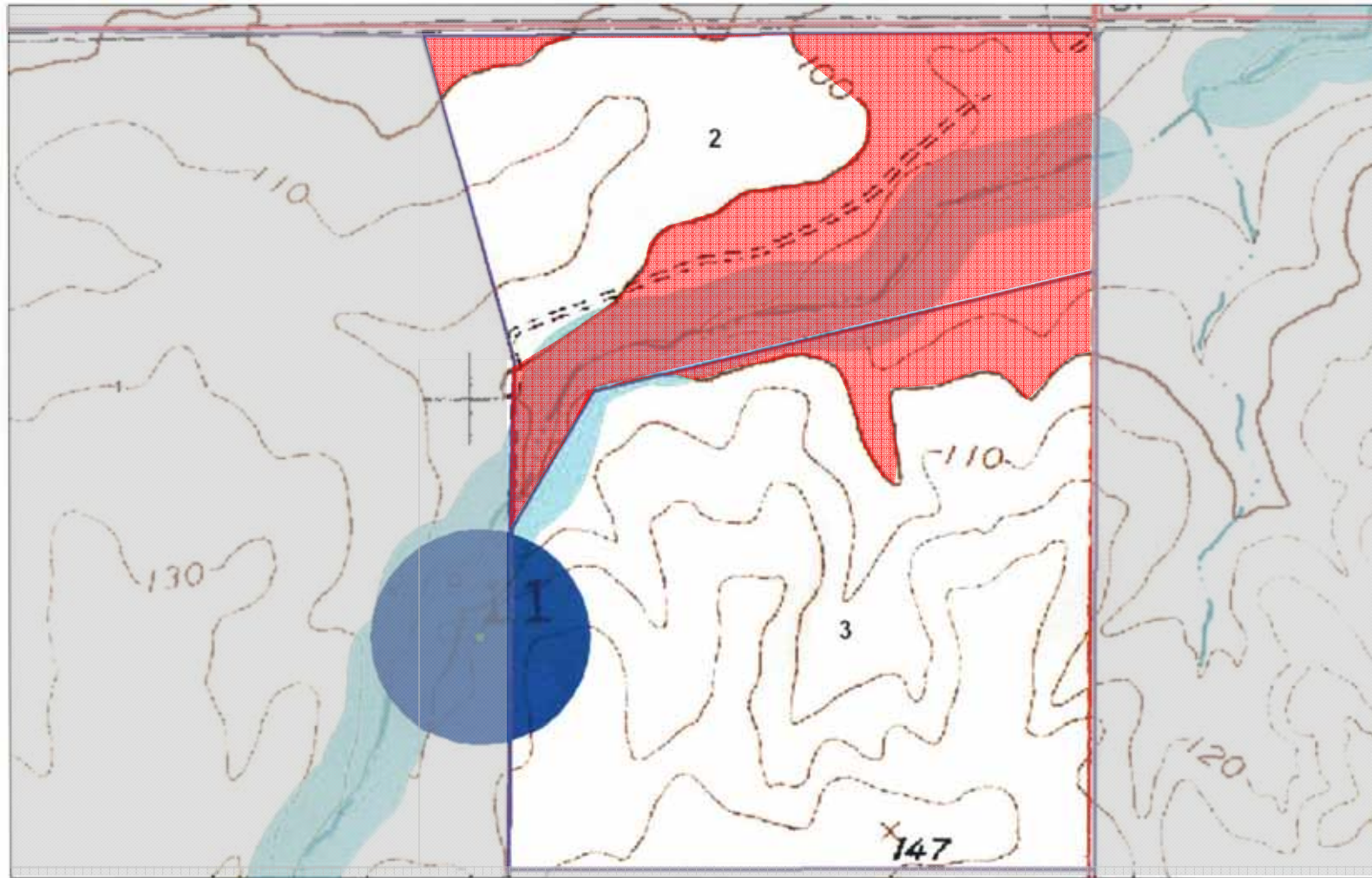
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SO22-1

0 400 800 1200 1600 2000 2400 ft
Data Zoom 14-0

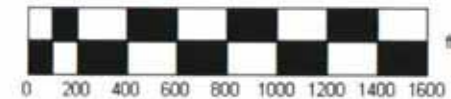
Drawing Reference:
DeLorme XMap 5.0 GIS Editor

MAP OF BIOSOLID APPLICATION AND BUFFERS
SYNAGRO EMIGH SOUZA RANCH (SO-22) SITE
SOLANO COUNTY



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MN (14.5° E)

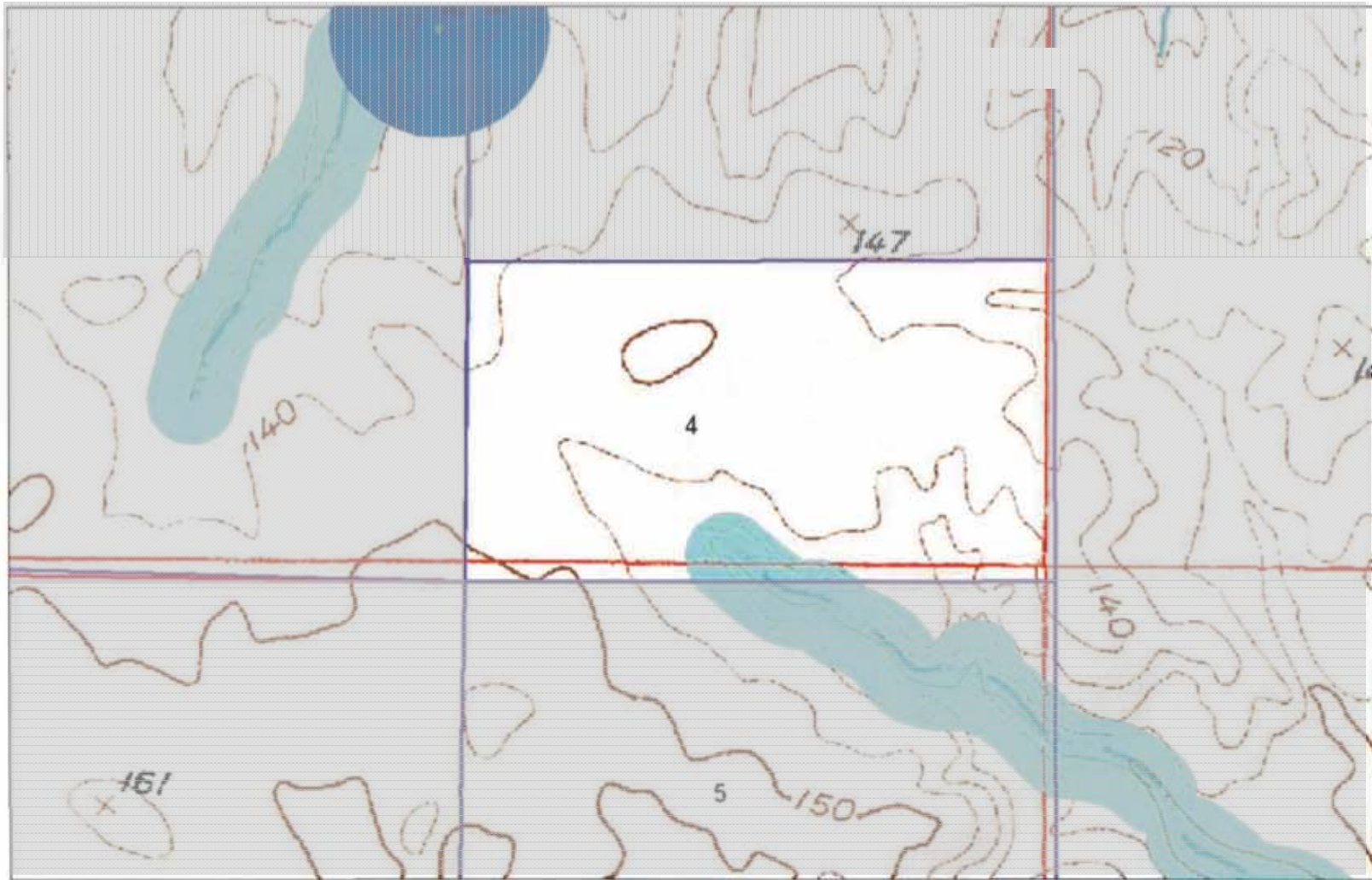
SO22-2,3



Data Zoom 14-5

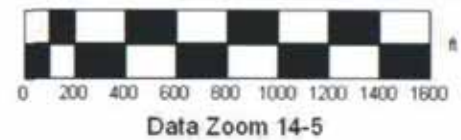
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SOLANO COUNTY**



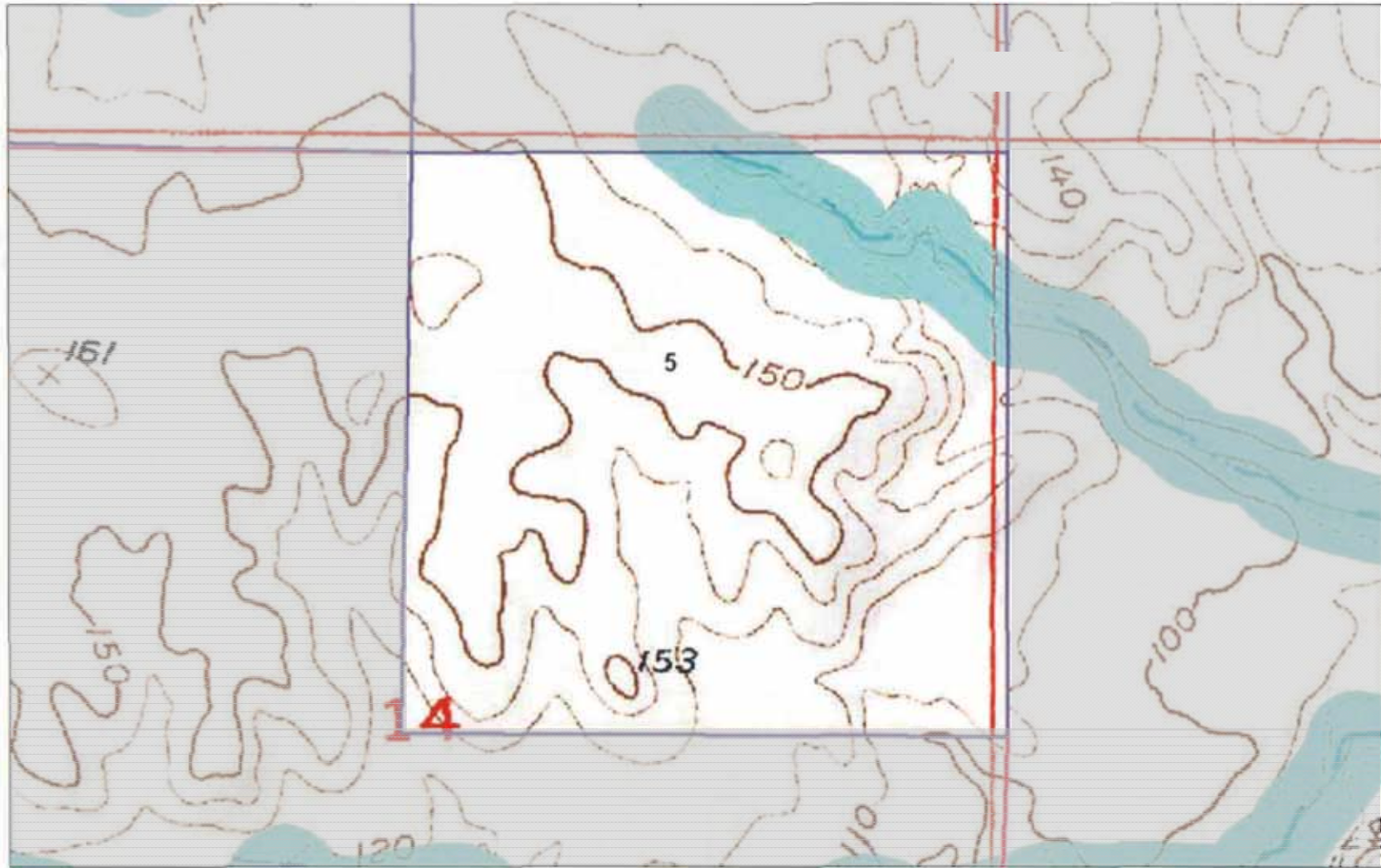
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MN (14.5° E)

SO22-4



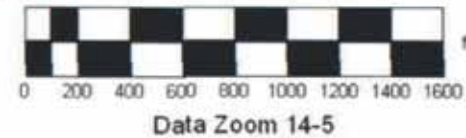
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DeLorme XMap 5.0 GIS Editor

**MAP OF BIOSOLID APPLICATION AND BUFFERS
SYNAGRO EMIGH SOUZA RANCH (SO-22) SITE
SOLANO COUNTY**



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MN (14.5° E)

SO22-5



Drawing Reference:
DeLorme XMap 5.0 GIS Editor

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SOLANO COUNTY