



Central Valley Regional Water Quality Control Board

13 September 2021

CERTIFIED MAIL
7019 2970 0001 5201 6196

Chris Marks, Operator
Denali Water Solutions, LLC
1425 Victoria Ct., Unit B2
San Bernardino, CA 92408

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Edward and Nancy Silva, Owners
Fagundes Ranch
P.O. Box 103
El Nido, CA 95317

NOTICE OF APPLICABILITY (NOA); STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2004-0012-DWQ; 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; DENALI WATER SOLUTIONS, LLC AND EDWARD AND NANCY SILVA; DENALI-SILVA RANCH (FAGUNDES RANCH) BIOSOLIDS APPLICATION SITE; MERCED COUNTY

On 1 February 2021, Denali Water Solutions, LLC submitted a Notice of Intent (NOI) and application fee for coverage under the State Water Resources Control Board's Water Quality Order 2004-0012-DWQ, *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 NOI was signed by Chris Marks with Denali Water Solutions, LLC and Edward J. Silva, owner of the biosolids application area.

According to the NOI, Denali Water Solutions, LLC plans to apply biosolids from various municipal generators throughout California, on up to 1,486 acres of agricultural land owned by Edward and Nancy Silva in Merced County. Both Denali Water Solutions, LLC and Edward and Nancy Silva are collectively and jointly referred to as "Discharger" for the purpose of this Notice of Applicability (NOA). Supplemental information to support the application, including a pre-application report, were provided on 25 February, 20 July, and 6 August 2021.

Central Valley Water Board staff's review of the NOI and pre-application report is discussed in more detailed in the attached staff memorandum. Based on the

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1685 E Street, Fresno, CA 93706 | www.waterboards.ca.gov/centralvalley

information provided in the NOI and pre-application report, this project meets the conditions for enrollment under the enclosed General Order. All the requirements contained within the General Order described as applicable to Sewage Sludge – Class “B” biosolids apply to your application. The discharge is hereby covered under **enrollee number 2004-0012-DWQ-0030**. Please include this number on all correspondence related to this discharge.

PROJECT LOCATION

The proposed project includes applying between 5 to 20 dry tons of biosolids per year on approximately 1,486 acres of agricultural land owned by Edward and Nancy Silva in south central Merced County (biosolids application area). The Denali-Silva Ranch (or Fagundes Ranch) is approximately three miles west of El Nido in Merced County (37° 08' 05" N, 120° 33' 22" W), Assessor Parcel Numbers (APNs) 074-100-031, 074-110-007, 074-110-023, and 074-110-054, as shown in **Attachment A**.

This portion of Merced County is within the Sacramento and San Joaquin River Basins. The operative *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan), designates beneficial uses, establishes narratives and numerical water quality objectives, and contains implementation programs and policies to achieve water quality objectives for all waters within the basins.

MONITORING AND REPORTING PROGRAM

The General Order includes Monitoring and Reporting Program (MRP) 2004-0012-DWQ. MRP 2004-0012-DWQ requires the submittal of an annual monitoring report by **15th February** of each year identifying quantity of biosolids applied to the various fields, constituent concentrations, and cumulative pollutant loading calculations.

SPECIFIC REQUIREMENTS

1. Application of biosolids at a location or in a manner different from that described in the NOI and this NOA is prohibited.
2. The application shall not cause or threaten to cause pollution as defined by California Water Code section 13050.
3. There shall be no discharge of biosolids from the storage or application areas to adjacent land areas not regulated by this General Order, to surface water, or to surface water drainage courses.
4. The staging and application of biosolids shall comply with all applicable setbacks contained in the General Order as specified in Discharge Specification B.11.
5. Biosolids with less than 75% moisture shall not be applied during periods when the surface wind speed exceeds 25 miles per hour as determined by the nearest calibrated regional weather station (e.g., airport, CIMIS).
6. The application of Class “B” biosolids containing a moisture content of less than 50% is prohibited.

7. The application of biosolids to water-saturated or frozen ground or during periods of precipitation that includes runoff from the permitted site is prohibited.
8. Application of biosolids at rates in excess of the nitrogen requirements of the crops or at rates that would degrade groundwater quality is prohibited.
9. In accordance with the General Order's Monitoring and Reporting Program, the Discharger shall submit the required annual monitoring report by **15th of February of each year.**
10. The Discharger shall submit the required annual fee (as specified in the annual billing statement issued by the State Water Resources Control Board) until this NOA is officially terminated.
11. Failure to abide by the conditions of General Order 2004-0012-DWQ, including its monitoring and reporting requirements, and this NOA could result in enforcement actions, as authorized by provisions of the California Water Code.

SALT AND NITRATE CONTROL PROGRAMS

The Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (i.e., Salt and Nitrate Control Programs) as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative. These Basin Plan amendments became effective on 17 January 2020. For more information regarding the Salt and Nitrate Control Programs, you are encouraged to go to the [CV-SALTS Info Webpage](https://www.cvsalinity.org/public-info) (<https://www.cvsalinity.org/public-info>).

Compliance with the Salt and Nitrate Control Programs is discussed further in the attached staff memorandum. As these programs are implemented, the Central Valley Water Board may find it necessary to modify the requirements of this NOA to ensure the goals of the Salt and Nitrate Control Programs are met.

As discussed in the attached staff memorandum, for the Nitrate Control Program, the Discharger (CV-SALTS ID 3592) has selected Path B and submitted a Notice of Intent (NOI) to join a Management Zone Group when one is formed for the Merced Basin. In addition, the Discharger has submitted a NOI and fee invoice to participate in the Prioritization and Optimization Study (P&O Study) to comply with the Salt Control Program.

DOCUMENT SUBMITTALS

All monitoring reports and other correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB should be emailed to centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706. To ensure that your submittals

are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15,
Place ID: 873469
Place Name: Denali-Silva Ranch (Fagundes Ranch) Biosolids Application Site
Order: 2004-0012-DWQ-0030

All documents, including responses to inspections and written notifications, submitted to comply with this General Order shall be directed, via the paperless office system, to the Compliance and Enforcement Unit, attention to Russell Walls. Mr. Walls can be reached at (559) 488-4392 or russell.walls@waterboards.ca.gov. Questions regarding the permitting aspects of the General Order and notification for termination of coverage under the General Order, shall be directed, via the paperless office system, to the WDR Permitting Unit, attention to Katie Carpenter.

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

Coverage for your Facility under the General Order shall become effective subject to this Notice of Applicability immediately.

If you have any questions regarding this matter, please contact Katie Carpenter by phone at (559) 445-5551 or by email at Katie.Carpenter@waterboards.ca.gov.

Original Signed by Clay L. Rodgers for:
Patrick Pulupa
Executive Officer

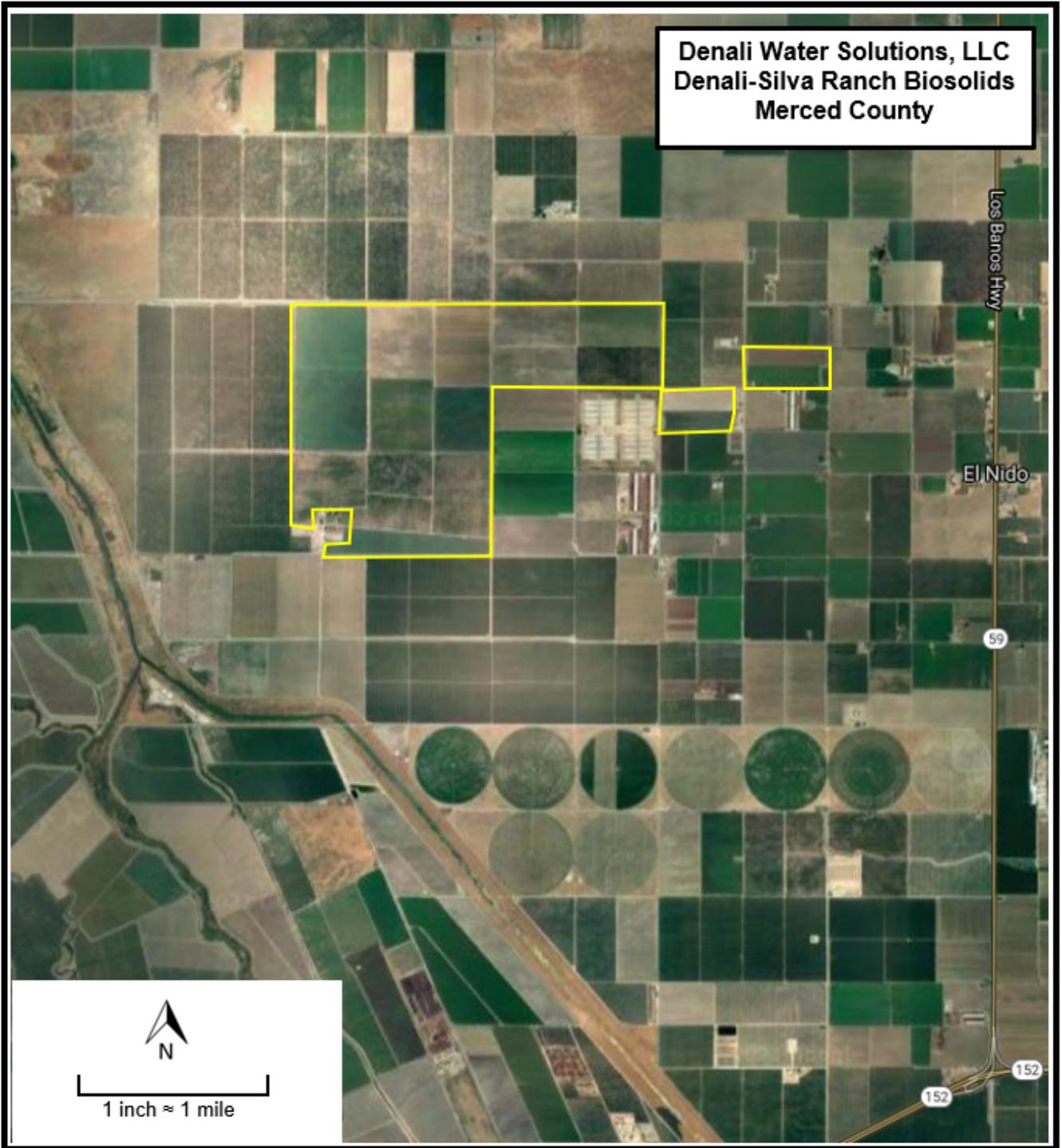
Attachments:

- Attachment A – Site Location Map
- Attachment B – Biosolids Application Area Map
- 13 September 2021 Central Valley Water Board Staff Memorandum
- State Water Resources Control Board Order WQ 2004-0012-DWQ

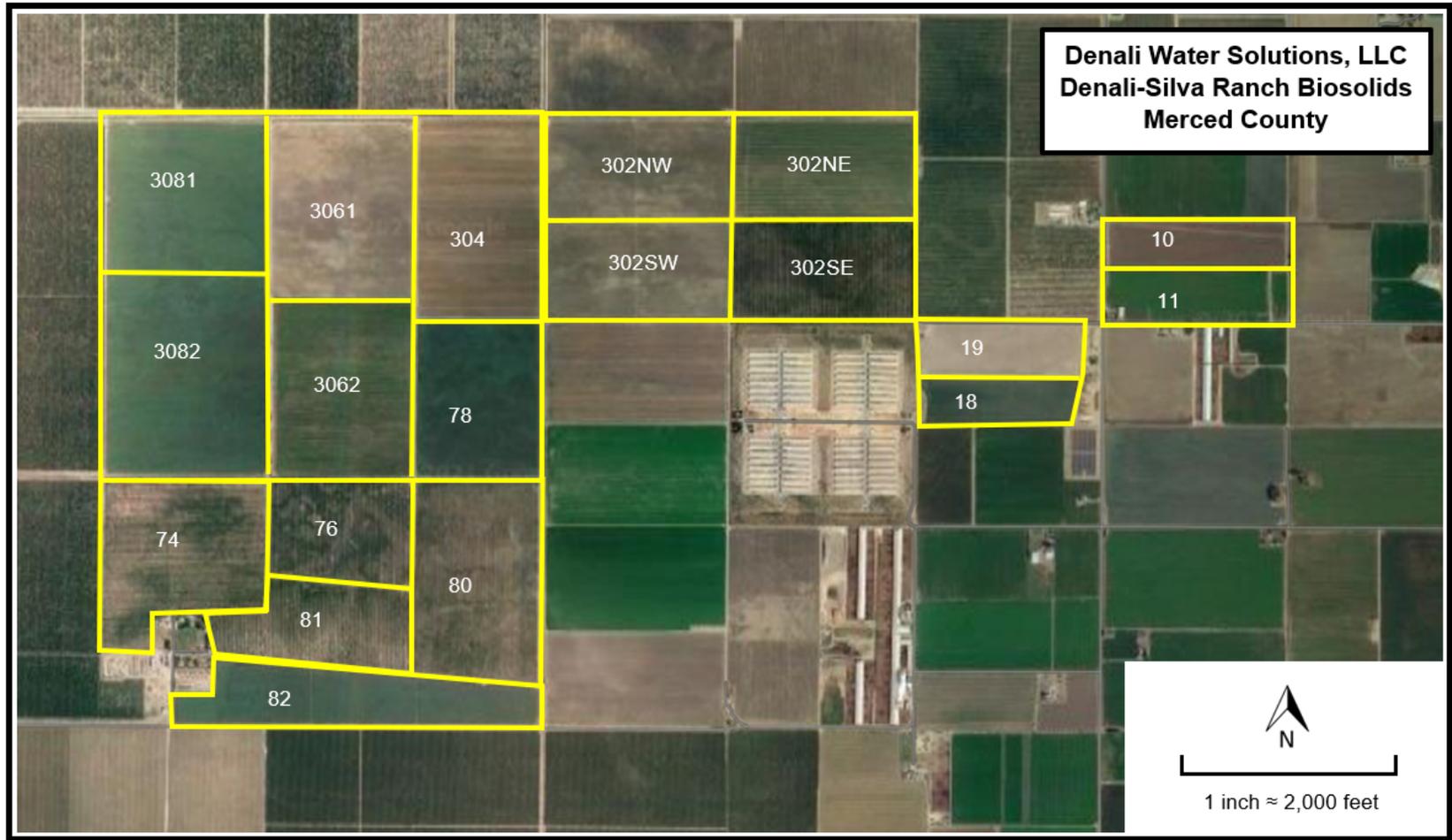
cc: (see Next Page)

cc (w/ attachments):

- David Lancaster, State Water Resources Control Board, OCC, Sacramento (via email)
- Laurel Warddrip, State Water Resources Control Board, DWQ, Sacramento (via email)
- Russell Walls, Central Valley Water Board, Enforcement and Compliance, Fresno (via email)
- Adam Forbes, Division of Drinking Water, Fresno (via email)
- Esther Canal, Merced County Environmental Health, Merced (via email)
- Chris Marks, Denali Water Solutions, LLC, San Rafael (via email)



ATTACHMENT A – SITE LOCATION MAP
NOTICE OF APPLICABILITY 2004-0012-DWQ-0030
FOR
DENALI WATER SOLUTIONS, LLC AND EDWARD AND NANCY SILVA
DENALI-SILVA RANCH (FAGUNDES RANCH) BIOSOLIDS APPLICATION SITE
MERCED COUNTY



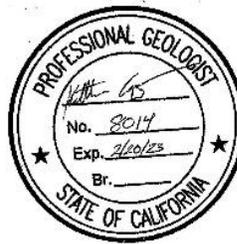
ATTACHMENT B – BIOSOLIDS APPLICATION AREA MAP
 NOTICE OF APPLICABILITY 2004-0012-DWQ-0030
 FOR
 DENALI WATER SOLUTIONS, LLC AND EDWARD AND NANCY SILVA
 DENALI-SILVA RANCH (FAGUNDES RANCH) BIOSOLIDS APPLICATION SITE
 MERCED COUNTY

Central Valley Regional Water Quality Control Board

TO: Scott J. Hatton
Supervising Water Resource Control Engineer

FROM: Alexander S. Mushegan
Senior Water Resource Control Engineer
RCE 84208

Kathleen Carpenter
Engineering Geologist
PG 8014



DATE: 13 September 2021

APPLICABILITY OF COVERAGE; STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2004-0012-DWQ; 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; DENALI WATER SOLUTIONS, LLC AND EDWARD AND NANCY SILVA; DENALI-SILVA RANCH (FAGUNDES RANCH) BIOSOLIDS APPLICATION SITE; MERCED COUNTY

BACKGROUND INFORMATION

On 1 February 2021, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Notice of Intent (NOI) with an application fee from Denali Water Solutions, LLC for coverage under State Water Resources Control Board's Water Quality Order 2004-0012-DWQ, *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) for application of Class B biosolids on land owned by Edward and Nancy Silva in Merced County (Denali-Silva Ranch also known as the Fagundes Ranch). Additional information to support the NOI, including a pre-application report, were provided on 25 February, 20 July, and 6 August 2021.

This memorandum provides a summary of Central Valley Water Board staff's review of the submittal and the applicability of the discharge to be covered under the General Order.

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PROJECT DESCRIPTION

The biosolids application area was previously regulated by Merced County Department of Public Health (Merced County) under their biosolids application program. In addition, a portion of the biosolids application area was also regulated under the General Order (NOA 2004-0012-DWQ-0025) for Jim Brisco Enterprises, Inc. Coverage under NOA 2004-0012-DWQ-0025 was terminated on 26 July 2021.

According to the NOI, the Discharger will receive Class "B" biosolids from various generators within California, these can vary from year to year but typically include the following:

- East Bay Municipal Utility District
- City of Santa Cruz
- City of San Mateo
- Deer Creek WWTP
- City of Watsonville
- City of Livermore WWTP
- El Dorado Hills WWTP

The proposed project includes the application of biosolids on up to 1,487 acres of farmland in western Merced County as shown in **Attachment A** of the Notice of Applicability (NOA). The fields will be used to grow forage crops including alfalfa, corn silage, sudan grass, and wheat. The biosolids application area consists of 19 fields as shown in **Attachment B** of the NOA. According to the Discharger, biosolids applications will comply with all applicable setbacks listed in the General Order or the Merced County biosolids ordinance, whichever is more stringent.

The biosolids application area is relatively flat with slopes less than three percent. Depth to groundwater in the area ranges from about 60 to 80 feet below ground surface (bgs) in Spring 2014 based on available groundwater data for nearby wells from the [California Department of Water Resources \(DWR\) SGMA Interactive Groundwater Map](https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels) (<https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels>). Therefore, no erosion control plan or groundwater monitoring are required (per the General Order).

According to the Land Productivity Assessment, prepared by David Coyle, a certified professional soil scientist (#330995), soils within the biosolid application areas are healthy and suitable for biosolids application. The biosolids application areas are situated in rural area with limited access and will have signs posted at all access points to prevent public access. Therefore, the biosolid application area meets the site restrictions for Class B biosolids in section 503.32(b)(5), 40 CFR.

BIOSOLIDS TREATMENT AND SAMPLING

The Discharger proposes to apply between 5 and 20 dry tons of biosolids per acre per year on up to 1,487 acres of land owned by Edward and Nancy Silva. Denali Water Solutions, LLC and the Silvas are collectively and jointly referred to as “Discharger”.

The submitted data characterizes biosolids from various generators within California. The average metal concentration of the various generators is summarized in Table 1 and compared to the 40 Code of Federal Regulations (CFR), Part 503 requirements for the application of biosolids to land.

Table 1. Biosolids Metal Concentrations

Constituent/ Parameter	Units	Average	Ceiling Concentration Limits	Pollutant Concentration Limits for Exceptional Quality Biosolids
Arsenic	mg/kg	5.5	75	41
Cadmium	mg/kg	1.3	85	39
Copper	mg/kg	406	4,300	1,500
Lead	mg/kg	15.9	840	300
Mercury	mg/kg	0.8	57	17
Molybdenum	mg/kg	9.5	75	--
Nickel	mg/kg	23.9	420	420
Selenium	mg/kg	6.6	100	100
Zinc	mg/kg	1,065	7,500	2,800

As shown in Table 1, the average concentration of metals in the biosolids generated by the various municipal generators are below the Ceiling Concentrations Limits (Table 1, section 503.13 CFR) and the Pollutant Concentration Limits for Exceptional Quality (EQ) Biosolids (Table 3, section 503.13 CFR).

According to the pre-application report biosolids applied to the site will meet Pathogen Reduction Requirements for Class B biosolids under 40 CFR Part 503. In addition, biosolids generated by the various generators will meet the Vector Attraction Reduction Requirements in accordance with the Volatile Solids Reduction standards under Option 1 of section 503.33(b)(1).

SALT AND NITRATE CONTROL PROGRAMS

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These Basin Plan amendments were approved by the State Water Resources Control Board and the Office of Administrative Law and became effective on 17 January 2020.

For the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will need to meet performance-based requirements and participate in a basin-wide planning effort known as the Prioritization and Optimization Study (or P&O Study) to develop a long-term salinity strategy for the Central Valley. On 6 August 2021, the Discharger (CV-SALTS ID 3592) submitted a Notice of Intent and proof that it had submitted the payment invoice to join the P&O Study.

For the Nitrate Control Program, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternative compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers may comply with the Nitrate Control Program either individually (Pathway A) or collectively as part of a Management Zone Group (Pathway B). The Denali-Silva Ranch Biosolids Application falls within Groundwater Sub-Basin 5-022.04 (San Joaquin Valley – Merced Basin), a Priority 2 basin. As a new Discharger, Denali Water Services, LLC submitted a Notice of Intent selecting Pathway B on 6 August 2021. Therefore, Denali Water Services, LLC will join a Management Zone Group once one is formed for the San Joaquin Valley – Merced Basin.

COMMENTS

Based on the information presented in the NOI, pre-application report, and supplemental information, the discharge of biosolids to land owned by Edward and Nancy Silva in Merced County is consistent with the requirements of 40 CFR, Part 503 for the use of Class B biosolids.