

# CARMEL AREA WASTEWATER DISTRICT

## Annual Biosolids Monitoring Report

Period: January 2023 - March 2023  
 Sample Date: 27-Jan-23

Name POLLUTANTS	Concentration (mg/kg) Dry Weight unless indicated	EPA 503 pollution limits for land application	
		Pollutant Concentrations (40 CFR 503.13) (monthly avg.)	Ceiling Concentrations (40 CFR 503.13) (daily maximum)
Antimony	ND		
Arsenic	17.2	41 mg/Kg	75 mg/Kg
Barium	374.0		
Beryllium	3.6		
Boron	49.5		
Cadmium	0.961	39 mg/Kg	85 mg/Kg
Chromium	28.2		
Cobalt	0.862		
Copper	756.0	1500 mg/Kg	4300 mg/kg
Lead	35.2	300 mg/Kg	840 mg/kg
Molybdenum	26.4		75 mg/kg
Nickel	20.2	420 Mg/Kg	420 mg/Kg
Phosphorus	36,800		
Selenium	8.9	100 mg/Kg	100 mg/Kg
Silver	ND		
Thallium	ND		
Vanadium	20.2		
Zinc	1320.0	2800 mg/Kg	7500 mg/Kg
Ammonia Nitrogen	4500		
Cyanide, Total	<1		
Nitrate Nitrogen	ND		
Nitrogen, Total Kjeldahl	42,000		
pH	6.86		
% Solids	28.8%		
Mercury	0.2	17 mg/Kg	57 mg/Kg
Grease/Oil	1010		
Hex Chromium	ND		

### Pathogen Reduction (40 CFR 503.32)

Class B - (PSRP) Anaerobic Digestion at 95 F for minimum of 15 days

### Vector Attraction Reduction (40 CFR 503.33)

Option 1 - VS reduced by a minimum of 38%

### Certification

*I certify, under penalty of law, that the Class B pathogen requirements in 503.32 and the vector attraction reduction requirement in 503.33 using option (1) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including fine and imprisonment".*

Name & Title: Edward Waggoner - Operations Superintendent

Signature: 

Telephone Number: (831) 624-1249

Date: 1-26-2024

**CARMEL AREA WASTEWATER DISTRICT**  
Annual Biosolids Monitoring Report

Period: April 2023-June 20223  
Sample Date: 18-Apr-23

Name POLLUTANTS	Concentration (mg/kg) Dry Weight unless indicated	EPA 503 pollution limits for land application	
		Pollutant Concentrations (40 CFR 503.13) (monthly avg.)	Ceiling Concentrations (40 CFR 503.13) (daily maximum)
Antimony	ND		
Arsenic	ND	41 mg/Kg	75 mg/Kg
Barium	303.0		
Beryllium	ND		
Boron	39.2		
Cadmium	3.2	39 mg/Kg	85 mg/Kg
Chromium	30.8		
Cobalt	1.3		
Copper	686.0	1500 mg/Kg	4300 mg/kg
Lead	41.3	300 mg/Kg	840 mg/kg
Molybdenum	22.2		75 mg\kg
Nickel	30.4	420 Mg/Kg	420 mg/Kg
Phosphorus	23,400		
Selenium	12.1	100 mg/Kg	100 mg/Kg
Silver	ND		
Thallium	ND		
Vanadium	20.0		
Zinc	1080.0	2800 mg/Kg	7500 mg/Kg
Ammonia Nitrogen	5630		
Cyanide, Total	ND		
Nitrate Nitrogen	ND		
Nitrogen, Total Kjeldahl	38,200		
pH	7.75		
% Solids	23.0%		
Mercury	0.2	17 mg/Kg	57 mg/Kg
Grease/Oil	ND		
Hex Chromium	ND		

**Pathogen Reduction (40 CFR 503.32)**

Class B - (PSRP) Anaerobic Digestion at 95 F for minimum of 15 days

**Vector Attraction Reduction (40 CFR 503.33)**

Option 1 - VS reduced by a minimum of 38%

**Certification**

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Name & Title: Edward Waggoner - Operations Superintendent

Signature: Edward Waggoner  
Telephone Number: (831) 624-1249  
Date: 1-26-2024

# CARMEL AREA WASTEWATER DISTRICT

## Annual Biosolids Monitoring Report

Period: July 2023 - September 2023  
 Sample Date: 11-Jul-23

Name POLLUTANTS	Concentration (mg/kg) Dry Weight unless indicated	EPA 503 pollution limits for land application	
		Pollutant Concentrations (40 CFR 503.13) (monthly avg.)	Ceiling Concentrations (40 CFR 503.13) (daily maximum)
Antimony	ND		
Arsenic	ND	41 mg/Kg	75 mg/Kg
Barium	68.1		
Beryllium	0.6		
Boron	12.9		
Cadmium	0.5	39 mg/Kg	85 mg/Kg
Chromium	5.0		
Cobalt	ND		
Copper	195.0	1500 mg/Kg	4300 mg/kg
Lead	8.2	300 mg/Kg	840 mg/kg
Molybdenum	5.7		75 mg\kg
Nickel	5.9	420 Mg/Kg	420 mg/Kg
Phosphorus	10,000		
Selenium	2.1	100 mg/Kg	100 mg/Kg
Silver	ND		
Thallium	ND		
Vanadium	1.9		
Zinc	325.0	2800 mg/Kg	7500 mg/Kg
Ammonia Nitrogen	5510		
Cyanide, Total	0.11		
Nitrate Nitrogen	ND		
Nitrogen, Total Kjeldahl	2,870		
pH	6.7		
% Solids	23.8%		
Mercury	0.2	17 mg/Kg	57 mg/Kg
Grease/Oil	560		
Hex Chromium	ND		

### Pathogen Reduction (40 CFR 503.32)

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### Vector Attraction Reduction (40 CFR 503.33)

Option 1 - VS reduced by a minimum of 38%

### Certification

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Signature: 

Telephone Number: (831) 624-1249

Date: 1-26-2024

# CARMEL AREA WASTEWATER DISTRICT

## Annual Biosolids Monitoring Report

Period: October 2023 - December 2023  
 Sample Date: 10-Oct-23

Name POLLUTANTS	Concentration (mg/kg) Dry Weight unless indicated	EPA 503 pollution limits for land application	
		Pollutant Concentrations (40 CFR 503.13) (monthly avg.)	Ceiling Concentrations (40 CFR 503.13) (daily maximum)
Antimony	ND		
Arsenic	ND	41 mg/Kg	75 mg/Kg
Barium	57.7		
Beryllium	0.5		
Boron	8.8		
Cadmium	0.4	39 mg/Kg	85 mg/Kg
Chromium	2.1		
Cobalt	ND		
Copper	135.0	1500 mg/Kg	4300 mg/kg
Lead	3.9	300 mg/Kg	840 mg/kg
Molybdenum	5.6		75 mg/kg
Nickel	2.8	420 Mg/Kg	420 mg/Kg
Phosphorus	6,920		
Selenium	ND	100 mg/Kg	100 mg/Kg
Silver	14.1		
Thallium	ND		
Vanadium	1.3		
Zinc	302.0	2800 mg/Kg	7500 mg/Kg
Ammonia Nitrogen	1150		
Cyanide, Total	ND		
Nitrate Nitrogen	ND		
Nitrogen, Total Kjeldahl	10,600		
pH	6.89		
% Solids	20.0%		
Mercury	0.9	17 mg/Kg	57 mg/Kg
Grease/Oil	600		
Hex Chromium	ND		

**Pathogen Reduction (40 CFR 503.32)**

Class B - (PSRP) Anaerobic Digestion at 95 F for minimum of 15 days

**Vector Attraction Reduction (40 CFR 503.33)**

Option 1 - VS reduced by a minimum of 38%

**Certification**

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Name & Title: Edward Waggoner - Operations Superintendent

Signature: 

Telephone Number: (831) 624-1249

Date: 1-26-2024