



# Florida Department of Environmental Protection

Division of Water Resource Management

## Biosolids Application Site Annual Summary

### Part I – Application Site Information

SITE NAME:		SITE ID:	
MAILING ADDRESS:		MONITORING PERIOD -- From: JAN 1 to DEC 31,	
EMAIL (optional):			
SITE PERMITTEE:			
SITE MANAGER:			
SITE OWNER(S):			
Total acres approved for land application		acres	
Total acres applied during reporting period		acres	
Total quantity of biosolids applied during reporting period:		dry tons	
Total quantity of Total Nitrogen (TN) applied		lbs	
Total quantity of Total Phosphorus (TP) applied		lbs	

### Documentation Checklist

Yes N/A

- Attach copies of any revisions made to the Nutrient Management Plan (NMP). [62-640.650(5)(d), F.A.C.]
- Attach the results of ground water monitoring, if applicable. [62-640.650(3)(c), F.A.C.]
- Attach example calculations for the nutrient and cumulative loadings to an application zones. [62-640.650(5)(d), F.A.C.]
- Attach copies of records, as applicable, demonstrating compliance with the demonstration submitted with the NMP for sites located within the Lake Okeechobee, St. Lucie River, or Caloosahatchee River watersheds in accordance with subsection 62-640.500(8), F.A.C. [62-640.650(5)(d), F.A.C.]

### Comments


### Certification

I certify:

- Copies of this report will be sent to the facilities whose biosolids were applied at this biosolids application site;
- The management and application of biosolids at the site during the reporting period were consistent with the NMP; and
- Annual soil pH testing has been conducted and the results documented in the site records.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted 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.

NAME OF SITE PERMITTEE OR AUTHORIZED AGENT (Type or Print)	TELEPHONE NO.
SIGNATURE OF SITE PERMITTEE OR AUTHORIZED AGENT	DATE (MM/DD/YY)

Part II. Hauling Records – Summary for the Reporting Period

Facility ID	Facility Name	Quantity of Biosolids Received (Dry Tons)	Comments

**Part III. Nutrient Management - Application Zone Summary**

Complete a separate sheet for each application zone, and use additional sheets for each zone if necessary.

<b>Application Zone ID</b>		<b>Application Zone Acres</b>	
<b>Crop(s) Grown</b>			
<input type="checkbox"/> Yes <input type="checkbox"/> No	The management, harvesting, and resulting crop yield on this zone was consistent with the NMP.		
<input type="checkbox"/> Yes <input type="checkbox"/> No	The application of all sources of nutrients on this zone has been consistent with the NMP and total nutrient loadings did not exceed the loadings set by the NMP for this zone.		

Allowed Biosolids Nutrient Loading Information for this Zone for the Reporting Period (from the NMP)				
Basis for Application Zone Nutrient Budget (check one)	Maximum Allowed Plant Available Nitrogen (PAN) from Biosolids (lbs/acre)	Maximum Allowed P <sub>2</sub> O <sub>5</sub> from Biosolids (lbs/acre)	Maximum Allowed TN from Biosolids (lbs/acre)	Maximum Allowed TP from Biosolids (lbs/acre)
<input type="checkbox"/> Nitrogen (N) or <input type="checkbox"/> Phosphorus (P)				

Summary of Annual Facility Loadings to the Application Zone For the Reporting Period						
Facility ID(s)	Dry Tons of Biosolids Applied	Dry Tons of Biosolids Applied Per Acre	Plant Available Nitrogen (PAN) from Biosolids (lbs/acre)	P <sub>2</sub> O <sub>5</sub> from Biosolids (lbs/acre)	TN from Biosolids (lbs/acre)	TP from Biosolids (lbs/acre)
<b>TOTALS</b>						

Comments:

Part IV. Cumulative Loadings and Annual Soil pH – Summary of Application Zones (attach additional sheets as needed)

Application Zone ID(s)	As (lbs/acre)	Cd (lbs/acre)	Cu (lbs/acre)	Pb (lbs/acre)	Hg (lbs/acre)	Mo (lbs/acre)	Ni (lbs/acre)	Se (lbs/acre)	Zn (lbs/acre)	Annual Soil pH (std. units)

(Application zone IDs shall match the zone IDs given in the site registration and site Nutrient Management Plan.)

Comments:

## INSTRUCTIONS FOR BIOSOLIDS APPLICATION SITE ANNUAL SUMMARY FORM

This form shall be completed for each permitted biosolids application site in accordance with Chapter 62-640, Florida Administrative Code, (F.A.C.). The site permittee, by no later than February 19 of the year following the reporting period, shall submit the original completed form to the appropriate Department District Office or delegated local program. Use additional sheets if necessary. All information shall be typed or printed in ink.

### Part I – Application Site Information

**Site Name/Mailing Address:** Enter the site name and mailing address as given in the permit application for the biosolids application site.

**Site ID:** Enter the identification number of the application site found on the site permit.

**Monitoring Period:** Enter the year of the reporting period. A new permitted application site shall report all information from the start of operation through December 31 of its first year.

**Site Permittee:** Enter the name of the site permittee.

**Site Manager:** Enter the name of the site manager.

**Site Owner(s):** Enter the name(s) of the site owner(s).

**Total acres approved for land application:** Enter the total acreage approved for biosolids land application at the application site.

**Total acres applied during reporting period:** Enter the total acreage where biosolids were actually applied during the reporting period.

**Total quantity of biosolids applied during reporting period:** Enter the total quantity of biosolids applied to the entire application site during the reporting period. Enter the quantity in dry tons (1 ton = 2000 lb).

**Total quantity of Total Nitrogen (TN) applied:** Enter the total quantity of Total Nitrogen (TN) applied during the reporting period. Enter the quantity in pounds (lbs)

**Total quantity of Total Phosphorus (TP) applied:** Enter the total quantity of Total Phosphorus (TP) applied during the reporting period. Enter the quantity in pounds (lbs)

**Documentation Checklist:** Check "Yes" or "N/A" as applicable. N/A means "not applicable." The example calculations will always be applicable unless no biosolids were applied during the reporting period.

**Comments:** Enter any comments deemed appropriate to provide any relevant information to DEP.

**Certification:** Check each box to verify each item certified. Type or print the name and title of the signing official. Include the telephone number where the official may be reached and the date the report is signed. This report must be signed in accordance with Chapter 62-640, F.A.C.

**Part II – Hauling Records Summary for Reporting Period:** Enter the total quantity of biosolids (in dry tons) received from each facility during the reporting period. Enter any comments deemed appropriate to provide any relevant information to DEP.

**Part III – Nutrient Management - Application Zone Summary:** Complete a separate sheet for each application zone at the application site, and use additional sheets for each zone if necessary.

**Application Zone ID :** Enter the application zone identification number as it appears on the site permit application and in the Nutrient Management Plan.

**Application Zone Acres:** Enter the approved acreage for the application zone.

**Crop(s) Grown:** Enter the crop(s) grown on the application zone during the reporting period.

**NMP Consistency:** Check "yes" or "no" for the two questions on consistency with the site NMP. Any "no" answers should be explained in the comments section at the bottom of the form or on attached sheets.

**Allowed Biosolids Nutrient Loading Information for this Zone for the Reporting Period (from the NMP):** Enter the requested information given in the NMP that applies to the reporting period year.

**Basis for Application Zone Nutrient Budget (Check One):** Check the appropriate box to indicate whether the nutrient budget for the zone was established on a nitrogen or phosphorus basis.

**Maximum Allowed Plant Available Nitrogen (PAN) from Biosolids (lbs/acre):** Enter the maximum amount of plant available nitrogen (PAN) allowed to be applied by biosolids to the zone (this is the remaining amount of the crop recommended nitrogen demand after other sources of nitrogen, including any mineralization of nitrogen from prior years of biosolids application, are taken into account).

**Maximum Allowed P<sub>2</sub>O<sub>5</sub> from Biosolids:** Enter the maximum amount of P<sub>2</sub>O<sub>5</sub> allowed to be applied by biosolids to the zone (this is the remaining amount of the crop recommended P<sub>2</sub>O<sub>5</sub> demand after other sources of P<sub>2</sub>O<sub>5</sub> are taken into account).

**Maximum Allowed TN from Biosolids (lbs/acre):** Enter the maximum amount of total nitrogen (TN) allowed to be applied to the application zone from biosolids applications during the reporting year in accordance with the application site Nutrient Management Plan (this is biosolids allowed PAN adjusted for the availability of nitrogen in the biosolids and should have been addressed in the NMP).

**Maximum Allowed TP from Biosolids (lbs/acre):** If the zone has a phosphorus-based nutrient budget, enter the maximum amount of total phosphorus (TP) allowed to be applied to the application zone from biosolids in accordance with the application site Nutrient Management Plan (this is the biosolids allowed P<sub>2</sub>O<sub>5</sub> amount divided by 2.3).

**Facility ID(s):** Enter the facility ID of each facility whose biosolids were applied to the application zone during the reporting period.

**Dry Tons of Biosolids Applied:** Enter the total dry tons applied to the application zone from each facility in dry tons.

**Dry Tons of Biosolids Applied per Acre:** Calculate the resulting dry tons applied per acre from each facility to the zone and enter that result.

**Plant Available Nitrogen (PAN) from Biosolids (lbs/acre):** Calculate and enter the total amount of PAN (in pounds per acre) applied to the zone from each facility.

**P<sub>2</sub>O<sub>5</sub> from Biosolids:** Calculate and enter the total amount of P<sub>2</sub>O<sub>5</sub> (in pounds per acre) applied to the zone from each facility.

**TN from Biosolids (lbs/acre)** Calculate and enter the amount of TN (in pounds per acre) applied to the zone from each facility.

**TP from Biosolids (lbs/acre)** Calculate and enter the amount of TP (in pounds per acre) applied to the zone from each facility.

**TOTALS:** Calculate and enter the sum of each column to determine the total of each loading category to the application zone.

**Comments:** Enter any comments deemed appropriate to provide any relevant information to DEP.

**Part IV – Cumulative Loadings and Annual Soil pH – Summary of Application Zones:** Enter each application zone ID and for each zone calculate and enter the applicable lifetime cumulative loadings of metals resulting from biosolids application starting from the time of first use of the land through the end of the reporting period in accordance with subsection 62-640.700(7), F.A.C. The units shall be pounds per acre (lbs/acre). Enter the results of the annual soil pH testing for each application zone in standard units.

**Basic Formulas for Calculations**

A. Dry tons = Wet tons x Percent Solids (decimal) Example: 40 wet tons of biosolids x 0.15 total solids = 6 dry tons of biosolids
B. Dry tons = gallons of biosolids x 8.34 lb/gallon x ton/2000 lb x Percent Solids (decimal) Example: 6,000 gallons of biosolids x 8.34 lb/gal x ton/2000 lb x 0.04 total solids = 1 dry ton of biosolids
C. Dry tons = cubic yards (wet) of biosolids x Y lb/cubic yard x ton/2000 lb x Percent Solids (Y = site-specific bulk density of biosolids) Example: 20 cubic yards of biosolids at 15% total solids and 1800 lb/cubic yard; Dry tons = 20 cu yds x 1800 lb/cu yds x ton/2000 lb x 0.15 total solids; Dry tons = 2.7 dry tons of biosolids
D. Dry tons per acre = Dry tons applied/number of acres Example: 20 dry tons spread over 5 acres; 20 dry tons/5 acres = 4 dry tons/acre
E. Pounds of nutrient per acre = Dry tons of biosolids applied per acre x 2000 lb/ton x Percent of nutrient concentration (decimal); Example: 4 dry tons of biosolids containing 5% nitrogen on a dry weight basis; 4 dry tons/acre x 2000 lb/ton x 0.05 nitrogen = 400 lbs/acre of nitrogen applied
F. Pounds of metal per acre = Dry tons of biosolids applied per acre x metal concentration in mg/kg x 0.002 Example: 4 dry tons of biosolids x 6 mg/kg As dry weight x 0.002 = 0.0480 lbs As/acre
G. PAN calculations can be found in Chapter 7 of the U.S. Environmental Protection Agency Design Manual for Land Application of Sewage Sludge and Domestic Septage, EPA/625/R-95/001. Default PAN calculations may use PAN x 1.5 = TN
H. $P_2O_5/2.3 = TP$ ; $TP x 2.3 = P_2O_5$