pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southcentral Regional Office**
**CLEAN WATER PROGRAM**

# NPDES/WQM PERMITS FACT SHEET INDIVIDUAL SFTF

| | | | |
|---|---|---|---|
| Application Type | **New** | Application No. | **PA0267015 2119403** |
| Wastewater Type | **Sewage** | APS ID | **1002563** |
| Facility Type | **SFTF** | Authorization ID | **1331670 (NPDES) 1297894 (WQM)** |

## Applicant, Facility and Project Information

| | | | |
|---|---|---|---|
| Applicant Name | **Dogwood Acres Campground Inc.** | Facility Name | **Dogwood Acres Campground** |
| Applicant Address | 4500 Enola Road | Facility Address | 4500 Enola Road |
| | Newville, PA 17241 | | Newville, PA 17241 |
| Applicant Contact | Charles Strub | Facility Contact | Charles Strub |
| Applicant Phone | (717) 776-5203 | Facility Phone | (717) 776-5203 |
| Client ID | 63871 | Site ID | 443082 |
| SIC Code | 7033 | Municipality | Upper Frankford Township |
| SIC Description | Services - Trailer Parks And Campsites | County | Cumberland |
| Date Application Received | October 21, 2020 | WQM Required | Yes |
| Date Application Accepted | November 3, 2020 | WQM App. No. | 2119403 |
| Project Description | New NPDES and WQM Permits. | | |

## Summary of Review

Dogwood Acres Campground Inc. (Dogwood) has applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of NPDES and WQM permits for a new sanitary wastewater treatment plant expected to serve an existing campground located in Upper Frankford Township, Cumberland County.

Dogwood initially submitted a minor sewage NPDES permit application. Given the expected influent volume and discussions with DEP, Dogwood modified the submission to a Small Flow Treatment Facility (SFTF) NPDES permit application and re-designed the proposed treatment plant that can accommodate flows up to 0.002 MGD. As DEP received both NPDES and WQM permit applications, DEP has decided to review these applications simultaneously.

Based on the review, it is recommended that the NPDES permit be drafted. The WQM permit will be issued in conjunction with a final NPDES permit.

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | *Jinsu Kim*<br>Jinsu Kim / Environmental Engineering Specialist | January 26, 2019 |
| | | Daniel W. Martin, P.E. / Environmental Engineer Manager | |
| | | Maria D. Bebenek, P.E. / Program Manager | |

I. Background Information

Dogwood owns and operates an existing 30-acre campground located at 4500 Enola Road, Newville, PA 17241. This campground currently consists of a bathhouse, campground store, swimming pool and 106 total sites including 98 camp sites, 4 cabins and 4 tent sites. No future development is expected. The currently sewage disposal system includes a sewer collection system, pump station, septic tanks, and sand mound. The existing sand mound according to the Design Engineer's Report dated October 2020 is not sized to handle the current peak flows at the campground and soils suitable for on-lot disposal system are not present on the property. The report also indicates that Dogwood utilizes a holding tank and waste hauler service for high volume events. Due to the distance to the nearest local municipal wastewater treatment plant, Dogwood has decided to install a treatment plant for a stream discharge. DEP approved an Act 537 Planning revision on October 30, 2017 (A3-21930-111-3).

II. Proposed Treatment System Information

Given the nature of business, the flow is expected to fluctuate seasonally. The October 2020 Design Engineer's Report indicated that the average daily flow of 1,041 GPD with a maximum average flow of 1,167 GPD and peak daily flow of 3,360 GPD has been observed. No future development is considered at this time. Based on the discussions with DEP and further analysis, Dogwood reported 1,643 GPD as the annual average design flow with the hydraulic design capacity of 2,000 GPD and the peak instantaneous flow of 4,280 GPD in the WQM permit application. The following system has been proposed for a new sanitary wastewater treatment works:

a) Sewer Collection System

The existing collection system will remain unchanged.

b) Pump Station

The existing pump station will be abandoned and replaced with a new 8 ft.- diameter pump station with duplex submersible pumps rated for 45 GPM at a TDH of 20 ft. Based on the calculations, a new pump station will have a detention time of 4.9 hours with an effective volume of 410 gallons.

c) Biological Treatment

From the pump station, influent will be pumped to a 4,750-gallon septic tank (PST-2000) for initial solids removal and CBOD treatment. The tank will have a minimum hydraulic retention time of 48 hours. A solid filter, Polylok PL-525 filter, will be installed at the end of this tank for additional solids removal. From this septic tank, wastewater will be directed via gravity flow into a 4,850-gallon equalization tank (PSA-2000). In this tank, two (2) submersible pumps will be installed to pump wastewater into a new 1,500-gallon moving bed biofilm reactor (MBBR-660) for biological treatment. These two (2) pumps will be operating alternately. In the MBBR, coarse bubble diffusors will be installed to provide air at a rate of 2,175 lbs of O2 per day for aeration. A blower designed for 87 scfm will be located inside the mechanical shelter. Followed by the MBBR treatment process, wastewater will then enter via gravity the secondary clarifier (DEC-660) for solids treatment. Any sludge generated from this clarifier will be directed back to the septic tank.

d) Tertiary Treatment

Partially-treated wastewater from the clarifier will be sent via gravity to a flow divider which will divert the flow into two (2) separate Ecoflo Coco Filters (EC7-1200-C-PG) for additional solids removal. Two (2) filters are required to accommodate the maximum flow of 2,000 GPD.

e) Disinfection

Dogwood proposed an UV disinfection unit for disinfection. From the new Coco Filter, flow will be pumped to a new UV disinfection system (UV Pure Hallett-13). A minimum dose of 30 mJ/cm2 is expected to be applied. The system capacity is 9,360 GPD. This unit is self-cleaning and will contain a remote alarm system.

f) Outfall

From the disinfection unit, effluent will be discharged into an unnamed tributary of Conodoguinet Creek through a precast concrete outfall structure via 4-inch PVC. The outfall will be located at 40º 14' 10.74", 77º 23' 42.68".

g) Other Considerations

A control panel will be installed for alarm systems. A portable/standby generator will be installed in the event of power failure in the pump station as well as other treatment units.

III. Discharge, Receiving Water and Water Supply Information

| Discharge, Receiving Waters and Water Supply Information | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | .001643 |
| Latitude | 40º 14' 10.74" | Longitude | -77º 23' 42.68"" |
| Quad Name | Carlisle | Quad Code | 1728 |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | Unnamed Tributary to Conodoguinet Creek (WWF, MF) | Stream Code | 10364 |
| NHD Com ID | 56406543 | RMI | 0.07 |
| Drainage Area | 0.4 | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | 0.00301 | $Q_{7-10}$ Basis | USGS StreamStats |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 07B | Chapter 93 Class. | WWF, MF |
| Existing Use | WWF, MF | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Attaining Use(s) | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | | Name | |
| Nearest Downstream Public Water Supply Intake | Carlisle Borough | | |
| PWS Waters | Conodoguinet Creek | Flow at Intake (cfs) | 48 |
| PWS RMI | 35.95 | Distance from Outfall (mi) | |

Drainage Area
The discharge will be to Unnamed Tributary (10364) of Conodoguinet Creek at RMI 0.07. USGS StreamStats available at https://streamstats.usgs.gov/ss/ estimated a drainage area of 0.4 sq.mi.

Streamflow
USGS StreamStats generated a Q7-10 flow of 0.00301 cfs at the point of discharge.

Conodoguinet Creek
Under 25 PA Code § 93.9o, all unnamed tributaries of Conodoguinet Creek are designated as warm water fishes and support migratory fishes. No special protection water will therefore be impacted by the proposed discharge. No Class A Wild Trout Fishery will be impacted by the proposed discharge. The proposed discharge will be located in a stream segment listed as attaining uses.

Public Water Supply Intake
The nearest downstream water supply intake is Carlisle Borough on the Conodoguinet Creek. Given the distance, the discharge is not expected to significantly impact the water supply.

IV. WQM Permit Recommendation
DEP determined that the WQM permit with standard sewage conditions is required for the proposed treatment system. No special condition will be needed for this project.

V. NPDES Permit Recommendation

According to Dogwood, flow is expected to be about 1,600 GPD with the maximum flow of 2,000 GPD. Based on this, DEP determined that the proposed discharge is subject to an NPDES permit for a small flow treatment facility and requires Dogwood to comply with the effluent limitations and monitoring requirements specified on page 5 of this fact sheet. These requirements are derived from DEP's Standard Operating Procedure (SOP) for New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications (SOP No. BPNPSM-PMT-003). Facilities that are designed based on a flow of less than 2,000 GPD or considered as SRSTPs are exempt from the Bay requirements. Accordingly, it is not necessary for the permittee to perform nutrient monitoring.

VI. Other Considerations

Since this is a new permittee, no compliance history is available.

## Proposed Effluent Limitations and Monitoring Requirements

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) [1] | | Concentrations (mg/L) | | | | Minimum [2] Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Annual Average | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | XXX | XXX | XXX | XXX | XXX | 1/month | Measured |
| BOD5 | XXX | XXX | XXX | 10.0 | XXX | 20 | 1/month | Grab |
| TSS | XXX | XXX | XXX | 10.0 | XXX | 20 | 1/month | Grab |
| Fecal Coliform (No./100 ml) | XXX | XXX | XXX | 200 | XXX | XXX | 1/month | Grab |