

Application Type Renewal  
Wastewater Type Sewage  
Facility Type SFTF

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SFTF/SRSTP**

Application No. PA0228362  
APS ID 1006462  
Authorization ID 1296673

**Applicant, Facility and Project Information**

Applicant Name	<u>Kevin &amp; Laurie Darling</u>	Facility Name	<u>Gateway Landing</u>
Applicant Address	<u>511 Lake Drive</u> <u>Titusville, FL 32780-2535</u>	Facility Address	<u>5741 State Route 87</u> <u>Williamsport, PA 17701-8645</u>
Applicant Contact	<u>Laurie Darling</u>	Facility Contact	<u>Laurie Darling</u>
Applicant Phone	<u>570-777-0281</u>	Facility Phone	<u>570-777-0281</u>
Client ID	<u>307645</u>	Site ID	<u>536734</u>
SIC Code	<u>4952</u>	Municipality	<u>Plunketts Creek Township</u>
SIC Description	<u>Trans. &amp; Utilities - Sewerage Systems</u>	County	<u>Lycoming</u>
Date Application Received	<u>November 18, 2019</u>	WQM Required	<u>No</u>
Date Application Accepted	<u>December 05, 2019</u>	WQM App. No.	<u>4101402 T-4</u>
Project Description	<u>Renewal of NPDES Permit</u>		

**Summary of Review**

INTRODUCTION

Kevin and Laurie Darling, property owners, propose the renewal of the National Pollution Discharge Elimination System (NPDES) permit which authorizes the discharge of treated effluent from the small flow treatment facility (SFTF) serving an apartment building in Plunketts Creek Township, Lycoming County.

APPLICATION

The Darlings submitted the NPDES Application for Individual Permit to Discharge Sewage Effluent from Small Flow Treatment Facilities (DEP #3800-PM-BCW0018b). This application was received by the Department on November 18, 2019 and was considered administratively complete on December 05, 2019. The client and site contact is Laurie Darling. Her additional contact information is (email) lajd0217@gmail.com.

PUBLIC PARTICIPATION

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.

The case file, permit application package and the draft permit will be available for public review at the Department's Northcentral Regional Office. The address is 208 West Third Street, Suite 101, Williamsport, PA 17701. An appointment can be made to review these materials during the comment period by calling the file coordinator at 570-327-3636.

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APPROVE	DENY	SIGNATURES		DATE
X		Jeffrey J. Gocek, EIT	<i>Jeffrey J. Gocek</i> Project Manager	09/28/2020
X		Nicholas W. Hartranft, PE	<i>Nicholas W. Hartranft</i> Environmental Engineer Manager	09/28/2020

**DISCHARGE, RECEIVING WATERS AND WATER SUPPLY INFORMATION**

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.002</u>
Latitude	<u>41° 20' 49.86"</u>	Longitude	<u>-76° 56' 15.82"</u>
Quad Name	<u>Montoursville North</u>	Quad Code	<u>0830</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary to Loyalsock Creek</u>	Stream Code	<u>19804</u>
NHD Com ID	<u>66911927</u>	RMI	<u>8.1</u>
Drainage Area	<u>434</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.051</u>
Q <sub>7-10</sub> Flow (cfs)	<u>22.1</u>	Q <sub>7-10</sub> Basis	<u>USGS Gage #01552000</u>
Elevation (ft)	<u>592</u>	Slope (ft/ft)	<u>N/A</u>
Watershed No.	<u>10-B</u>	Chapter 93 Class.	<u>Trout Stock Fishes (TSF)</u>
Existing Use	<u>Exceptional Value (EV)</u>	Existing Use Qualifier	<u>RBP - Antidegradation</u>
Exceptions to Use	<u>None</u>	Exceptions to Criteria	<u>None</u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u>N/A</u>		
Source(s) of Impairment	<u>N/A</u>		
TMDL Status	<u>N/A</u>	Name	<u>N/A</u>
Nearest Downstream Public Water Supply Intake	<u>Pennsylvania-American Water Company</u>		
PWS Waters	<u>West Branch Susquehanna River</u>	Flow at Intake (cfs)	<u>710</u>
PWS RMI	<u>11.0</u>	Distance from Outfall (mi)	<u>34.0</u>

Q<sub>7,10</sub> Determination

The Q<sub>7,10</sub> is the lowest seven consecutive days of flow in a 10 year period and is used for modeling wastewater treatment plant discharges. 25 PA § 96.1 defines the Q<sub>7,10</sub> as “the actual or estimated lowest seven consecutive day average flow that occurs once in 10 years for a stream with unregulated flow or the estimated minimum flow for a stream with regulated flow”.

Basin characteristics, for a watershed based on the discharge location, were obtained from the USGS StreamStats webpage. A nearby, downstream gage, USGS #01552000 (Loyalsock Creek at Loyalsockville, PA), was selected as a reference. This gage is located 1.23 river miles downstream from the discharge location. A Q<sub>7,10</sub> flow for that gage and drainage area were obtained from *Selected Streamflow Statistics for Streamflow Locations in and near Pennsylvania* (USGS Open Files Report 2011-1070). Knowing the drainage area at the discharge (434 mi<sup>2</sup>) and both the drainage area (435 mi<sup>2</sup>) and the Q<sub>7,10</sub> (22.2 CFS) at the reference gage, the Q<sub>7,10</sub> at the discharge was calculated to be 22.149 CFS.

See Attachment 01 for the Q<sub>7,10</sub> determination.

TREATMENT FACILITY SUMMARY

The property currently contains two one-bedroom apartments, one-two bedroom apartment and an office. The office is currently rented by Greevy & Associates (Oil & Gas Law and Estate Planning). Both of the one-bedroom apartments are on the second floor, while the two bedroom apartment and the office are on the first floor.

The existing treatment is provided by a dual train SFTF with a design flow of 0.002 MGD. The SFTF consists of a 1,000 gallon grease trap (former restaurant train), three septic tanks (a 500 gallon and 900 gallon on the former restaurant train and a 2,000 gallon on the residential train), two dosing pump stations, a split train recirculating gravel media filter (2,400 square foot total; lined and subsurface), combined erosion chlorination, a 900 gallon chlorine contact tank and an outfall sewer to Loyalsock Creek.

See Attachment 02 for a map of the facility location.

WWTP characteristics are as follows.

<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Annual Average Design Flow (MGD)</b>
Sewage	Secondary	Septic Tank Sand Filter	Erosion	0.002
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.002	Undetermined	Not Overloaded	None	Landfill

The above design was first approved by Water Quality Management (WQM) permit #4101402, issued June 7, 2001 to Michael E. Hughes. The permit was amended a short time later on August 17, 2001 in order to construct a recirculating 2,400 square foot gravel media filter rather than the original design which included a once-through sand filter. The original NPDES permit was issued June 5, 2001. Both the NPDES and WQM permits were transferred to Paul M. Hendershot on December 13, 2005. The NPDES permit expired on June 30, 2006. Both the NPDES and WQM permits were again transferred (and the NPDES was renewed), this time to Robin Real Estate on November 13, 2008. Following the sale of Robin Real Estate, both the NPDES and WQM permit were transferred a third time to the former owner of Robin Real Estate (Robin A. Frantz) and her partner (Jason R. Kline) on February 3, 2012. Lastly, the permit was transferred to Kevin and Laurie Darling on January 14, 2014 as #4101402 T-4.

The discharge was designed to occur at river mile 8.1 but the discharge from this facility has never been observed. It is believed that due to the installation of a perforated outfall sewer, at some distance prior to the receiving stream, all effluent goes to groundwater rather than the receiving stream. This installation was not part of the original design, nor is it approved in the Department's permit documents from 2001. Because of this situation, sampling is performed at the chlorine contact tank.

In lieu of a flow meter, the facility utilizes a flow totalizer, which counts gallons of well water. Flow is estimated based on the difference in gallons during the month divided by 31 (days) for an estimated monthly average flow (in units of million gallons per day).

See Attachment 03 for a treatment process schematic.

COMPLIANCE HISTORY

The WMS Query *Open Violations for Client by Permit Number* revealed no open violations for Kevin and Laurie Darling.

The most recent Department inspection, a compliance evaluation inspection (CEI), was conducted October 10, 2019. At the time of the inspection, all required treatment units appeared online and operational. Clear effluent was present in the chlorine contact tank. An effluent violation for fecal coliforms from August 2019 was documented during the inspection.

Recent Discharge Monitoring Report (DMR) data, from September 2019 to August 2020, is presented in the table below.

Parameter	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19
Flow (MGD) Average Monthly	0.00001	0.00001	0.00001	0.0001	0.00001	0.00003	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
pH (S.U.) Minimum	7.0	6.0	6.5	6.8	6.0	6.0	7.0	6.5	7.0	6.5	6.4	6.5
pH (S.U.) Maximum	7.0	6.0	6.5	6.8	6.0	6.0	7.0	6.5	7.0	6.5	6.4	6.5
TRC (mg/L) Average Monthly	0.50	0.8	0.15	0.15	0.40	0.25	0.50	0.0	0.0	0.0	0.0	0.0
TRC (mg/L) Instantaneous Maximum	0.50	0.8	0.15	0.15	0.40	0.25	0.50	0.20	0.0	0.0	0.0	0.0
CBOD5 (mg/L) Average Monthly	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	3.05	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	9.46
CBOD5 (mg/L) Instantaneous Maximum	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	3.05	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	9.46
TSS (mg/L) Average Monthly	5.40	< 1.6	< 1.6	< 0.8	< 0.8	2.0	< 1.6	6.8	1.6	4.0	2.8	< 0.8
TSS (mg/L) Instantaneous Maximum	5.40	< 1.6	< 1.6	< 0.8	< 0.8	2.0	< 1.6	6.8	1.6	4.0	2.8	< 0.8
Fecal Coliform (No./100 ml) Geometric Mean	2,419.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0

An average monthly flow of 10 gallons per day has been reported on recent DMRs. The permittee has been contacted for clarification. Additional information will be provided in the Fact Sheet Addendum.

EXISTING PERMIT LIMITATIONS

The following limitations were established at the last renewal issuance which occurred April 22, 2015.

Discharge Parameter	Mass Limits (lb/day)		Concentration Limits (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum	IMAX	Minimum Measurement Frequency	Required Sample Type
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/Month	Measured
pH (SU)	XXX	XXX	6.0	XXX	XXX	9.0	1/Month	Grab
Total Residual Chlorine	XXX	XXX	XXX	1.0	XXX	1.5	1/Month	Grab
CBOD <sub>5</sub>	XXX	XXX	XXX	10	XXX	20	1/Month	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	1/Month	Grab
Fecal Coliform (No./100mL)	XXX	XXX	XXX	200 Geometric Mean	XXX	XXX	1/Month	Grab

DEVELOPMENT OF EFFLUENT LIMITATIONS

Technology-Based Limitations

The following technology-based limitations apply to SFTFs, subject to water quality analysis and BPJ where applicable:

Parameter	Average	IMAX	Sample Type	Frequency
Flow (GPD)	Report	XXX	Measured	1/Month
BOD <sub>5</sub> (mg/L)	10	20	Grab	1/Month
TSS (mg/L)	10	20	Grab	1/Month
TRC (mg/L)	Use TRC Spreadsheet to determine WQBELs		Grab	1/Month
Fecal Coliform (No./100 mL)	200 (Geometric Mean)		Grab	1/Month

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Total Residual Chlorine

The Department's *TRC\_CALC spreadsheet* is a model used to evaluate Total Residual Chlorine (TRC) effluent limitations for non-residential SFTFs. This model determines applicable acute and chronic wasteload allocations (WLAs) for TRC based on the data supplied by the user and then compares the WLAs to the technology-based average monthly limit using the procedures described in the EPA Technical Support Document (for Water Quality-based Toxics Control).

Parameter	Effluent Limitations (mg/L)	
	Monthly Average	IMAX
Total Residual Chlorine	0.50	1.6

See Attachment 04 for the TRC\_CALC output. DMR data indicates that the existing facility can meet this more stringent limitation.

Water Quality-Based Limitations

In accordance with Department policy, water quality modeling using the PENTOXSD and WQM models is not performed for SFTFs.

Best Professional Judgment (BPJ) Limitations

In the absence of applicable effluent guidelines for the discharge or pollutant, permit writers must identify and/or develop needed technology-based effluent limitations (TBELs) TBELs on a case-by-case basis, in accordance with the statutory factors specified in the Clean Water Act.

Pollutant	Limit	SBC	Basis
pH (SU)	6.0-9.0	Minimum-IMAX	§ 92a.47, 95.2

Anti-Backsliding

In order to comply with 40 CFR § 122.44(l) (anti-backsliding requirements), the Department must issue a renewed permit with limitations as stringent as that the of the previous permit.

No less stringent limitations have been proposed.

RECEIVING STREAMStream Characteristics

The receiving stream is Loyalsock Creek, a tributary to West Branch Susquehanna River. Loyalsock Creek, according to 25 PA § 93.9L, is protected for Trout Stock Fishes (TSF) and Migratory Fishes (MF). This is the stream's Designated Use, which is defined in 25 PA § 93.1 as "those uses specified in §§ 93.9a – 93.9z for each waterbody or segment whether or not the use is being attained". Designated uses are regulations promulgated by the Environmental Quality Board (EQB) through the rulemaking process. Loyalsock Creek currently has an Existing Use classification of Exceptional Value (EV), which is the Department's highest level of "special protection". An Existing Use is defined in 25 PA § 93.1 as "those uses actually attained in the waterbody on or after November 28, 1975 whether or not they are included in the water quality standards". Similarly, 25 PA § 93.1 defines Exceptional Value Waters as "surface waters of the highest quality which satisfy 25 PA § 93.4b(b)".

Loyalsock Creek is identified by stream code 19804. This stream is located in (Chapter 93) drainage list L and State Water Plan watershed 10B (Loyalsock Creek). No EPA-approved TMDL has been completed for Loyalsock Creek.

Impairment

Loyalsock Creek is not impaired and is attaining its designated uses for *Aquatic Life, Fish Consumption and Potable Water Supply*. No TMDL has been calculated for this stream.

CHESAPEAKE BAY TMDL

Nutrient monitoring requirements associated with the Chesapeake Bay TMDL do not apply to SFTFs, which have a hydraulic design flow equal to or less than 2,000 gallons per day.

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DISCHARGE MONITORING REPORTS

For this permit, the operative compliance mechanism will be the Discharge Monitoring Report (DMR), which is to be submitted monthly. The Annual Maintenance Report (AMR), to be submitted annually, will be utilized to document maintenance activities which occur in the period between June 01 and May 31 of each year.

SPECIAL PERMIT CONDITIONS

Annual Maintenance Form  
 Discharge Monitoring Report Form  
 Tank Monitoring  
 Pumping Requirement  
 Total Residual Chlorine Minimization  
 Stormwater Prohibition  
 Approval Contingencies  
 Proper Waste Disposal  
 Municipal Treatment Availability

SUPPLEMENTAL DISCHARGE MONITORING REPORTS

Annual Maintenance Report  
 Non-Compliance Report Form  
 Laboratory Accreditation Sheet

PROPOSED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Mass Limits (lb/day)		Concentration Limits (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum	IMAX	Minimum Measurement Frequency	Required Sample Type
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/Month	Measured
pH (SU)	XXX	XXX	6.0 Instant. Min.	XXX	XXX	9.0	1/Month	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.6	1/Month	Grab
BOD <sub>5</sub>	XXX	XXX	XXX	10	XXX	20	1/Month	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	1/Month	Grab
Fecal Coliform (No./100mL)	XXX	XXX	XXX	200 Geometric Mean	XXX	XXX	1/Month	Grab

END of Fact Sheet.