



**Central
Virginia
Community
College**

Illicit Discharge Detection and Elimination Manual

**Programmatic Overview of CVCC's
IDDE Program and Process**



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(Revised November 2016)**

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TABLE OF CONTENTS

1.0 INTRODUCTION AND PURPOSE4
2.0 IDDE TRAINING PROGRAM.....6
3.0 DOCUMENTATION.....7
 3.1 Annual Reporting to DEQ 7
4.0 IDENTIFICATION OF AN ILLICIT DISCHARGE.....8
 4.1 Defining an Illicit Discharge 8
 4.2 CVCC’s Stormwater Outfall Mapping/Inventory 9
 4.3 Awareness during Daily Activities and Operations 10
 4.4 Special Local Water Quality Concerns 10
 4.5 Reporting Procedures 11
5.0 OUTFALL SCREENING12
 5.1 Dry-Weather Outfall Screening 12
 5.2 Wet-Weather Screening 14
6.0 INVESTIGATING ILLICIT DISCHARGE15
 6.1 Investigation Triggers and Prioritization 15
 6.2 Investigation Protocol 15
 6.3 Timeframes for Performing Investigations 17
7.0 ELIMINATING VERIFIED ILLICIT DISCHARGES.....18
 7.1 Source Elimination 18
 7.2 Follow-up on Source Elimination 19
 7.3 Administrative Action, Enforcement and Penalties 19
 7.4 Reportable Spills 20

APPENDICES

APPENDIX A: CVCC Outfall Reconnaissance Inspection Form

APPENDIX B: CVCC IDDE Tracking Form

ACRONYMS

DCR	Virginia Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality
EPA	Environmental Protection Agency
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
ORI	Outfall Reconnaissance Inventory
TMDL	Total Maximum Daily Load
VAC	Virginia Administrative Code
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program
CVCC	Piedmont Virginia Community College
WLA	Waste Load Allocation

1.0 INTRODUCTION AND PURPOSE

This manual presents the standard protocol which Piedmont Virginia Community College (CVCC) will utilize to implement its Illicit Discharge Detection and Elimination (IDDE) Program. The manual provides written procedures to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to CVCC's small municipal separate storm sewer system (MS4). The written procedures are required to be developed, implemented, and updated by CVCC as a condition of the college's MS4 General Permit (General Permit). The General Permit authorizes stormwater discharges from MS4s to surface waters in urbanized areas of the Commonwealth of Virginia. The General Permitting mechanism is designed to prevent pollutants from entering water bodies through stormwater runoff.

The MS4 Program is part of the Federal National Pollutant Discharge Elimination System (NPDES), which is authorized through the Clean Water Act. With delegation from the Environmental Protection Agency (EPA), MS4 General Permits in Virginia are issued through the Virginia Pollution Discharge Elimination System (VPDES) and administered by the Virginia Department of Environmental Quality (DEQ). This manual was developed in general accordance with the EPA's, *"Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments."* To ensure compliance with IDDE requirements of the General Permit, CVCC is required to perform the procedures outlined in this manual.

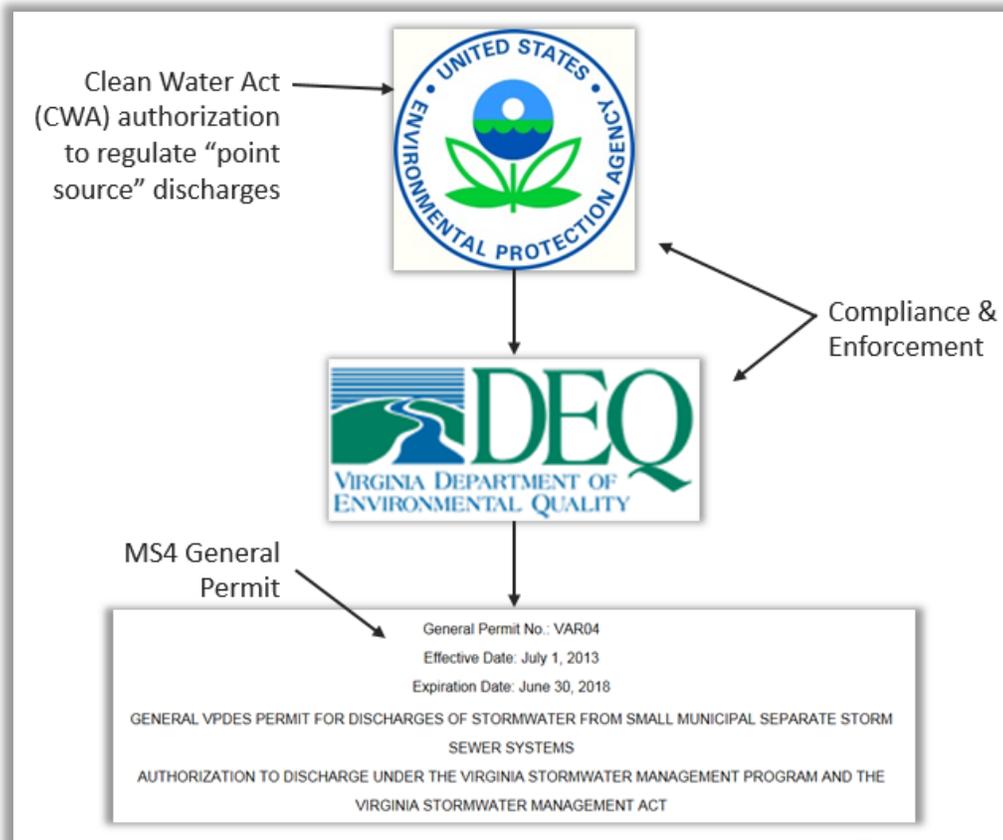


Figure 1. Generalized depiction of the regulatory framework for the MS4 General Permit.

CVCC's IDDE Program includes five distinct components:

- **IDDE Training** – Procedures to train applicable operations and maintenance staff are discussed in Section 2.0 of this manual.
- **Illicit Discharge Tracking** – For CVCC to demonstrate compliance to the conditions of the General Permit, documentation of IDDE activities performed is paramount. This is discussed in Section 3.0 of this Manual from field through administrative responsibilities.
- **Identification of an Illicit Discharge** – Procedures to screen, identify and report questionable illicit discharges are outlined in Sections 4.0 and 5.0 of this manual.
- **Investigating the source of an Illicit Discharge** – Procedures to investigate potential illicit discharges that have been identified or reported are outlined in Section 6.0 of this manual.
- **Elimination of an Illicit Discharge** – Procedures to eliminate illicit discharges that have been confirmed through the investigation effort are outlined in Section 7.0 of this manual.

2.0 IDDE TRAINING PROGRAM

The General Permit requires CVCC to provide **annual training** to applicable operations and maintenance staff in recognition and reporting of illicit discharges. This manual serves as the annual training material to meet the General Permit requirement. Note that training is also required for Good Housekeeping Pollution Prevention practices to applicable staff and CVCC provides a separate manual as training material for those activities.

The written procedures herein serve as the foundation of a successful IDDE Program and help to achieve General Permit compliance. However, implementation of the procedures is critical for achieving the IDDE Program goal **to eliminate non-stormwater discharges** to CVCC's storm sewer system and ultimately receiving waters. As referenced throughout this manual, the IDDE Program relies on supplemental materials to assist with implementation and documentation. Documentation that procedures have been implemented is critical to demonstrate permit compliance in the case of a regulatory audit. Operations and maintenance staff who are identified for IDDE training should be familiar with each Section of this Manual, CVCC's IDDE Field Guide, and the supplemental materials provided in the Appendices of this Manual, which include:

- **Outfall Reconnaissance Inspection Form** – This form is used for outfall screening to assist in determining the potential of an illicit discharge. The form is located in Appendix A.
- **IDDE Tracking Form** – A form to assist with ensuring documentation required by the General Permit for each investigation regarding any suspected illicit discharge. To be completed by the CVCC Facilities Manager; but required information may be needed from operations and maintenance staff to assist with the completion of the form. The form is located in Appendix B.

3.0 DOCUMENTATION

As highlighted throughout this Manual, documentation of illicit discharge reports, investigations, and elimination actions is critical for demonstrating compliance to the General Permit. In the case of an illicit discharge, CVCC's General Permit requires, at a minimum, the following information:

- ✓ The date or dates that the illicit discharge was observed and reported;
- ✓ The results of the investigation;
- ✓ Any follow-up of the investigation;
- ✓ Resolution of the investigation; and
- ✓ The date that the investigation was closed.

The resolution of a discharge may be a referral to and acceptance by the DEQ or local government for action; however, this action must be properly documented by CVCC. If the discharge is determined to be a permitted or allowable discharge, then the final action will be documented and the information will be included on the corresponding CVCC Illicit Discharge Tracking Inventory Form. This will enable CVCC to access this information if future requests are received concerning the discharge in question. The information will also be included in annual reporting described in the following section.

3.1 Annual Reporting to DEQ

CVCC must annually report to the DEQ information pertaining to its IDDE efforts. The information is included in CVCC's MS4 Annual Report due October 1st of each year. Information required for reporting includes:

- 1) A list of any written notifications of physical interconnection given by the operator to other MS4s;
- 2) The total number of outfalls screened during the reporting period, the screening results, and detail of any necessary follow-up action;
- 3) A summary of each investigation conducted by CVCC regarding a suspected illicit discharge. The summary must include:
 - a. The date the suspected discharge was observed, reported, or both;
 - b. How the investigation was resolved, including any follow-up; and
 - c. Resolution of the investigation and the dates the investigation was closed.

4.0 IDENTIFICATION OF AN ILLICIT DISCHARGE

Municipal separate stormwater sewer (MS4) means a conveyance, or system of conveyances, that ultimately discharges into surface waters and wetlands. That is, any system of drainage from roads, parking lots, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that convey stormwater is part of the MS4. These conveyance systems are vulnerable to contamination that can then travel alone or be carried with stormwater to receiving surface waters. Substances other than stormwater that enter receiving waters may be considered an illicit discharge and elimination of those discharges is the focus of this Manual. An illicit discharge can:

1. Be a measurable flow from a storm drain during dry weather that contains pollutants or pathogens;
2. Have a unique frequency, composition, and mode of entry in the storm drain system;
3. Be caused when the sewage disposal system interacts with the storm drain system; or
4. Be discharges from pollutants from specific source areas and operations known as “generating sites.”
Generating sites are identified in the CVCC Good Housekeeping/Pollution Prevention Program Manual.

4.1 Defining an Illicit Discharge

For the purpose of CVCC’s IDDE Program, an illicit discharge is defined as:

Illicit Discharge - Any discharge to an MS4 that is not composed entirely of stormwater, except discharges specifically identified in the Virginia Administrative Code.

Most sources of an illicit discharge on the CVCC campus are likely to originate from a generating site or activity, such as a washing area or vehicle maintenance area. These could result from daily practices or from a specific spill incident. Table 1 provides source pollutants that could be generated from areas of each campus.

Table 1. Examples of source pollutants of an illicit discharge.

• Automotive fluids (oil, fuel, antifreeze)	• Landscape waste (grass clippings, etc.)
• Cooking oil and grease	• Improperly applied fertilizer
• Solvents	• Sediment
• Paints	• Vehicle wash water
• Chemical cleansers (detergents, soaps)	• Sanitary sewer wastewaters
• Improperly applied pesticides/herbicides	• Dumpster leachate
• Improperly managed salts	• Trash

The regulations do have exemptions for some non-stormwater discharges that would not be considered an illicit discharge if not a significant contributor of pollutants to the college’s MS4. Table 2 lists some of these discharges that may be relevant to CVCC that and are not significant contributors of pollutants and therefore are not considered illicit discharges. If there is uncertainty of the source or constituents within an observed discharge, the CVCC Facilities Manager should be contacted immediately so a determination can be made. Additional detail for identification of an illicit discharge is provided in the *CVCC IDDE Field Guide*.

Table 2. Examples of sources that are not considered illicit discharges.

- | | |
|---|--|
| <ul style="list-style-type: none">• Fire-fighting activities• Water line flushing• Landscape/lawn irrigation• Diverted stream flows• Rising groundwater• Uncontaminated groundwater infiltration• Uncontaminated pumped groundwater | <ul style="list-style-type: none">• Air conditioning condensate• Footing or foundation drains• Springs• Water from crawl space pumps• Dechlorinated swimming pool wastewater• Discharges from potable water sources• Flows from riparian habitats and wetlands |
|---|--|

4.2 CVCC's Stormwater Outfall Mapping/Inventory

An outfall can be considered a point where CVCC's MS4 discharges concentrated flow to surface waters or wetlands, such as at the end of a pipe or open drainage channel. Generally, these are the locations that drain the campus and can be evaluated routinely to identify potential pollutants. Action can then be taken to prevent these pollutants from passing downstream, such as eliminating the pollutant at its source. The General Permit requires CVCC to maintain a storm sewer map and outfall inventory as part of the IDDE Program. CVCC may incorporate outfall locations in their mapping and inventory that do not directly discharge into surface waters or wetlands for due diligence during screening procedures.

CVCC's outfall maps include locations of outfalls from the storm sewer system, the drainage area to each outfall, and the receiving waterway. The mapping is a critical component of the required outfall screening and serves as a tool to identify potential generating sites on campus, the conveyance systems adjacent to them, and the locations where they discharge. Outfall locations are indicated with a yellow triangle and outfall number, as seen in Figure 2 below.

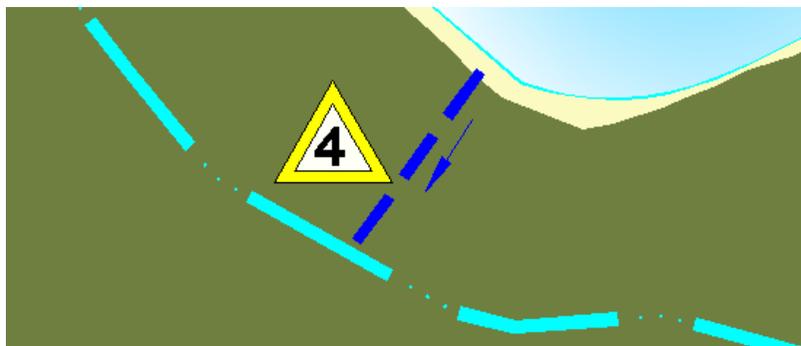


Figure 2. Example indication of a stormwater conveyance with an outfall location.

An illicit discharge identified on campus may also originate from an interconnected upstream MS4. Interconnections are also identified on the mapping to assist with identifying the contact for a potential off-site pollutant source. The upstream MS4 should be notified immediately so they can perform an investigation to identify and eliminate the pollutant source.

The General Permit also requires CVCC to maintain an Outfall Inventory Form that includes permit-required attributes for each outfall. The form is provided separately from this document. The Facilities Manager should maintain a copy of both the IDDE Mapping and Outfall Inventory Form for review upon request by the public or DEQ. Each should be updated in the case that additional outfalls are added to the system, as may be the case with new construction.

4.3 Awareness during Daily Activities and Operations

Potential illicit discharges can be removed prior to entering the storm sewer with the identification and appropriate follow-up when pollutants are observed to be exposed to precipitation, and subsequently stormwater runoff. CVCC maintenance and operations staff are in the best position to identify these pollutants, such as those identified in Table 1. Figure 3 provides several examples of the observations and actions that could prevent an illicit discharge. If the observer is not qualified or appropriately trained to take the appropriate action, or if illegal dumping is observed, notify the CVCC Facilities Manager. The CVCC Good Housekeeping/Pollution Prevention Manual can also be a reference for instruction on appropriate actions.



Figure 3. Example daily observations and subsequent actions can prevent an illicit discharge.

4.4 Special Local Water Quality Concerns

CVCC’s MS4 ultimately discharges to receiving waters that have been identified by the DEQ to not meet water quality standards. Subsequent studies, called Total Maximum Daily Load (TMDL) studies, have been performed by DEQ. The TMDL studies identify specific pollutants causing the impairments to the receiving waters and designate the amount of the pollutant the receiving water can assimilate to achieve water quality standards. A required reduction of the pollutant is typically assigned to the MS4s that drain to the impaired segment of the water body. It is important that CVCC maintenance and operations employees be aware of these special pollutants shown in Table 3, which are nitrogen, phosphorous and sediment.

Table 3. Special pollutants of concern.

College	TMDL	Pollutants of Concern
CVCC	Chesapeake Bay	Nitrogen Phosphorous Sediment

Nitrogen & Phosphorous considerations: CVCC utilizes its Nutrient Management Plan when applying nutrients on campus. This plan includes conservative practices for the use of nutrients such as fertilizer, and how to effectively apply them while minimizing adverse effects. In addition, CVCC utilizes good housekeeping practices and a general sense of awareness for possible nutrient sources in day to day operations.

Sediment considerations: Possible sediment sources include, but are not limited to, construction and maintenance activities, soil erosion and stockpiles of sediment-laden material. Proper source controls (i.e. silt fence, gutter buddies, etc.) should be utilized to prevent the transportation of sediment. In addition, CVCC should utilize good housekeeping practices and a general sense of awareness for possible sediment sources in day-to-day operations.

4.5 Reporting Procedures

CVCC maintenance and operations staff are the first line of defense for preventing sources that could contribute to an illicit discharge. Actions that are taken to remove *potential sources* of an illicit discharge do not need to be reported unless it is suspected an illicit discharge has previously occurred. In this case, the employee needs to report the concern to the Facilities Manager as soon as possible. The Facilities Manager will then document the report with the IDDE Tracking Form provided in Appendix B. Staff should be familiar with the form to assist with providing the necessary information required to complete the form.

An illicit discharge or potential source for an illicit discharge may also be reported by other individuals that are not trained or authorized to perform necessary actions, such as reports from students, faculty, staff, or contractors. These individuals may recognize a potential illicit discharge after learning about pollution in stormwater runoff through CVCC’s public education and outreach efforts. The CVCC stormwater webpage directs these individuals to contact the Facilities Manager, who will subsequently perform the appropriate follow-up action and documentation. If an employee is otherwise notified, the appropriate action should be taken, and if an illicit discharge is potentially occurring, the Facilities Manager shall be notified.

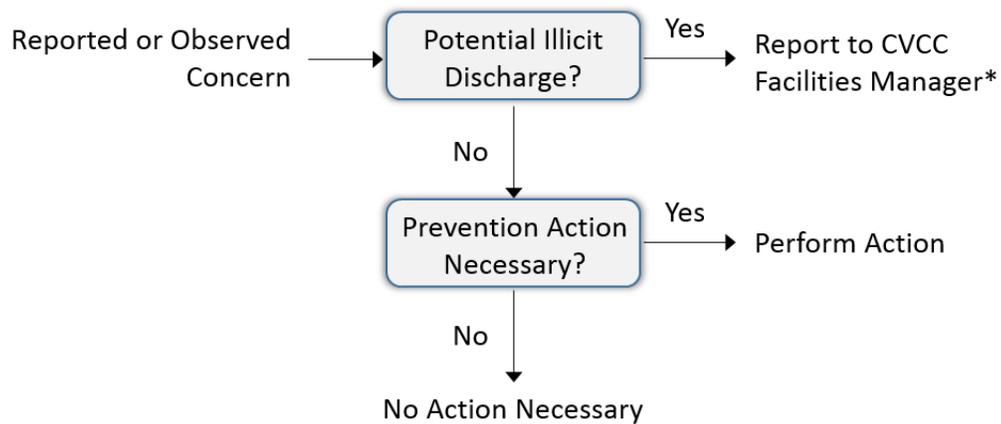


Figure 4. Reporting procedures for CVCC field staff.

5.0 OUTFALL SCREENING

As an effort to identify illicit discharge occurrences from the CVCC MS4, annual outfall screening is required by the Program Plan under the General Permit for all of the outfalls at the CVCC campus. In the case that potential illicit discharges are observed at specific outfalls and the source is not identified or eliminated, subsequent screening at a higher frequency may be necessary. Screening will be performed by an individual designated by the CVCC Facilities Manager.

5.1 Dry-Weather Outfall Screening

Outfall screening shall be performed during dry weather using the Outfall Reconnaissance Inspection (ORI) Form provided in Appendix A. Completion of the form serves as the appropriate documentation that the required outfall screening has been performed and should be retained on file for a minimum of 3 years. Outfalls that are flowing during dry weather may indicate an active pollution issue, depending on if rain has occurred during the last 24 to 48 hours. Special attention should be paid to outfalls that are flowing and when no rain has occurred within the last 48 hours. When the screening of an outfall indicates a potential illicit discharge, the CVCC Facilities Manager shall be notified within one business day so an investigation, as described in Section 5.0, can be performed and an IDDE Tracking Form completed.

The ORI Inspection Form includes the following sections, which are to be completed for each outfall with each annual outfall screening:

- **Section 1: Background Data** – Requires general information regarding when and where the screening was performed, weather conditions at the time of the screening, and references to any photos taken. Tips for completing Section 1 include:
 - ✓ The Outfall ID can be found on the IDDE Program Support Mapping. The mapping may be updated from time to time to reflect new outfalls.
 - ✓ Take at least 1 photo of the outfall for documentation purposes, especially if there is question regarding the potential for an illicit discharge.
 - ✓ Rainfall data can be gathered from the link below by navigating to the location of the campus on the map and selecting the last day or last 2 days. The map will depict rainfall precipitation ranges using a color scale (See Figure 5): http://www.srh.noaa.gov/ridge2/RFC_Precip/

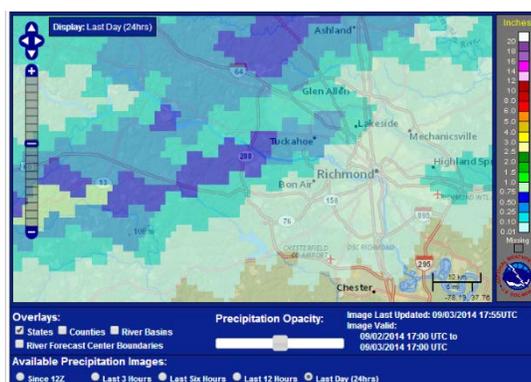


Figure 5. Sample Precipitation Summary

- Section 2: Outfall Description** – Requires a description of the outfall and determination if flow is present during dry weather. Tips for completing Section 2 include:
 - ✓ If the cross-section of a pipe or channel is abnormal, provide a sketch in the available area of the dimension column and label measured dimensions.
 - ✓ If submerged with sediment, measure the depth of sediment.
 - ✓ The identification of flow is important since flow during dry weather would indicate a non-stormwater discharge. If a pipe is partially submerged, and it is difficult to identify dry-weather flow, a nearby leaf or blade of grass can be dropped onto the water surface near the outfall. The travel of the object on the surface can help indicate if flow is discharging from the outfall.
 - ✓ Upon completion of this section, if no flow is present, skip to Section 5 of the form.
- Section 3: Quantitative Characterization for Flowing Outfalls** – Requires quantitative information of the flow present at the outfall, including information to determine an estimate of the flow rate. The pH and ammonia levels require the use of test strips. The purpose of this information is to help identify the source of the discharge. Tips for completing Section 3 include:
 - ✓ Measuring pH can determine whether a flow is industrial or commercial in nature. Normal stormwater has a pH around 7.
 - ✓ High levels of ammonia (> 0.3 ppm) can indicate excess fertilizer or contamination by sanitary wastewater.
 - ✓ Flow rate can be estimated with the following equations. Measured data from the form is shown in **bold**.

Flow #1 (for pipes):

$$\frac{\text{'X' liters}}{\text{'X' seconds}} \times \frac{1 \text{ gallon}}{3.78 \text{ liters}} \times \frac{60 \text{ seconds}}{\text{minute}} = \text{Flow in gpm}$$

- ✓ For the Flow #1 calculation, time in seconds is the time to fill the bottle to 'X' liters.

Flow #2 (for open channels):

$$\left[\left(\frac{\text{bot. width (ft)} + \text{top width (ft)}}{2} \right) \times \text{depth (ft)} \right] \times \frac{\text{Length (ft)}}{\text{travel time (seconds)}} \rightarrow$$

$$\times \frac{7.48 \text{ gallons}}{1 \text{ cubic ft}} \times \frac{60 \text{ seconds}}{\text{minute}} = \text{Flow in gpm}$$

- ✓ For the Flow #2 calculation, travel time is estimated by the time it takes a floating object to travel the defined length.

- **Section 4: Physical Indicators for Flowing Outfall** – Requires the observance of physical indicators in the flow, such as odor and color, to assist with identifying the source of the discharge. Tips for completing Section 4 include:

- ✓ Take photos of visible indicators.

- **Section 5: General Physical Indicators for All Outfalls** – Requires physical indicators be noted that are not related to flow, such as abnormal vegetation and staining, which can indicate that an intermittent discharge has occurred in the past, even if not currently flowing. Tips for completing Section 5 include:

- ✓ Take photos of visible indicators.
- ✓ Note benthic growth, such as algae or slime on channel surfaces, which can be an indicator of nutrients in the stormwater runoff (See Figure 6).



Figure 6. Example Photo showing algae growth.

- **Section 6: Outfall Severity Index** – Requires the assignment of a severity score for prioritizing outfall follow-up investigation, if necessary. The severity of concern at an outfall is best judged by the outfall inspector. The rating system provided on the form is intended to provide consistency and guidance; but the intuition of the inspector overrides the scoring rules. Outfalls can be characterized as:
 - ✓ Unlikely to be subject to an illicit discharge. No further action is necessary.
 - ✓ Potential illicit discharge occurring at the outfall.
 - ✓ Suspect illicit discharge occurring at the outfall.
 - ✓ Obvious illicit discharge occurring at the outfall.

For all potential, suspect or obvious illicit discharges, report to the Facility Manager as soon as possible to the maximum extent practicable.

- **Section 7: Any Non-Illicit Discharge Concerns** – The inspector performing the outfall screening should identify any other concerns such as trash, overgrowth prohibiting flow, or structural concerns of the outfall (e.g. collapsed pipe).

5.2 Wet-Weather Screening

While dry-weather screening events can identify possible illicit interconnections that are continuous, wet weather screening events may identify pollutant discharges that are temporary and/or likely to result from improper storage of polluting materials or inadequate cleanup of off-site pollutant releases. Wet-weather screening may be appropriate if dry weather screening identifies physical indicators from Sections 4 and 5 of the ORI Inspection Form.

6.0 INVESTIGATING ILLICIT DISCHARGE

In the case of the identification of an illicit discharge, it is necessary to conduct an investigation to identify and eliminate the source of the discharge. An investigation may result from:

- A staff observation;
- A report to CVCC staff from the general public;
- A report from an interconnected MS4; or
- Results of outfall screening.

The determination of if an illicit discharge has occurred will be made by the CVCC Facilities Manager. ***In all cases of an illicit discharge, the CVCC IDDE Tracking Form must be completed as documentation for General Permit annual reporting.***

An investigation of an illicit discharge may result in the source being easily identified or may be complex and should utilize instruction in this manual, the IDDE Field Guide, and storm sewer mapping, and may require coordination with administrators of interconnected MS4s.

The following sections outline the methodologies that shall be followed in the investigation an illicit discharge.

6.1 Investigation Triggers and Prioritization

Upon the identification of an illicit discharge, the date, location, and description must be reported in the CVCC IDDE Tracking Form. Note that Section 6 of the ORI Inspection Form should be referenced to estimate a severity Index classification. The following shall trigger an investigation:

- The determination of the occurrence of an illicit discharge by the Facilities Manager based on an observed illicit discharge by CVCC staff, such as during daily activities, or a follow-up from a reported observation.
- A severity index classification of either potential, suspect, or obvious. If more than one outfall screenings produce one of these classifications, investigation efforts shall be prioritized as:
 - Obvious – Illicit discharge(s) suspected of being sanitary sewer discharges or significantly contaminated would have this classification.
 - Suspect – Numerous physical indicators result in this classification.
 - Potential - These discharges should not be expected to be hazardous to human health and safety.

The start date of the investigation is required to be provided on the CVCC IDDE Tracking Form.

6.2 Investigation Protocol

An investigation of an illicit discharge may result in the source being easily identified or may be complex and should utilize instruction in this manual, the IDDE Field Guide, storm sewer mapping and may require coordination with administrators of interconnected MS4s.

Based on the familiarity of the campus and its drainage areas, an initial field evaluation may easily identify the source of an illicit discharge. Once found, the source should be eliminated and efforts documented on the CVCC IDDE tracking form. ***It is critical that documentation on the CVCC IDDE tracking form is complete to demonstrate illicit discharges have been addressed in accordance with General Permit conditions.***

If the source of an illicit discharge is not easily identified, further investigation is necessary and should be guided by the following procedures:

- 1) Track the illicit discharge to its point of entry into the storm sewer. Tracking can be supplemented with review of the CVCC outfall mapping to identify flow directions and the drainage area. Cross reference the mapping with the CVCC Stormwater Pollution Prevention (SWPPP) mapping provided in the CVCC Good Housekeeping & Pollution Prevention Manual that indicates areas most likely to be the source of pollutants.
- 2) Conduct a field inspection of the drainage area near the point of entry to identify the potential pollutant source. Document potential sources with photos, ensuring the photos give the appropriate context to the location of the source.

CVCC Staff will primarily rely upon visual inspections of the areas in the storm sewer system above the outfall at which an illicit discharge is detected. However, sampling and analysis can be performed as necessary to determine the characteristics of the illicit discharge and to help identify the most likely source. Improper connections and unpermitted cross-connections to the storm sewer system can be detected by utilizing a combination of methods to investigate non-stormwater discharges, such as visual/video inspections, and dye or smoke tracer testing. Additional dry-weather testing at a discharge point assists in identification of abnormal conditions such as sporadic or continuous discharge, which can facilitate tracing of the source. Tracking techniques also include visual inspections of drainage structures and lines, damming lines to isolate areas, indicator monitoring, and optical brightener monitoring traps.

Other more elaborate approaches include using remote sensing tools to identify soil moisture, water temperature, and vegetation anomalies associated with illegal dumping activities. Due to the size of the CVCC campus and the activities that typically occur thereon, it is not anticipated these types of tracking strategies will be necessary and further discussion is outside of the scope of this Manual.

If an illicit discharge is determined to originate outside of the CVCC property, then the appropriate locality and/or MS4 Program authority should be contacted immediately by CVCC staff and the request made to eliminate the discharge. The interconnected MS4 should initiate corrective action per their prescribed process. CVCC staff will follow up with the responsible entity to verify the corrective action has been successfully implemented, and the final action will be documented and tracked on the CVCC IDDE Tracking Form.

Additional detail for conducting an investigation is provided in the *CVCC IDDE Field Guide*.

6.3 Timeframes for Performing Investigations

Generally, investigation of a potential illicit discharge should initiate as soon as possible to the maximum extent practicable. However, if necessary due to resources, the timeframe for initiation of an investigation should be prioritized with first priority given to illicit discharges suspected of being sanitary sewage or otherwise significantly contaminated. Additionally, investigation priority should be targeted as (1) “obvious” illicit discharge, (2) “suspect” illicit discharge and (3) “potential” illicit discharge as described in the Severity index described in Section 5.1.

If, after performing an investigation of an observed or reported illicit discharge, the source of the discharge has not been identified and the non-stormwater discharge has not been detected again after 6 months, efforts will be documented and the discharge identified as “non-recurring” with “source not found” on the CVCC IDDE Tracking Form. At that time, no further action is necessary. However, investigatory due diligence should include (with documentation):

- The tracking and field inspection methods described in the previous Section were performed;
- At least one additional dry-weather screening during the 6-month time period; and
- At least one wet-weather screening.

If an observed discharge is intermittent, CVCC staff will perform **three separate investigations** attempting to observe the discharge when it is flowing. If these attempts are unsuccessful, CVCC staff will also document the occurrence and process and no further action is necessary.

7.0 ELIMINATING VERIFIED ILLICIT DISCHARGES

The ultimate goal of the IDDE Program is to eliminate illicit discharges from the MS4. Once an illicit discharge has been identified and an investigation has determined the source of the discharge, the appropriate actions need to be taken and documented to eliminate the discharge.

7.1 Source Elimination

CVCC prohibits illicit discharge into its MS4 through language provided within the Standards of Conduct for Staff and the Student Handbook for students. Prohibition is also addressed through contract language with contractors performing work on campus. Further, CVCC’s daily operations intend to prevent illicit discharges through the practices described in the CVCC Good Housekeeping/Pollution Prevention Manual. Through these mechanisms (See Figure 7), CVCC can eliminate illicit discharges in which the source occurs on CVCC property.

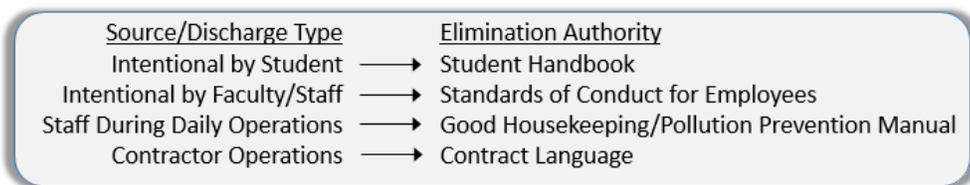


Figure 7. CVCC authority for prohibition of illicit discharges on campus.

When an illicit discharge originates within CVCC’s property, CVCC staff will take the necessary corrective action to eliminate the discharge. Follow-up inspections may be necessary to ensure the discharge into the CVCC storm drain system has ceased. Periodic inspections should be conducted during both wet and dry-weather after the initial illicit discharge to confirm the identified discharge has been eliminated. Actions and resolutions must be documented and maintained on file for 3 years.

When the source of an illicit discharge originates off campus; and therefore, CVCC does not have authority to eliminate the source DEQ or the interconnected MS4 should be contacted by the Facilities Manager, as applicable. Figure 8 provides examples of the enforcement authorities to contact based on the type of illicit discharge. This list is not all-inclusive, but was developed in coordination with DEQ and is based on typical sources of illicit discharges. Reports of illicit discharge to an outside agency should be maintained on file along with information related to the case, including dates, locations, photos, results of screenings and investigations, and identified sources.



Figure 8. Illicit discharge enforcement contacts for off-site illicit discharges entering the CVCC MS4s.

7.2 Follow-up on Source Elimination

Prior to closure of an illicit discharge investigation, CVCC is required to conduct or request a follow-up investigation to ensure the illicit discharge has been eliminated. When the source originated on campus, the follow-up investigation may simply include a field inspection with documentation including photos where the source had previously been identified. In the case of an off-campus illicit discharge, follow-up should include a request for information from the appropriate upstream enforcement entity. Documentation of off-campus efforts is also required on the CVCC IDDE Tracking Form.

7.3 Administrative Action, Enforcement and Penalties

CVCC prohibits illicit discharge into its MS4 through language provided within the Standards of Conduct for staff and the Student Handbook for students, each of which provide methods and procedures for reporting, as well as corrective and disciplinary action. Prohibition is also addressed through contract language with contractors performing work on the campus. If an individual or entity is identified during an illicit discharge investigation to be responsible for intentionally contributing to the discharge, the following binding documents will be utilized to conduct any necessary administrative action, enforcement, or penalties:

- Student Handbook – Intentionally causing an illicit discharge could be considered damage to College property or facilities and a violation of state and federal law under the Clean Water Act. Student disciplinary policies and procedures, as prescribed in the Student Handbook, will dictate the appropriate action.
- Standards of Conduct (staff) - Intentionally causing an illicit discharge could be in conflict with the standard of conduct requiring compliance to laws and regulations of the Commonwealth. Corrective and disciplinary actions will be as prescribed in the administration of the Commonwealth's disciplinary system.
- Contract Language – CVCC can pursue administrative actions within its authority, such as revocation with a Stop Work Order for construction sites or suspension or revocation of a contract.

Administrative action is the least desirable outcome of the CVCC IDDE program; however, it may be necessary in the following situations:

- Recurring or egregious illicit discharge incidents;
- Failure of a person knowingly responsible for an illicit discharge to notify CVCC or DEQ; or
- Refusal by the responsible party to voluntarily take corrective action on an illicit discharge, once it is brought to their attention.

Because CVCC has limited legal authority, any legal action would likely be initiated by a state or federal environmental agency in conjunction with the appropriate law enforcement agency. In some cases, as determined necessary by the Facilities Manager, CVCC may pursue common law trespass as a legal means to stop an illicit discharge.

One or more of the following enforcement actions will be performed for confirmed illicit discharges:

- Upon CVCC verification that the reported incident is a valid illicit discharge, the responsible party will be notified immediately (by letter) of the requirement to correct the illicit discharge and, when appropriate, remediate the area affected by that discharge.
- The appropriate State Authority and/or DEQ will be notified in writing of the illicit discharge in certain cases where the discharge is occurring within a live watercourse.
- CVCC may revoke or suspend a contract issued to an outside party should an illicit discharge be detected and not corrected by the responsible party.

7.4 Reportable Spills

If any unusual or extraordinary discharge should occur from a facility and the discharge enters or could be expected to enter surface waters, CVCC shall promptly notify, in no case later than within 24 hours, DEQ by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any known adverse effects on aquatic life. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

- Unusual spillage of materials resulting directly or indirectly from processing operations;
- Breakdown of processing or accessory equipment;
- Spills of large quantities of chemicals or fuels; and
- Flooding or other acts of nature.

NOTE: The immediate (within 24 hours) reports required to be provided to DEQ may be made to the Blue Ridge Regional Office Pollution Response Program as found at the link provided below. Reports may be made by telephone or by fax. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

<http://deq.virginia.gov/Programs/PollutionResponsePreparedness.aspx>.

APPENDIX A: CVCC Outfall Reconnaissance Inspection Form

SAMPLE OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Campus:	Outfall ID:
Today's date:	Time:
Investigators:	Form completed by:
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:
Camera:	Photo #s:
Notes (e.g., origin of outfall, if known):	

Section 2: Outfall Description

LOCATION	MATERIAL	CROSS-SECTION (SHAPE)		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> Concrete <input type="checkbox"/> Corrugated Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open channel	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Rip-Rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	Stop watch
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	_____ ' (Top) _____" (Bottom)	Ft	Tape measure
	Measured length	_____ ' _____"	Ft	Tape measure
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: General Physical Indicators for both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Severity Index

<p>An IDDE score will be calculated by summing the Severity Indexes in section 4 and adding the number of indicators checked as present in section 5</p> <p><input type="checkbox"/> Unlikely (No indicator checked as present in Section 4 <u>OR</u> only one (1) indicator checked as present in Section 5)</p> <p><input type="checkbox"/> Potential – (one (1) indicator with a severity of one (1) in Section 4 <u>OR</u> two (2) indicators checked as present in Section 5)</p> <p><input type="checkbox"/> Suspect - IDDE score of Three (3) (one or more indicators checked in Section 4 with a total of severities equal to three (3) <u>OR</u> more than two (2) indicators checked as present in Section 5 <u>OR</u> a total of severities in Section 4 plus indicators checked as present in Section 5 is equal to three (3))</p> <p><input type="checkbox"/> Obvious – IDDE score of greater than Three (3) (one or more indicators checked in Section 4 with and the total of the severities is greater than three (3) <u>OR</u> a total of severities in Section 4 plus indicators checked as present in Section 5 is greater than three (3)).</p> <p>IDDE Notes:</p>
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Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

APPENDIX B: CVCC IDDE Tracking Form

IDDE TRACKING Form

Date Illicit Discharge Observed/Reported: _____ Outfall # (if applicable): _____

Description of IDDE: _____

Date of Investigation: _____

Was the Source found? Yes No

If "Yes", please describe: _____

Was IDDE Resolved? Yes No

If "Yes", please explain how it was resolved (Please include any personnel or outside parties contacted or involved):

If "No", please explain why it was not resolved: _____

Is any follow-up action required? Yes No

If "Yes", please explain: _____

Date investigation closed: _____

Attach photos to this form and retain for records.