

Year 3 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2020-June 30, 2021

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2020 and June 30, 2021 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Westover Air Reserve Base

EPA NPDES Permit Number: MAR042051

Primary MS4 Program Manager Contact Information

Name: Champanine Saviengvong Title: Environmental Engineer

Street Address Line 1: 250 Patriot Avenue

Street Address Line 2:

City: Chicopee State: MA Zip Code: 01022

Email: champanine.saviengvong@us.af.mil Phone Number: (413) 557-3951

Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.westover.afrc.af.mil/About-Us/Resources/Environmental-and-Noise/>

Date SWMP was Last Updated: July 2021

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

Impairment(s)			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Phosphorus
<input checked="" type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
In State:	<input type="checkbox"/> Assabet River Phosphorus	<input type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input type="checkbox"/> Charles River Watershed Phosphorus	<input type="checkbox"/> Lake and Pond Phosphorus	
Out of State:	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input checked="" type="checkbox"/> Nitrogen
			<input type="checkbox"/> Phosphorus
<div>Clear Impairments and TMDLs</div>			

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Year 3 Requirements

- ☒ Inspected and screened all outfalls/interconnections (excluding Problem and Excluded outfalls)
- ☒ Updated outfall/interconnection priority ranking based on the information collected during the dry weather inspections as necessary
- ☒ Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - ☐ This is not applicable because we do not have sanitary sewer
 - ☒ This is not applicable because we did not find any new SSOs

- ☐ The updated SSO inventory is attached to the email submission
- ☐ The updated SSO inventory can be found at the following website:

- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated system map due in year 2 as necessary
- ☒ Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- ☒ Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- ☒ Updated inventory of all permittee owned facilities as necessary
- ☒ O&M programs for all permittee owned facilities have been completed and updated as necessary
- ☒ Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- ☒ Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☒ Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☐ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☐ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☐ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Unlike a traditional MS4, Westover does not have residences and does not have Military Family Housing, thus there are no pets or pet owners that live on-Base and thus there is no residential lawn maintenance. Traditional Permit holders need to send out educational messages multiple times per year, however at Westover, Federal contractors handle grass clippings, leaf litter. All septic systems on site are owned by Westover ARB and are operated under strict Base Operating Service (BOS) contract terms. See Westover SWMP Section 4.1.2

Nitrogen (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☐ Distributed an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers
- ☐ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☐ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Potential structural BMPs

- ☒ Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen removal by the BMP was estimated consistent with Attachment 1 to Appendix H. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen removed in mass per year by the BMP were documented.

- ☐ The BMP information is attached to the email submission
- ☒ The BMP information can be found at the following website:

<https://www.westover.afrc.af.mil/About-Us/Resources/Environmental-and-Noise/>

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The SWMP and applicable BMPs were updated in accordance with Appendix H of the 2016 Final Permit. See Section 3 of the Westover ARB SWMP.

At Westover ARB, the Base Civil Engineer is the single authority for making decisions on disposal methods, and the BOS Contractor is the single workforce. The BOS Contractor is allowed to dispose of leaf clipping on within the specific terms of the contract. Westover does not dispose of leaf litter. Leaf litter is collected, piled, and physically turned by the BOS Contractor. Any changes to process are manifested through contract modifications. The contractor's performance is monitored through QAEs and instructions for the contractor can only be communicated through the QAEs and Base Contracting Officer. Summary: Additional education

regarding leaf litter is not needed. (See Westover SWMP Section 4.1.2)

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
- ☒ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

☐ Yes

☒ No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period:**

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

BMP: 1a - Industrial Users (including employees, tenants, and contractors)

Message Description and Distribution Method:

Distribute one message within the 6-yr term of 2017-2023:

- Face-to-face training of Marine Vehicle Repair Shop in October and November 2019 on Spill Prevention and Response;
- Stormwater training for Aircraft Maintenance Group on 6 and 9 February 2020 (see slideshow in Appendix F of the SWMP); and
- Posted Environmental Management System Posters throughout base on stormwater and pollution prevention topics (see example poster in Appendix F of the SWMP).

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☒ No ☐

If yes, describe why the change was made:

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period:**

The SWMP and Annual Report were posted online for public feedback. See BMP 2a and 2b in the Westover ARB SWMP.

Was this opportunity different than what was proposed in your NOI? Yes ☐ No ☒

Describe any other public involvement or participation opportunities conducted **during this reporting period:**

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

☐ This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period.***

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- ☒ No outfalls were inspected
- ☐ The outfall screening data is attached to the email submission
- ☐ The outfall screening data can be found at the following website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period**.*

Number of outfalls screened:

*Below, report on the percent of outfalls/interconnections screened **to date**.*

Percent of outfalls screened:

Optional: Provide additional information regarding your outfall/interconnection screening:

Deadlines for dry weather screening and catchment investigations are delayed for new non-traditional permittees. No screenings or catchment investigations have been conducted yet. Dry weather screening and sampling will be conducted by 30 June 2024. Catchment investigations on high and low priority outfalls will be completed by 30 June 2031. Currently, no outfalls are classified as problem outfalls. However, if future outfall ranking updates discover a problem outfall (possibly based on the results of dry weather screening), a catchment investigation on that outfall will begin earlier. See BMP 3b in the Westover ARB SWMP.

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ☒ No catchment investigations were conducted
- ☐ The catchment investigation data is attached to the email submission
- ☐ The catchment investigation data can be found at the following website:

*Below, report on the number of catchment investigations completed **during this reporting period**.*

Number of catchment investigations completed this reporting period:

*Below, report on the percent of catchments investigated **to date**.*

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

Deadlines for dry weather screening and catchment investigations are delayed for new non-traditional permittees. No screenings or catchment investigations have been conducted yet. Dry weather screening and sampling will be conducted by 30 June 2024. Catchment investigations on high and low priority outfalls will be completed by 30 June 2031. Currently, no outfalls are classified as problem outfalls. However, if future outfall ranking updates discover a problem outfall (possibly based on the results of dry weather screening), a catchment investigation on that outfall will begin earlier. See BMP 3b in the Westover ARB SWMP.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- ☒ No illicit discharges were found

- ☐ The illicit discharge removal report is attached to the email submission
- ☐ The illicit discharge removal report can be found at the following website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period**.*

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018)**.*

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

No illicit discharges have been discovered. The deadline for IDDE written procedures for new non-traditional permittees is delayed until 30 June 2022. See BMP 3b in the Westover ARB SWMP.

Employee Training

Describe the frequency and type of employee training conducted **during this reporting period**:

No illicit discharge training has been conducted yet. EPA indicated to Westover that training is not required until completion of the IDDE Program written procedures which is due to be complete by 30 June 2022. See BMP 3b and 3e in the Westover ARB SWMP.

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

Number of Site Plans: MSE Remove Tanks Project; DogPatch Construction; Shoppette Canopy Project;

Repair Offloading Station

Number of Inspections:

(20) Inspections at EOD Bunker Construction Site.

(2) Inspections at Runway 05/23 Repair

(2) Inspections at Indoor Small Arms Range Construction

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment**As-built Drawings***Below, report on the number of as-built drawings received **during this reporting period**.*Number of as-built drawings received: *Optional:* Enter any additional information relevant to the submission of as-built drawings:

AFI 32-1023 Designing and Constructing Military Construction Projects Chapter 2.3.2 requires a comprehensive design and review process for all construction projects at Westover ARB, including submission of as-built drawings and development of operation and maintenance procedures. Additionally ETL 14-1 includes additional operation and maintenance requirements for projects. Both of these documents are enforced at Westover ARB. See BMP 5c in the Westover SWMP.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

2020:

Street and parking lot designs on Air Force facilities are required to follow Unified Facilities Criteria (UFC) 3-250-01 Pavement Design for Roads and Parking Areas and UFC 3-210-10 Low Impact Development. These UFCs aim to maintain pre-development hydrology through the use of LID techniques where feasible. For instance, UFC 3-210-10 specifically requires consideration of bioretention areas, permeable pavements, cisterns, and green roofs. LID technologies are evaluated based on their cost effectiveness and ability to keep post-construction discharges and volumes lower than pre-construction discharges and volumes. Therefore, Westover ARB determines that no changes to these regulations are required. See BMP 5d in the Westover ARB SWMP.

Proposed 2021:

Street and parking lot designs on Air Force facilities are required to follow Unified Facilities Criteria (UFC) 3-250-01 Pavement Design for Roads and Parking Areas and UFC 3-210-10 Low Impact Development. In addition to this requirement, Westover ARB has developed and adopted a written policy for construction storm water management that meets the requirements of the MS4 Permit by following storm water design guidelines described in the Massachusetts Stormwater Handbook. See BMP 5d in the Westover ARB SWMP.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

This report is not applicable to non-traditional permittees (2016 Final Permit Part 5.1.3).

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

A list of retrofit opportunities will be developed by 30 June 2023. See BMP 5c in the Westover ARB SWMP.

MCM6: Good Housekeeping

Catch Basin Cleaning

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period**.*

Number of catch basins inspected: 408

Number of catch basins cleaned: 66

Total volume or mass of material removed from all catch basins: 210 cubic feet

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins: 1,457

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

N/A

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

☐ Number of miles cleaned:

☐ Volume of material removed: [Select Units]

☐ Weight of material removed: [Select Units]

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

Westover is covered under the MSGP and its associated SWPPP, which is not reportable on this Annual Report Form.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- ☒ Not applicable
- ☐ The results from additional reports or studies are attached to the email submission
- ☐ The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

COVID-19 Impacts

Optional: If any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 4 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Develop a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover
- Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
- Identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)

Provide any additional details on activities planned for permit year 4 below:

In year 4, an IDDE written procedures plan will be developed, and the Nitrogen Source Identification Report will be completed. See SWMP Appendix D.

Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

JOHN B. MORIARTY

Title:

Chief, Environmental Engineer

Signature:

Date:

09/27/21

*[Signatory may be a duly authorized
representative]*

Note: When prompted during signing, save the document under a new file name.

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA: stormwater.reports@epa.govMassDEP: laura.schifman@mass.gov

Paper Signature:

If you did not sign electronically above, you can print the signature page by clicking the button below.

[Print Signature Page](#)

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.

[Lock Form](#)