



**Municipal Separate Storm Sewer System (MS4)
2021 Annual Report**

A. Permittee Information

1. Name of MS4: City of St. Albans
 2. Permit Number: 7074 - 9014.ARA

B. Attached Documents

The following documents have been prepared and submitted with this Annual Report:

- Annual Report Workbook (.xlsx)
- BMP Tracking Table (.xlsx)

C. Certification of STPs constructed to comply with the FRP or PCP

The following BMPs were built or implemented within the past calendar year and were constructed in compliance with the approved Flow Restoration Plan (FRP) or Phosphorus Control Plan (PCP).

Name of System	Location
None.	

N/A

Name of Qualified Designer	Title
Signature	Date

D. MS4 Operator Certification

This Annual Report shall be signed by a principal executive officer, ranking elected official or other duly authorized employee consistent with 40 CFR §122.22(b) and certified as follows:

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 gathered and evaluated 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 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.

Chip Sawyer	Director of Planning & Development
Print Name	Title
Chip Sawyer	March 31, 2022
Signature	Date

Digitally signed by Chip Sawyer
Date: 2022.03.31 14:02:45 -04'00'

Minimum Control Measure Reporting

GP Part	MCM Requirements	Measurable Goal	Description of how requirement was met	List attachments if applicable	Activities planned for next year	Proposed change in BMP or measurable goal?
MM#1: Public Education and Outreach on Stormwater Impacts						
1.c. (1)	Website maintained with locally relevant stormwater information	384 site visits and 1,372 page views.	Site updates and new content at www.fcsvt.org	Franklin County Stormwater RSEP Report.	Same.	No.
1.c. (2)	Maintain a program to identify opportunities and provide technical assistance on Low Impact BMPs	275 Visits to technical asst. pages.	Total page views to the following pages: Workshops page: 161, Homeowner DIY: 35, Intentional Gardening: 32, Driveway Drainage: 47. Driveway workshop reformatted.	Above.	Same.	No.
1.c. (3)	Participate in a regional stormwater education strategy or develop an MS4 specific program	Franklin County Stormwater is the City/Town RSEP, administered by NRPC.	The City pays \$5,000 annually to this effort. In addition to web visits reported above, the RSEP participates in produce of online videos and collaboration with organizations, like the Friends of Northern Lake Champlain. All in RSEP report attached.	Above.	Same.	No.
	Other	Additional marketing and educational work.	19 Media posts. 14 News stories. Front Porch Forum posts. Educational storymap created and distributed.	Above.	Similar	No.
MM#2: Public Involvement and Participation						
2.d	Participate in a regional stormwater public involvement and participation strategy or develop an MS4 specific program	Clean-up Events.	Butt Litter Pick-up stats: 6 events, 61 participants, 43,194 butts collected. Outdoor Cleanup Stats: 20 volunteers, 1,439 pieces of trash collected.	Above.	Same.	No.
	Other	Recruiting volunteers to support projects, promote events, and/or engage the public.	144 participants via Facebook page following. 81 volunteers attended FCS-led events. Partners: Mill River BBQ and Smokehouse, The Tobacco Coalition, The Rozalia Project, Outdoor Gear Exchange	Above.	Similar	No.
MM#3: Illicit Discharge Detection and Elimination						
3.a (1)	Develop and maintain a GIS or AutoCAD map of the storm sewers in the regulated MS4 showing all outfalls	No updates to maps 2021.	Public Works cleaned catch basins, and visited key outfalls.	N/A.	Begin process to procure new mapping system.	No.
3.a (2)	Develop ordinance or policy prohibiting non-stormwater discharges and implement enforcement procedures	Achieved	Adopted as part of Stormwater Management and Operations on 05/14/18.	Previously submitted.	Complete.	No.
3.a (3)	Develop and implement a plan to detect and address non-stormwater discharges	50 outfalls inspected in 2021.	See attached IDDE report.	IDDE report.	Develop IDDE follow-ups and workplan for 2022.	No.
3.a (4)	Inform public on the dangers of illegal discharges	50 catch basins stenciled in 2021.	50 catch basins stenciled in 2021.	N/A.	Public notices as necessary. Stencil CBS.	No.
3.a (6)	Status of monitoring activities:					
	Outfalls Inspected:	50	See attached IDDE report.	IDDE report.	Develop IDDE follow-ups and workplan for 2022.	No.
	Number of dry-weather samples taken:	14	See attached IDDE report.	Above.	Above.	No.
	Feet of stormwater drainage pipe inspected:	None.	Did not camera drainage pipe in 2021.	Above.	Above.	No.
	Discharges Detected:	9	Suspected discharges, but further sampling and follow-up is required in 2022.	Above.	Above.	No.
	Discharges Corrected:	None.	Suspected discharges, but further sampling and follow-up is required in 2022.	Above.	Above.	No.
	Other					
MM#4: Construction Site Stormwater Runoff Control						
4.a (1)	Develop and implement procedures to ensure that construction activities undertaken by the MS4 are properly permitted	Achieved.	City projects follow EPSC guidelines and apply for State or local construction stormwater permits, depending on size of project.	N/A.	Same.	No.
	Number of permitted MS4 construction projects:	2	Neighborhood sidewalk project, Kingman Street Project	N/A.	Same.	No.
4.a (2)	Review existing policies to determine effectiveness, consistency with state standards; Amend for consistency with state standards	Achieved.	Review performed during drafting of local ordinances 2015-2018. No updates required in 2021.	N/A.	Same.	No.
4.a (3)	Develop and implement ordinance that regulates earth disturbance <1ac	Achieved.	Adopted as part of Stormwater Management and Operations on 05/14/18.	Previously submitted.	Complete.	No.
	Number of projects with <1ac of disturbance subject to MS4 requirements:	1	Nutrablend expansion	N/A.	Same.	No.
	Other					
MM#5: Post Construction Stormwater Management for New Development and Redevelopment						
5.d	Review existing policies to determine effectiveness, consistency with state standards, opportunities for LID, and opportunities for changes to street and parking requirements; Amend for consistency with state standards	Achieved.	Review performed during drafting of local ordinances 2015-2018. No updates required in 2021.	N/A.	Same.	No.
5.e	Develop and implement procedures to identify projects that disturb >1ac but do not require a state post-construction permit	Achieved.	Adopted as part of Stormwater Management and Operations on 05/14/18.	Previously submitted.	Complete.	No.
	Number of projects >1ac of disturbance <1ac of impervious:	0	There was none in 2021.	N/A.	Same.	No.
5.f	Adopt an ordinance or policy that requires projects that disturb >1ac to utilize a combination of structural, non-structural, and low impact BMPs and ensure long-term maintenance.	Achieved.	Adopted as part of Stormwater Management and Operations on 05/14/18.	Previously submitted.	Complete.	No.
5.g (1)	Develop and implement procedures for inspecting projects subject to the MS4's ordinance.	Achieved.	Adopted as part of Stormwater Management and Operations on 05/14/18.	Previously submitted.	Complete.	No.
	Number of STPs (without state permits) inspected by MS4:	0	There was none in 2021.	N/A.	Same.	No.

5.g (2)	Develop and implement procedures to ensure that development activities undertaken by the MS4 are properly permitted.	Achieved.	City projects follow guidelines and apply for State or local stormwater management permits, depending on size of project. Typically the only permits needed are State stormwater construction permits, which are obtained.	N/A.	Same.	No.
Other						
MM#6: Pollution Prevention and Good Housekeeping for Municipal Operations						
6.b (2)	Conduct stormwater training for staff	0 trainings attended.	Suspended normal trainings, due to COVID-19.	N/A.	Resume normal training frequency.	No.
6.b (3)	Implement controls for reducing or eliminating the discharge of pollutants from the MS4.	Achieved.	See below.	N/A.	Same.	No.
	STPs constructed, upgraded, & maintained	5 maintained.	List in BMP tracking table	BMP Tracking Table	Same.	No.
	STPs incorporated into the MS4	0 in 2021. 3 Existing.	List in BMP tracking table	BMP Tracking Table	Same.	No.
	Inspections performed on fleet vehicles, buildings, garages, parks, open spaces	Regular inspections.	Regular maintenance as needed, as per equipment manuals. Notably, the Johnston Sweeper and the Vac-Con Sewer/Stormwater maintenance truck were inspected and maintained over the winter.	See Nonstructural tab.	Same.	No.
	Catch basin cleaning	122 CBs inspected/cleaned and 20 yards of sediment collected.	Complete 'Non Structural Tab'	See Nonstructural tab.	Same.	No.
	Street Sweeping	1,774 miles swept & 335 yards of debris collected.	Complete 'Non Structural Tab'	See Nonstructural tab.	Same.	No.
	Leaf/organic waste removal program	None in 2021. However, did collect xmas trees and recycle them.	Complete 'Non Structural Tab'	N/A.	No plans for 2021 as of yet.	No.
6.b (4)	Develop and implement procedures for proper disposal of wastes	Achieved.	Submitted with 2019 Report. No updates in 2021.	Previously submitted.	Update as needed.	No.
6.c	Prohibit use of phosphorus containing fertilizers on facility operations unless warranted by a soil test; submit copy of test	Achieved.	This is a standard City policy. Also included in contracts, when appropriate.	N/A.	Update as needed.	No.
6.d	Participate in the Agency's Municipal Compliance Assistance Program (or other audit program) for municipal garages	None. Informed that MCAP no longer exists.	Informed by VT DEC staff that MCAP no longer exists. No replacement program was brought to our attention.	N/A.	Resume similar program, if made available.	No.
Other						

Additional MS4 Reporting Requirements	
Annual Review of SWMP completed	Yes
Results of information collected and analyzed, if not included elsewhere	N/A
Notice that permittee is relying on another entity to satisfy some of its permit obligations	Northwest Regional Planning Commission: MCMs 1 and 2.
Estimated funds spent on stormwater management for the fiscal year*	\$230,766 (Stormwater Utility FY2021 budget)
Other information, if applicable	

Impaired Waters Response Plan	
Impaired Stream	Rugg Brook.
Impairment	Stormwater sediment.
Status of implementation	Pursuing implementation of FRP. Completed final design of SASH/Nason St. BMP.
Planned activities for upcoming year	Pursue funding and construction of SASH/Nason St. BMP.
Other information, if applicable	

Impaired Waters Response Plan	
Impaired Stream	Stevens Brook.
Impairment	Stormwater sediment.
Status of implementation	Pursuing implementation of FRP. Continued design of Lo. Welden Cooling Ponds BMP and began design of Lemnah Drive BMP.
Planned activities for upcoming year	Pursue funding and construction of Lemnah Drive BMP. Continue conversation with VT DEC about Hungerford land BMP.
Other information, if applicable	

Non Structural BMP Reporting

Complete Table 1 or 2, depending on tracking method used by MS4

Table 1. Area tracking method			
Sub Area Name (Lake segment, route, etc.)	St. Albans Bay		
Area of streets swept (acres)	46.5		
P Load from Streets where sweeping occurs (kg/year)	20		
Sweeper Frequency	Weekly		
Sweeper Technology	Vacuum Assisted		
Year sweeping started	2008		
If weekly or monthly, number of months streets are swept	8		
Phosphorus Credit	4.27%		
Phosphorus Reduction from Street Sweeping (kg/year)	0.853333333		
Catch Basin Cleaning			
P Load from Streets where catch basin cleaning occurs (kg/year)			
Phosphorus Credit	2%	2%	2%
Phosphorus Reduction from Catch Basin Cleaning(kg/year)			

Table 2. Measurement of material tracking method	
Combined dry weight of material collected (kg)	
OR Cubic yards of material collected	20 yards total from 122 catch basins.
Number of sediment samples taken	One sample in April.
Lab where samples were processed	
Record the average TP result	
Was a particle size analysis done?	
Please attach results from the lab	

**There is currently no approved accounting methodology based on weight or volume of material collected. Should a method be developed, DEC anticipates information like that in Table 2 could be required.

Table 3. Phosphorus Reduction Factor				
	2/year (spring and fall)	Monthly	Weekly	4X in the fall
Mechanical Broom	1%	3%	5%	17%
Vacuum Assisted	2%	4%	8%	17%
High Efficiency Regenerative Air-Vacuum	2%	8%	10%	17%

Flow Restoration Plan Implementation		
	Rugg Brook	Stevens Brook
Summary of actions taken to implement FRP components	Final design and permitting for SASH/Nason BMP	1. Continued design of Lo. Welden Cooling Ponds BMP and purchased necessary land. 2. Continued design of Lemnah Drive BMP.
Extent of BMP implementation	Design	Design
Estimate of the extent of completion for remaining items	No other BMPs were advanced in 2021.	No other BMPs were advanced in 2021.
Assessment of ability to meet outstanding schedule items	No actionable evidence at this time that schedule cannot be met, but the true feasibility of all BMPs has not yet been tested against realities in the field, including landowner issues, VT DEC permitting conflicts, and final costs.	No actionable evidence at this time that schedule cannot be met, but the true feasibility of all BMPs has not yet been tested against realities in the field, including landowner issues, VT DEC permitting conflicts, and final costs.

Stream Flow Monitoring	
Participate in MOU with VTDEC to monitor sw impaired streams	Participating.
Funds spent on stream flow monitoring in 2021	\$6,743

Stream Corridor Protection	
Ordinance or regulation adopted to protect and regulate development in sw impaired water stream corridors	Stream Corridor Rules previously adopted are available at www.stalbansvt.com/stormwater

Phosphorus Control Plan Development	
Extent of implementation of the Municipal Roads Standards	
Road Erosion Inventory (REI)	Uploaded to 'Municipal Roads General Permit Implementation Table' in Dec. 2019
Map and identify connected curbed and catch basin road segments to specified outlets	Mapped in Previous Years.
Roads and Outlets planned for upgrade within the first permit term (through July 2023)	Replaced drainage pipe and outfall and completed erosion repairs for O9906 2021.
Roads and Outlets planned for upgrade in calendar year 2022.	Planning to replace drainage pipe and outfall and complete erosion repairs for O9908 in 2022.
Extent of street sweeping and catch basin cleaning	See 'Non-structural tab'
Extent of stormwater BMP implementation	See 'BMP Tracking Table'
Estimate of the extent of remaining items requiring completion	No other items remaining: PCP submitted on March 31, 2021.
Assessment of the ability to meet outstanding schedule items	No other items remaining: PCP submitted on March 31, 2021.
List of '3 acre sites' that have been taken over by the MS4	None.
Has this acreage been included in the MS4's baseload calculations?	N/A
Has the baseload been calculated based on municipally owned and controlled developed lands?	Yes.
Summarize progress on establishing P credits for existing projects	P credits established and included in submitted PCP.
Summarize progress on identifying additional projects necessary to meet the PCP targets	Submitted PCP shows that targets can be met with projects in the FRP.

BMP Identification			Design, Construction and Maintenance							Basin Information				BMP Tracking Specifications							Phosphorus Calculations													
BMP ID	BMP Name	Responsible Party	Latitude (decimal)	Longitude (decimal)	Existing SW Permit Number/ID	Watershed Project Database	Part of MS4 Program Database	Cost Estimate	BMP Status	Year Planned Construction	Date	Date of last Maintenance	IC TMDL List	Eligible for Phosphorus Credit	BMP Type	Impervious area (sq ft)	Previous Entry	Previous	Previous	Previous	Previous	Previous	Total Phosphorus	Drainage Area (sq ft)	Infiltration	Load Before Treatment	Storage Depth	Phosphorus	Reduction	Manual P Reduction	Is this an eligible to be changed?	Does the upgrade change the drainage area?	% Credit to	P Credit
CP01	Drainage Ditch Interceptor West	City of St. Albans	44.821771	-73.265422			Yes	Complete		6/1/2012	6/2/2012	Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Infiltration Chambers	0	0.14	0.14	0.14	0.14	0.14	0.14	688	0.12	0.20	0.72				Yes		100%	
CP02	Travis Park Run Catcher	City of St. Albans	44.821771	-73.265422	1129		Yes	Complete		6/1/2012	6/2/2012	Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Retention (pre-treatment)	0	0.21	0.21	0.21	0.21	0.21	0.21	550	0.24	0.94	2.06				Yes		100%	
SP002	LaSalle/Neves Street	City of St. Albans	44.821771	-73.265422	2105		Yes	Final Design (100%)	2012	6/1/2012	6/2/2012	Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Swamp Wetland	0	15.06	15.06	15.06	15.06	15.06	15.06	55,827	5.56	5.27				Yes		100%		
SP003	Lowell Street 2	City of St. Albans	44.821771	-73.265422	1566		Yes	Preliminary Design (100%)	2012	6/1/2012	6/2/2012	Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Swamp Wetland	0	5.71	5.71	5.71	5.71	5.71	5.71	24,547	7.89	2.95				Yes		100%		
SP004	Lower Middle Street	City of St. Albans	44.821771	-73.265422	2141		Yes	Preliminary Design (100%)	2012	6/1/2012	6/2/2012	Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Swamp Wetland	0	20.61	20.61	20.61	20.61	20.61	20.61	274,479	76.88	1.14				Yes		100%		
SP005	Hwy93rd/Lower Basin	Community Base Management	44.821771	-73.265422	2248		Yes	Planned				Drains Brook	St. Albans Bay Direct Drainage	St. Albans Bay	Yes	Swamp Wetland	0	60.13	60.13	60.13	60.13	60.13	60.13	222,156	48.87	1.19				Yes		100%		

BMP Identification								Maintenance	
Unique ID	Project Name	Land Owner	Responsible Party	Latitude (decimal degrees)	Longitude (decimal degrees)	Previous SW permit number (if applicable)	Part of MS4/ Incorporated into MS4	Date of last inspection	Maintenance needed?
INC01	Murray Drive Swales	City of St. Albans	City of St. Albans	44.809995	-73.098619	1-0477	Yes	July 2021	Yes
INC02	Guyette Cir/Bowles Ln Swales	City of St. Albans	City of St. Albans	44.807015	-73.096380	1-0691	Yes	July 2021	Yes
INC03	Lemnah Drive 1	City of St. Albans	City of St. Albans	44.806063	-73.089327	2-0147	Yes	July 2021	Yes
INC04	Warner Dr/Isham Ave	City of St. Albans	City of St. Albans	44.817612	-73.076212	5521-9010.R	No	April 2021	No
DIV01	Stevens-Rugg Diversion Canal	City and Town of St. Alban	City and Town of St. Albans	44.806259	-73.091888	5643-INDO.AR	No	June 2020	Yes