

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2017	Permit No.	. ILR40 0401				
MS4 OPERATOR INFORMATION: (As it ap	pears on th	e curre	nt permit)			
Name: Village of North Aurora		М	ailing Addres	ss 1: 25 East	State Street	
Mailing Address 2:					County: Ka	
City: North Aurora	State:	: <u>IL</u>	Zip: 60542	2	Telephone:	630.906.7373
Contact Person: John Laskowski (Person responsible for Annual Report)		Ema	il Address:	jlaskowski@	northaurora.	org
Name(s) of governmental entity(les) in which	MS4 is loc	cated:	As it appea	rs on the cu	rrent permi	t)
Village of North Aurora						-7
THE FOLLOWING ITEMS MUST BE ADDRESS	SED.					
A. Changes to best management practices (cher regarding change(s) to BMP and measurable	ck appropria goals.)	ate BM	P change(s)	and attach in	formation	
1. Public Education and Outreach	□ 4	. Cons	truction Site	Runoff Contr	rol	П
2. Public Participation/Involvement	□ 5	. Post	Construction	Runoff Conf	trol	
3. Illicit Discharge Detection & Elimination	☐ 6	. Pollu	tion Prevent	ion/Good Hou	usekeeping	
 B. Attach the status of compliance with permit companies and progress towards MEP, and your identified measurable goals for 	achieving the	he stati	itory goal of	reducing the	ness of your discharge o	identified best f pollutants to the
C. Attach results of information collected and ana					ing the repor	ting period.
 D. Attach a summary of the storm water activities implementation schedule.) 	s you plan t	o unde	rtake during	the next repo	orting cycle (including an
E. Attach notice that you are relying on another g	government	entity	to satisfy sor	ne of your pe	rmit obligation	ons (if applicable).
F. Attach a list of construction projects that your	entity has p	aid for	during the re	eporting perio	d.	
Any person who knowingly makes a false, fictitiou commits a Class 4 felony. A second or subsequen	s, or fraudu it offense af	ilent ma fter con	terial statem viction is a C	ent, orally or l class 3 felony.	in writing, to (415 ILCS 5	the Illinois EPA /44(h))
The the				1/5/20	018	
Owner Signature: John Laskowski			m. 11	/ / Date:		
Printed Name:			Public	Works Direc	tor	
Finted Name:				Title:		

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

WATER POLLUTION CONTROL

COMPLIANCE ASSURANCE SECTION #19 1021 NORTH GRAND AVENUE EAST

POST OFFICE BOX 19276

SPRINGFIELD, ILLINOIS 62794-9276

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form WPC 691 Rev 6/10 has been approved by the Forms Management Center.

IL 532 2585

VILLAGE OF NORTH AURORA 2018 ANNUAL I.E.P.A. FACILITY INSPECTION REPORT

March 2017 to March 2018 Reporting Year

NPDES PERMIT FOR STORM WATER DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

- A. <u>CHANGES TO BEST MANAGEMENT PRACTICES</u> There are no significant changes to the Best Management Practices (BMP) for the control measures submitted in the Notice of Intent for the Village of North Aurora for this reporting period excepting those changes intended to meet recent modifications made by IEPA to the NPDES permit issued February 10, 2016.
 - A. Public Education and Outreach

Climate Change information has been provided on the Village of North Aurora website.

B. Public Participation/Involvement

No changes this reporting period.

C. Illicit Discharge Detection and Elimination

No changes this reporting period.

D. Construction Site Runoff Control

No changes this reporting period.

E. Post-Construction Runoff Control

No changes this reporting period.

F. Pollution Prevention/Good Housekeeping

No changes this reporting period.

B. STATUS OF COMPLIANCE WITH THE PERMIT CONDITIONS, INCLUDING AN ASSESSMENT OF THE BMPS AND PROGRESS TOWARD THE MEASURABLE GOALS

The status of compliance for the six (6) Control Measures outlined in the Village of North Aurora's Notice of Intent are presented in this report are summarized as follows and in the attached spreadsheet:

A. Public Education and Outreach

BMP A.1: Distribute informational pamphlets once per year.

The Village of North Aurora has provided information, received from both Kane County and the Kane DuPage Soil and Water Conservation District, to the public regarding the impact of storm water discharges and prevent storm water pollution. Information has been distributed to North Aurora schools and are also available at the North Aurora Village Hall. The Kane County Recycling Guide is also available at the Village Hall for distribution to residents.

The Village of North Aurora will continue to make information available to the public to educate them on the impact of storm water discharges and to prevent storm water pollution through pollution prevention practices.

NPDES Pamphlets were passed out in August at North Aurora Days Festival booth and "Help Reduce Storm Water Pollution" was posted on North Aurora's webpage.

BMP A.2: Invite and have the Kane-DuPage Soil and Water Conservation District, County or professional organization to participate in public meetings at least one or more times per year.

The Village of North Aurora partnered with the KDSWCD and held a public hearing at the Village of North Aurora Village Board meeting on March 5, 2018.

The Village of North Aurora will continue to schedule a public hearing and speaking engagement with KDSCD annually. The public hearing will be posted at the Village Hall and also on the Village of North Aurora website to inform the public of this event.

The Village conducted a seminar called Government 101. During the Public Works presentation the NPDES program was explained. Approximately 20 residents were in attendance.

BMP A.3: Create and televise a public service announcement once per year.

A public service announcement was run on the Fox Valley Television Cable Consortium on Channel 17. The Village of North Aurora's Notice of Intent and additional information is available on the Village of North Aurora's website for public access. The Village of North Aurora will continue to provide information on the Village's website and in the newsletter to educate the public on storm water pollution prevention. A link to the EPA's website on climate change, https://www.epa.gov/sites/production/files/signpost/cc.html has been added to the Village of North Aurora website.

BMP A.4: Pass out flyers and promote education of storm pollution at the North Aurora Days Festival.

The Annual North Aurora Days event was held in August, 2017 and provided an opportunity for the Public Works Director to publicly speak and answer questions regarding storm water pollution prevention. NPDES pamphlets were available. The Village of North Aurora's annual North Aurora Days Event will continue to provide an opportunity to reach out to North Aurora residents about water pollution prevention and distribute pollution prevention information.

BMP A.5: Pass out flyers and promote education of storm pollution at local schools.

The Village of North Aurora has distributed educational materials, received from Kane County and the Kane DuPage Soil and Water Conservation District, to the local schools. The Village of North Aurora will continue to annually provide educational materials to our local schools. Pamphlets were delivered to Goodwin, Fern and Schneider Elementary Schools on January 22, 2018

B. Public Participation/Involvement

BMP B.4: Conduct a Storm Water Pollution Public Hearing one (1) time per year.

The Village of North Aurora held a public hearing on March 5, 2018. The Kane DuPage Soil and Water Conservation District was in attendance.

C. Illicit Discharge Detection and Elimination

BMP C.1: Update storm sewer mapping as applicable, if funds are available.

The Village maintains and updates as necessary the computerized storm water mapping system. The map identifies storm sewer mains, sewer size and locations, catch basin locations, and discharge points to receiving waters (Fox River and tributary streams). A copy of the storm sewer map is kept on file. Updates to the mapping system are performed when funding is available.

BMP C.2: Keep a running record of illicit discharge violations, their cause, and the remedy.

The Village of North Aurora has adopted an illicit discharge detection and elimination ordinance approved May 16, 2016. The Village Codified ordinance states it is unlawful to discharge to any natural outlet without an NPDES permit. No violations have been issued during the reporting period.

BMP C.3: Log inspections of commercial/industrial sites and sanitary sewers inspections.

The Village performs cursory inspections of Village property during normal business operations for proper storage of materials. Visual inspections occur periodically in zoned commercial and industrial sites.

Sanitary sewers are televised and repaired as funding permits. No violations were reported for the 2017-2018 reporting year.

BMP C.7: Log inspections of storm sewer outfalls to the Fox River or Blackberry Creek with photo and visual inspection during dry weather conditions.

The Public Works Director conducted visual dry weather screening on outfalls to Mill Race that is an immediate tributary to the Fox River (West side) on 12/6/2016. The map and pictures are on file.

D. Construction Site Runoff Control

BMP D.1: Continue to enforce the Kane County Stormwater Ordinance.

The Village of North Aurora has adopted Ordinance 01-05-14-02, an Ordinance Adopting the Kane County Stormwater Management Ordinance, and subsequent amendments to Ordinance 01-05-14-02. This Ordinance incorporates by reference all of the provisions of the Kane County Storm Water Management Ordinance which was adopted by the Kane County Board and is enforced within the municipal limits by the Village of North Aurora. (Copies of all ordinances are on file) Review and Updates to the stormwater management ordinance are currently out for proposal as of February 21, 2017 by Kane County.

BMP D.2: Continue to contract with the Kane-DuPage Soil and Water Conservation District for soil and sedimentation plan review and inspection.

North Aurora has adopted Kane County Storm Water Ordinance and has an intergovernmental agreement (on file) with the Kane-DuPage Soil and Water Conservation District to provide on-going construction site soil erosion inspections for construction sites greater than or equal to 2 acres. The KDSWCD has authority to inspect these sites for NPDES compliance. A copy of the intergovernmental agreement between the Village of North Aurora and KDSWCD is on file. Copies of the erosion and sediment control inspections are on file.

BMP D.3: Log incidences of violations to Ordinance 2001-73.

The Village of North Aurora addresses the control of construction wastes such as discarded building material, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. Per ordinance 2001-73 building construction waste must be disposed of properly. No violations have been reported during this report period.

BMP D.4: Continue to review plans for conformance to the Kane County Ordinance and local Ordinances.

The North Aurora Public Works Department, the Building and Zoning Department, and the North Aurora Village Engineer jointly address plan reviews and site runoff control procedures with all contractors during pre-construction meetings, as well as conducting site inspections and ensuring enforcement. The Village Engineer reviews plans for conformance with engineering requirements and Kane County Ordinance. Copies of reviews are on file organized by a project by project basis.

E. Post-Construction Runoff Control

BMP E.2: Update and adopt revisions to the Kane County Stormwater Ordinance as required.

The Village of North Aurora has adopted Ordinance 01-05-14-02 which adopts the Kane County Stormwater Ordinance 00-312. This Ordinance incorporates by reference all of the provisions of the Kane County Storm Water Management Ordinance and is enforced within the municipal limits by the Village of North Aurora. A copy of this ordinance and all subsequent ordinances approving amendments to the Kane County Stormwater Ordinance are on file at the North Aurora Village Hall. Ensuring compliance with the Kane County stormwater ordinance reduces pollution due to decreased runoff rates and erosion control requirements. No changes have been made to the current ordinance.

BMP E.7: Inspect storm detention basins and visible storm features for trash and clean-up as required.

Storm water management facilities are owned by a public agency (or homeowners association) with long term maintenance costs covered by Special Service Areas (SSA). The Village performs cursory inspections and maintenance of Village detention basins during normal business operations on a request basis and as needed and regularly after severe weather events. Clean up is performed on a case by case basis as scheduling and allows, a fall and spring clean-up are scheduled through a lawn maintenance contract that addresses debris clean-up in roadside ditches. No major issues of concern were reported. No significant maintenance was performed

F. Pollution Prevention/Good Housekeeping

BMP F.1: Provide instruction on NPDES requirements and compliance for Public Works employees. Begin the creation of an Employee Pollution Prevention Manual, if funding is available.

North Aurora Employee Training for Public Works Employees is scheduled annually with the Kane DuPage Soil and Water Conservation District. The Village provided employee training in March of 2017. An Additional introductory training was conducted by Village staff for Public Works Employees on March 30, 2018.

BMP F.2: Clean at least 25% of catch basins in high traffic areas and arterial snow routes, 8000 feet of storm sewer, and if funding is available.

<u>Fleet and building maintenance</u>: Fleet and building maintenance is performed on a monthly basis by Village Staff. Used motor oil, fluids, batteries, tires, etc. are all recycled through approved recycling programs. North Aurora performs regular maintenance on their vehicles, vehicle wash waste is tributary to the sanitary sewer. The Police Department washes all vehicles through a public car wash that recycles and filters the water used. The North Aurora Fire Department vehicles are washed at Fire Station 2 inside where runoff is discharged through an approved triple trap system.

Parking lots and street cleaning: Bi-annual cleaning is done on all parking lots and streets and debris is dumped at an appropriate landfill to help keep storm sewers free of debris. Street sweeping was done throughout the village. The Village of North Aurora leaf collection program was conducted from mid-October 2017 through December 6 ,2017 as advertised to the public on the Village's website and October 2017 Newsletter. Street Cleaning was performed on 1/13/17, 7/12/17 and 12/04/17and on approximately August 7, 2017 after the North Aurora Days festival.

Storm drain system cleaning – increase inlet cleaning frequency on main roads: The Public Works Department attempts to clean sections of the storm drain system annually. This reporting year, Public Works has addressed all resident requests. Temporary low staff levels are preventing the increased frequency of this activity. Implementation of the Village GIS system will assist with developing a systematic cleaning schedule.

Road salt application and storage: Salt is stored in two covered salt domes with an impervious surface, and roads are salted using a minimal amount of salt necessary, roads are treated with an environmentally friendly liquid to help limit the amount of salt needed.

<u>Spill Response and Prevention</u>: The Public Works Department manages the prevention and response of spills as needed. The Fire Department is provided with updated Storm Sewer Maps when available.

C. RESULTS OF ANY INFORMATION COLLECTED AND ANALYZED, INCLUDING MONITORING DATA

Monitoring data for each BMP is shown on the attached spreadsheet to compare yearly BMP activities from one reporting year to the next to evaluate effectiveness. This is the second year the Village has begun tracking effectiveness. Statistical analysis will be difficult to establish in any category due to a limited amount of collected data. Initially it can be seen that the tonnage that is prevented from entering waterways is related to development. Additional descriptors will be added when and if they become available for qualitative comparison. The Village of North Aurora has a population of less than 25,000 and therefore has chosen to perform visual observations of select outfalls as a secondary means for monitoring effectiveness.

D. SUMMARY OF STORM WATER ACTIVITIES ANTICIPATED FOR THE NEXT REPORTING CYCLE

The Village will focus on addressing BMP goals that were not reached within this past reporting period and make progress on accomplishing them before the next reporting period.

E. <u>NOTICE OF RELYING ON ANOTHER GOVERNMENTAL ENTITY TO SATISFY SOME OF THE PERMIT OBLIGATIONS</u>

The Village of North Aurora relies on Kane County to fulfill its stormwater regulation and has adopted the Kane County Storm water Ordinance. The Village of North Aurora has also retained the services of the Kane-DuPage Soil and Water Conservation District to provide the Village's on-going construction site soil erosion inspections (intergovernmental agreement is on file).

F. CONSTRUCTION PROJECT LIST

The following road and construction projects were active in the Village of North Aurora from March 2017 to March 2018:

Road Construction and Infrastructure Improvements completed during the 2017-2018 Reporting Year

- Acorn Drive-resurfacing
- Alder Drive- reconstruction with storm sewer system point repairs
- Airport Road- reconstruction with storm sewer system point repairs
- Ice Cream Drive-reconstruction with storm sewer system point repairs
- Cherry Tree Court- water main and road reconstruction
- Smoke Tree Lane-water main installation and road reconstruction
- Deerpath Road- resurfacing
- Seavey Road-resurfacing
- Magnolia Drive-resurfacing/ storm system point repairs
- Feltes Lane-resurfacing
- Mitchell Drive-resurfacing

G. Summary of approved TMDL study BMP's

No TMDL limits nor TMDL BMPs have been implemented.

H. Qualifying Local Programs implementing all minimum control measures:

The Village of North Aurora is not relying on any local program to meet all minimum control measures.

VILLAGE OF NORTH AURORA NPDES MONITORING, RECORDKEEPING, REPORTING AND EVALUATION OF ESTIMATED POLLUTION REDUCTION REPORTING PERIOD MARCH 2017 THROUGH MARCH 2018

ВМР	Public Education and Outreach	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP A.1	Distributed Paper Material	Village of North Aurora	August for North Aurora Days	Oak and Randall Roads	25 pamphlets +/-	Pamphlets passed out in August at North Aurora Days Festival booth. "Help Reduce Storm Water Pollution" posted on North Aurora's webpage	v
BMP A.2	Speaking Engagement	Village of North Aurora	March 20, 2017	Village Hall	Approximately 20 residents attended Gov 101	KDSWCD gave a presentation at the Public Hearing held March 20, 2017. The Village conducted a seminar called Government 101. During the Public Works presentation the NPDES program was explained. Approximately 20 residents were in attendance.	V
BMP A.3	Public Service Announcements	Village of North Aurora	week of 1/22/17	N/A	Bulletin ran for 1 week	Stormwater Pollution outreach was advertised on the Fox Valley Cable channel	v
BMP A.4	Community Event	Village of North Aurora	August for North Aurora Days	Oak and Randall Roads	25 pamphlets +/-	passed out NPDES materials at the Annual North Aurora Days Festival in August	7
BMP A.5	Classroom Education Material Distributed	Village of North Aurora	1/22/2018	Various Schools	reached ~ 305 students	Pamphlets were delivered to Goodwin, Fern and Schneider Elementary Schools	v
ВМР	Public Involvement and Participation	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP B.4	Public Hearing	Village of North Aurora	1st and 3rd week of the month	Village Hall	No measurable public interest	Residents may speak at any public Village meeting that generally meets the 1st and 3rd week of the month.KDSWCD gave a presentation at the Public Hearing held March 5, 2018	v
ВМР	Illicit Discharge Detection and Elimination	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP C.1	Sewer Map Preparation	Village Engineer	no updates performed during this reporting period	N/A	Mostly minor development has occurred during the reporting period within existing developments where detention has already been provided	No new outfalls have been constructed to the Fox River. Outfalls for a respective developments are on file with the Village Engineer within the specific project file folder	V
BMP C.2	Regulatory Control Program	Village of North Aurora	adopted May 2016	Enforceable Village Wide	N/A	No violations have been issued during the reporting period.	V
BMP C.3	Detection/Elimination Prioritization Plan	Village of North Aurora, Village Engineer	Pre construction meeting was in October	see folder BMP C.3.	The Village is planning on televising 128,000 linear feet of sanitary sewer in the 2017-2018 fiscal year	Reduction of Inflow and Infiltration reduces the chance of sanitary sewer overflows decreasing the probability of stormwater pollution	V
BMP C.7	Visual Dry Weather Screening	Village of North Aurora, Village Engineer	12/8/2017	12" PVC White 12" PVC Green 10" PVC Green 8" PVC Green 12" PVC w/flap gate	5 outfalls located west on Grant Street behind the residential properties south of the State Street Bridge	All pipe are in good condition with no evidence of illict discharge or illegal connections. Photographs are on file.	7
ВМР	Construction Site Stormwater Runoff Control	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?

VILLAGE OF NORTH AURORA NPDES MONITORING, RECORDKEEPING, REPORTING AND EVALUATION OF ESTIMATED POLLUTION REDUCTION REPORTING PERIOD MARCH 2017 THROUGH MARCH 2018

ВМР	Public Education and Outreach	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP D.1	Regulatory Control Program	Village of North Aurora,Village Engineer	No updates to the stormwater control ordinance were made during the reporting period	Village Limits	New developments were reviewed during the reporting period for compliance with the stormwater ordinance. Correspondence is on file with the Village Engineer and copies with Village of North Aurora	Kane County distributed an RFP for Stormwater Ordinance updates on February 21, 2017 by Kane County. As revisions are proposed to the ordinance the Village will review proposed changes and adopt relevant revisions.	V
BMP D.2	Erosion and Sediment Control BMPs	Village of North Aurora, KDSWCD, Village Engineer	Various, see report print outs in file	Sites under construction	Smiles Dental, N.A. Lodgings Randall Crossings, Liberty Business Center Bldg. 1, North Aurora Storage	Smiles Dental 2.06 ac., N.A. Lodgings Randall Crossings 2.83 ac., Liberty Business Center Bldg. 151 ac., North Aurora Storage 11.95 ac. The total acreage is 67.84 ac * 20Tn/yr/ac = 1,356.8 Tn, estiamted tons of soil erosion prevented from entering streams by incorporating erosion and sedimentation control measrues.	V
BMP D.3	Other Waste Control Program	Village of North Aurora, KDSWCD, Village Engineer	Various see report print outs in file (BMP D.2)	Sites under construction	Smiles Dental, N.A. Lodgings Randall Crossings, Liberty Business Center Bldg. 1, North Aurora Storage	No written violations were issued during this reporting period.	V
BMP D.4	Site Plan Review Procedures	Village Engineer	various, but prior to permit issuance	Village Limits	developments are on file with the Village Engineer by project number and copies at Village of North Aurora	Ensuring compliance with Village requirements reduces pollution by following codes, ordinances, construction standards for protection and improves safety	V
ВМР	Post Construction Storm Water Management	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP E.2	Regulatory Control Program	Village Engineer	various, but prior to permit issuance	Village Limits	Developments are on file with the Village Engineer by project number, copies are provided and retained by the Village of North Aurora	Ensuring compliance with the Kane County stormwater ordinance reduces pollution due to decreased runoff rates and erosion control requirements.	V
BMP E.7	Other Post-Construction Controls	Village of North Aurora	during normal business operations	Village Wide	No major issues of concern were reported. No significant maintenance was performed	The Village performs periodic inspections of Village detention basins during normal business operations for maintenance and targeted inspections after significant rain events. Clean up is performed on a case by case basis and scheduling allows	V
ВМР	Pollution Prevention and Good Housekeeping for Municipal Operations	Key Organizer(s)	Date(s) Performed	Location(s)	Quantity Descriptor(s) (number, attendance, incidences, etc.)	Estimated Pollution Reduction, result, effect, response, actions taken or notes	Completed?
BMP F.1	Employee Training Program	Village of North Aurora	March 2016 and 2017	Village Hall	Public Works Street Division Employees	The Village provided employee training in March of 2017 and 2018. The Public Works Director attends the IAFSM conference annually where soil erosion topics are addressed. This employee is a retains a CPESC license.	Ŋ
BMP F.2	Inspection and Maintenance Program	Village of North Aurora	1/23/16, 7/12/17, 12/4/17	Throughout the Village	All major Village streets were cleaned, funding was not available for storm sewer cleaning this reporting period	North Aurora performs regular maintenance on their vehicles, wash waste is tributary to the sanitary sewer. Village streets are swept every fall and spring, catch basins are cleaned as funding permits	V

^{*}per NRCS construction site without erosion control can average a soil loss of 20-200 tons/acre/year