

COMMONWEALTH OF MASSACHUSETTS

# Town of Southwick

*Department of Public Works*

454 COLLEGE HIGHWAY, SOUTHWICK, MA 01077

Telephone (413) 569-6772 Fax (413) 569-5001 e-mail: dpw@southwickma.net

April 27, 2006

U.S. Environmental Protection Agency  
Water Technical Unit  
P.O. Box 8127  
Boston, MA 02114

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Re: Annual Report  
NPDES General Permit MS4  
EPA MAR041022/DEP W-045481  
Town of Southwick, Massachusetts

\*\*\* Sent Certified Mail \*\*\*

To Whom It May Concern:

Please find enclosed the NPDES Phase II Small MS4 General Permit Annual Report for the Town of Southwick, Massachusetts. This information is submitted to the EPA in accordance with EPA's Annual Reporting requirement.

If you have any questions regarding this information, please contact me at (413) 569-6772. Thank you for your attention in this matter.

Very truly yours,

A handwritten signature in cursive script that reads "R. Grannells".

Richard Grannells  
DPW Engineer

Enclosure

Copy: Linda Domizio, MA DEP Division of Watershed Management

RG/rg

Cc:  
J. Neece  
K. Stinehart



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# Town of Southwick

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Telephone (413) 569-6772 Fax (413) 569-5001 e-mail: dpw@southwickma.net

April 27, 2006

DEP, Division of Watershed Management  
627 Main Street  
Worcester, MA 01608  
Attn: Ms. Linda Domizio

Re: Annual Report  
NPDES General Permit MS4  
EPA MAR041022/DEP W-045481  
Town of Southwick, Massachusetts


\*\*\* Sent Certified Mail \*\*\*

Dear Ms. Domizio:

Please find enclosed the NPDES Phase II Small MS4 General Permit Annual Report for the Town of Southwick, Massachusetts. An original report is submitted to DEP in accordance with DEP and EPA's Annual Reporting requirement.

If you have any questions regarding this information, please contact me at (413) 569-6772. Thank you for your attention in this matter.

Very truly yours,



Richard Grannells  
DPW Engineer

Enclosure  
Copy: US EPA, Boston

RG/rg

Cc:  
J. Neece  
K. Stinehart

**Municipality/Organization: Southwick**

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**EPA NPDES Permit Number: MAR041022**

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**MaDEP Transmittal Number: W-045481**

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**Annual Report Number**

**& Reporting Period:**

**No. 3: March 05-March 06**

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## **NPDES PII Small MS4 General Permit Annual Report**

### **Part I. General Information**

**Contact Person: Karl Stinehart**

**Title: Town Administrator**

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**Telephone #: (413) 569-5995**

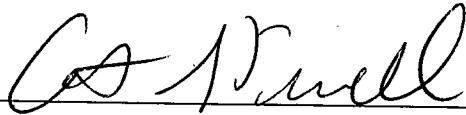
**Email: cpendleton@southwickma.net**

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### **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, 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.

**Signature:**



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**Printed Name: Arthur G. Pinell**

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**Title: Board of Selectman - Chair**

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**Date:**

**4/27/06**

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## **Part II. Self-Assessment**

The Town of Southwick has completed the required self-assessment and has determined that our municipality is in compliance with our Stormwater Management Program and permit conditions. The Town has aggressively mapped outfall locations throughout the Town. The Town is also working to develop a set of by-laws that addresses the NPDES requirements while considering the existing regulations and procedures that address stormwater management. Areas which will be addressed in more detail in Permit Year 4 include submittal of draft by-laws for Town Meeting approval.

### **Acronyms Used in Following Pages**

BOS = Board of Selectmen

Con Com = Conservation Commission

CRC = Citizens Restoring Congamond

DPW = Department of Public Works

LMC = Lake Management Committee

PB = Planning Board

PRC = Parks & Recreation Commission

PVPC = Pioneer Valley Planning Commission

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
1A Revised	Classroom Education	School District	Incorporate water quality into curriculum	Not originally planned for Year 3. The water temperature dropped early leaving few aquatics to observe. The Powdermill School performed water quality testing in late May after the aquatics started growing.	Study water quality as part of the 7 <sup>th</sup> and 8 <sup>th</sup> grade curriculum at Powdermill School.
1B Revised	Southwoods Magazine	Con Com/ BOS	Publish stormwater/ water quality info 1x /year	Drinking water results are published annually, with the latest published in June 2005.	Publish stormwater/water quality info one time in the year.
1C Revised	Newspaper Press Releases	BOS	Publish stormwater/ water quality info 2x / year	Newspaper articles published on Town Cleanup Day, Hazmat Collection Day, Annual Lake Cleanup, Sewer system installation progress and Old Town Beach 319 project. In addition, there were numerous articles on the DPW & Con Comm enforcing various illicit discharge and construction project NPDES issues.	Publish stormwater/water quality info twice in the year.
1D Revised	Local Cable Access	BOS	Post stormwater/water quality info 2x/ year	Taped and televised reruns of “Town Cleanup” and “Annual Lake Cleanup” (See BMP 2C).	Post stormwater/water quality info twice in the year.
1E Revised	Lakeside Kiosks	LMC	Post stormwater/water quality info 2x/ year	Handout information on exotic species to boaters launching at two State Boat Ramps. Also, “No Weeds In/No Weeds Out” and “Do not feed waterfowl” signs posted at launches	Post stormwater/water quality info twice in the year.

1F	Community Website	BOS	Post stormwater/water quality info 2x/ year	CRC and Commonwealth of Massachusetts websites are linked through the Town's website; LMC, ConCom and Community Preservation Committee also have pages on the Town website. DPW web pages include information on Highway Division activities including catch basin repairs and cleaning, street sweeping and roadside cleanup. Town Cleanup Day was publicized on Town Website. These pages will continue to be expanded to include more stormwater information as the program develops.	Post stormwater/water quality info twice in the year.
Revised					

### 1a. Additions

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### 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2A	Wetland Cleanup	Cub Scouts/ Con Com	Support interested groups with trash pickup. Cub Scouts annual wetland cleanup.	During 2005, Scouts planted trees at the Town well open-space area and had a clean-up day at the Town Sofinowski Land Preserve. Con Com & DPW also participated. Scouts also built and installed 10 bluebird houses on Town preserves.	Continue to support interested groups by collecting trash bagged by participants. Support/direct Cub Scout annual wetland cleanup.
Revised					
2B	Student Water Quality Monitoring	School Dept.	Conduct water quality sampling and analysis.	The schools performed lake water quality sampling and analysis during May 2005.	Conduct water quality sampling and analysis during 2006 if schools are able to schedule.
Revised					
2C	Annual Lake Cleanup	CRC	Conduct cleanup day	CRC and LMC conducted another annual cleanup of Lake Congamond,	Hold lake cleanup day in summer 2006. The cleanup day is scheduled

Revised					
2D	Lakeside Maintenance	LMC	Maintain trash receptacles at Lake	LMC continued to maintain ~25 trash receptacles at public access points to Lake Congamond.	Continue to maintain trash receptacles at public access points to Lake Congamond
Revised					
2E	Volunteer Water Quality Monitoring	CRC	Conduct water quality sampling & analysis	Water quality sampling & analysis was conducted at Lake Congamond monthly. Analytes include: temperature, pH, dissolved oxygen, conductivity, phosphorus & chlorophyll.	Continue water quality sampling & analysis.
Revised					

## 2a. Additions

	Town-Wide Cleanup	CRC/ ConCom/ DPW	Conduct Town-wide Cleanup Day	Promoted Town-wide cleanup on for April 23, 2005, where volunteers, with DPW assistance, collect litter from roadsides and throughout Town. The Rotary Club sponsored a cleanup of two miles of College Highway on 4/9/06 and	The Con Comm is working on scheduling a date for a Town-wide cleanup in 2006, where volunteers, with DPW assistance, collect litter from roadsides throughout Town.
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## 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3A	Mapping Stormwater Outfalls	DPW	Develop map of outfalls	DPW & Tighe & Bond field staff identified, inspected and GPS-located storm drain outfalls throughout the Town and catch basins within the urbanized areas of the Town.	Continue to map additional outfalls identified since initial mapping. Set schedule for field inspection.
Revised					

3B	Develop Illicit Discharge Program	DPW	Draft plan.	DPW has an existing Curtain Drain/ Foundation Drain Policy allowing connection to catch basin and another bylaw that prohibits discharging of sump pumps into the street or catch basins. Periodic inspections are conducted by DPW for presence of gray water or bacteria, which would result in disconnection from the system. Through storm drain outfall mapping process, potential illicit connections (sump pumps) continue to be identified and addressed. The Town's pre-existing sump pump bylaw already covers this illicit activity.	Prepare new procedures/ plan as necessary.
Revised					
3C	Non-Stormwater By-Law	BOS/DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. Draft bylaws have been approved by Town Counsel and are under review by the Town Board of Selectmen.	Refine by-law and propose to Town Meeting for adoption.
Revised					
3D	Illegal Dumping	DPW	Perform regular patrols/cleanup	DPW performed regular patrols and cleaned up illegal dumped trash. Police have ticketed those found responsible for illegal dumping.	Continue to perform regular patrols/cleanup.
Revised					
3E	Water Quality Monitoring	BOH	Regular sampling at beach sites in summer	BOH performed weekly sampling at beaches from June through August, 2005.	Continue to perform weekly water quality monitoring at beaches during summer months.
Revised					

**3a. Additions**




#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
4A Revised	Construction Runoff By-law	PB/ Con Com/ DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. By-law under review by Board of Selectmen, with DPW plan to submit to Town voters in 2006. Building Department is distributing information packages on NPDES construction and requiring builders to sign off on receipt of package. ConCom, Planning Board and DPW are also informing developers of NPDES requirements and have incorporated proof of NPDES NOI submittal and development of SWPPP as permitting requirement.	Refine by-law and propose to Town Meeting for adoption. Continue to work with developers to incorporate BMPs during construction activities.
4B Revised	Plan Review	PB/ Con Com/ DPW	Enforcement under by-law	Continued plan review per existing regulations.	Continue plan review per existing regulations. By-law enforcement proposed following adoption by Town voters..
4C Revised	Inspection / Reporting	DPW/PB/ Con Com	Enforcement under by-law	Continued inspection / reporting under existing regulations. Town officials have worked with developers to ensure compliance with required BMPs during construction.	Continued inspection / reporting under existing regulations. By-law enforcement proposed following adoption by Town voters..
Revised					

#### 4a. Additions


**5. Post-Construction Stormwater Management in New Development and Redevelopment**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 3</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 4</b>
5A Revised	Post Construction Runoff By-law	PB/ Con Com/ DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. Draft by-law was presented to Planning Board by DPW with favorable response for adoption. Draft bylaws have been approved by Town Counsel and are under review by the Town Board of Selectmen.	Refine by-law and propose to Town Meeting for adoption.
5B Revised	Construction Site Plan Review	PB/ Con Com/ DPW	Enforcement under by-law	Continued plan review per existing regulations. By-law enforcement proposed Years 4-5.	Continue plan review per existing regulations. By-law enforcement proposed Years 4-5.
5C Revised	Stormwater System Maintenance Plan	PB/Con Com/ DPW	Enforcement under by-law	Continued inspection / reporting under existing regulations. By-law enforcement proposed Years 4-5.	Continued inspection / reporting under existing regulations. By-law enforcement proposed Years 4-5.
Revised					
Revised					

**5a. Additions**


## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6A Revised	Municipal Maintenance Activity Program	DPW/ PRC	Evaluate and draft additional policies	All roads swept as part of spring cleanup. All catch basins are vacuumed 1x/year after sweeping, some 2x/year (by lakes). Draft Good Housekeeping Manual developed in March 2005.	Continue with annual sweeping program. Draft new policies as necessary.
6B Revised	Training of all municipal employees	DPW	Initial good housekeeping training	In-house training is done for new hires or anyone transferring within DPW. Good housekeeping training attended by Town Officials and DPW staff on April 11, 2006.	Conduct good housekeeping training.
6C Revised	Catch Basin Cleaning Program	DPW	Clean 90% of catch basins annually	Town purchased its own vacuum/jet rodder truck in 2005 and will now do all vacuuming with DPW employees. 97% of town catch basins within urbanized area were cleaned in the months of September, October and November, 2005.	Clean at least 90% of catch basins in 2006.
6D Revised	Street Sweeping & Cleaning	DPW	Sweep 90% of streets annually	100% of paved town streets within urbanized area were swept in the months of April, May and June, 2005. Approximately 25% of streets within urbanized area were swept twice.	Sweep at least 90% of streets in 2006.
Revised					

### 6a. Additions

	Exotic Aquatics Bylaw	LMC		Townpeople voted 11/30/99 to accept LMC proposed "No Weeds In/No Weeds Out" Town bylaw that addresses boats launching on Congamond Lakes – Ramp Attendants inspect boats entering/leaving ramps	Continue reminding public, boat inspection process & giving out handouts on preventing spread of nuisance aquatics. DCR plans to supply summer employees in 2006 to assist in monitoring boats in/out of ramps and educate users.
	Waterfowl Bylaw	LMC		Townpeople voted 3/14/02 to accept LMC proposed "Do Not Feed Waterfowl" Town bylaw that setup fines for feeding waterfowl. Ramp Attendants hand out literature on "why" not to feed waterfowl & LMC installed "Do Not Feed Waterfowl" signs at ramps & public areas. Compliance is nearly 100% without having to issue fines.	Continue reminding ramp users & public on benefits of not feeding waterfowl (besides fines).
	Stormwater Management	LMC		LMC began seeking Town Funds & matching grants in 1995 to address erosion, sedimentation, etc. LMC received grants in 1995, 1997, 1999 & 2001 for various catch basin, erosion control, sedimentation chambers, etc. New 65-space public parking area designed & built in 1998 adjacent to boat ramp with 100% of stormwater sheet flowing onto grassy area where it percs naturally into ground. The Town & PVPC received another 319 grant to address erosion & sediment issues in 4 subwatersheds on the western side of Middle Pond. The DPW installed a new deep sump catch basin on Powder Mill Road during 2005.	Continue seeking funding for projects in watershed. Work with PVPC (319 project manager) and consulting engineering company to define, design and implement BMPs in these 4 subwatersheds.

**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)</b>	<b>Planned Activities – Permit Year 4</b>
7A	No TMDL waters in Southwick				
Revised					
Revised					

**7a. Additions**

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**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

- The Town notes the high involvement of its citizens and various community and lake organizations in improving town-wide environmental conditions.
- Eleven (11) weekly water samples were collected and analyzed for coliform at the Town beach, with no samples indicating high coliform counts during the 2005 beach season.
- Water testing over the last five years by Citizens Restoring Congamond, Inc. showed levels of total phosphorus averaging over 20 micrograms/liter. Levels in other western Massachusetts lakes are typically in the (low) single digits indicating that the Congamond lakes are being affected by stormwater runoff.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

**Programmatic**

Stormwater management position created/staffed -- Currently being covered by DPW, Con Com & Board of Health – Long range staffing & necessary funding being assessed	(y/n)	Y & N (see left)
Annual program budget/expenditures		\$25K

**Education, Involvement, and Training**

Estimated number of residents reached by education program(s)	(# or %)	20%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	4-5 mi/yr
Household Hazardous Waste Collection Days		Normally 1x/yr
▪ days sponsored (held in July 2005, planned for July 2006)	(#)	1 day
▪ community participation	(%)	7%
▪ material collected	(tons or gal)	~6 tons
School curricula implemented	(y/n)	Y

## Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
<b>Regulatory Mechanism Status (indicate with "X")</b>				
▪ Illicit Discharge Detection & Elimination		X	X	
▪ Erosion & Sediment Control		X	X	
▪ Post-Development Stormwater Management		X	X	
<b>Accompanying Regulation Status (indicate with "X")</b>				
▪ Illicit Discharge Detection & Elimination		X	X	
▪ Erosion & Sediment Control		X	X	
▪ Post-Development Stormwater Management		X	X	

## Mapping and Illicit Discharges

Outfall mapping complete	(%)	96%
Estimated or actual number of outfalls	(#)	~220
System-Wide mapping complete (in urbanized area)	(%)	95%
<b>Mapping method(s)</b>		
▪ Paper/Mylar – Some older developments & projects	(%)	
▪ CADD – Some newer developments & projects	(%)	
▪ GIS – Town-wide GIS Warrant Article for Town voters in May 2005 Town Meeting. ~2-year effort initiated November 2005	(%)	X
Outfalls inspected/screened	(# or %)	~204
Illicit discharges/connections identified (4 possible outfalls + 3 sump pump discharges to storm sewers)	(#)	7
Illicit discharges/connections removed (Corrective action work initiated on 4 of 4 outfalls are part of 2005 319 Grant and BMPs will be defined by engineering consultant in mid 2006 with construction planned for early 2007; 3 of 3 sump pump discharges identified in 2004 have been corrected and 2 of 3 identified during 2005 already corrected, remaining property owner received 2 <sup>nd</sup> notice & fine under existing bylaw)	(#) (est. gpd)	See details at left

% of population on sewer	(%)	25%
% of population on septic systems (Sewer Phase 2 study completed with data collection and survey going to homeowners in potential areas.	(%)	75%

### Construction

Number of construction starts (>1-acre) Approximately 50% of starts exceed 1 acre.	(#)	49
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	75%
Site inspections completed	(# or %)	~75
Tickets/Stop work orders issued	(# or %)	~12
Fines collected (~12 \$25 fines issued by DPW; Con Comm has lien on major violator accumulating \$300/day fines; DEP issued large fines to two major violators in Town during 2005. Collection of fines levied is another story!	(# and \$)	
Complaints/concerns received from public	(#)	20-30

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	75%
Site inspections completed	(# or %)	~50
Estimated volume of stormwater recharged – DPW now requiring infiltration trenches/structures for roof water on most new housing starts and retroactive for construction in critical areas. DPW also regulates driveway stormwater management.	(gpy)	See left for info.

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1 time/yr
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Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1 times/yr
Total number of structures cleaned	(#)	~1100
Storm drain cleaned (jet rodded)	(LF or mi.)	~200'
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	700 to 800 tons (dry wt.)
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Town landfill / compost
Cost of screenings disposal (All basin & storm drain cleaning performed as contract service (\$30K)) DPW received \$210K in FY06 to purchase vacuum/jet-rod truck. Truck received November 2006 and in future DPW will do catch basin cleaning.	(\$)	~\$30K (2004)

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1 time/yr
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1 time/yr
Qty. of sand/debris collected by sweeping	(lbs or tons)	1200 - 1300 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Town landfill / compost
Cost of sweepings disposal (All sweeping performed as contract service (\$27K))	(\$)	\$0
Street sweeper being considered for possible purchase in FY08, depending on funding availability. Contract services will be used until DPW has own equipment.	(#)	See left
Developers required to keep roadways swept and vacuum catch basins until roads in development are accepted by Town.	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	NA
▪ Herbicides	(lbs. or %)	NA
▪ Pesticides	(lbs. or %)	NA

Anti-/De-Icing products and ratios (sand/salt mix is typically 4:1 or all sand)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	15% NaCl 5% CaCl <sub>2</sub> 0% MgCl <sub>2</sub> 0% CMA 0% Kac 0% KCl 80% Sand
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	N
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction – New larger storage facility 2005 funding requested	(y/n)	