

STORMWATER POLLUTION PREVENTION
PLAN

For the

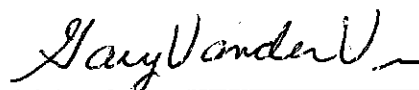
BOROUGH OF ALPINE

BERGEN COUNTY, NEW JERSEY

March, 2005

Revised April 1, 2006
Revised April 1, 2007
Revised April 1, 2008
Revised April 28, 2009
Revised April 15, 2011
Revised April 15, 2012
Revised March 15, 2013
Revised March 18, 2014
Revised March 1, 2015
Revised March 11, 2016
Revised February 1, 2017
Revised April 1, 2018

AZZOLINA & FEURY ENGINEERING, INC.
CONSULTING ENGINEERS
PARAMUS, NEW JERSEY



Gary Vander Veer, P. E.
N.J. License No. 25557

SPPP Signature Page

Municipality
Information

Municipality:Alpine County;County:Bergen

NJPDES # : NJG0150932PI ID #: 167001

Team Member/Title:Gary Vander Veer/Municipal Engineer

Effective Date of Permit Authorization (EDPA):April 1, 2004

Date of Completion:April 1, 2004Date of most recent update: April 1, 2018

"I certify that this SPPP includes all of the information and items identified in Attachment A of the Tier A Municipal Stormwater General Permit. 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 purposely, knowingly, recklessly, or negligently submitting false information."



(Signature)

April 1, 2018
(Date)

Gary Vander Veer
(Print Name)

Stormwater Coordinator
(Title)

(NOTE: A new SPPP signature page should be attached each time the SPPP is updated or modified, excluding data entries. Previous SPPP signature pages shall be retained as part of the SPPP.)

Tier A Municipal Stormwater Regulation Program

Stormwater Pollution Prevention Team Members

Number of team members may vary.

Completed by: Gary Vander Veer

Title: Alpine Municipal Engineer

Date: February 1, 2018

Municipality: Alpine

County: Bergen

NJPDES #: NJG0150932

PI ID #: 167001

Stormwater Program Coordinator: Gary Vander Veer

Title: Alpine Borough Municipal Engineer

Office Phone #: 201-845-8500

Emergency Phone #: _____

Public Notice Coordinator: Stephanie Wehmann

Title: Alpine Borough Clerk

Office Phone #: 201-784-2900 ext.19

Emergency Phone #: _____

Post-Construction Stormwater Management Coordinator: Gary Vander Veer

Title: Municipal Engineer

Office Phone #: 201-845-8500

Emergency Phone #: _____

Local Public Education Coordinator: Lorraine Mattes

Title: Alpine Environmental Commission Chairperson

Office Phone #: 201-784-2900 ext.22

Emergency Phone #: _____

Ordinance Coordinator: Russ Huntington

Title: Alpine Borough Attorney

Office Phone #: 201-666-8282

Emergency Phone #: _____

Public Works Coordinator: Frank Rickenbaugh

Title: Alpine Supt. of Dept. of Public Works

Office Phone #: 201-741-0086

Emergency Phone #: _____

Employee Training Coordinator: Frank Rickenbaugh

Title: Alpine Supt. of Dept. of Public Works

Office Phone #: 201-741-0086

Emergency Phone #: _____

Other: Alden Blackwell

Title: Alpine Borough Zoning Officer

Office Phone #: 201-784-2900 ext.22

Emergency Phone #: _____

SPPP Form 2 - Public Notice

Municipality
Information

Municipality: Alpine

County: Bergen

NJPDES # : NJG0150932

PI ID #: 167001

Team Member/Title: Stephanie Wehmann, Borough Clerk

Effective Date of Permit Authorization (EDPA): April 1, 2004

Date of Completion: 3/15/05

Date of most recent update: 02/01/18

Briefly outline the principal ways in which you comply with applicable State and local public notice requirements when providing for public participation in the development and implementation of your stormwater program.

For meetings where public notice is required under the Open Public Meetings Act (Sunshine Law, NJSA 10:4-6 et. seq.) the Borough of Alpine provides public notice in a manner that complies with the requirements of the Act. Also, in regard to the passage of Ordinances, the Borough of Alpine provides public notice in a manner that complies with the requirements of NJSA 40:49-1 et. seq. In addition, for municipal actions (e.g. adoption of the municipal stormwater management plan) subject to public notice requirements in the Municipal Land Use Law (NJSA 40:55D-1 et. seq.) the Borough of Alpine complies with those requirements.

SPPP Form 3 – New Development and Redevelopment Program

Municipality Information

Municipality: Alpine

County: Bergen

NJPDES # : NJG0150932

PI ID #: 167001

Team Member/Title: Gary Vander Veer, Stormwater Coordinator

Effective Date of Permit Authorization (EDPA): April 1, 2004

Date of Completion: 3/15/05

Date of most recent update: 2/1/18

Describe in general terms your post-construction stormwater management in new development and redevelopment program (post-construction program), and how it complies with the Tier A Permit minimum standard. This description must address compliance with the Residential Site Improvement Standards for stormwater management; ensuring adequate long-term operation and maintenance of BMPs (including BMPs on property that you own or operate); design of storm drain inlets (including inlets that you install); and preparation, adoption, approval, and implementation of a municipal stormwater management plan and municipal stormwater control ordinance(s). Attach additional pages as necessary. Some additional specific information (mainly about that plan and ordinance(s)) will be provided in your annual reports.

The Borough of Alpine is ensuring that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards for stormwater management (including the NJDEP Stormwater Management rules NJAC 7:8, referenced in those standards) are in compliance with those standards. Our planning board and zoning board of adjustment ensure such compliance before issuing preliminary or final subdivision or site plan approvals under the Municipal Land Use Law. These standards also apply to single, stand-alone residential lots in the Borough that are developed or redeveloped, subsequent to the Borough's adoption of NJAC 5:21-7 as the Borough's stormwater management requirements (Ordinance 587, adopted 4-25-2001).

Since the EDPA, the Borough has constructed a new development project on municipal property. The Borough has adopted its Municipal Stormwater Control Ordinance as of March 22, 2006. The Borough will ensure adequate long-term operation and maintenance of BMP's for any new project by requiring a project maintenance plan similar to the maintenance plan described in the above noted ordinance, and by requiring and funding the implementation of that plan. We will also require any storm drain inlets that we install to comply with the design standard in Attachment C of our permit or equal. We will ensure such operation and maintenance for any new development or redevelopment projects on our property by complying with the maintenance requirements in that ordinance. In addition, any storm drain inlets we install for such projects will comply with that ordinance's standard for such inlets.

(New Development and Redevelopment Program – cont.)

The Municipal Stormwater Management Plan (MSWMP) has been approved by the Alpine Planning Board. It has been approved by the Bergen County Planning Board on October 3, 2006. The Municipal Stormwater Control Ordinance has been adopted, with the date of adoption being March 22, 2006. Twenty days prior to adoption, the introduced version of the ordinance was submitted to the Bergen County Planning Board for review and comments. The Ordinance was approved by the Bergen County Planning Board on October 3, 2006.

The ordinance, which will be administered by the Alpine Planning Board, Zoning Board of Adjustment, and code enforcement officer, will control Stormwater from non-residential development and redevelopment projects. In the Borough of Alpine, non-residential areas are minimal, since there are no commercial or industrial zones. There are several pre-existing non-conforming uses that will be subject to these new regulations if redevelopment of the sites is proposed. Where it is necessary to implement the municipal stormwater management plan, the approved ordinance will also control aspects of residential development and redevelopment that are not subject to the Residential Site Improvement Standards. This will be similar to the current requirements in effect as a result of Borough Ordinance 587.

For any BMP that is installed in order to comply with the requirements of our post-construction program, the Borough of Alpine will ensure adequate long-term operation as well as preventative and corrective maintenance (including replacement) of BMPs. For BMPs on private property that we do not own or operate, the Borough of Alpine does this by requiring the private entity (homeowner's association) to perform the operation and maintenance, with penalties if the private entity does not comply. If, for example, the private entity does not perform the required maintenance, the Borough can perform the maintenance and charge the private entity.

The Borough of Alpine will also enforce, through the municipal stormwater control ordinance, compliance with the design standard in Attachment C of our permit, to control passage of solid and floatable materials through storm drain inlets. The Borough of Alpine expects that for most projects, such compliance will be achieved either by conveying flows through a trash rack as described in the "Alternative Device Exemptions," or, for flows not conveyed through a trash rack, by installation of the NJDOT bicycle safe grate and, where curb pieces are needed, a curb piece with a clear space opening no bigger than two inches across the smallest dimension. The current standard used in the Borough is attached hereto (or approved equal).

The new project constructed by the Borough provides for affordable housing (eight unit apartment building). The project received approval from NJDEP and included stormwater management improvements to address stormwater runoff quantity controls, quality controls and groundwater recharge.

(New Development and Redevelopment Program – cont.)

The Borough enforces the requirements of N.J.A.C. 7:8; specifically, addressing stormwater runoff quantity controls, quality controls and groundwater recharge requirements, through review of residential development and redevelopment plans. When variances and/or waivers of existing Borough ordinances are required, the applications shall apply for approval from one of the Borough's land use boards. Approvals will include conditions for installation and maintenance of stormwater management improvements. The stormwater runoff quality controls and groundwater recharge requirements are triggered when the project is classified as a "major development", as defined in N.J.A.C. 7:8. The stormwater runoff quantity controls are required regardless of the size of the development or redevelopment.

The Borough's existing Municipal Stormwater Control Ordinance and Municipal Stormwater Management Plan shall be reviewed at each re-examination of the Borough's Master Plan.

SPPP Form 4- Local Public Education Program

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Lorraine Mattes, Environmental Commission Chairperson

Effective Date of Permit Authorization (EDPA): 04/01/2004

Date of Completion: 3/15/05 Date of most recent update: 04/28/11

Local Public Education Program

Describe your Local Public Education Program. Be specific on how you will distribute your educational information, and how you will conduct your annual event. Attach additional pages with the date(s) of your annual mailing and the date and location of your annual event.

The Borough of Alpine intends to comply with the local public education program in accordance with the requirements of Attachment E of the permit including but not limited to the following:

Maintain a stormwater related page on the municipal website, including a link to www.cleanwater.nj.org.

Each resident and business shall be mailed a Department educational brochure (pet waste).

Present a display at the municipal building and provide Department literature at a municipal event (Memorial Day Parade).

Provide a poster to be displayed at the ballfield at the school and/or at the field adjacent to the municipal building.

Distribute a letter from the Governing Body to every residence and business, highlighting the Borough's ordinances relating to stormwater runoff.

The local public education program shall meet or exceed the ten point total requirement to comply with Attachment E of the permit.

SPPP Form 5 – Storm Drain Inlet Labeling

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Frank Rickenbaugh, Supt., Dept. of Public Works

Effective Date of Permit Authorization (EDPA): 04/01/2004

Date of Completion: 3/15/05 Date of most recent update: 02/01/18

Storm Drain Inlet Labeling

Describe your storm drain inlet labeling program, including your labeling schedule, the details of your long-term maintenance plan, and plans on coordinating with watershed groups or other volunteer organizations.

All storm drain inlets within the Borough were previously labeled by the local girl scouts as a community service project. The labels were plastic labels, applied with an adhesive.

There are no municipal streets in the Borough of Alpine with sidewalks. The only parking areas that apply are the parking lots adjacent to the municipal building, the fire house, and the elementary school. The Dept. of Public Works garage and maintenance yard also fall into this category. Labeling of any inlets within these areas will be completed. Since the areas that fall under the mandatory labeling guidelines is quite limited, 100% of the required labeling will be completed by April, 2006.

The attached map divides the Borough of Alpine into two sectors. Sector A is the area north of Closter Dock Road and Sector B is the Area South of Closter Dock Road. This map will be used for this program as well as the Outfall Pipe Mapping program, and the Illicit Connection Elimination Program.

In addition, the retrofitting of storm drain inlets will require open curb pieces to be replaced by curb pieces with restricted curb openings. These curb pieces will be installed with stenciled wording "No Dumping - Drains To Waterways" to satisfy the labeling requirement

SPPP Form 6 – MS4 Outfall Pipe Mapping

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Gary Vander Veer, Borough Engineer

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 04/28/09

Explain how you will prepare your map (include its type and scale, and the schedule for the mapping process). Who will prepare your map (e.g., municipal employees, a consultant, etc.)?

The Borough of Alpine has conducted a field investigation to identify, classify, and investigate each outfall pipe uncovered. The field investigation was performed through the Borough Engineer's office. The end of each outfall pipe has been identified and labeled with an alphanumeric identifier. The location of each outfall is shown on a map, to be developed, at a scale of 1 inch = 100 feet. The outfall pipe is identified as either municipally or privately owned and operated. Approximate NAD 83 coordinates and/or GPS coordinates have been assigned to each outfall.

The Borough has been divided into two sectors: Sector A is the area north of Closter Dock Road and Sector B is the area south of Closter Dock Road. Both sectors have been 100% inspected.

SPPP Form 7 – Illicit Connection Elimination Program

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Gary Vander Veer, Borough Engineer

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 04/15/11

Describe your Illicit Connection Elimination Program, and explain how you plan on responding to complaints and/or reports of illicit connections (e.g., hotlines, etc.). Attach additional pages as necessary.

During the outfall mapping process, the Borough conducted an initial physical inspection of each outfall pipe. The inspection was conducted by the Borough Engineer's office. We used the DEP Illicit Connection Inspection Form to conduct the inspections and the forms will be kept with the SPPP records. Outfall pipes that were found to have dry weather flows or evidence of an intermittent non-stormwater flow will be rechecked again to locate the illicit connection. If we are able to locate the illicit connection (and the connection is within the Borough of Alpine), we will cite the responsible party for being in violation of the Illicit Connection Ordinance (Ordinance No. 642, adopted on Nov. 15, 2004). The connection will be eliminated immediately. If, after the appropriate amount of investigation, we are unable to locate the source of the illicit connection, we will submit the Closeout Investigation Form with our Annual Inspection and Recertification. If an illicit connection is found to originate from another public entity, the Borough of Alpine will report the illicit connection to the Department.

(Illicit Connection Elimination Program – cont.)

As of this date, all open watercourses within the Borough have been inspected. All stormwater outfalls have been located, mapped and inspected. Follow-up inspections are in progress for all outfalls which exhibited dry weather flows. There have been no obvious illicit connections verified at this time. Since virtually the entire municipality is residential, none were anticipated. The reinspection of dry weather flow outlets has eliminated many of those previously exhibiting dry weather flows. The reinspection observations indicated no flow.

During the year, 2017, additional inspections were performed on outfalls previously showing dry weather flows. Additional outlets were uncovered during the reinspection process. All of the previously inspected outfalls re-inspected during this period still show dry weather flows, which have yet to be identified. Five additional outlets were inspected, along a previously unchecked open watercourse. None of these exhibited dry weather flows.

SPPP Form 8 – Illicit Connection Records

Municipality Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Gary Vander Veer, Municipal Engineer

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 02/01/17

Prior to May 2, 2006

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 17

Number of outfalls found to have a dry weather flow? 2

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

May 2, 2006 – May 1, 2007

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 49

Number of outfalls found to have a dry weather flow? 16

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

May 2, 2007 – May 1, 2008

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 0

Number of outfalls found to have a dry weather flow? 0

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? 0

Of the illicit connections found, how many remain? N/A

May 2, 2008 – May 1, 2009

Note: Attach a copy of each illicit connection report form for outfalls found to have a dry weather flow.

Total number of inspections performed this year? 73

Number of outfalls found to have a dry weather flow? 26

Number of outfalls found to have an illicit connection? 0

How many illicit connections were eliminated? N/A

Of the illicit connections found, how many remain? N/A

SPPP FORM 8 – ILLICIT CONNECTION RECORDS

Reinspection reports / follow up on dry weather flows

January 1, 2010 through December 31, 2010

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	38 locations
Dry weather flows remaining after reinspection (inspection forms attached)	27 locations

January 1, 2011 through December 31, 2011

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

January 1, 2012 through December 31, 2012

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

January 1, 2013 through December 31, 2013

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

January 1, 2014 through December 31, 2014

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

SPPP FORM 8 – ILLICIT CONNECTION RECORDS

Reinspection reports / follow up on dry weather flows

January 1, 2015 through December 31, 2015

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

January 1, 2016 through December 31, 2016

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	0 locations
Dry weather flows remaining after reinspection	27 locations

January 1, 2017 through December 31, 2017

Dry weather flows after initial inspection	44 locations
Dry weather flows reinspected this period	4 locations
Dry weather flows remaining after reinspection	27 locations
Additional outlets identified	5 locations

SPPP Form 9 – Yard Waste Ordinance/Collection Program

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # :0150932PI ID #: 167001

Team Member/Title: Frank Rickenbaugh, DPW Supt.

Effective Date of Permit Authorization (EDPA):04/01/04

Date of Completion: 3/15/05 Date of most recent update: 02/01/18

Please describe your yard waste collection program. Be sure to include the collection schedule and how you will notify the residents and businesses of this schedule. Attach additional pages as necessary.

The Borough of Alpine has adopted an ordinance permitting the placement of non-containerized yard waste along the street for pick-up. A regular collection of yard waste (leaves) will be scheduled during the fall months. The pick-up schedule will be noted in the quarterly newsletter and will be posted at the Borough Hall.

The collection schedule will, again, divide the Borough into two sectors: Sector A will be the area north of Closter Dock Road and Sector B will be the area south of Closter Dock Road (see attached map).

The Borough has adopted a yard waste ordinance (Ordinance No. 644, Adopted on November 15, 2004). The ordinance prohibits the placement of non-containerized yard waste along the street more than seven days prior to the scheduled collection. The ordinance also prohibits the placement of non-containerized yard waste closer than ten feet from any storm sewer inlet along the street

The Borough previously collected yard waste during the summer months (grass clippings, etc.). This waste was then stockpiled at the DPW yard. This procedure has been changed to the following:

-Continue to collect the grass clippings but, instead of stockpiling the waste at the DPW yard, bagged clippings are collected and added to the compost pile at the Borough's leaf compost facility.

SPPP Form 10 - Ordinances

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Russ Huntington, Borough Attorney

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 04/15/12

For each ordinance, give the date of adoption. If not adopted, explain the development status:

Pet Waste Nov. 15, 2004

Are information sheets regarding pet waste distributed with pet licenses? Y N ()

Litter existing ordinance complies with requirements

Improper Waste Disposal Nov. 15, 2004

Wildlife Feeding Nov. 15, 2004

Yard Waste Nov. 15, 2004

Illicit Connections Nov. 15, 2004

How will these ordinances be enforced?

The Borough of Alpine code enforcement officers and the local police officers will enforce these ordinances. If someone is found to be in violation of an ordinance, they will be issued a written warning for the first time offenses, at the discretion of the enforcement officer. Subsequent offenses will mandate penalties to be assessed. Additional ordinances will be required; namely, refuse container/dumpster ordinance and private catch basin retrofitting ordinance. These ordinances will be required to be in place within eighteen months from the effective date of this permit. The fertilizer management ordinance requirement is not applicable to the Borough of Alpine. The Borough Attorney will review the existing ordinances to determine if new ordinances are required or if the existing ordinances comply with the new requirements.

As required with the renewal of the municipal stormwater permit, additional ordinances were adopted by the Governing Body during 2010; namely, the Refuse Container/Dumpster Ordinance and the Private Storm Drain Inlet Retrofitting Ordinance. Both of these ordinances will be enforced similar to those previously adopted under the municipal stormwater permit.

SPPP Form 11 – Storm Drain Inlet Retrofitting

Municipality Information	Municipality: <u>Alpine County Bergen</u> NJPDES # : <u>0150932</u> PI ID #: <u>167001</u> Team Member/Title: <u>Gary Vander Veer, Municipal Engineer</u> Effective Date of Permit Authorization (EDPA): <u>04/01/04</u> Date of Completion: <u>3/15/05</u> Date of most recent update: <u>02/01/17</u>
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What type of storm drain inlet design will generally be used for retrofitting?
Alpine will use the NJDOT bicycle safe grate and, where necessary, a curb opening with a clear space no bigger than two inches across the smallest dimension

Repaving, repairing, reconstruction or alteration project name	Projected start date	Start date	Date of completion	# of storm drain inlets	# of storm drains w/ hydraulic exemptions
<i>2004 Road Improvement Program</i>	<i>07/01/04</i>		<i>09/30/04</i>	<i>41</i>	<i>0</i>
<i>2005 Road Improvement Prog.</i>	<i>07/01/05</i>	<i>08/01/05</i>	<i>10/05</i>	<i>13</i>	
<i>2006 Road Improvement Prog.</i>		<i>7/6/06</i>	<i>10/23/06</i>	<i>50</i>	
<i>2007 Road Improvement Prog.</i>		<i>7/1/07</i>	<i>10/15/07</i>	<i>23</i>	
<i>2008 Road Improvement Prog.</i>		<i>7/08</i>	<i>10/08</i>	<i>27</i>	

Are you claiming any alternative device exemptions or historic place exemptions for any of the above projects? Please explain:

No alternative devices used or operated

No historic place exemptions

SPPP FORM 11 – STORM DRAIN INLET RETROFITTING

CONTINUATION

Project Name	Project start date	Project end date	# of storm drain inlets
2009 Road Program	08/2009	08/2009	28
2009 Drainage Program	08/2009	09/2009	10
2010 Road Program	07/2010	10/2010	42
2010 Drainage Program	10/2010	11/2010	4
2011 Road Program	06/15/11	07/15/11	29
2012 Road & Drainage Programs	06/24/12	12/30/12	20
2014 Road Programs	07/10/14	10/23/14	23
2015 Road Program	08/26/15	09/11/15	17
2016 Road Program	06/08/16	08/10/16	21
2017 Road Program	06/19/17	12/15/17	20

SPPP Form 12 – Street Sweeping and Road Erosion Control Maintenance

Municipality
Information

Municipality: Alpine County: Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Frank Rickenbaugh, Supt. DPW

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 02/01/18

Street Sweeping

Please describe the street sweeping schedule that you will maintain.

(NOTE: Attach a street sweeping log containing the following information: date and area swept, # of miles swept and the total amount of materials collected.)

Street sweeping is required to be performed monthly along municipally owned and operated curbed streets that are in predominantly commercial areas. The only area of the Borough of Alpine that could be classified as a predominantly commercial area is the southerly side of Closter Dock Road, between Church Street and Route 9W. Closter Dock Road is a County roadway, owned and operated by Bergen County.

Road Erosion Control Maintenance

Describe your Road Erosion Control Maintenance Program, including inspection schedules. A list of all sites of roadside erosion and the repair technique(s) you will be using for each site should be attached to this form.

(NOTE: Attach a road erosion control maintenance log containing the following information: location, repairs, date)

The Borough of Alpine has developed a listing of all municipal streets that may be subject to roadside erosion as a result of a lack of curbing, steep grades to the streets, or both. The condition of these roadways will be monitored by the Alpine Dept. of Public Works and the Borough Engineer's office for erosion problems.

(Street Sweeping -- cont.)

This portion of Closter Dock Road is not curbed.

Therefore, there are no regulated roadways within the Borough of Alpine that must be included in a monthly street sweeping program. Street sweeping does take place along municipal roadways, periodically, through a shared equipment arrangement with an adjoining municipality. The street sweeping on all municipal roadways will continue as such.

Courtesy street sweeping of all streets in the Borough was performed by the Borough of Cresskill during the course of the year. The street sweeping occurred during the period May 8 - 11, 2017 and collected approximately 7 cubic yards of debris.

(Road Erosion Control Maintenance -- cont.)

Areas of erosion will be identified and repairs will be scheduled; said remedial work will be in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. The repairs may either be permanent (installation of curbing) or temporary. If permanent remedial work is performed, the streets will be removed from the monitoring list. If the remedial work is temporary, the monitoring will continue to evaluate the effectiveness of the work performed.

An inspection log will be maintained, identifying the dates of the inspection and condition of the roadside. The log will also identify the dates and form of any remedial work performed. The status of the road erosion control maintenance program will be included in the Annual Report and Recertification.

As an aside, it is not anticipated that this item will be encountered to any great extent since roadside swales and/or conveyance channels are not a design feature in the Borough. The more likely problem will be lack of maintenance of private property, (lawn areas) adjacent to the roadway, or failure to properly install erosion control devices at the edge of roadways during development or redevelopment of properties. If these types of problems are encountered, the property owner or the contractor will be notified to correct the situation.

SPPP Form 13 – Stormwater Facility Maintenance

Municipality
Information

Municipality: Alpine County: Bergen

NJPDES # :0150932PI ID #: 167001

Team Member/Title: Frank Rickenbaugh, Supt., Dept. of Public Works

Effective Date of Permit Authorization (EDPA):04/01/04

Date of Completion: 3/15/05 Date of most recent update: 02/01/18

Please describe your annual catch basin cleaning program and schedule. Attach a map/diagram or additional pages as necessary.

The Borough of Alpine has implemented an annual catch basin cleaning program to maintain catch basin function and efficiency. Through the efforts of the Dept. of Public Works and the Borough Engineer's office, a municipal map of all catch basins has been prepared to identify the location of all catch basins to insure that 100% inspection is performed. All catch basins are inspected at least once per year and are cleaned, if necessary. The lack of debris or sediment does not remove the catch basin from the annual inspection requirement. At the time of inspection and, if required, cleaning, the structural condition of the catch basin will be observed.

Please describe your stormwater facility maintenance program for cleaning and maintenance of all stormwater facilities operated by the municipality. Attach additional pages as necessary.

(NOTE: Attach a maintenance log containing information on any repairs/maintenance performed on stormwater facilities to ensure their proper function and operation.)

The Borough of Alpine will implement a stormwater facility maintenance program to ensure that all stormwater facilities operated by the municipality function properly. The Borough facilities include the following:

catch basins/inlets

storm drains (pipes)

detention/retention basins

These stormwater facilities will be inspected annually to ensure that they are functioning properly. In areas of repeat maintenance requirements, inspections will be performed on a more frequent basis to minimize potential system failures. In addition to repeated maintenance, the stormwater features will be evaluated for reconstruction to eliminate the system flaws.

(Stormwater Facility Maintenance – Catch Basin Cleaning Program – cont.)

If minor repairs are required, the repairs will be performed by the Dept. of Public Works. Major repairs will be referred to the Borough Engineer's office for inclusion in the annual road improvement program. The road improvement program will also consider the need for structural repairs to catch basins on those streets to be repaved and any structural repairs will be performed prior to repaving. This program began in April, 2005.

During the twelve month period prior to December 31, 2017, fifteen storm drain inlets (catch basins) were reconstructed under the road improvement programs and four storm drain inlets were repaired by the Alpine DPW.

SPPP Form 14 - Outfall Pipe Stream Scouring Remediation

Municipality
Information

Municipality: Alpine County: Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Gary Vander Veer, Municipal Engineer

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 03/18/14

Describe your stormwater outfall pipe scouring detection, remediation and maintenance program to detect and control active, localized stream and stream bank scouring. Attach additional pages as necessary.

(NOTE: Attach a prioritized list of sites observed to have outfall pipe stream and stream bank scouring, date of anticipated repair, method of repair and date of completion.)

During the course of the stormwater outfall pipe mapping and illicit connection evaluation of this program, the Borough will evaluate the outfall pipe locations for scouring. The sites will be placed on a prioritized list and remedial work will be performed in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. Remedial work that does not require NJDEP permits may be performed first.

Subsequent to the remedial work being performed, an annual inspection of the site will be performed to ensure that the scouring has not resumed.

Any sites requiring scour remediation will be listed and attached to this report. None have been identified to date. The list will be updated periodically, coincidental with the outfall pipe mapping and illicit connection inspections. The listing will include the anticipated date of remedial work and the method to be used for the remedial work. Once repairs are completed, the listing will be updated to include the actual date of remedial work.

Previously, one location of stream scour was repaired with riprap after obtaining the applicable NJDEP permit (outfall from Bristol Court).

SPPP Form 14 - Outfall Pipe Stream Scouring Remediation

Municipality
Information

Municipality: Alpine County: Bergen

NJPDES # :0150932PI ID #: 167001

Team Member/Title: Gary Vander Veer, Municipal Engineer

Effective Date of Permit Authorization (EDPA):04/01/04

Date of Completion: 3/15/05 Date of most recent update: 03/18/14

Describe your stormwater outfall pipe scouring detection, remediation and maintenance program to detect and control active, localized stream and stream bank scouring. Attach additional pages as necessary.

(NOTE: Attach a prioritized list of sites observed to have outfall pipe stream and stream bank scouring, date of anticipated repair, method of repair and date of completion.)

During the course of the stormwater outfall pipe mapping and illicit connection evaluation of this program, the Borough will evaluate the outfall pipe locations for scouring. The sites will be placed on a prioritized list and remedial work will be performed in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. Remedial work that does not require NJDEP permits may be performed first.

Subsequent to the remedial work being performed, an annual inspection of the site will be performed to ensure that the scouring has not resumed.

Any sites requiring scour remediation will be listed and attached to this report. None have been identified to date. The list will be updated periodically, coincidental with the outfall pipe mapping and illicit connection inspections. The listing will include the anticipated date of remedial work and the method to be used for the remedial work. Once repairs are completed, the listing will be updated to include the actual date of remedial work.

Previously, one location of stream scour was repaired with riprap after obtaining the applicable NJDEP permit (outfall from Bristol Court).

SPPP Form 15 – De-icing Material Storage

Municipality
Information

Municipality: Alpine County Bergen

NJPDES # : 0150932 PI ID #: 167001

Team Member/Title: Frank Rickenbaugh, Supt., Dept. of Public Works

Effective Date of Permit Authorization (EDPA): 04/01/04

Date of Completion: 3/15/05 Date of most recent update: 02/01/18

De-icing Material Storage

Describe how you currently store your municipality's de-icing materials, and describe your inspection schedule for the storage area. If your current storage practices do not meet the de-icing material storage SBR describe your construction schedule and your seasonal tarping interim measures. If you plan on sharing a storage structure, please include its location, as well as a complete list of all concerned public entities. If you store sand outdoors, describe how it meets the minimum standard.

The Borough of Alpine currently stores its de-icing salt within an enclosed, roofed structure at its DPW facility at the southerly end of Hilltop Lane, south of Hillside Avenue. The structure will need to be expanded since the front of the structure is open.

Until such time that a building expansion can be completed, the open end of the storage facility shall be protected from the elements. The Borough has implemented the interim seasonal tarping procedure at the site. The exposed end of the facility (i.e. the material stored within the facility) will be tarped from October 15 through April 30. During this period, Borough personnel will inspect the tarp weekly to ensure that it is fully covering the exposed end of the salt pile. In addition, at the completion of loading and unloading activities, the site will be inspected for any spilled salt.

SPPP Form ~~67~~ – Standard Operating Procedures

Municipality Information	Municipality: <u>Alpine County Bergen</u>	
	NJPDES # : <u>0150932</u> PI ID #: <u>167001</u>	
	Team Member/Title: <u>Frank Rickenbaugh, Supt., Dept. of Public Works</u>	
	Effective Date of Permit Authorization (EDPA): <u>04/01/04</u>	
Date of Completion: <u>3/15/05</u> Date of most recent update: <u>02/01/18</u>		
BMP	Date SOP went into effect	Describe your inspection schedule
Fueling Operations (including the required practices listed in Attachment D of the permit)	03/15/05	<i>The Borough maintains a fueling location at the DPW maintenance yard. The site will be inspected at least once per month to ensure compliance with the SOP.</i>
Vehicle Maintenance (including the required practices listed in Attachment D of the permit)	03/15/05	<i>Monthly inspections will be held to ensure that the SOP is being met.</i>
Good Housekeeping Practices (including the required practices listed in Attachment D of the permit) Attach inventory list required by Attachment D of the permit.	03/15/05	<i>Monthly inspections of the maintenance yard will be held to ensure compliance with the SOP.</i>

Borough of Alpine

Standard Operating Procedures

Vehicle and Equipment Fueling

Introduction and Purpose

Vehicle and equipment fueling procedures and practices are designed to minimize any adverse impacts to surface or ground waters. Understanding the procedures for delivering fuel into the vehicles, mobile fuel tanks, and storage tanks is critical for this purpose. Safety is always the priority.

Scope

These procedures are to be implemented at the Alpine Borough maintenance yard fueling location.

Standards and Specifications

(vehicle and equipment fueling)

- Shut the engine off.
- Ensure that the fuel is the proper type of fuel.
- Absorbent spill clean-up materials and spill kits shall be available in fueling areas and shall be disposed of properly after use.
- Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to prevent overfilling.
- Fuel tanks shall not be "topped off".
- Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling area in the maintenance yard.
- Instructions for safe operation of the fueling equipment shall be clearly posted in a prominent area of the facility. The instructions shall include the appropriate contact information for the person or persons responsible for spill response.

Standards and Specifications

(bulk fueling)

- Drip pans or absorbent pads shall be used under all hose and pipe connections and other leak-prone areas during bulk fueling.
- Block storm sewer inlets, or contain tank trucks used for bulk transfer, with temporary berms or temporary absorbent booms during transfer process. If temporary berms are used instead of blocking the storm sewer inlets, all hose connection points associated with the transfer of fuel must be within the temporary berms during the loading/unloading of bulk fuels.

- Protect fueling areas with berms and/or dikes to prevent run-on, runoff, and to contain spills.
- A trained employee must always be present to supervise during bulk transfer.

Spill Response

- Conduct cleanups of any fuel spills immediately after discovery.
- Uncontained spills are to be cleaned using dry cleaning methods only. Spills shall be cleaned up with a dry, absorbent material (e.g. kitty litter, sawdust, etc.) and absorbent material shall be swept up.
- Collected waste shall be disposed of properly
- Contact the Alpine Fire Dept. at 201-768-0081 through the Alpine Police Dept.

Maintenance and Inspection

- Fueling areas and storage tanks shall be inspected monthly.
- Keep an ample supply of spill cleanup material on the site.
- Any equipment, tanks, pumps, piping, and fuel dispensing equipment found to be leaking or in disrepair must be repaired or replaced immediately.
- The valve on the discharge pipe from the secondary containment area of the above ground fuel storage tank shall remain closed at all times except as described below. Visual inspections shall be performed before discharging stormwater through the valve, to ensure that fuel in the tank has not come into contact with the stormwater to be discharged.

In addition to the above, the Borough of Alpine Department of Public Works shall comply with the requirements and recommendations found in the “Spill Prevention, Control and Countermeasure (SPCC) Plan, Borough of Alpine, Department of Public Works”, prepared by PMK Group, and prepared in accordance with 40 CFR 112 Environmental Protection Agency, Oil Pollution Prevention and Response, dated January, 2009.

In January, 2010, construction was completed on the spill containment feature at the fuel storage tanks, to eliminate the potential for fuel spills during refueling of municipal vehicles and/or during the delivery of fuel to the above ground fuel storage tanks. This facility will require cleanup of the containment area in the event of spillage during deliveries and/or refueling.

Borough of Alpine

Standard Operating Procedure

Vehicle Maintenance

Introduction and Purpose

This SOP contains the basic practices of vehicle maintenance to be implemented at the maintenance yard, including maintenance activities at ancillary operations in the Borough of Alpine. The purpose of this SOP is to provide a set of guidelines for the Borough of Alpine maintenance yard including maintenance activities at ancillary operations.

Scope

This SOP applies to all activities at the Borough maintenance yard including maintenance activities at ancillary operations within the Borough of Alpine.

Standards and Specifications

- Conduct vehicle maintenance only in designated areas
- When possible, perform all vehicle and equipment maintenance at an indoor location with a paved floor.
- Always use drip pans.
- Absorbent spill clean-up material shall be available in maintenance areas and shall be disposed of properly after use.
- Maintenance areas shall be protected from stormwater runoff, and shall be located at least fifty feet downstream from any drainage structures (storm drain inlets).
- Maintenance projects that must be performed outdoors and that last for more than one day must utilize a portable tent or cover over the equipment being serviced when not being worked on.
- Do not dump or dispose oils, grease, fluids or lubricants onto the ground.
- Do not dump or dispose batteries, used oils, antifreeze and other toxic fluids into a storm drain or water course.
- Do not bury tires.
- Collect waste fluids in properly labeled containers and dispose of properly.
- Cleaning of vehicles and equipment outdoors, when permitted, will be performed only with clean water. This will only be permitted for vehicles using de-icing material and will only be permitted immediately following the vehicle's use for this purpose.

- Vehicle cleaning that requires more than clean water and any vehicle cleaning other than that specifically noted above, will only be performed in a contained area, where the unclean wash water can be captured and disposed of properly.

Spill Response and Reporting

- Provide spill containment dikes or secondary containment around stored oils and other fluid storage drums.
- Conduct cleanups of any fuel spills immediately after discovery.
- Spills are to be cleaned using dry cleaning methods only. Spills are to be cleaned up with a dry, absorbent material (kitty litter, sawdust, etc.) and the rest of the area shall be swept clean.
- Collected waste is to be disposed of properly.
- Contact the Alpine Fire Dept. through the Alpine Police Dept. at 201-768-0881.

Maintenance and Inspection

- Periodically check for leaks and damaged equipment; make repairs as necessary.

In September, 2012, construction was completed on a washwater containment system, connected to the drains at the garage bay exit doors. Therefore, all vehicle and equipment washing will be performed indoors henceforth. The washwater will drain into the containment system where it will be periodically pumped out (collected) and properly disposed of by an outside contractor. No vehicle or equipment washing will be conducted outdoors.

Borough of Alpine

Standard Operating Procedures

Good Housekeeping

Introduction and Purpose

This SOP contains the basic practices of good housekeeping to be implemented at the maintenance yard in the Borough of Alpine. The purpose of this SOP is to provide a set of guidelines for the employees of the Borough of Alpine for Good Housekeeping Practices at their maintenance yard.

Scope

This SOP applies to the maintenance yard of the Borough of Alpine, situated at the southerly end of Hilltop Lane., south of Hillside Avenue.

Standards and Specifications (General)

- All containers should be properly labeled and marked, and the labels must remain clean and visible.
- All containers must be kept in good condition and tightly closed when not in use.
- When practical, chemicals, fluids and supplies should be kept indoors.
- If containers are stored outside, they must be covered and placed on spill platforms.
- Keep storage areas clean and well organized.
- Spill kits and drip pans must be kept near any liquid transfer areas, protected from rainfall.
- Absorbent spill clean-up materials must be available in maintenance areas and shall be disposed of properly after use.
- Place dry trash, dirt and other debris in the open dumpster.
- Place any waste that must be kept dry to avoid contamination in the covered dumpster, only.
- Collect waste fluids in properly labeled containers and dispose of them properly.
- Establish and maintain a recycling program by disposing papers, cans, bottles and trash in designated bins.

Standards and Specifications (Salt and De-icing Material Handling)

- During loading and unloading of salt and de-icing materials, prevent and/or minimize spills. If salt or de-icing materials are spilled, remove the material using dry cleaning methods. All collected materials shall be either reused or properly discarded.
- Sweeping should be conducted once a week to get rid of dirt and other debris. Sweeping should also be conducted immediately following loading/unloading activities, when practical.

- Minimize the tracking of materials from storage and loading/unloading areas.
- Minimize the distance that salt and de-icing materials are transported during loading/unloading activities.
- Any materials that are stored outside must be tarped when not actively being used.
- If interim seasonal tarping is being implemented, de-icing materials may be stored outdoors only between October 15 through April 30.
- Install haybales or other suitable erosion control device along the fence line, downhill of the salt storage building during the period when de-icing salt is stored on site. Inspect weekly to insure the integrity of the haybale barrier.

Spill Response and Reporting

- Conduct clean up of any spills immediately after discovery.
- Spills are to be cleaned using dry cleaning methods only.
- Contact the Alpine Fire Dept. through the Alpine Police Dept. at 201-768-0881.

Maintenance and Inspection

- Periodically check for leaks and damaged equipment and make repairs as necessary.
- Perform monthly inspections of all (indoor and outdoor if applicable) storage locations.

Security of the Compound

The maintenance yard serves a dual purpose and, as such, cannot be completely secured. Remote portions of the yard are utilized for parking by residents using the swim club and tennis facilities, immediately to the south of the maintenance yard. As such, access to the yard is possible 24 hours per day, 365 days per year. Due to the inability to secure the yard, illegal dumping and disposal of unwanted material at the yard is a frequent occurrence. In order to maintain the integrity of the site and to satisfy the good housekeeping permit requirements, certain security measures will need to be installed to minimize, if not eliminate, the illegal dumping of batteries, drums, yard waste, etc.

The site security will be an issue considered during the feasibility study to be performed over the next several months. Together with the enhancement of the salt storage area and the possible rearrangement of other assets at the site, security will be discussed with the goal of maximizing the security of the site while minimizing the inconvenience to those utilizing the swim club facilities.

As of this date, it is anticipated that a gate will be installed this year, along Hilltop Lane, which will diminish access to the site during non-business hours. Access to the DPW yard will be restricted to authorized personnel during nights and weekends. Further study may be required if it is determined that this measure does not adequately address any illegal dumping and disposal of unwanted material at the site.

The gate noted above, has been installed along Hilltop Lane, immediately south of the entrance to the school parking are. This installation addresses the most immediate concern regarding the security of the site.

SPPP Form 17 – Employee Training

Municipality Information

Municipality: Alpine County Bergen
 NJPDES # : 0150932 PI ID #: 167001
 Team Member/Title: (as noted)
 Effective Date of Permit Authorization (EDPA): 04/01/04
 Date of Completion: 3/15/05 Date of most recent update: 02/01/18

Describe your employee training program. For each required topic, list the employees that will receive training on that topic, and the date the training will be held. Attach additional pages as necessary.

Training of municipal employees will occur periodically when new regulations are enacted or, simply, as a refresher program. The personnel training will be as follows:

training by the Police Chief:
enforcement of ordinances Police Officers, code enforcement officer

training by the Supt., Dept. of Public Works:

<u>yard waste collection</u>	<u>DPW personnel</u>
<u>street sweeping</u>	<u>"</u>
<u>stormwater facility maintenance</u>	<u>"</u>
<u>road erosion control</u>	<u>"</u>
<u>vehicle maintenance sop</u>	<u>"</u>
<u>good housekeeping sop</u>	<u>"</u>
<u>outfall pipe stream scouring remediation</u>	<u>"</u>
<u>illicit connection elimination</u>	<u>"</u>
<u>outfall pipe mapping</u>	<u>"</u>

The training was in the form of viewing the Department's videos available on the website. DPW training date was 02/16/2017.

Stormwater Pollution Prevention Plan

Borough of Alpine

Appendix

Permit Attachment C

Curb Piece – standard detail

Permit Attachment E (local public education methods)

Educational material (pet waste, etc)

Sector Map

Road Erosion Control – street map and listing

Inventory list

Outfall inspection forms – reinspection during the prior twelve months, remaining to be confirmed or eliminated.

Stormwater BMP'S; inventory of features, locations and installation dates

(prior twelve months, where applicable)

FORM SPPP-18

Revised 03/15/13

Attachment C

Design Standard - Storm Drain Inlets

This standard applies to storm drain inlets installed as part of new development and redevelopment projects (public or private) that disturb one acre or more. In addition, retrofitting of existing storm drain inlets to this standard is required where such inlets are in direct contact with repaving, repairing (excluding repair of individual potholes), reconstruction or alterations of facilities owned or operated by the Tier A Municipality. For exemptions to this standard see "Exemptions" below.

Grates in Pavement or Other Ground Surfaces

Design engineers shall use either of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:

1. The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996).
2. A different grate, if each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is no greater than 0.5 inches across the smallest dimension.

(In regard to whether the different grate must also be bicycle safe, the Residential Site Improvement Standards include requirements for bicycle-safe grates.)

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater basin floors.

Curb-Opening Inlets (Including Curb-Opening Inlets in Combination Inlets)

Whenever design engineers use a curb-opening inlet, the clear space in that curb opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven (7.0) square inches, or be no greater than two (2.0) inches across the smallest dimension.

Exemptions

Retrofitting Exemptions

1. Repaving, repairing, reconstruction or alterations projects that began construction prior to March 3, 2004, and projects that were awarded bid prior to March 3, 2004, are exempted from the storm drain inlet design standard.
2. Existing curb-opening inlets do not need to be retrofitted to meet the design standard if each individual clear space in the curb opening has an area of no more than nine (9.0) square inches.

Hydraulic Performance Exemptions

1. New Development and Redevelopment Projects - Where the review agency determines that this standard would cause inadequate hydraulic performance that

could not practicably be overcome by using additional or larger storm drain inlets that meet these standards.

2. Retrofitting of existing storm drain inlets - Where the review agency determines that this standard would cause inadequate hydraulic performance.

Alternative Device Exemptions

1. Where flows from the water quality design storm as specified in N.J.A.C. 7:8 are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:

- a. A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or

- b. A bar screen having a bar spacing of 0.5 inches.

2. Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars, to the elevation of the water quality design storm as specified in N.J.A.C. 7:8.

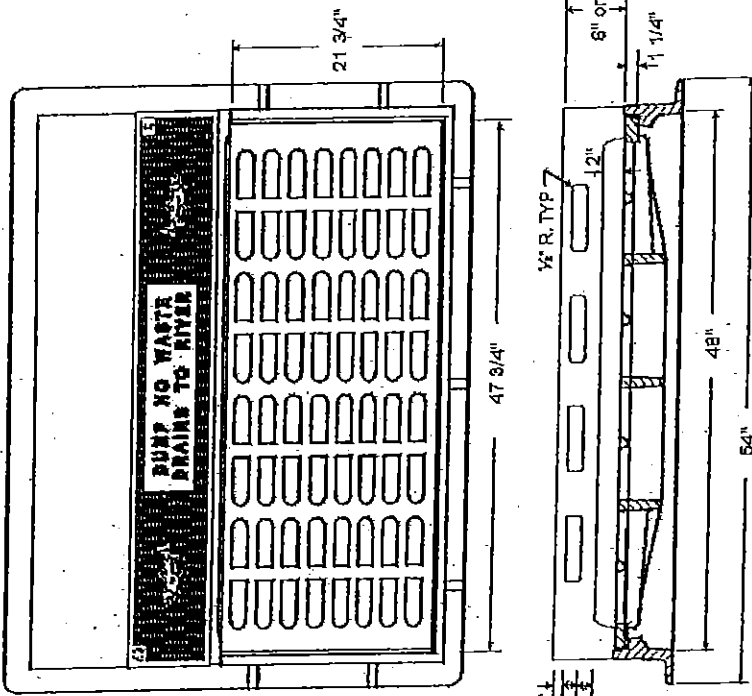
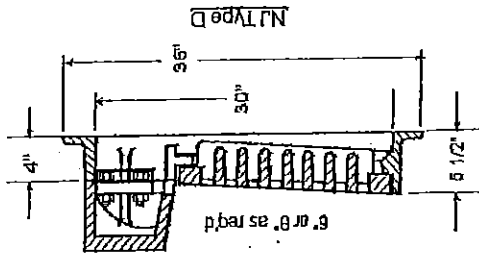
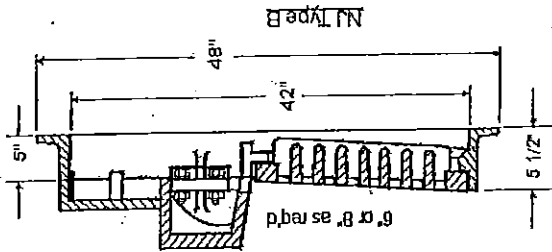
Note - The preceding exemptions do not authorize any infringement of requirements in the Residential Site Improvement Standards for bicycle-safe grates in new residential development (N.J.A.C. 5:21-4.18(b)2 and 7.4(b)1).

Historic Places Exemption

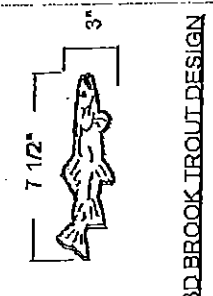
1. Where the Department determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.

2618

Curb Inlet with Bicycle Safe Grate and type 'N - Eco Curb Piece'



1 3/8" ~~DRAINS TO BAY~~ 3/8"
 1 3/8" ~~DRAINS TO RIVER~~
~~DRAINS TO LAKE~~
 2" ~~DRAINS TO OCEAN~~
 DRAINS TO WATERWAYS ←
 NAME PLATE OPTIONS



NOTES:

1. MATERIAL: Gray Cast Iron ASTM A48-83 Class 30B;
2. AASHTO HS20-44 Highway Loading;
3. Supplied without surface coating.



CAMPBELL FOUNDRY COMPANY

Harrison, N.J. 07029

Phone: 973-483-5480 FAX: 973-483-1843

DRAWN BY:

DATE

06/09/2003

FILE

www.campbellfoundry.com

Curb Inlet with Bicycle Safe Grate and type 'N - Eco Curb Piece'

Pattern Number: 2618



Attachment E

Local Public Education Approved Activities and Point Totals

A. Tier A Municipalities shall conduct educational activities that total a minimum of 10 points annually. Each approved activity is listed below with an assigned point value.

1. **School Presentations** - Present educational classes/assemblies to local elementary, middle, and/or high school classes. (1 point per visit / maximum of 5 points per year)
2. **Website** - Maintain a stormwater related page on the municipal website and include a link to www.cleanwaternj.org. (1 point)
3. **Stormwater Display** - Present a stormwater related display and materials at any municipal event (e.g., Earth Day, town picnic) or maintain a display at the municipal building (2 points)
4. **Giveaway** - Distribute an item with a stormwater related message (e.g., refrigerator magnets, temporary tattoos, bookmarks, coloring books, and pens or pencils). Municipality must purchase a minimum number of the item equal to 10% of the municipal population. (2 points)
5. **Citizen Stormwater Advisory Committee** - Establish a subcommittee to the Environmental Commission to identify, coordinate and implement stormwater related programs. (2 points)
6. **Utilize Department Materials** - Use Department created stormwater education materials, which can be found on www.cleanwaternj.org to publish an ad in a newspaper that serves the municipality; broadcast a radio or television commercial on a local radio or municipal public service channel; produce a billboard or sign which can be displayed on a bus, bus stop shelter, or at a recreation field (outfield sign). (2 points each / maximum of 4 points per year)
7. **Poster Contest** - Organize a poster contest with a local school district. Poster themes shall have an appropriate stormwater message. Posters are to be displayed at buildings within the municipality such as at the town hall, library, or school. (2 points)
8. **Stormwater Training for Elected Municipal Officials** - Conduct a program for all elected municipal officials which educates them on the Stormwater Management Rules (N.J.A.C. 7:8), Tier A Permit and what steps the municipality has already taken to minimize stormwater pollution. (3 points)
9. **Mural** - Facilitate the planning and painting of a stormwater pollution themed mural at a local downtown/commercial area. (3 points)
10. **Mailing** - Distribute any of the Department's educational brochures, tip cards, or a municipally produced equivalent (e.g, calendar, recycling schedule), to every resident and business in the municipality. (3 points)
11. **Partnership Agreement / Local Event** - Identify and enter into a partnership

agreement with a local group such as a watershed organization, Riverkeeper, school, youth/faith based group and/or other nonprofit to carry out a minimum of two (2) watershed stewardship/education activities (e.g., litter march, stream/beach cleanup). (3 points)

12. Ordinance Education – Distribute a letter from the mayor to every resident and business in the municipality highlighting the requirements and environmental benefits of the Pet Waste, Litter, Improper Disposal of Waste, Wildlife Feeding, Yard Waste, Illicit Connection, Refuse Container, and Private Storm Drain Inlet Retrofitting Ordinances. This letter/article must also reference a page on the municipal website (if applicable) to which residents can go to read these ordinances. (5 points)

* Posting these ordinances does not constitute the development of a website referenced above.

Solutions to Stormwater Pollution

Easy Things You Can Do Every Day To Protect Our Water

A Guide to Healthy Habits for Cleaner Water

Pollution on streets, parking lots and lawns is washed by rain into storm drains, then directly to our drinking water supplies and the ocean and lakes our children play in. Fertilizer, oil, pesticides, detergents, pet waste, grass clippings: You name it and it ends up in our water.

Stormwater pollution is one of New Jersey's greatest threats to clean and plentiful water, and that's why we're all doing something about it.

By sharing the responsibility and making small, easy changes in our daily lives, we can keep common pollutants out of stormwater. It all adds up to cleaner water, and it saves the high cost of cleaning up once it's dirty.

As part of New Jersey's initiative to keep our water clean and plentiful and to meet federal requirements, many municipalities and other public agencies including colleges and military bases must adopt ordinances or other rules prohibiting various activities that contribute to stormwater pollution. Breaking these rules can result in fines or other penalties.



As a resident, business, or other member of the New Jersey community, it is important to know these easy things you can do every day to protect our water.

Limit your use of fertilizers and pesticides

- Do a soil test to see if you need a fertilizer.
- Do not apply fertilizers if heavy rain is predicted.
- Look into alternatives for pesticides.
- Maintain a small lawn and keep the rest of your property or yard in a natural state with trees and other native vegetation that requires little or no fertilizer.
- If you use fertilizers and pesticides, follow the instructions on the label on how to correctly apply it.



Make sure you properly store or discard any unused portions.

Properly use and dispose of hazardous products

- Hazardous products include some household or commercial cleaning products, lawn and garden care products, motor oil, antifreeze, and paints.
- Do not pour any hazardous products down a storm drain because storm drains are usually connected to local waterbodies and the water is not treated.

AVAILABLE
5/29/17

- If you have hazardous products in your home or workplace, make sure you store or dispose of them properly. Read the label for guidance.

- Use natural or less toxic alternatives when possible.

- Recycle used motor oil.

- Contact your municipality, county or facility management office for the locations of hazardous-waste disposal facilities.



Keep pollution out of storm drains

- Municipalities and many other public agencies are required to mark certain storm drain inlets with messages reminding people that storm drains are connected to local waterbodies.

- Do not let sewage or other wastes flow into a stormwater system.

Clean up after your pet

- Many municipalities and public agencies must enact and enforce local pet-waste rules.

- An example is requiring pet owners or their keepers to pick up and properly dispose of pet waste dropped on public or other people's property.

- Make sure you know your town's or agency's requirements and comply with them. It's the law. And remember to:

- Use newspaper, bags or pooper-scoopers to pick up wastes.

- Dispose of the wrapped pet waste in the trash or unwrapped in a toilet.

- Never discard pet waste in a storm drain.



Don't litter

- Place litter in trash receptacles.

- Recycle. Recycle. Recycle.

- Participate in community cleanups.

Dispose of yard waste properly

- Keep leaves and grass out of storm drains.

- If your municipality or agency has yard waste collection rules, follow them.

- Use leaves and grass clippings as a resource for compost.

- Use a mulching mower that recycles grass clippings into the lawn.



Contact information

For more information on stormwater related topics, visit www.njstormwater.org or www.nonpointsource.org

Additional information is also available at U. S. Environmental Protection Agency Web sites www.epa.gov/npdes/stormwater or www.epa.gov/nps

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Nonpoint Pollution Control
Municipal Stormwater Regulation Program
(609) 633-7021



www.cleanwaternj.org



Borough of Alpine 2018 Application for NJ Dog/Cat License

All dogs and cats must be licensed each year by **January 31st**. Mail or bring the following 5 items to Alpine Borough Hall, 100 Church Street; 2nd Fl., Alpine, NJ 07620-1095.



- _____ 1) Completed registration form.
- _____ 2) **Rabies vaccination certificate must be valid through 11/1/2018.**
- _____ 3) Proof of spay/neuter if not already provided or on rabies certificate.
- _____ 4) Check payable to "Borough of Alpine" with correct fee.
- _____ 5) Stamped Self-Addressed envelope.

FEES Dogs: Spayed/neutered = \$11.00 Dogs: not spayed or not neutered = \$14.00
 Cats: Spayed/neutered = \$ 9.00 Cats: not spayed or not neutered = \$12.00

Owners' Name _____ Date: _____
 Address: _____ P.O. B. _____ Tel: _____
 E-mail (optional) _____ Indicate on form if dog debarked.*

Dog or Cat	Pet's Name	Sex M/F	Spay/Neutered? Y/N	Age	Breed	Hair : S=Short M=Medium L=Long	Color	Rabies Vacc. Exp.Date	Vet	Fee

LATE FEES: Per pet: February \$10.00 March \$25.00
 Thereafter increases \$5 per month (ex. April \$30, May \$35, etc.)

For Renewals after 1/31st add appropriate late fee

TOTAL ENCLOSED: \$

*****ECRWSS****

Boxholder
 Alpine, New Jersey, 07620

Attention Dog and Cat Owners!

**RE: 2018 DOG AND CAT LICENSES
 PLUS SEE REVERSE FOR ADDITIONAL
 IMPORTANT INFORMATION ON CONTROLLING
 YOUR PET, STORMWATER MANAGEMENT & RECYCLING.**

PRSR STD
 ECRWSS
 U.S. POSTAGE
 PAID
 EDDM Retail

Your pet's 2017 license will expire 1/31/2018 and must be renewed each year by January 31st.
 Please renew promptly. Late fees start February 1st and increase monthly.

ALL dogs or cats must be licensed by the age of 7 months or, for older pets, within 10 days of adoption (even if "they never leave the house").

- **Rabies vaccination certificate must be valid through November 1, 2018.** Pet owners (not the vet) are responsible for providing an updated vaccination certificate to the Borough. Check your records now to leave sufficient time to get shots updated as needed. NJ State recommends dogs and cats receive the 3-year vaccination every 2 years to maintain immunity. Medical waivers require a new signed VPH-28 Form each year.
- **Notify the Borough Clerk's office if you move, no longer own your dog or cat or change phone numbers!** Call 784-2900 ext. 10 so we can update our records. Failure to notify us results in our continuing to send out renewal & late notices while your pet remains on our records.
- **FEES: CATS: \$9 if spayed/neutered or \$12 if not. DOGS \$11 if spayed/neutered or \$14 if not.**
- **LATE FEES:** \$ 10 in February; \$25 in March increasing by \$5 each month thereafter.
- Failure to properly license your pet may result in the issuance of a summons subject to a \$40 fine.**
- Please be sure and provide a working telephone number and keep us informed if it changes.



* Debarking Information required per State Law N.J.S.A. 4:19-15.5

**Article 21, Section I of the Sanitary Code Book, Borough Code (Ch. 68) and N.J.S.A. 4:19-15 et.seq.

SENT TO ALL 11/2017

Dear Alpine Pet Owner - Is your dog or cat green?

Do your part to remove pet waste from the water pollution equation!

We're part of the Tenakill Brook watershed area with streams tributary to the Oradell Reservoir where our drinking water comes from. Notice the storm drains throughout Alpine? They prevent flooding by collecting stormwater when it rains. Pet waste and other pollutants left on lawns, streets, or placed in storm drains are washed **untreated** into our streams. This degrades water quality. Pet waste left on the ground may expose children, adults and other animals to disease causing bacteria such as giardia and salmonella. Seemingly small amounts add up. And yet this is totally preventable!

**Proper disposal of pet waste is not just a courtesy.
It's the healthy and environmentally sound thing to do - AND it's the law!**

BRING a plastic bag when you walk your dog. **BAG** waste using the bag like a glove to pick it up and turning the bag inside out to contain. **DISPOSE** of the waste properly by placing it in a trash can or flushing unbagged down a toilet. You can even hire a service to clean your yard. For a service near you check online at pooper-scooper.com/newjersey.htm.

Other ways to prevent water pollution include: use a professional car wash where water is properly recycled, maintain your vehicle against leaks, recycle oil filters and fluids properly, don't apply fertilizer before a rainstorm (and never by law between Dec. 1 & Mar. 1), use lawn chemicals sparingly if at all and don't litter. For more info call the N.J. Department of Environmental Protection @ Division of Water Quality, Bureau of Nonpoint Pollution Control, Municipal Stormwater Regulation Program at (609) 633-7021 or visit them online at www.njstormwater.org. Also check out Bergen County Utilities Authority at www.bcua.org for collection dates to dispose of household hazardous wastes like paints, solvents, fertilizers, pesticides, used motor oil and filters, fluorescent lights - check the site for a complete list.

REMEMBER: By law, dogs are not permitted to run at large, disturb the peace with prolonged barking or allowed to soil, defecate or commit any nuisance on public property or any private property that you do not own. Teach your dog to be a good neighbor.

Residents - Your Cooperation is Needed. Please Help Keep Recyclables Free of Contaminants!



Most paper collected for recycling in the U.S. is shipped to China to be made into new paper products. In a recent crack-down in what China is calling "Operation Green Fence," customs officials are rejecting entire shipments of both paper and plastics that contain levels of contamination beyond the allowed 1.5 percent. Contaminants in paper include items such as plastic bags, glass, metal and plastic containers, packing materials, bags of garbage and even diapers. If these items are found in the materials that are baled and shipped to China, they are being returned to the U.S. at shipping fees of \$6,000 per container and those costs eventually get passed through to all of us. Residents can help keep their recyclables materials clean by only recycling items that the Recycling Program accepts.

Please keep the following items out of your recycling bins/containers:

Plastic bags, film, bubble wrap, covers for magazines and newspapers, plastic wrap from household goods like paper towels.

Plastic grocery bags – do not use as containers for recyclables - **recycle these back at the grocery store;**

Milk, juice and wax-coated cartons, diapers and pet food bags--**dispose in garbage;**

Paper egg cartons--not accepted as recyclable paper-**dispose in garbage;** and

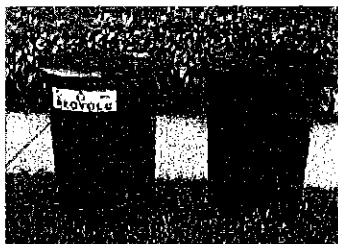
Plastic packaging with paper attached, such as Tyvec mailing envelopes--either tear the paper away from the plastic and **recycle only the paper** or **dispose** of all in the garbage.

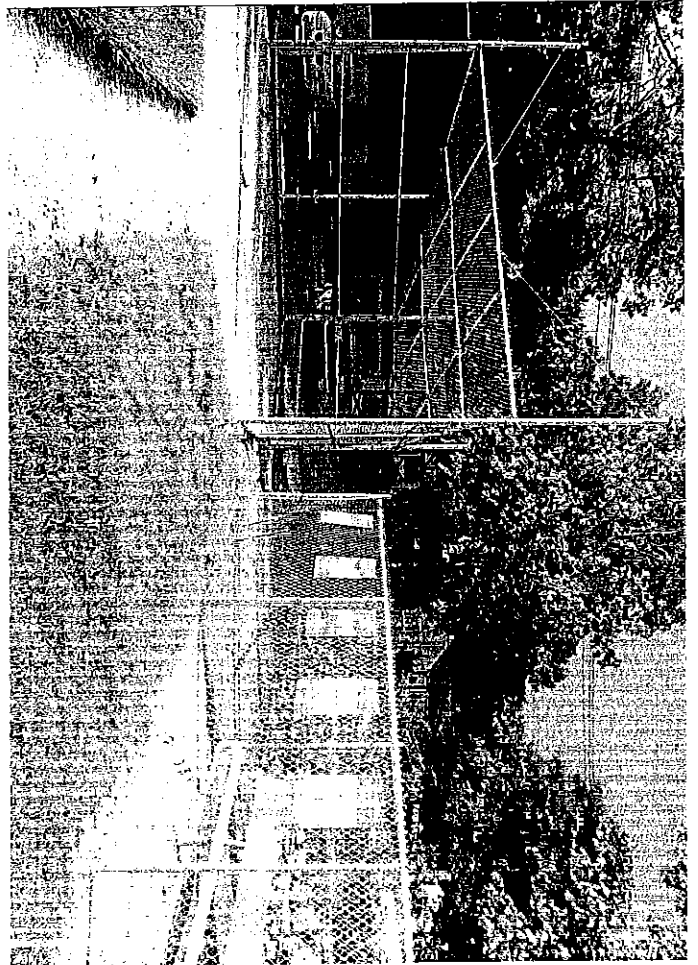
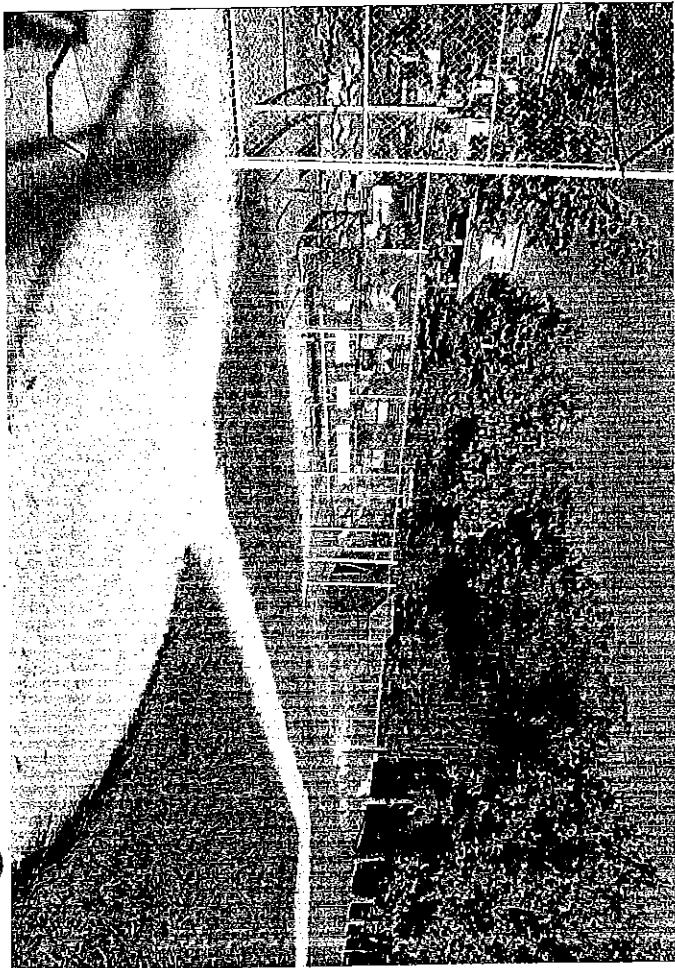
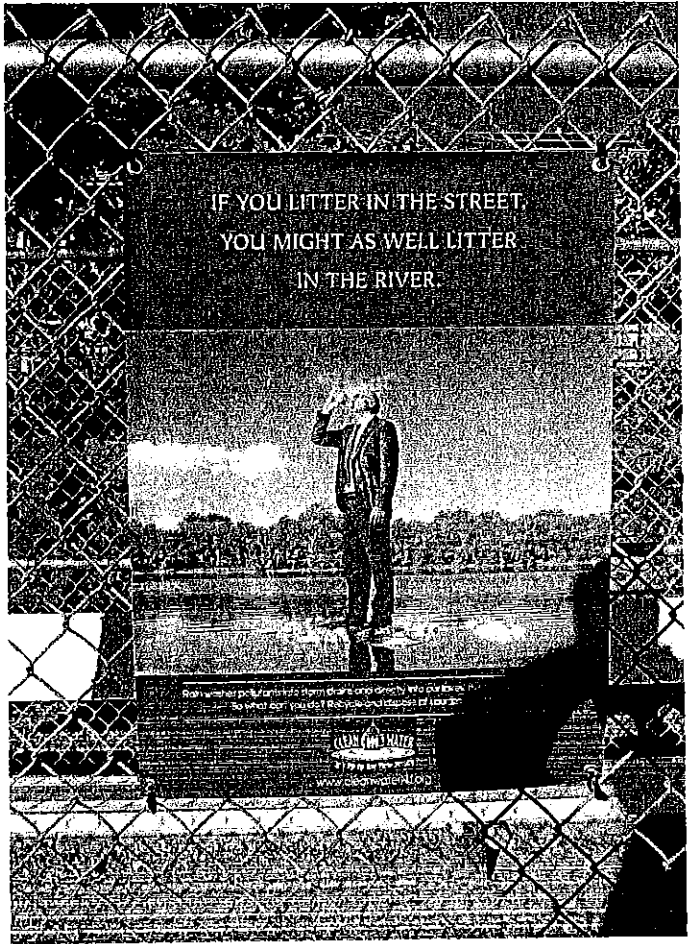
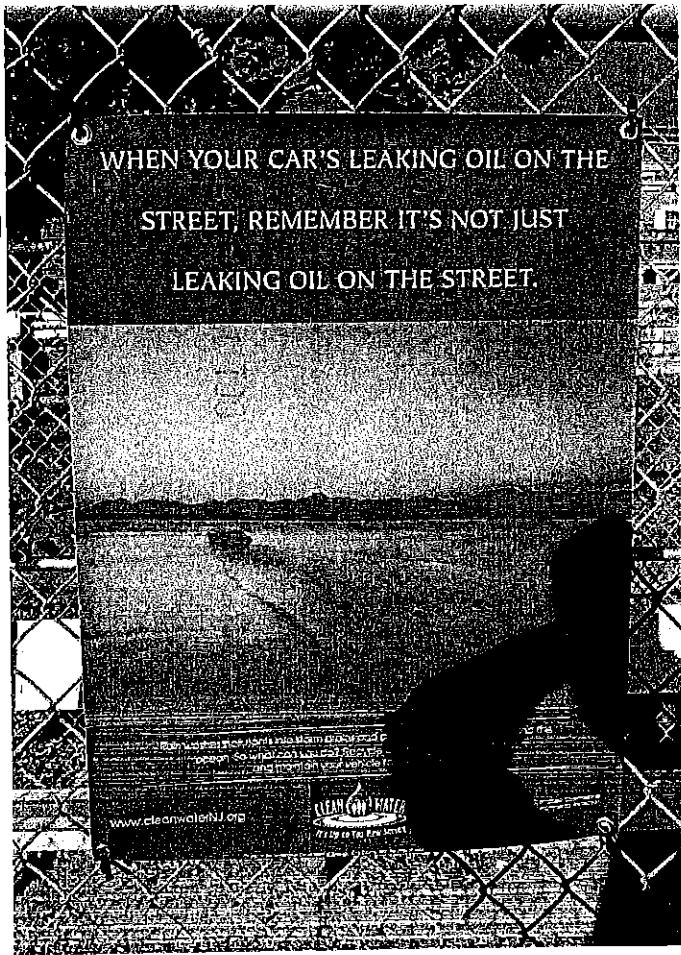
Refrain from putting recyclables out in plastic bags.

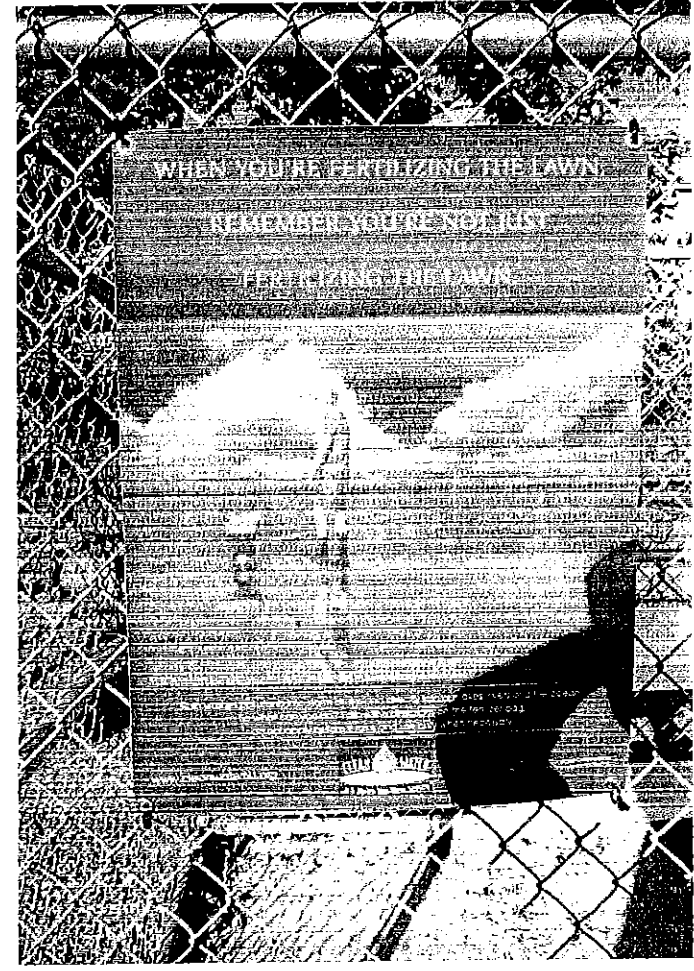
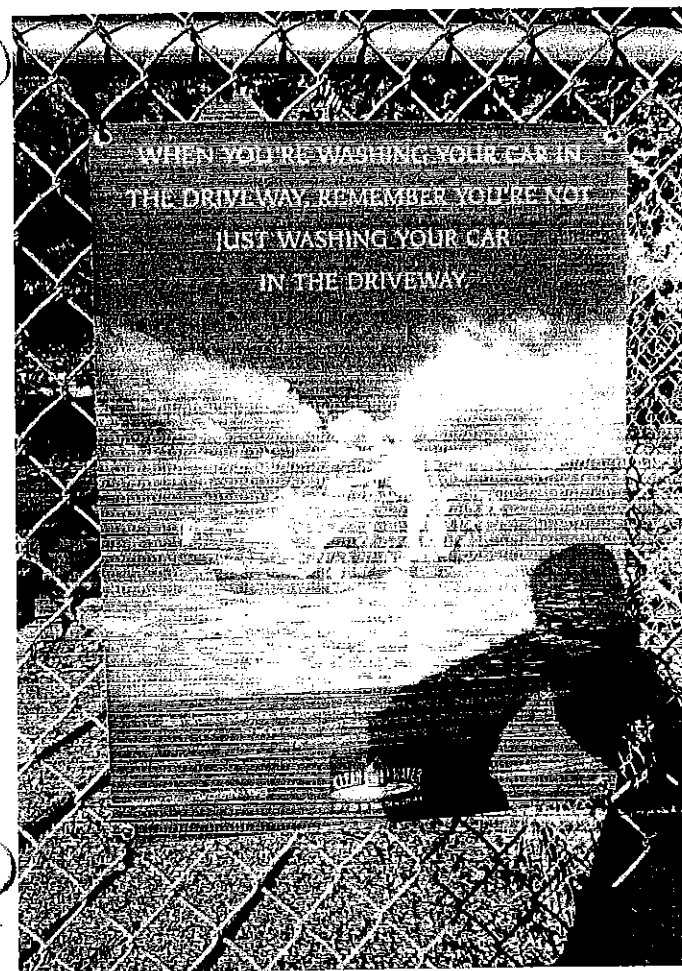
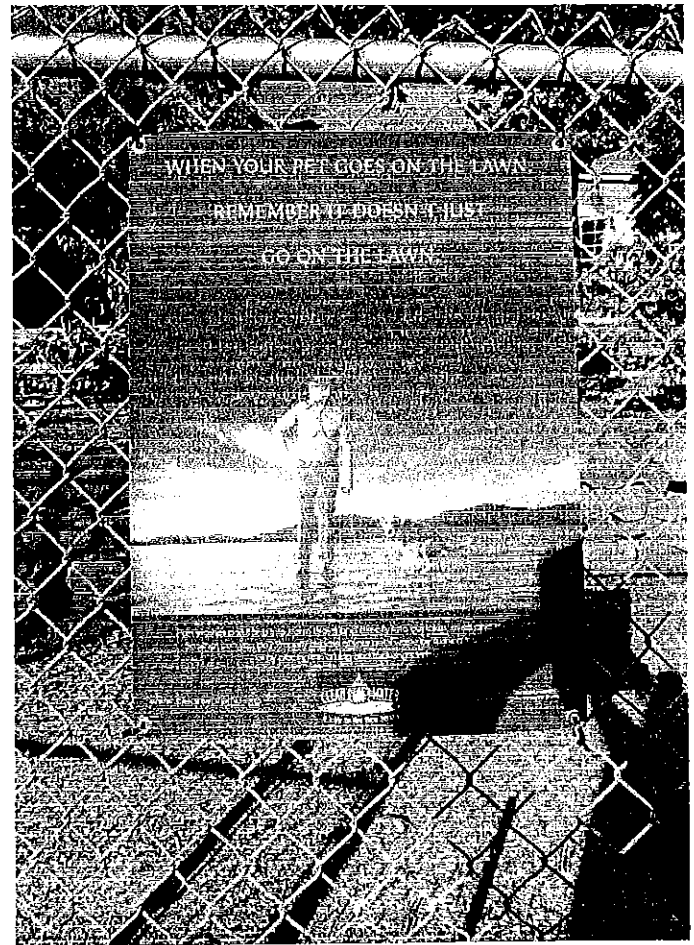
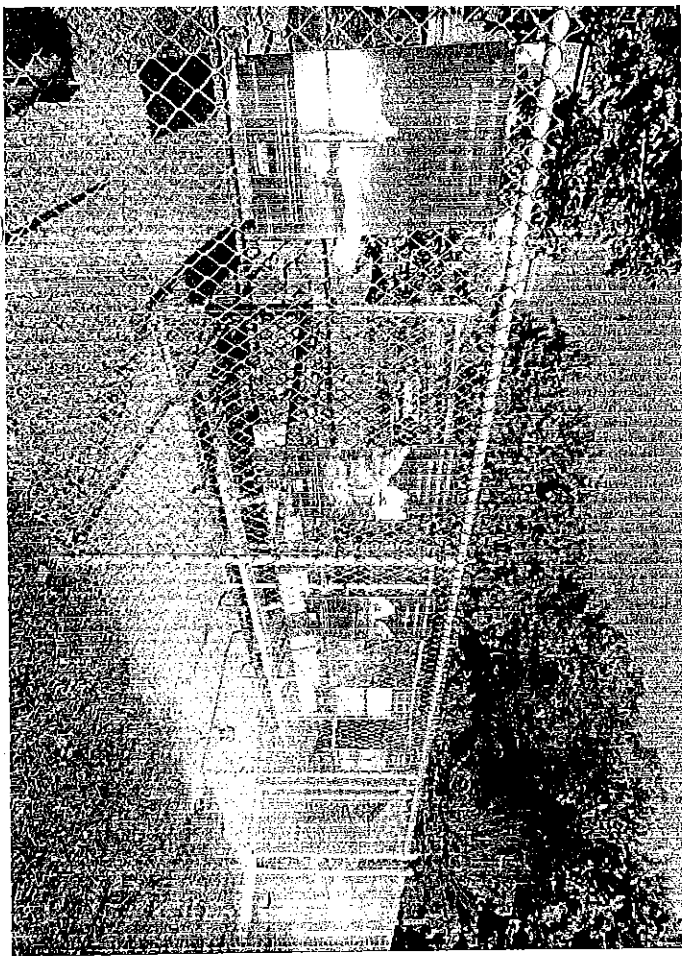
Separate paper, flatten cardboard and stack neatly and securely.

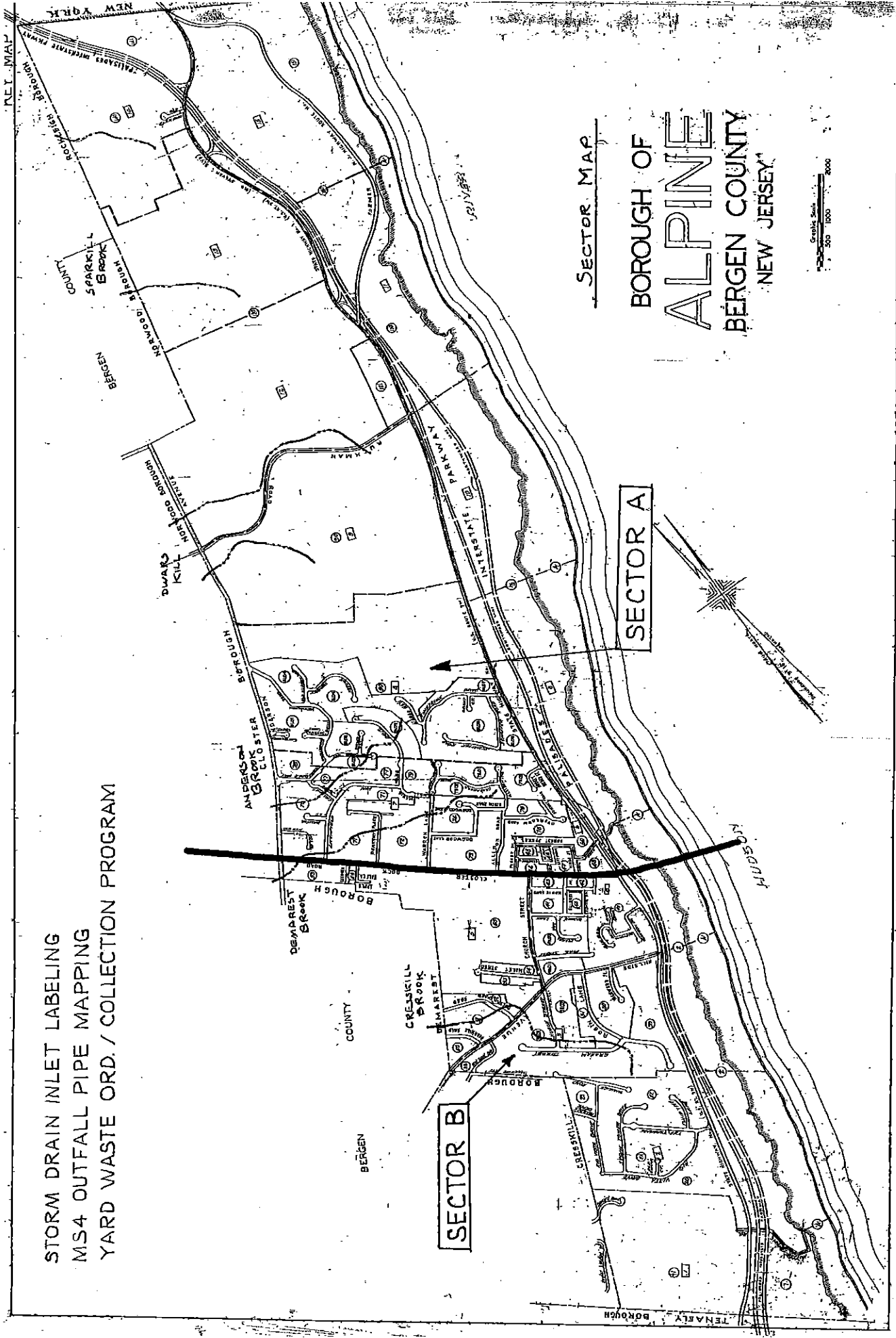
Place cans, bottles, and plastics (that have been rinsed clean) loosely in containers.

We recommend you use containers with secure lids to prevent problems with blowing or wildlife.









STORM DRAIN INLET LABELING
 MS4 OUTFALL PIPE MAPPING
 YARD WASTE ORD. / COLLECTION PROGRAM

SECTOR MAP
 BOROUGH OF
ALPINE
 BERGEN COUNTY
 NEW JERSEY

Graphic Scale
 0 500 1000 2000

SECTOR A

SECTOR B

NET MAP

TENAFELY BOROUGH

Borough of Alpine

Road Erosion Control

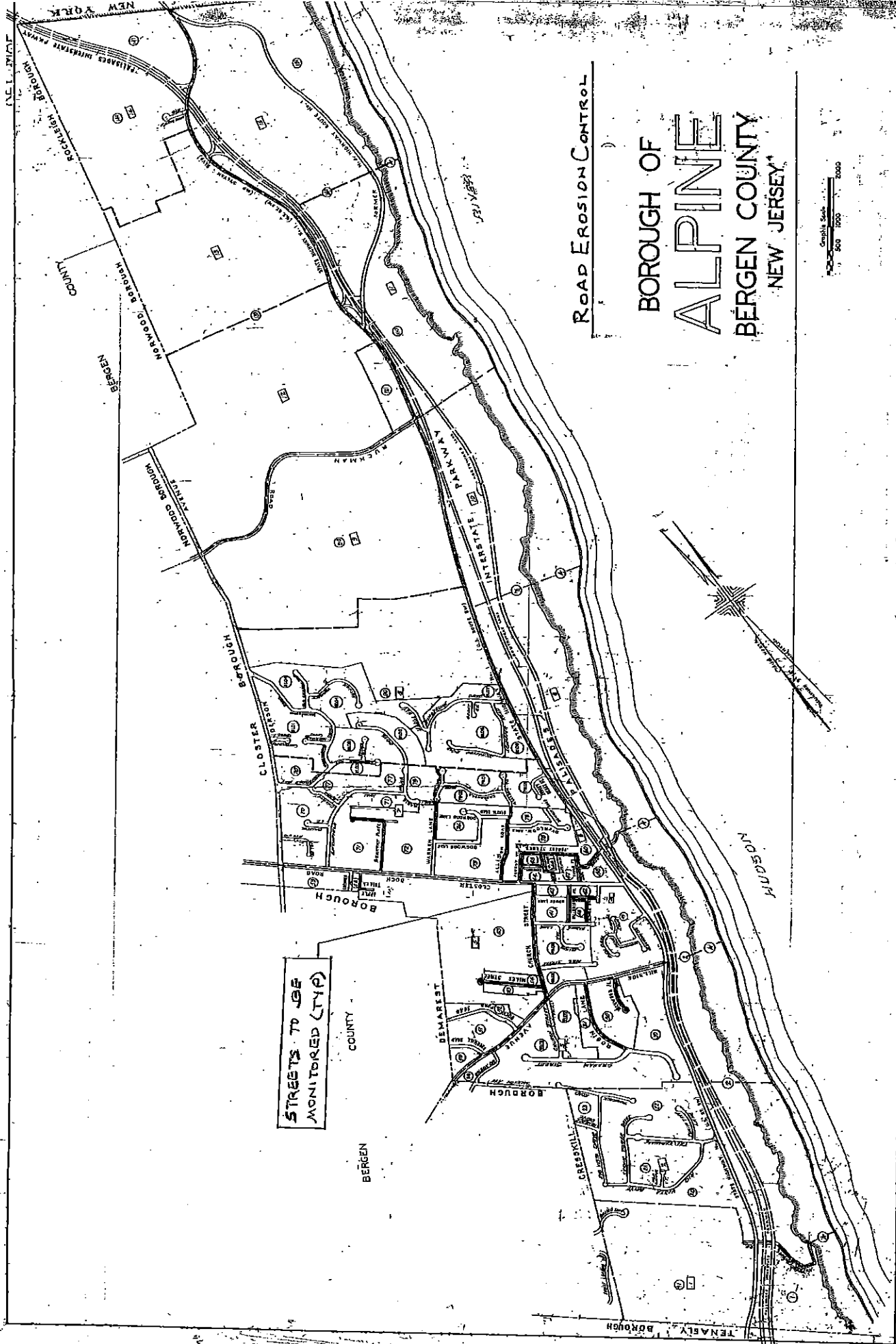
Roads to be monitored (revised 04/01/06)

Allison Road*
Alpine Drive
Apple Tree Lane
Berkery Place
Church Street*
DuBois Avenue
Forest Street
Highwood Place
Main Street
Miles Street
Monument Drive
Old Dock Road
Ridge Street
Robin Lane
Ruckman Road
School House Lane
Warren Lane*
West Main Street

* partial

FORM SPPP-19

Revised 03-18-14



ROAD EROSION CONTROL

BOROUGH OF ALPINE

BERGEN COUNTY
NEW JERSEY

STREETS TO BE
MONITORED (TYP)

Graphic Scale
0 500 1000 2000

BOROUGH OF ALPINE

Maintenance Yard

INVENTORY LIST

3 leaf vacuum machines
1 chipper box for roll off truck
1 dump truck
1 dump truck with trailer
2 flatbed trailers
1 Police trailer
5 container boxes -- storage, etc.
3 roll-off dumpsters - recycling
5' high pile gravel/road grit
1 backhoe
2 plow blades
1 salt spreader
5 misc. size BBQ grills

FORM SPPP-20

Revised 04/01/18

OUTLET PIPE INSPECTION REPORTS

2017

BOROUGH ENGINEER'S OFFICE

FOLLOW – UP INSPECTIONS

(DRY WEATHER FLOWS)

FORM SPPP-21

STORMWATER OUTFALL PIPES

I. Mapping Inspection

Dates: initial inspection 9/21/17 this inspection _____

Watercourse Creskill trib

Municipality Alpine

Block 41 Lot 1 Street Name Church St.

Outfall:

Pipe size 15" material RCF end treatment Headwall

Identifier C.63

Coordinates _____

II. Stream Scour Inspection

Scour visible N Y _____

Describe _____

Elevation relative to watercourse @ Inv.

Receiving watercourse velocity @ U.S. end of trib.

Receiving watercourse geometry 2'w. x 1' D.

III. Illicit Connection Inspection

Dry weather flow visible Y N

Intermittent flow Y N

Pipe scour visible Y N

Describe ~ 3" deep.

Odor present Y N

source: drain from
bital Box

STORMWATER OUTFALL PIPES

I. Mapping Inspection

Dates: initial inspection 9-26-17 this inspection _____

Watercourse Cresskill - trip

Municipality Alpine

Block 41 Lot 13 Street Name Haring Lane

Outfall:

Pipe size 4" x 6" material PVC end treatment daylight

Identifier c.64

Coordinates _____

12" - yard drain outlet
4" - roof drain outlet?

II. Stream Scour Inspection

Scour visible N ~~Y~~

Describe _____

Elevation relative to watercourse 6" - 6" up; 4" - 12" up

Receiving watercourse velocity 0 - no flow

Receiving watercourse geometry 2' w x 2' deep

III. Illicit Connection Inspection

Dry weather flow visible Y ~~N~~

Intermittent flow Y ~~N~~

Pipe scour visible Y ~~N~~

Describe _____

Odor present Y ~~N~~

STORMWATER OUTFALL PIPES

I. Mapping Inspection

Dates: initial inspection 9-21-17 this inspection _____

Watercourse Crosskill trib.

Municipality Albany

Block 41 Lot 3 Street Name School House Lane

Outfall:

Pipe size 4" material PVC end treatment daylight

Identifier C.65

Coordinates _____

II. Stream Scour Inspection

Scour visible N Y _____

Describe _____

Elevation relative to watercourse 12" up.

Receiving watercourse velocity < 1 fps

Receiving watercourse geometry 3' w x 1' d

III. Illicit Connection Inspection

Dry weather flow visible Y _____ N

Intermittent flow Y _____ N

Pipe scour visible Y _____ N

Describe _____

Odor present Y _____ N

loc. east side opp. chuly
frontin S.H. Lane roof drain
outlet?

STORMWATER OUTFALL PIPES

I. Mapping Inspection

Dates: initial inspection 9/29/17 this inspection _____

Watercourse Crosskill

Municipality Alpine

Block 41 Lot 3 Street Name School House Lane

Outfall:

Pipe size 6" material PVC end treatment daylight

Identifier C.66

Coordinates _____

loc. off w/ly end
School House Lane,
south side

II. Stream Scour Inspection

Scour visible N X Y _____

Describe _____

Elevation relative to watercourse 2' above

Receiving watercourse velocity 0

Receiving watercourse geometry 3' w x 2' d

III. Illicit Connection Inspection

Dry weather flow visible Y N X

Intermittent flow Y N X

Pipe scour visible Y N X

Describe _____

Odor present Y N X

BOROUGH OF ALPINE
STORMWATER BMP'S

INVENTORY

AS PER REQUIREMENT OF ANNUAL REPORT AND CERTIFICATION,
PART B, ITEM #26.

I. Dry Wells / Seepage Pits

- a.) Dry wells and seepage pits are installed on substantially all properties developed and/or redeveloped within the Borough, dating to 1990. Refer to files and as-built surveys to obtain locations where these devices were installed within the property limits.

II. Detention Basins

- a.) Vaccaro Drive, Block 11 Lots 2.06 & 2.07
1. Wet pond with outlet control structure; stormwater runoff quantity control; installed circa 2000.
- b.) Tamcrest Drive, Block 11 Lot 22.09
1. Wet pond with outlet control structure; stormwater runoff quantity control; installed circa 2000.
- c.) Tamarack Road, Block 22 Lot 25
1. Detention basin with outlet control structure; stormwater runoff quantity control; installed circa 1982.
- d.) Tulip Tree Lane, Block 22 Lots 4 & 10
1. Detention basin with outlet control structure; stormwater runoff quantity control; installed circa 1982.
- e.) Stone Tower Drive, Block 22 Lots 10 & 11
1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1982.

- f.) Rio Vista Drive, Block 20 Lot 17
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1982.
- g.) Rio Vista Drive, Block 20 Lot 13
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1982.
- h.) Pike Street, Block 49 Lot 27
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1983.
- i.) Alpine Drive, Block 49 Lot 34.01
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1983.
- j.) Frick Drive, Block 55 Lot 25.01
 - 1. Detention basin / underground pipe storage with outlet control structure; stormwater runoff quantity control; installation circa 2007.
- k.) Audrey Urban Court, Block 79.03 Lots 8.07 & 8.08
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 2002.
- l.) Timberline Drive, Block 81.06 Lot 10
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1984.
- m.) Margo Way, Block 81.04 Lot 18.07
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1991.
- n.) Margo Way, Block 81.04 Lots 18.03 & 18.04
 - 1. Detention basin with outlet control structure; stormwater runoff quantity control; installation circa 1991.

III. Manufactured Treatment Device

- a.) The Esplanade, Block 22 Lot 7; Stormfilter; driveway runoff water quality treatment; installation 2012.
- b.) Tamcrest Court, Block 11 Lot 2.07; Stormfilter; driveway runoff water quality treatment; installation 2009.

- c.) Tulip Tree Lane, Block 22 Lot 17.01; Stormceptor (2); driveway runoff water quality treatment; installation 2006.
- d.) Audrey Urban Court, Block 79.03 Lot 8.07; Stormceptor; roadway runoff water quality treatment; installation 2003.
- e.) Vaccaro Drive, Block 11 Lot 2.06; Stormceptor (2); driveway runoff water quality treatment; installation 2005.
- f.) Autumn Terrace, Block 81.04 Lot 18.01; Baysaver; driveway runoff water quality treatment; installation 2007.
- g.) Litchfield Way, Block 71 Lot 22; Stormceptor (2); driveway runoff water quality treatment; installation 2009.
- h.) Autumn Terrace, Block 81.04 Lot 17; Stormceptor; driveway runoff water quality treatment; installation pending.
- i.) Schaffer Road, Block 81.06 Lot 24; Stormfilter; driveway runoff water quality treatment; installation 2011.
- j.) Route 9W, Block 121 Lot 3; Storm Filter (4); driveway runoff water quality treatment; installation pending.
- k.) Dogwood Lane, Block 73 Lot 16; Storm Filter (2); driveway runoff water quality treatment; installation 2014; deed restriction recorded 03/21/16.
- l.) Rio Vista Drive, Block 22 Lot 20; Storm Filter (3); driveway runoff water quality treatment; installation 2015; deed restriction recorded 02-02-2017.
- m.) Anderson Avenue, Block 78 Lot 2; Stormceptor (2); driveway runoff water quality treatment; installation 2014; deed restriction pending.
- n.) Montammy Drive/Route 9W; Block 11 Lot 2; Bio-retention basin; driveway / parking area water quality treatment; installation 2014.
- o.) Canterbury Court; Block 81.01 Lot 4; Stormfilter (1); driveway runoff water quality treatment; installation pending.
- p.) Ruckman Road; Block 90 Lot 6; Stormfilter (1); driveway runoff water quality treatment; installation 2015; deed restriction recorded 02/04/16.

IV. Pervious Paving System

- a.) Route 9W, Block 121 Lots 6 & 7; permeable pavement driveway with storage bed; water quality treatment; installation 2016; deed restriction recorded 08/10/17.

V. Sand Filters

- a.) Frick Drive, Block 55 Lots 22.01 – 22.04 (subdivision); Subsurface sand filters (21); stormwater runoff from private road; water quality treatment; installation 2007; association responsible for maintenance.
- b.) Frick Drive, Block 55 Lot 22.01; Subsurface sand filters (6); stormwater runoff from driveway; water quality treatment; installation 2008; association responsible for maintenance.
- c.) Frick Drive, Block 55 Lot 24.01; Subsurface sand filters (3); stormwater runoff from driveway; water quality treatment; installation 2013; association responsible for maintenance.