

# NPDES Phase II MS4 General Permit Annual Report

## **I. General Information**

Organization:	NH Department of Transportation (NHDOT)
EPA NPDES Permit Number:	NHR043001
Annual Report Number and Reporting Period:	No. 13: May 1, 2016 to April 30, 2017
Contact Person:	Mark Hemmerlein
Title:	Water Quality Program Manager
Telephone #	(603) 271-1550
Email:	mhemmerlein@dot.state.nh.us

### 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.

*Mark Hemmerlein*

Mark Hemmerlein  
Water Quality Program Manager,  
New Hampshire Department of Transportation

# NPDES Phase II MS4 General Permit Annual Report - 2017

## II. Self Assessment

The New Hampshire Department of Transportation (Department) continues to be committed implementing a program to reduce the discharge of pollutants from the Department's regulated Small MS4s to the maximum extent practicable, with the goals of protecting water quality and satisfying the water quality requirements of the Clean Water Act and state water quality standards while providing a safe and efficient transportation system for the public.

The Department has continued to strengthen its role in coordinating erosion control planning, review and inspections for all the Department's projects. The Department has been coordinating with DES Wetland, Watershed Management and Alteration of Terrain personnel to insure consistency with permanent Structural Water Quality Controls, erosion control planning, contractor SWPPP development and monitoring efforts for all of the Department's projects.

The Department has also continued its public education and outreach efforts through stormwater table display, which has made many appearances at local fairs, schools, and Department events.

This year the focus has been with the newly published permit. The Department has formed a committee better understand the goals of EPA and determine best means for the Department to fulfill those goals through our Project Development and Operations Divisions.

The Department has completed this self-assessment and has determined that our agency is in general compliance with all permit conditions and completing measurable goals set out initially in the NOI.



# NPDES Phase II MS4 General Permit Annual Report - 2017

## III. Summary of Minimum Control Measures

This section is formatted as follows:

### NPDES Minimum Control Measure

<u>Code</u>	<u>Description</u>
BMP	BMP Description
TEAM	Responsible Team/ Bureau Name
GOAL	Measurable Goal
PROG	Progress on Goal(s) Permit Year 6 (2008-2009)
ACTION	Planned Activities Year 6 (2009-2010)

## 1. **Public Education and Outreach**

### 1A. Nonpoint Source Stormwater Display

BMP	Showcase the Department's Nonpoint Source Stormwater Table NH State Fairs, and other appropriate locations (e.g. schools)
TEAM	Bureau of Environment
GOAL	Note the approximate number of events that the Department's stormwater table was viewed.
PROG	The Stormwater / NPS presentation table was displayed at the major New Hampshire Wild NH, highlighting water resource protection and other natural resources through the state. The table illustrates various Department activities related to bridges, roadways, sand and salt operations, patrol sheds, and active construction sites.
ACTION	The Department anticipates using the improved stormwater display table for presentations at local schools, and other appropriate audiences in addition to the state fairs.

### 1B. Meetings / Presentations with Professional, Private, and Public Organizations

BMP	The Department will continue to attend and/or assist in organizing appropriate stormwater related presentations and workshops with both public and private organizations.
TEAM	Bureau of Environment
GOAL	In general, members of Department's Bureau of Environment personnel try to attend two to three stormwater related workshops each year to remain up to date on stormwater issues and regulatory changes.
PROG	This past year, the Department hosted the ACEC-NH Technical Transfer Conference CESPEC Training.
ACTION	Continue to provide or assist in hosting or supporting presentations to both public and private organizations.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **1C Transportation Stormwater Conferences**

BMP	The Department will continue meeting with the surrounding New England states to coordinate programs and share information.
TEAM	Bureau of Environment
GOAL	Meet at least annually.
PROG	The Department's Environmental personnel were not able to meet this year due to budget constraints but coordinated a number of interstate projects.
ACTION	Continue to meet and coordinate with other New England State Agencies to share information and efforts relative to stormwater issues.

### **1D Develop Appropriate Media Campaign**

BMP	Increase public education and outreach efforts through additional public announcements and information sharing using the available media options including the Department's web site.
TEAM	Commissioner's Office and Bureau of Environment
GOAL	The Department will focus on informing the traveling public on the Department's activities through press releases, media contacts and public meetings
PROG	The Department's Public Information Officer continues to work with various NH media outlets i.e., NHPR, WMUR (channel 9) and state newspapers to distribute public information regarding the Department's activities.
ACTION	The Department's Public Information Officer will continue to inform and educate the public through local media outlets on Department activities related to pollution prevention actions.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **1E Development of Partnerships**

BMP	Encourage and facilitate development of mutually beneficial partnerships.
TEAM	Bureau of Environment
GOAL	Document the partnerships that are formed.
PROG	The Department has been actively pursuing and formulating important partnerships with such groups as the NH Association of General Contractors, the UNH T2 group and the NH Chapter of the American Council of Engineering Companies (ACEC). For number of years, Department has teamed with ACEC-NH to host a Technical Transfer Conference in April in Concord, NH. This conference is geared toward increasing awareness of new technologies and techniques for pollution prevention, stormwater management as well other interests.
ACTION	The Department will continue to support the efforts of the NH Stormwater Center, ACEC, AGC and others to distribute and exchange the latest information on stormwater treatment design.

### **1F Grant Opportunities**

BMP	Review opportunities to apply for project grants to mitigate water quality impairments from roadway runoff. Program projects for this purpose to meet grant requirements
TEAM	Bureau of Environment
GOAL	Note the project type, location, and whether the committee selected the project. If project is selected, report on the status.
PROG	Address existing water quality problems associated with highway runoff. Many of our water quality improvements are incorporated into our capital projects.
ACTION	The Department will continue to work toward identifying suitable projects and available funding sources.

### **1G Special Events**

BMP	Research the types of special events (ex. Earth Day, local fairs, Wild NH, etc) and determine appropriate involvement.
TEAM	Bureau of Environment
GOAL	Note the event and the type of involvement from the Department. Note the number of events per year.
PROG	The BOE personnel will occasionally participate in special events to display the new Stormwater Demonstration Table or discuss the Department's activities to minimize and prevent stormwater related impacts. The Department will also meet with watershed association groups when invited or as issues arise.
ACTION	The Department will continue to look for appropriate events in which to participate and will contact other events groups such as the

# **NPDES Phase II MS4 General Permit Annual Report - 2017**

Department of Agriculture, NH Fair Association, NH DRED and others.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **2. Public Participation and Involvement**

#### **2A Sponsor A Highway Program**

BMP	Local businesses and volunteer groups will adopt a roadway segment to periodically clean up trash and debris in return for a free sign highlighting the business or group. District personnel help by collecting filled trash bags along the route.
TEAM	Bureau of Highway Maintenance and Bureau of Turnpikes
GOAL	Document quantity of roadside material collected on an annual basis.
PROG	The Program continues to represent one of the most successful programs for public participation with over 475 different volunteer groups participating in collecting trash on over 1,500 miles of roadway. Since the Program began in 1994. The Department also supports the Annual Coastal Cleanup Event by picking up and disposing the trash bags that were filled by volunteers along the coastal beaches. The Department has over the years covered the cost of hauling and disposing of the collected trash.
ACTION	The Department will continue supporting these programs.

#### **2B Department Public Meetings**

BMP	The Department continues to provide opportunities for public input and involvement on specific projects through Public Informational Meetings, as well as Public Hearings. These meetings engage the public in specific discussions of stormwater management issues.
TEAM	Bureau of Environment, Bureau of Highway Design, and Bureau of Bridge Design
GOAL	Coordinate with the Environmental Project Managers and document the public meetings that occurred within the regulated communities. Document any water quality issues that were brought to the Department's attention.
PROG	The Department continues to schedule and promote public meetings related to new projects. For these meetings the Department solicits public input about water quality and stormwater issues. The Department continues attending the Salt Reduction Workgroup meeting associated with the Chloride TMDLs in the southern part of the State.
ACTION	BOE personnel and District staff will continue to solicit input at public meetings and work with Lake Associations and NHDES regarding water quality problems and addressing stormwater management aspects for all of its projects statewide.

#### **2C Seek Relevant Information from Public Officials**

BMP	Notify and request input on stormwater or other environmental issues from municipal officials, regional planning commissions and
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## **NPDES Phase II MS4 General Permit Annual Report - 2017**

	other State Agencies by sending out initial notification letters and environmental report documents during the project planning phase.
TEAM	Bureau of Environment
GOAL	Incorporate any comments and concerns into the project design documents that were received through these letters during the project development phase. Municipal and regional officials are asked specifically to express and comment of water quality concerns and stormwater management issues related to proposed roadway projects. The letter provides a mechanism to discuss concerns at the local level and address existing as well as potential issues through the design and construction of new storm drain systems.
PROG	The BOE will continue to use letters to interact with local (including stormwater coordinator), state, and federal officials to solicit water quality concerns.
ACTION	BOE will continue to follow-up with discussions with design and construction staff as needed.

### **2D The Department's Website**

BMP	Expanding the use of its web site to promote public involvement and participation with regard to stormwater issues.
TEAM	Office of Information Technology and Bureau of Environment
GOAL	Keep the existing website current.
PROG	The Department continues to add new project information, reference documents, and links to its current main website as a means of disseminating public information. For some of the larger, multi-year projects, separate project specific web sites have been created to host project related environmental documents and studies. The site would include stormwater related documents and NPDES Phase II resources.
ACTION	As time allows, Bureau of Environment staff will continue to add technical guidance, or project related stormwater related information into the main Department's website.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **3. Illicit Discharge Detection and Elimination**

#### **3A Encroachment Easements**

BMP	Review and update the drainage connection within assessments which allow property owners to connect or contribute runoff to the Department's storm drain system. Additional language will be included to address concerns about non-stormwater and illicit discharges.
TEAM	Bureau of Highway Maintenance and Attorney General's Office
GOAL	BOE will coordinate with District Personnel to explain purpose and intent of changes. The revised approval letter will be used for new drainage connections.
PROG	The Department is currently reviewing the existing regulation with the Attorney Generals Office.
ACTION	Continue to process and coordinate with AG office to finalize the drainage connection approval letters.

#### **3B Drainage Map**

BMP	Map the entire Department maintained drainage system located within the regulated Small MS4 communities.
TEAM	Bureau of Environment and Bureau of Highway Design.
GOAL	Maintain sufficient progress to complete mapping of entire MS4 drainage system by May 2010.
PROG	The Department has completed this task.
ACTION	The Department is revisiting this task in light of recent efforts to improve the stream conductivity within the state. The latest efforts are to connect this geo-database with other and separate regulated discharges from simple culvert crossings.

#### **3C Illicit Detection and Elimination Program**

BMP	Detect and eliminate illicit discharges and/or connections from the Department storm drain system. The Department will prioritize future IDDE efforts with consideration to 303(d) impaired water bodies, public water supplies, and recreational areas.
TEAM	Bureaus of Environment and Highway Maintenance.
GOAL	Review all outfalls associated with waters that are impaired with bacteria ( <u>E. coli</u> , <u>Enterococcus</u> ).
PROG	The Department continues to focus on the chloride TMDL and implementing BMPs to towards attaining the allocation specified in the plan and other runoff related issues.
ACTION	The Department will continue to investigate mapped outfalls focusing on water bodies on the 303 (d) list of impaired water bodies. The Department will continue to maintain records of all outfall investigations. The BOE will coordinate with the District Maintenance personnel to assist in the outfall investigations.

## NPDES Phase II MS4 General Permit Annual Report - 2017

### **4. Construction Site Runoff Control**

#### **4A Stormwater Pollution Prevention Plan Review**

BMP	Continue to review comment and approve project-specific SWPPPs developed by contractors for the Department's projects.
TEAM	Bureaus of Environment and Construction
GOAL	Review, update and document the approval process of the project-specific SWPPPs.
PROG	The Department continues to strengthen its requirements for site erosion control and review on construction projects. The Department has been focusing on smaller project that do not require Notice of Intents to be filed with EPA. The projects that require NH Dredge and Fill Permits and ACOE PG permits now contain enhance Erosion (Sediment) control plans. The Department is also requiring a SWPPP be developed on smaller project even though no NOI is filed.
ACTION	The Department is continuing to incorporate new requirements in our program

#### **4B Educate New Erosion Control Inspectors**

BMP	Educate new contractors on the expectations for inspections and erosion control maintenance.
TEAM	Bureaus of Environments and Construction
GOAL	Identify new contractors and erosion control inspectors that have not worked with the Department as SWPPPs are submitted and inspectors are listed, to insure typical protocols and BMPs are implemented.
PROG	The Department continues to review SWPPPs and work with contractors and inspectors in the field and evaluate their success or failure. The Department utilizes general guidance for conducting turbidity monitoring, BMP inspection and BMP maintenance plans. When finalized, these procedures will be provided to contractors and erosion control inspectors as needed on a project-by-project basis.
ACTION	The Department is facilitating Certified professional erosion and sediment control specialist classes to develop an Alteration of Terrain compliant workforce.

#### **4C Roadway Maintenance Activities**

BMP	Coordinate with the Division of Operations and others as appropriate, with regard to erosion control issues as part of maintenance activities.
TEAM	Bureau of Environment and Bureau of Highway Maintenance
GOAL	Coordinate with Highway Maintenance personnel with planning and field review of erosion control BMPs.
PROG	The BOE has expanded its review of erosion control BMPS to other divisions outside of the Construction Bureau. Through this

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

expanded coordination, BOE believes that the Department's roadway maintenance is becoming more consistent across the various Districts in the State.

ACTION The Department is implementing EPA's model SWPPP template for use by the Department maintenance personnel in developing their SWPPPs for their projects and Alteration of Terrain requirements are being followed.

### **4D Stormwater Management Erosion and Sedimentation Control Reference Manuals**

BMP Continue utilizing the stormwater management erosion and sedimentation control manuals.

TEAM Bureau of Environment

GOAL Review manuals and reference materials to ensure that they remain in compliance with all Federal and State regulations.

PROG The Department has updated its "Construction Manual" to be the general guidebook for all Department activities related to construction projects, including erosion and sediment control. The Department has also completed the update to the manual "The Department Guidelines for Temporary Erosion and Sediment Control and Stormwater Management". Future updates will be conducted as necessary as new information or BMPs become available or adopted.

ACTION Department will continue to monitor the use of the revised NHDES Site Alteration Rules, and Volume III "Erosion and Sediment control" manual.

### **4E Meetings with EPA Region 1 and NHDES**

BMP Meet with EPA Region 1 and NHDES on an as needed basis to discuss water quality issues associated with construction-related activities.

TEAM Bureau of Environment

GOAL Prepare/file a conference report of any meeting noting agenda, attendees, points of interest and any action items.

PROG DOT attended update meetings on the new MS4 Permit.

ACTION The Department will continue to keep open communication with NHDES and EPA Region 1 relative to construction-related issues.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **4F Project Design**

BMP	Appropriate drainage and erosion control measures including project planning, phasing and sequencing will continue to be a major focus as part of the roadway improvement design phase. Review all projects currently in the design phase.
TEAM	Bureau of Environment, Bureau of Highway Design and Bureau of Bridge Design
GOAL	Meet regularly with the BOE Environmental Managers and the Highway Design Project Managers to discuss and document proposed projects with respect to stormwater runoff and water quality BMPs that are needed.
PROG	The Department has also been coordinating DES Wetlands and Watershed Management Bureau personnel on SWPPP review on projects.
ACTION	The BOE will continue to coordinate NHDES to provide updates and workshops to help educate design and maintenance personnel on the latest best management practices.

### **4G Specifications**

BMP	Review the current specifications and compare to the 2008-2012 Construction General Permit (CGP) and NHDES Alteration of Terrain permit. Make revisions as appropriate.
TEAM	Bureau of Environment and Bureau of Highway Design
GOAL	Continue to review and maintain up to date construction specifications regarding stormwater Best Management Practices.
PROG	The Construction specifications have been reviewed in consideration of the new CGP. It was determined that the specifications were more stringent or equivalent as the recently published permit.
ACTION	The Department continues to monitor construction specifications for recently published CGP and to address the recent 401 water quality requirements for turbidity monitoring.

### **4H Construction School**

BMP	Provide the Bureau of Construction personnel with training or updates on stormwater issues and/or NPDES Phase II issues.
TEAM	Bureau of Environment and Bureau of Construction
GOAL	The Department again did a Construction School Program highlighting the requirements of the MS4 and CGP Program.
PROG	The Construction School is an effective training forum to educate personnel on the basic elements of the NPDES Program. More recently, the Department hosted more focused workshop on common issues that construction engineers should be on lookout when building wet basins and other stormwater treatment structures.
ACTION	The Department will continue to periodically assess the need for NPDES-related workshops for its employees. The Bureau of

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

Environment will continue to revise and prioritize the education and outreach needs of the Department.

### **5. Post Construction Runoff Control**

#### **5A Review Stormwater BMP Designs for Proposed Projects**

BMP	Develop a consistent internal review process to evaluate the designs and needs of proposed water quality BMPs that would be included in new construction projects relative to sensitivity of the receiving waters and increases in impervious surface.
TEAM	Bureau of Environment, Bureau of Highway Maintenance, Bureau of Construction, and Bureau of Bridge Design
GOAL	Establish a review process to evaluate BMPs designs on proposed projects to insure consistency with recent guidance criteria. Document and follow-up as required.
PROG	The review process for stormwater BMP design has been done on an as needed and project-by-project basis. Some of the Department's oldest stormwater structures are being rehabilitated and upgraded as part of major highway rehabilitation projects.
ACTION	The Department will continue to coordinate with DES on latest BMP designs, and implement them in projects.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **5B Develop Data Base to Maintain Inventory Stormwater BMPs and Manage Drainage Infrastructure Assets**

BMP	Develop a database to allow tracking and scheduling of routine maintenance procedures on stormwater treatment structures
TEAM	Bureau of Highway Maintenance, Bureau of Turnpikes and Bureau of Bridge Maintenance.
GOAL	The Department has developed a central GIS database of stormwater treatment structures.
PROG	The Department determined methods that track efforts used to maintain the systems. The Department did a complete inspection of some of its stormwater systems and is completing maintenance and repairs last summer.
ACTION	The Department will re-inspect the structures as needed. The Department will also research available software packages to identify programs that can be used to schedule and track maintenance needs based on GIS attribute data.

### **5C Standardize Routine Roadway and BMP Maintenance Procedures**

BMP	Develop and implement Standard Operating Procedures manual to be utilized as a guide for maintenance personnel in maintaining stormwater BMPs.
TEAM	Bureau of Highway Maintenance, Bureau of Construction and Bureau of Environment.
GOAL	Develop a Department SOP manual preferable a durable pocket-sized field manual to outline standard maintenance protocols for various BMPs.
PROG	The manual is complete and waiting for State Rules approval
ACTION	The Department will continue to develop BMP Maintenance procedures for all types of BMPs.

### **5D Enhance/ Replace / Upgrade Roadway and Drainage Culverts to Rectify Observed Sediment and other Pollutant Source Areas**

BMP	Coordinate with Watershed Groups, Lake Assoc., etc. to address Erosion Control Issues Related to Existing Roads and Culvert Washouts in Environmental Sensitive Areas.
TEAM	Bureau of Highway Maintenance and Bureau of Environment
GOAL	To address complaint-based or other known pollutant source issues related to the Department drainage in a timely manner to satisfy stakeholders and minimize water quality impacts.
PROG	The Department has responded and coordinated with various watershed groups in the state to address known problem areas.
ACTION	The Department will continue to coordinate with resource agencies and volunteer groups as water quality issues are brought to their attention.

## NPDES Phase II MS4 General Permit Annual Report - 2017

### **6. Pollution Prevention / Good Housekeeping**

#### **6A Managing Assets for Transportation Systems (MATS)**

BMP	Continue to inventory and incorporate the Department drainage system in the GIS system to enable management and maintenance of the drainage related assets.
TEAM	Bureau of Highway Maintenance, Office of Information Technology and Bureau of Finance and Contracts
GOAL	Complete mapping inventory of drainage systems and develop procedures to capture maintenance activities in the MATS system or MATS like system.
PROG	The Department is using a GIS based system to maintain an inventory of the storm drain infrastructure.
ACTION	The Department has an Asset Management Office that will continue to work toward integrating drainage system components into a GIS system with the other systems. This office will research the available software to identify appropriate software packages that can integrate GIS attribute data to real-time work activities.

#### **6B Roadside Litter Removal Program**

BMP	Remove roadside litter from all Department maintained roads
TEAM	Bureau of Highway Maintenance and Bureau of Turnpikes.
GOAL	Maintain a level of roadside cleanliness that is considered acceptable to the public based on the number of complaints received or lack of, regarding litter.
PROG	Roadside litter removal is part of the Department maintenance program and is done throughout the year. Actual quantities of material are not typically calculated. There are no major changes to this BMP.
ACTION	Continue removing roadside litter from all Department roadways.

#### **6C Coastal Cleanup**

BMP	Continue to support the annual Coastal Cleanup Program by collecting and disposing of the filled trash bags and other debris.
TEAM	Bureau Highway Maintenance
GOAL	Coordinate with District personnel to pickup trash bags and collected debris following each event.
PROG	District 6 collects the bags of litter left along the roadside along the NH Route 1 corridor.
ACTION	Continue to assist in the debris pickup and disposal in support of this program.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **6D Employees Training**

BMP	The Department will continue providing appropriate presentations to Department staff relative to stormwater issues and the NPDES Phase II program.
TEAM	Bureaus of Environment, Highway Maintenance and Commissioner's Office
GOAL	A total number of presentations/meetings and the target audience within the reporting year will be documented. A follow-up on identified issues will be noted and required actions identified.
PROG	The Department has held a number of internal training sessions focused on pollution prevention.
ACTION	The Department will continue to update and modify training to Department Personnel. The Bureau of Environment will note the training needs and prioritize those needs for subsequent training sessions.

### **6E Guidance Materials**

BMP	Update guidance documents and evaluate the need for additional guidance.
TEAM	Bureau of Environment
GOAL	Update the guidance document and summarize the changes. Note any additional guidance materials that have been or will be developed.
PROG	The Department is revising its internal guidance document, BMPs for Routine Roadway and Railway Maintenance Activities, for use by all Maintenance Districts and Operations bureaus as an educational reference tool and for performing roadside maintenance and being sensitive to environmental issues. The Bureau of Environment also prepared an internal guidance document entitled "The Department Guidelines for Temporary Erosion and Sedimentation control and Stormwater Management." The new NHDES Stormwater manual release in December 2008 was printed and distributed to design personnel.
ACTION	The BOE will continue to refine and adopt procedures, and provide employee training to implement standardized procedures statewide.

## **NPDES Phase II MS4 General Permit Annual Report - 2017**

### **6F Winter Maintenance Activities**

BMP	Review current procedures and determine ways to reduce salt use through the use of more efficient application procedures and/or technologies.
TEAM	Commissioner's Office, Bureaus of Highway Maintenance, Turnpikes and Environment
GOAL	Document current practices and make recommendations relative to new technologies. Meet with appropriate Department personnel to review current deicing procedures.
PROG	The Department has been working closely with the Salt Reduction Working Group to identify feasible measures to reducing salt use both at the state and municipal level. In this past year, the Department has been using pre-wet road salt just prior to application. The "pre-wet" process activates the salt, which improves its effectiveness. In addition, four roadway weather information stations (RWIS) were installed in MS4 areas and a total of 11 RWIS stations statewide. The RWIS data is being fed into the Maintenance Decision Support System (MDSS) to help reduce the unnecessary dispensing of salt.
ACTION	The Department will continue to aggressively pursue and experiment with various methods to reduce its salt usage including annual training of its employees and implantation on new technologies. The Department will continue to participate in the Salt Reduction Working Group, which provide a means to exchange technical information to other users and stakeholders.