



**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

NO. PC4-14- 12

**TITLE:** Expressing the Commission's appreciation to the family of John Haas for his Service as a Member between December 2005 and November 2013

Commissioner Ashmun moves and Commissioner Rohan Green seconds the motion that:

**WHEREAS**, John Haas was first appointed by the Ocean County Board of Chosen Freeholders on November 16, 2005 and served on the Commission with great dedication until November 2013; and

**WHEREAS**, Mr. Haas brought his experience and insight as the longtime District Recycling Coordinator in Ocean County, and as a member of the Borough Council, Board of Education and Planning Board in Seaside Park to the Commission; and

**WHEREAS**, during his tenure as a Commissioner, Mr. Haas served on the Audit Committee, was a member of the Commission's Permanent Land Protection Committee, Personnel & Budget Committee and Policy and Implementation Committee; and

**WHEREAS**, Mr. Haas served as Acting Vice Chair of the Commission in 2010 and as the Vice Chair from 2011 until 2013; and

**WHEREAS**, Mr. Haas was a strong advocate for the permanent protection of land in the Pinelands, and the Commission permanently preserved 7,228 acres through the Pinelands Conservation Fund during Mr. Haas' tenure; and

**WHEREAS**, during Mr. Haas' tenure, the Commission strengthened the Pinelands Protection Program by adopting 15 amendments to the Pinelands Comprehensive Management Plan; and

**WHEREAS**, Commissioners members are unpaid volunteers and Mr. Haas devoted hundreds of hours of his time as a Commissioner and logged more than 10,000 miles driving to and from Commission meetings; and

**WHEREAS**, the members of the Commission want to recognize Mr. Haas' significant contributions, and to express their appreciation for the service that he performed.

**NOW, THEREFORE BE IT RESOLVED** that the members of the Pinelands Commission, assembled at the Richard J. Sullivan Center for Environmental Policy and Education on this 9<sup>th</sup> day of May, 2014, do hereby express our appreciation to the family of our colleague and friend, John Haas for his commitment to the Pinelands and for his service as a member of the Commission between December 2005 and November 2013.

**Record of Commission Votes**

AYE NAY NP ABS				AYE NAY NP ABS				AYE NAY NP ABS			
Ashmun	X			Galletta	X			Prickett	X		
Avery	X			Jackson	X			Quinn	X		
Brown	X			Jannarone			X	Rohan Green	X		
DiBello	X			Lloyd	X			Witt			X
Earlen	X			McGlinchey			X	Lohbauer	X		

Adopted at a meeting of the Pinelands Commission

Date: May 9, 2014

Nancy Wittenberg  
Nancy Wittenberg  
Executive Director

Mark S. Lohbauer  
Mark S. Lohbauer  
Chairman



**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

NO. PC4-14- 13

**TITLE:** Expressing the Commission's appreciation to Leslie Ficcgaglia for her Service as a Member between April 1996 and April 2014

Commissioner Lloyd moves and Commissioner Jackson seconds the motion that:

WHEREAS, Leslie Ficcgaglia was first appointed by the Cumberland County Board of Chosen Freeholders on March 15, 1996 and served on the Commission with great distinction until April 2014; and

WHEREAS, during her tenure as a Commissioner, Ms. Ficcgaglia served on the Audit Committee and was a member of the Commission's Permanent Land Protection Committee, Personnel & Budget Committee and Policy and Implementation Committee; and

WHEREAS, Ms. Ficcgaglia's experience and insight as a former member of the Maurice River Township Planning Board and the Cumberland County Planning Board helped to inform and guide the Commission's decisions for nearly 18 years; and

WHEREAS, Ms. Ficcgaglia has devoted much of her life to support efforts to protect the environment, including serving as a trustee on the Citizens United to Protect the Maurice River and its Tributaries and sitting on the Delaware Bayshores Advisory Council of The Nature Conservancy. Additionally, she is a past trustee for the Association of New Jersey Environmental Commissions and chaired her township's Environmental Commission for many years; and

WHEREAS, during Ms. Ficcgaglia's tenure, the Commission strengthened the Pinelands Protection Program by adopting 29 amendments to the Pinelands Comprehensive Management Plan; and

WHEREAS, Ms. Ficcgaglia was a strong advocate for protecting Wild and Scenic Rivers as well as threatened and endangered plant and animal species in the Pinelands; and

WHEREAS, Commission members are unpaid volunteers and Ms. Ficcgaglia devoted hundreds of hours of her time as a Commissioner and logged more than 35,000 miles driving to and from Commission meetings; and

WHEREAS, the members of the Commission want to recognize Ms. Ficcgaglia's significant contributions, and to express their appreciation for the service that she performed.

**NOW, THEREFORE BE IT RESOLVED** that the members of the Pinelands Commission, assembled at the Richard J. Sullivan Center for Environmental Policy and Education on this 9<sup>th</sup> day of May, 2014, do hereby express our appreciation to our colleague and friend, Leslie Ficcgaglia for her commitment to the Pinelands and for her service as a member of the Commission between April 1996 and April 2014.

**Record of Commission Votes**

AYE NAY NP ABS				AYE NAY NP ABS				AYE NAY NP ABS			
Ashmun	X			Galletta	X			Prickett	X		
Avery	X			Jackson	X			Quinn	X		
Brown	X			Jannarone		X		Rohan Green	X		
DiBello	X			Lloyd	X			Witt			X
Earlen	X			McGlinchey		X		Lohbauer	X		

Adopted at a meeting of the Pinelands Commission  
Nancy Wittenberg  
Nancy Wittenberg  
Executive Director

Date: May 9, 2014  
Mark S. Lohbauer  
Mark S. Lohbauer  
Chairman



**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

NO. PC4-14- 14

**TITLE:** Approving With Conditions an Application for a Public Development and Certificate of Appropriateness (Application Number 1989-0538.006)

Commissioner GALLIHA moves and Commissioner Erker seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Findings of Fact, Conclusion and the recommendation of the Executive Director that the following application for Public Development and a Certificate of Appropriateness be approved with conditions:

App. No. 1989-0538.006      Applicant: HMS Host Corporation on behalf of New Jersey Turnpike Authority

Municipality: Galloway Township  
Management Area: Parkway Overlay District Underlain by a Regional Growth Area  
Proposed Development: Demolition of an existing 11,850 square foot service building and the construction of a 12,500 square foot service building at the Atlantic Service Area (Date of Report: April 17, 2014).

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received; and

WHEREAS, the Pinelands Commission hereby adopts the Findings of Fact and Conclusion of the Executive Director; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval; and

WHEREAS, the Pinelands Commission hereby determines that the proposed Public Development and Certificate of Appropriateness conforms to both the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 and the standards for approving a Certificate of Appropriateness set forth in N.J.A.C. 7:50-6.156 if the conditions recommended by the Executive Director are imposed.

**NOW, THEREFORE BE IT RESOLVED** that the following application for Public Development and Certificate of Appropriateness is hereby approved subject to the conditions recommended by the Executive Director:

App. No. 1989-0538.006 Applicant: HMS Host Corporation on behalf of New Jersey Turnpike Authority

Municipality: Galloway Township
Management Area: Parkway Overlay District Underlain by a Regional Growth Area
Proposed Development: Demolition of an existing 11,850 square foot service building and the construction of a 12,500 square foot service building at the Atlantic Service Area (Date of Report: April 17, 2014).

Record of Commission Votes

Table with 3 columns of headers (AYE, NAY, NP, ABS) and 3 columns of names (Ashmun, Galletta, Prickett, Avery, Jackson, Quinn, Brown, Jannarone, Rohan Green, DiBello, Lloyd, Witt, Earlen, McGlinchey, Lohbauer). Each cell contains a checkmark or an 'X' indicating the vote.

Adopted at a meeting of the Pinelands Commission

Date: May 9, 2014

Signature of Nancy Wittenberg, Executive Director

Signature of Mark S. Lohbauer, Chairman



State of New Jersey  
 THE PINELANDS COMMISSION  
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Chris Christie  
 Governor

Kim Guadagno  
 Lt. Governor

General Information: Info@njpines.state.nj.us  
 Application Specific Information: AppInfo@njpines.state.nj.us

Mark S. Lohbauer  
 Chairman

Nancy Wittenberg  
 Executive Director

April 17, 2014

Edward Beeler  
 HMS Host Corporation  
 6905 Rockledge Drive  
 Bethesda, MD 20817

Re: Application # 1989-0538.006  
 Garden State Parkway – Atlantic Service Area  
 Galloway Township

Dear Mr. Beeler:

The Commission staff has completed its review of this application for the demolition of an existing 11,850 square foot service building and the construction of a 12,500 square foot service building at the Atlantic Service Area within the Garden State Parkway right-of-way. Enclosed is a copy of a Public Development Application Report. The Report also includes a Certificate of Appropriateness to address cultural resources. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its May 9, 2014 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,

Charles M. Horner, P.P.  
 Director of Regulatory Programs

Enc: Appeal Procedure

- c: Secretary, Galloway Township Planning Board (via email)
- Galloway Township Construction Code Official (via email)
- Galloway Township Environmental Commission (via email)
- Atlantic County Department of Regional Planning and Development (via email)
- Rene Lipatas





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Chris Christie  
Governor

Kim Guadagno  
Lt. Governor

General Information: Info@njpinelands.state.nj.us  
Application Specific Information: AppInfo@njpinelands.state.nj.us

Mark S. Lohbauer  
Chairman

Nancy Wittenberg  
Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT  
AND CERTIFICATE OF APPROPRIATENESS**

April 17, 2014

Edward Beeler  
HMS Host Corporation  
6905 Rockledge Drive  
Bethesda, MD 20817

Application No.: 1989-0538.006

Location: Garden State Parkway – Atlantic Service Area  
Galloway Township

This application is for the demolition of an existing 11,850 square foot service building and the construction of a 12,500 square foot service building at the Atlantic Service Area within the Garden State Parkway right-of-way in Galloway Township. The existing service building is 50 years old or older.

**STANDARDS**

The Commission staff has reviewed the proposed demolition and construction for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

Land Use (N.J.A.C. 7:50-5.35)

The proposed development is located in the CMP designated Parkway Overlay District and underlain by a Pinelands Regional Growth Area. The proposed development is a permitted land use in the Parkway Overlay District.

Vegetation Management Standards (N.J.A.C. 7:50-6.23 & 6.26)

The proposed development will be located within existing developed, paved and landscaped areas. The proposed clearing and soil disturbance appears to be limited to that which is necessary to accommodate the proposed development.

The Landscaping and Revegetation guidelines of the CMP recommend the use of grasses that are tolerant of droughty, nutrient poor conditions. The existing Atlantic Service Area is comprised of pavement and existing maintained lawn area. The site of the proposed service building is surrounded by

existing pavement. The applicant proposes to plant unspecified grass species in two small discrete areas, less than 7,000 square feet, immediately adjacent to the proposed building.

Water Quality Standard (N.J.A.C. 7:50-6.83)

The proposed service building will be serviced by public sanitary sewer.

Cultural Resource Standards (N.J.A.C. 7:50-6.151-6.158)

The New Jersey State Historic Preservation Office (SHPO) previously determined that the Garden State Parkway was eligible for the National Register of Historic Places. The SHPO has determined that the existing 11,850 square foot service building subject of this application is a contributing resource to the register eligible Garden State Parkway Historic District.

The Commission staff has reviewed the documentation provided by the applicant and SHPO regarding the historic significance of the service building proposed for demolition. Based on this documentation, and in consideration of the SHPO determination that the existing 11,850 square foot service building is a contributing resource to the register eligible Garden State Parkway Historic District, the Commission staff has concluded that the building is a historically significant resource and is, therefore, eligible for Pinelands Designation in accordance with the provisions of the CMP (N.J.A.C. 7:50-6.154.)

The CMP (N.J.A.C. 7:50-6.156) requires that a certificate of appropriateness be issued by the Commission that identifies the required treatment of the historically significant resource from among three alternatives:

- preservation of the resource in place, if possible;
- preservation of the resource at another location, if preservation in place is not possible; or
- recordation.

The Commission staff has determined that recordation is the appropriate treatment for the historically significant resource. The standards of the CMP (N.J.A.C. 7:50-6.156(c)3.iii.) specify that the proposed recordation must conform to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. Prior to demolition, the building must be recorded according to the Historic American Building Survey standards. The design of the exterior of the replacement building must also conform to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and be approved by SHPO.

**PUBLIC COMMENT**

This applicant has provided the requisite public notices. Newspaper public notice was completed on March 7, 2014. The application was designated as complete on the Commission's website on April 1, 2014. The Commission's public comment period closed on April 11, 2014. No public comment was submitted to the Commission regarding the application.

**CONDITIONS**

1. Except as modified by the below conditions, the proposed development shall adhere to the plan, consisting of six sheets, prepared by CHA Consulting Inc., all sheets dated December 16, 2013.

2. Disposal of any construction debris or excess fill may only occur at an appropriately licensed facility.
3. Any proposed revegetation shall adhere to the "Vegetation" standards of the CMP. Where appropriate, the applicant is encouraged to utilize the following Pinelands native grasses for revegetation: Switch grass, Little bluestem and Broom-sedge.
4. Prior to any development, the applicant shall obtain any other necessary permits and approvals.
5. Prior to demolition of the building, a copy of the recordation report shall be provided to the Commission staff. No demolition shall occur until the Commission staff responds in writing that the submitted recordation report meets the CMP recordation requirements. Prior to its development, the design of the exterior of the replacement building must also conform to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and be approved by SHPO.

### CONCLUSION

As the proposed development conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed development subject to the above conditions.





Chris Christie  
Governor

Kim Guadagno  
Lt. Governor

## State of New Jersey

THE PINELANDS COMMISSION

PO Box 359

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[www.nj.gov/pinelands](http://www.nj.gov/pinelands)

General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)



Mark S. Lohbauer  
Chairman

Nancy Wittenberg  
Executive Director

### PINELANDS COMMISSION APPEAL PROCEDURE

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission within eighteen days of the date of the Executive Director's determination and must include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



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General Information: Info@njpines.state.nj.us  
 Application Specific Information: AppInfo@njpines.state.nj.us

Mark S. Lohbauer  
 Chairman

Nancy Wittenberg  
 Executive Director

April 25, 2014

Lynn E. Fleming, State Forester  
 NJDEP Division of Parks and Forestry  
 Mail Code 501-04  
 P.O. Box 420  
 Trenton, New Jersey 08625

Re: Application # 1992-0102.006  
 Wharton State Forest  
 Block 53, Lot 26  
 Washington Township

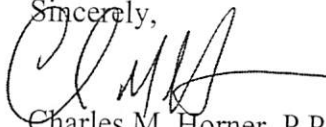
Dear Ms. Fleming:

The Commission staff has completed its review of your application for the spot spraying of herbicides accessory to a previously completed forestry operation on 12 acres of the above referenced 321 acre lot. Enclosed is a copy of a revised Public Development Application Report And Certificate of Appropriateness. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its May 9, 2014 meeting.

On April 21, 2014, the Commission staff mailed a cover letter and a Public Development Application Report And Certificate of Appropriateness for this application. That "Report" did not include a copy of the one public comment letter received by the Commission regarding the application. This cover letter and revised Report are being reissued to provide a copy of that public comment letter.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,  


Charles M. Horner, P.P.  
 Director of Regulatory Programs

Enc: Appeal Procedure





**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

NO. PC4-14- 15

**TITLE:** Approving With Conditions an Application for a Public Development and Certificate of Appropriateness (Application Number 1992-0102.006)

Commissioner Avery moves and Commissioner Galletta seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Findings of Fact, Conclusion and the recommendation of the Executive Director that the following application for Public Development and a Certificate of Appropriateness be approved with conditions:

App. No. 1992-0102.006 Applicant: New Jersey Department of Environmental Protection

Municipality: Washington Township  
Management Area: Pinelands Preservation Area District  
Proposed Development: Spot spraying of herbicides accessory to a previously completed forestry operation on 12 acres (Date of Report: April 25, 2014).

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received; and

WHEREAS, the Pinelands Commission hereby adopts the Findings of Fact and Conclusion of the Executive Director; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval; and

WHEREAS, the Pinelands Commission hereby determines that the proposed Public Development and Certificate of Appropriateness conforms to both the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 and the standards for approving a Certificate of Appropriateness set forth in N.J.A.C. 7:50-6.156 if the conditions recommended by the Executive Director are imposed.

NOW, THEREFORE BE IT RESOLVED that the following application for Public Development and Certificate of Appropriateness is hereby approved subject to the conditions recommended by the Executive Director:

App. No. 1992-0102.006 Applicant: New Jersey Department of Environmental Protection

Municipality: Washington Township  
Management Area: Pinelands Preservation Area District  
Proposed Development: Spot spraying of herbicides accessory to a previously completed forestry operation on 12 acres (Date of Report: April 25, 2014).

**Record of Commission Votes**

AYE NAY NP ABS				AYE NAY NP ABS				AYE NAY NP ABS			
Ashmun			X	Galletta	X			Prickett	X		
Avery	X			Jackson	X			Quinn	X		
Brown	X			Jannarone		X		Rohan Green	X		
DiBello	X			Lloyd	X			Witt			X
Earlen	X			McGlinchey		X		Lohbauer	X		

Adopted at a meeting of the Pinelands Commission

Date: May 9, 2014

Nancy Wittenberg  
Nancy Wittenberg  
Executive Director

Mark S. Lohbauer  
Mark S. Lohbauer  
Chairman



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Chris Christie  
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General Information: Info@njpines.state.nj.us  
 Application Specific Information: AppInfo@njpines.state.nj.us

Mark S. Lohbauer  
 Chairman  
 Nancy Wittenberg  
 Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT AND CERTIFICATE OF  
 APPROPRIATENESS**

(Corrected copy: attach copy of public comment letter)

April 25, 2014

Lynn E. Fleming, State Forester  
 NJDEP, Division of Parks and Forestry  
 Mail Code 501-04  
 P.O. Box 420  
 Trenton, NJ 08625

Application No.: 1992-0102.006

Location: Wharton State Forest  
 Block 53, Lot 26  
 Lovers Lane  
 Washington Township

This application is for spot spraying of herbicides on 12 acres of the above referenced 321 acre lot to suppress an existing invasive grass species, Japanese stiltgrass. The purpose of the herbiciding is to facilitate natural regeneration of the historic plantations of white pine and loblolly pine. A pre-emergent herbicide application and a post emergent herbicide application will occur in the first year. If necessary, the same herbicide treatments will be applied in year two. The installation of deer exclusion fencing is also proposed.

If within three years of herbicide treatment natural regeneration fails or is inadequate, this application proposes to mow, disk and plant the concerned twelve acres. Where white pine was present, native shortleaf pine will be planted. Loblolly pine will be replanted in the area where loblolly was present.

On November 23, 2011 and December 23, 2011 the Pinelands Commission Executive Director determined that Southern Pine Beetle infestation of the subject area constituted a condition that was potentially dangerous to life, health and safety. Those determinations authorized the harvesting of pine trees without completion of an application with the Pinelands Commission.

**STANDARDS**

The Commission staff has reviewed the proposed forestry activities for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

Land Use (N.J.A.C. 7:50-5.22(a)3)

The proposed forestry activities are located in the Pinelands Preservation Area District. Forestry is a permitted use in the Pinelands Preservation Area District.

Forestry (N.J.A.C. 7:50-6.46(a)9ii)

The CMP permits herbicide treatment as part of a forestry operation provided five conditions are met. One of those conditions is that the control of competitive plant species is clearly necessary. Another condition is that control by non-chemical means is not practical. A third condition is that all chemicals shall be expressly labeled for forestry use and shall be used and mixed in a manner that is consistent with relevant State and Federal requirements. The applicant has indicated that appropriately labeled herbicides, one expressly labeled for the pre-emergent treatment of Japanese stiltgrass and one expressly labeled for the post-emergent treatment of Japanese stiltgrass, will be used. The applicant has provided information demonstrating that the five CMP conditions will be met.

Cultural Resource Standards (N.J.A.C. 7:50-6.151-6.158)

The proposed forestry activities are located within the Mullica River/Chestnut Neck Historic District, which is listed on the New Jersey Register of Historic Places (N.J.A.C. 7:50-6.154(a)). The applicant provided information documenting that the requirement for a cultural resource survey was waived by the New Jersey State Historic Preservation Office because the proposed forestry activities would not cause sufficient ground penetration to disturb any subsurface cultural resources. The Commission Staff agreed that the cultural resource survey should be waived.

Although the requirement for a cultural resource survey was waived by the Commission staff, the CMP (N.J.A.C. 7:50-6.156) requires that a certificate of appropriateness be issued by the Pinelands Commission identifying the required treatment for the significant cultural resource from three alternatives:

- preservation of the resource in place, if possible;
- preservation of the resource at another location, if preservation in place is not possible; or
- recordation.

The Commission staff has determined that preservation in place is the appropriate treatment. The proposed forestry activities are consistent with the standards for preservation in place.

**PUBLIC COMMENT**

This applicant has provided the requisite public notices. Newspaper public notice was completed on November 18, 2013. Notice to required land owners within 200 feet of the above referenced lot was completed on November 20, 2013. The application was designated as complete on the Commission's website on March 24, 2014. The Commission's public comment period closed on April 11, 2014. The Pinelands Commission received one public comment regarding the application (copy attached).

Public Comment One: The commenter indicated the following:

- Japanese stiltgrass may be suppressed, but will not be eradicated by the proposed herbicide treatments;

- The proposed herbicide treatment should be withdrawn;
- Deer exclusion fencing and planting of native shortleaf pine should occur without attempting to regenerate white pine and loblolly pine, which are not native Pinelands species, despite their historic planting at the site, and
- Since these non-native species (white pine and loblolly pine) were previously subject of southern pine beetle infestation, it does not seem prudent to replant them.

Commission Staff Response: The applicant proposes to suppress the Japanese stiltgrass to enable natural regeneration of the historic white pine and loblolly plantations. The submitted application references both eradication and suppression of stiltgrass. In response to public comment, the applicant clarified, in writing, that eradication of the stiltgrass is not anticipated, but that the stiltgrass will be sufficiently suppressed to enable natural regeneration to occur. Although the commenter indicates that planting of native shortleaf pine is preferable, the CMP permits forestry activities that maintain Pinelands native forest types, except in those stands where other forest types exist. Maintaining existing plantations of white pine and loblolly pine is permitted by the CMP.

### CONDITIONS

1. The proposed activities shall adhere to the "Proposal For Silvicultural Activity On State Forest And Park Lands, New Jersey Forestry Services, dated November 26, 2013.

### CONCLUSION

As the proposed forestry activities conform to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed development subject to the above conditions.

Attach (1): April 11, 2014 Pinelands Preservation Alliance Letter



# State of New Jersey

## THE PINELANDS COMMISSION

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Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)

Mark S. Lohbauer  
Chairman

Nancy Wittenberg  
Executive Director

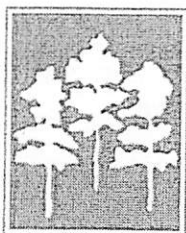
### PINELANDS COMMISSION APPEAL PROCEDURE

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission within eighteen days of the date of the Executive Director's determination and must include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.

APR 11 2014



## PINELANDS PRESERVATION ALLIANCE

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April 11, 2014

Re: Public Comments Regarding Application No. 1992-0102.006 - NJ DEP Division of Parks and Forestry; Block 53, Lot 26

Pinelands Preservation Alliance (PPA) and New Jersey Conservation Foundation (NJCF) submit these comments on Application No. 1992-0102.006, which would allow New Jersey State Forestry Services to treat invasive Japanese stiltgrass with herbicide to encourage regeneration of white pine and loblolly pine at the Greenbank Plantation. While controlling invasive species in the Pinelands is important, we suggest approaching this particular situation differently than is proposed in the application. In brief:

- Japanese stiltgrass will not be eradicated from this 12-acre site by two years of herbicide treatment.
- Instead of dedicating resources towards eradicating one non-native species (stiltgrass) to promote the regeneration of other non-native species (white pine and loblolly pine), the Greenbank Plantation site should be fenced and planted with native shortleaf pine.

In the communication to the Pinelands Commission dated June 18, 2013 (*Emergency Proposal for Silvicultural Activity on State Forest and Park Lands - New Jersey State Forestry Services*), State Forestry Services (NJ DEP) states that the chemical herbicides sethoxydim and fenoxaprop-p-ethyl will be applied to invasive Japanese stiltgrass (*Microstegium vimineum*) at the Greenbank Plantation in order to "eradicate" the stiltgrass and facilitate regeneration of white pines and loblolly pines that had previously been planted on the 12-acre site. These trees, which are not native to the New Jersey Pinelands, were harvested in March 2012 due to southern pine beetle damage. State Forestry Services proposes to apply herbicide to the stiltgrass with two applications in the first year. If after the first year of herbicide treatment the stiltgrass persists, treatment will be repeated the following year. Should white pine fail to regenerate within three years of herbicide treatment, State Forestry Services will plant the site with native shortleaf pine, and loblolly pine will be planted if natural regeneration of this species fails.

It is our professional opinion that two years of herbicide treatment will not eradicate the stiltgrass from this site, as is the stated intent of State Forestry Services. Stiltgrass is exceedingly difficult to control and has an incredibly persistent seed bank. As long as seeds are present in the soil, it has the potential to regenerate over the course of many years even if above-ground vegetation is killed (a 10-year lifespan for this species' seed bank is not unheard of). With two years of herbicide treatment, it might be possible to suppress the stiltgrass enough for the non-native white pine and loblolly pine seedlings to grow above the stiltgrass, but the stiltgrass will not be eradicated. The Great Swamp National Wildlife Refuge, for instance, has given up after years of efforts to control stiltgrass with herbicide. On the



Greenbank Plantation site, it is likely futile to attempt control unless State Forestry Services has the resources to apply herbicide treatment multiple times a year for up to 10 consecutive years.

Stiltgrass was able to colonize this site in the first place because the soil had been altered from its natural state such that it has higher nutrient levels and elevated pH. Native, unaltered Pinelands soil is not good habitat for stiltgrass. As long as the soil remains in this altered condition and the stiltgrass seed bank remains on-site after the herbicide treatments, the stiltgrass will regenerate despite having been suppressed by herbicide treatments for two years.

In a 2005 study by Judge *et al.* (attached), it is noted that sethoxydim and fenoxaprop-p resulted in 78% and 89% stiltgrass stand reduction, respectively, in field plots of 2.4m x 3.0m (page 915, highlighted). It is additionally noted that "...if not completely controlled [by herbicide], surviving seedlings will likely result in 100% cover by the fall and replenish the seed bank. Further research needs to be conducted to determine what level of control and how many seasons of control will be required to completely deplete the seed bank" (page 916, highlighted). This illustrates the difficulty in eradicating stiltgrass from the Greenbank Plantation site -- the herbicide will not eliminate the stiltgrass completely, and after two years of herbicide treatment the surviving seedlings and soil seed bank will allow for regeneration of this invasive population.

We recommend that State Forestry Services erect a fence to exclude deer and go straight to their contingency plan of planting native shortleaf pine trees on the fenced site and not attempt regeneration of the non-native white pine and loblolly pine, despite their historic attributes. It is not prudent to combat one non-native species across a 12-acre site to promote the regeneration of other non-native species. State Forestry Services recognizes in its above-referenced June 18, 2013 communication that "white pine is growing out of its natural range, with climate change projections showing its range receding even further northward in the future." Additionally, these out-of-place species were clearly susceptible to attack by southern pine beetle, and it would seem unwise to invite such an attack a second time.

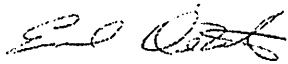
While it would be desirable to rid this site of stiltgrass, doing so will be exceedingly difficult. Luckily, the stiltgrass is unlikely to spread into unaltered Pinelands sites. The naturally acidic, nutrient-poor Pinelands soils act as a natural defense against many non-native species. This situation highlights the importance of maintaining the natural soil character throughout the Pinelands to prevent exotic invasions.

Thank you for your consideration of our comments.

Sincerely,



Amy Karpati, Ph.D.  
Director for Conservation Science  
Pinelands Preservation Alliance



Emile DeVito, Ph.D.  
Manager of Science & Stewardship  
New Jersey Conservation Foundation

## Response of Japanese Stiltgrass (*Microstegium vimineum*) to Application Timing, Rate, and Frequency of Postemergence Herbicides<sup>1</sup>

CAREN A. JUDGE, JOSEPH C. NEAL, and JEFFREY F. DERR<sup>2</sup>

**Abstract:** Japanese stiltgrass is a nonnative invasive grass that occurs in a variety of habitats and is widely distributed throughout the eastern United States. In natural areas such as forests, herbicide options that selectively control Japanese stiltgrass while preserving native herbaceous and woody vegetation may be desired. The efficacy of three selective postemergence herbicides (fenoxaprop-P, imazapic, and sethoxydim) applied early season, midseason, or late season on monoculture understory stands of Japanese stiltgrass in forests was examined in an experiment conducted at a site in North Carolina and a site in Virginia from 2002 to 2004. The herbicides, averaged across application timings, controlled Japanese stiltgrass at the end of the growing season 83 to 89% and seedhead production 79 to 94% compared with nontreated plants. Seedling emergence was reduced in the spring of 2004 by 89, 70, and 78% by fenoxaprop-P, imazapic, and sethoxydim, respectively, applied in 2003. In another experiment at the North Carolina site in 2002 and 2003, fenoxaprop-P or sethoxydim applied twice (4 wk apart) at half-registered rates controlled Japanese stiltgrass. This study demonstrates that land managers have multiple POST herbicide and application timing, rate, and frequency options for Japanese stiltgrass control.

**Nomenclature:** Fenoxaprop-P; imazapic; sethoxydim; Japanese stiltgrass, *Microstegium vimineum* (Trin.) A. Camus #<sup>3</sup> MCGVM.

**Additional index words:** Invasive plant, annual jewgrass, bambooglass, flexible sesagrass, Japanese grass, Mary's grass, Nepalese browntop.

**Abbreviations:** 1X, maximum use rate.

### INTRODUCTION

Japanese stiltgrass is an invasive, summer annual grass (Brown 1977; Winter et al. 1982), family Poaceae, subfamily Panicoideae, and tribe Andropogoneae (Fairbrothers and Gray 1972). A native of Asia, it was first reported in the United States in 1919 near Knoxville, TN (Fairbrothers and Gray 1972), and is now widely distributed throughout the eastern United States, from New York to Texas, and Puerto Rico (Barden 1987; Fairbrothers and Gray 1972; Redman 1995; USDA, NRCS 2004). Japanese stiltgrass occurs in a variety of habitats, including river banks, flood plains, woodland thickets, roadside ditches, river bluffs, forest edges, and deep forest understory sites (Fairbrothers and Gray 1972; Hunt

and Zaremba 1992; Redman 1995). More recently, it has encroached into landscape plantings and turfgrass (Fairbrothers and Gray 1972; Senesac 1994). The species is a C<sub>4</sub> plant (Brown 1977) with unusual shade adaptation. Dry-matter production under 18% of full sunlight was no different than 100% sunlight, and growth continued down to 5% of full sunlight; in contrast, large crabgrass [*Digitaria sanguinalis* (L.) Scop.], another C<sub>4</sub> summer annual grass, failed to grow at 5% of full sunlight (Winter et al. 1982).

Japanese stiltgrass is one of the most troublesome invasive species in the eastern United States. Japanese stiltgrass was ranked the most problematic of the known 167 nonnative, invasive species present in the 8,100-ha Oak Ridge National Environmental Research Park, located in Tennessee (Drake et al. 2003). It is considered difficult to manage due to numerous, dense stands that occur in disturbed, early-successional habitats, and relatively nondisturbed, late-successional forest communities (Drake et al. 2003). Similarly, in an invasive species survey of 23 urban riparian forest sites within the Raleigh and Cary, NC, greenways systems, Japanese stiltgrass was the only species to occur at every site among

<sup>1</sup> Received for publication September 28, 2004, and in revised form March 27, 2005.

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<sup>3</sup> Letters following this symbol are a WSSA-approved computer code from *Composite List of Weeds*, Revised 1989. Available only on computer disk from WSSA, 810 East 10th Street, Lawrence, KS 66044-8897.

the 26 invasive species inventoried (Vidra 2004). Likewise, the United States Department of Agriculture Forest Service lists Japanese stiltgrass as one of the top 33 invasive plants invading southern forests at an alarming rate, thus affecting forest productivity and degrading plant species diversity and wildlife habitat (Miller 2003).

Control recommendations emphasize prevention of seed production by hand weeding, mechanical methods, or nonselective POST herbicides before flowering (Tu 2000). Previous research by Judge et al. (2005), conducted in containers, showed that PRE herbicides registered for large crabgrass control were equally or more effective on Japanese stiltgrass than on large crabgrass, including benefin plus oryzalin, dithiopyr, isoxaben plus trifluralin, oryzalin, oxadiazon, pendimethalin, prodiamine, or trifluralin. Likewise, selective POST herbicides (clethodim, fenoxaprop-P, fluazifop-P, and sethoxydim) and nonselective POST herbicides (glufosinate and glyphosate), with little or no soil residual, registered for large crabgrass control were equally or more effective on Japanese stiltgrass than on large crabgrass grown in containers. Other preliminary research supports the effectiveness of pendimethalin, oryzalin, or prodiamine applied PRE and clethodim, fenoxaprop-P, fluazifop-P, sethoxydim, glufosinate, or glyphosate applied POST (Gover et al. 2003; Senesac 1994). Therefore, in managed ecosystems, such as lawns and landscapes, many selective PRE and selective or nonselective POST herbicide options are available for Japanese stiltgrass control in addition to hand or mechanical removal. However, in forested ecosystems, not all of these options are feasible, as it is often desirable to control Japanese stiltgrass while minimizing impact on native herbaceous and woody vegetation, including native rushes (Juncaceae) and sedges (Cyperaceae), thereby facilitating native plant-community restoration. As seed is the sole means of reproduction, the primary goal of any Japanese stiltgrass management program should be to reduce or eliminate seed input into the soil seed bank. Japanese stiltgrass has a persistent seed bank (Barden 1987; Gibson et al. 2002); seeds can remain viable in the soil for up to 3 yr (Barden 1987; Woods 1989).

For selective POST control, fenoxaprop-P and sethoxydim are both effective (Judge et al. 2005). In preliminary research, imazapic applied PRE controlled Japanese stiltgrass (Gover et al. 2003). Fenoxaprop-P (Anonymous 2003a) and imazapic (Anonymous 2003b) are registered specifically for Japanese stiltgrass control. However, the three herbicides vary in their level of selectivity. Fenoxaprop-P selectively controls nearly all summer

annual and some perennial grasses without injuring dicots or tolerant grasses; sethoxydim selectively controls both annual and perennial grasses without injuring most dicots; and imazapic is registered for both PRE and POST control of annual and perennial grasses, sedges, and many annual broadleaf species without injuring rangeland and pasture species, some warm-season turfgrasses, perennial prairie grasses, and some roadside wildflower species (Vencill 2002). For wildflower establishment, reduced rates (0.04 to 0.07 kg ai/ha) did not injure annual phlox (*Phlox drummondii* Hook.), lanceleaf coreopsis (*Coreopsis lanceolata* L.), and sundial lupine (*Lupinus perennis* L.). Rates less than 0.04 kg ai/ha were required to reduce stunting and occasionally stand thinning on scarlet sage (*Salvia coccinea* Buc'hoz ex Etl.), blanketflower (*Gaillardia pulchella* Foug.), and black-eyed susan (*Rudbeckia hirta* L.) (Norcini et al. 2003).

Timing of POST grass-herbicide applications impacts efficacy. For example, large crabgrass and smooth crabgrass [*D. ischaemum* (Schreb. ex Schweig.) Schreb. ex Muhl.] seedlings without tillers were more susceptible to fenoxaprop-P compared with plants in a more advanced growth stage that required higher rates or multiple applications for complete control (Chism and Bingham 1991; Neal et al. 1990). Additionally, the imazapic registration suggests that rates between 0.06 and 0.09 kg ai/ha only control Japanese stiltgrass less than or equal to 10 cm tall (Anonymous 2003b). In preliminary experiments, two applications of fenoxaprop-P, sethoxydim, or other selective grass herbicides at full registered rates were required to control Japanese stiltgrass (Judge et al. 2005); however, those trials were conducted with container-grown plants. Furthermore, Japanese stiltgrass produces both cleistogamous flowers (flowers that are closed and self-pollinating) and chasmogamous flowers (flowers that open and can cross-pollinate) (Williams 1998). Timing of the recommended fall treatment, whether manual, mechanical, or chemical, may be imprecise if the cleistogamous flowers are not readily visible. Additionally, reduced herbicide rates may be desirable in sensitive habitats (Williams 1998). Therefore, the objectives of this research were the following: (1) determine the efficacy of fenoxaprop-P, imazapic, and sethoxydim, on natural stands of Japanese stiltgrass; (2) compare control of nontillering and tillering plants at various rates and timings of fenoxaprop-P and sethoxydim; and (3) assess the impact of herbicide application on Japanese stiltgrass stand reduction the year after application.

## MATERIALS AND METHODS

**Efficacy as Affected by Herbicide and Application Timing.** The experiment was conducted in 2002 and repeated in 2003 in established forest understory monoculture stands of Japanese stiltgrass in both North Carolina and Virginia. In North Carolina, Schenck Memorial Forest (central Wake County), a mixed pine-hardwood forest, was the 2002 experimental site; in 2003, the experiment was repeated at Harris Lake Research Forest (southern Wake County), a hardwood forest. The Virginia experiment was conducted in a mixed pine-hardwood forest at the Hampton Roads Agriculture Experiment Station, Virginia Beach, VA.

The experiment was a factorial arrangement of treatments (three herbicides and three application timings, plus a nontreated) in a randomized complete block design with four replications. Plot size in North Carolina was 2.4 by 3.0 m and 1.8 by 3.0 m in Virginia. Selective POST herbicides included fenoxaprop-P, imazapic, and sethoxydim applied at 0.19, 0.07, and 0.56 kg ai/ha, respectively. Nonionic surfactant<sup>4</sup> (0.25% v/v) was added to fenoxaprop-P and imazapic. Each herbicide was applied early season (pretiller), midseason (tillering), or late season (before anthesis), and efficacy was compared with nontreated plants. In North Carolina, application dates in 2002 were May 10 (two to five leaves; 4 to 10 cm tall), July 18 (six to seven leaves, one to two tillers; 12 to 30 cm tall), and October 7 (multiple tillers; 30 to 40 cm tall); dates in 2003 were May 9 (four to six leaves; 15 to 30 cm tall), June 6 (six to seven leaves, zero to one tiller; 38 to 76 cm tall), and August 12 (multiple tillers; 76 to 80 cm tall). Herbicides were applied using a CO<sub>2</sub>-pressurized backpack sprayer equipped with two 8003 or two 8004 flat fan spray tips<sup>5</sup> in 2002 and 2003, respectively. The sprayer was calibrated to deliver 280 L/ha at 407 kPa and 280 L/ha at 234 kPa in 2002 and 2003, respectively. In Virginia in 2002, application dates were May 5 (two to five leaves; 8 to 30 cm tall), June 11 (six to seven leaves, two to five tillers; 28 to 58 cm tall), and July 22 (multiple tillers; 38 to 69 cm tall); dates in 2003 were May 8 (two to five leaves; 5 to 20 cm tall), June 11 (8 to 15 leaves, one to two tiller; 23 to 53 cm tall), and July 31 (multiple tillers; 48 to 69 cm tall). Herbicides were applied using a CO<sub>2</sub>-pressurized backpack sprayer equipped with two 8003 flat fan spray tips and calibrated to deliver 234 L/ha at 207 kPa. In 2002,

a drought severely affected plant growth at the North Carolina experimental site. Therefore, herbicides were applied later to coincide with the proper growth stage.

Percent biomass control was evaluated visually and compared with nontreated plants at the end of the season before senescence (North Carolina: November 4, 2002, and October 21, 2003; Virginia: October 24, 2002, and November 1, 2003), using a 0 to 100% scale, with 0 equal to no plant response and 100% equal to complete control. Additionally, seedhead reduction was also estimated in both sites in 2003. In North Carolina, visual estimates of percent of plants with seedheads were recorded on October 21 and converted to percent seedhead reduction. In Virginia, on October 20, terminal seedhead counts were made and converted to percent seedhead reduction compared with nontreated plants.

Percent biomass control and seedhead reduction data were analyzed using the GLM procedure (SAS 1999) testing the hypothesis for mixed model ANOVA ( $\alpha = 0.05$ ) with error partitioning to reflect the factorial treatment arrangement. Data from the four experimental repetitions (North Carolina 2002 and 2003; Virginia 2002 and 2003) were combined after analysis showed nonsignificance for year, location, and year-by-location interactions.

In the spring of 2004, Japanese stiltgrass seedlings were counted in plots sprayed in 2003 at both the North Carolina and Virginia sites to determine impact of the POST herbicides on the seedling population the following season. In North Carolina on May 14, seedlings were counted in randomly placed 1-m<sup>2</sup> subplots in each plot and converted to percent stand reduction compared with nontreated controls, using a 0 to 100% scale, with 0 equal to no stand reduction and 100% equal to complete stand reduction. In plots with high population densities, seedlings were counted in three randomly placed 1-dm<sup>2</sup> subplots, and data were extrapolated to a 1-m<sup>2</sup> basis. In Virginia, seedlings were counted on April 28 in randomly placed 0.9-m<sup>2</sup> subplots in each plot and converted to percent stand reduction compared with nontreated plants.

Percent stand reduction data were analyzed using the GLM procedure (SAS 1999) testing the hypothesis for mixed model ANOVA ( $\alpha = 0.05$ ) with error partitioning to reflect the factorial treatment arrangement. Data from the two experimental repetitions (North Carolina and Virginia 2004) were combined after analysis showed nonsignificance for location. Means for significant main effects and interactions were separated using the Pdiff option in SAS (1999) at the 5% significance level. The Pdiff option provides an associated level of significance

<sup>4</sup> Latron AG-98, principal functioning agents—nonylphenoxypolyethoxy ethanol, butyl alcohol, Rohm and Hass Co., 100 Independence Mall West, Philadelphia, PA 19106-2399.

<sup>5</sup> Spraying Systems Co., P.O. Box 7900, Wheaton, IL 60189-7900.

for each comparison. The mean square error is obtained by ANOVA and comparisons are equivalent to those determined with least significant difference.

**Efficacy as Affected by Herbicide, Rate, and Application Frequency.** The experiment was conducted in a mixed pine–hardwood forest at Harris Lake County Park (southern Wake County), NC, in 2002 and was repeated in 2003 in a nearby hardwood forest at Harris Lake Research Forest. Plot size was 2.4 by 3.0 m. The experiment was a factorial arrangement of treatments (two herbicides, two rates, two application frequencies, plus a nontreated) in a randomized complete block design with four replications. Herbicides included fenoxaprop-P at 0.10 (1/2×) or 0.19 kg ai/ha (maximum use rate or 1×) or sethoxydim at 0.28 (1/2×) or 0.56 kg ai/ha (1×). Nonionic surfactant (0.25% v/v) was added to fenoxaprop-P. Application frequency was once or twice (4 wk apart). Application dates in 2002 were May 23 (six to seven leaves, zero to one tiller; 30 to 33 cm tall) and June 17 (multiple tillers; 60 to 65 cm tall), 2002. In 2003, application dates were June 6 (six to seven leaves, zero to one tiller; 38 to 76 cm tall) and July 7 (multiple tillers; 76 to 80 cm tall). Herbicides were applied as previously described.

Percent biomass control was evaluated visually and compared with nontreated plants at the end of the season before senescence (November 4, 2002; October 21, 2003), using the 0 to 100% scale described previously. Percent biomass control data were analyzed using the GLM procedure (SAS 1999) testing the hypothesis for mixed model ANOVA ( $\alpha = 0.05$ ) with error partitioning to reflect the factorial treatment arrangement. Data from the two experimental repetitions (2002 and 2003) were combined after analysis showed nonsignificance for year. Means for significant main effects and interactions were separated using the Pdiff option in SAS (1999) at the 5% significance level.

## RESULTS AND DISCUSSION

**Efficacy as Affected by Herbicide and Timing Application.** No location or year effect or interactions were detected for Japanese stiltgrass control; therefore, data were pooled across locations and years (Table 1). Additionally, no herbicide, application timing, or interaction effects were present; therefore, data were pooled across application timings for each herbicide. Aboveground biomass of Japanese stiltgrass was reduced 83 to 89% by the herbicides (no difference among herbicides). Likewise, for seedhead reduction in 2003, no location

Table 1. Biomass reduction<sup>a</sup> (pooled across 2002 and 2003) and seedhead reduction<sup>b</sup> (2003) of Japanese stiltgrass at the end of the growing season at a site in North Carolina and a site in Virginia (pooled) by three postemergence herbicides applied at three timings (pretiller, tiller, preanthesis); and stand reduction<sup>c</sup> in 2004 at both sites from herbicides applied in 2003.<sup>d</sup>

Herbicide	Biomass reduction	Seedhead reduction	Stand reduction
	%		
Fenoxaprop-P	89	94	89
Imazapic	83	79	70
Sethoxydim	88	90	78
ANOVA	(P > F)		
Location	NS <sup>e</sup>	NS	NS
Year	NS	—	—
Herbicide <sup>f</sup>	NS	NS	0.0099
Fenoxaprop-P vs. imazapic	—	—	0.0113
Fenoxaprop-P vs. sethoxydim	—	—	NS
Sethoxydim vs. imazapic	—	—	NS
Application timing	NS	NS	NS
All interactions	NS	NS	NS

<sup>a</sup> Percent aboveground biomass reduction compared with nontreated controls was evaluated visually using a 0 to 100% scale; 0% = no plant response and 100% = complete control.

<sup>b</sup> In North Carolina, visual estimates of percent of plants with seedheads were recorded in October and converted to percent seedhead reduction; in Virginia, terminal seedheads were counted in October and converted to percent seedhead reduction compared with nontreated plants.

<sup>c</sup> Seedling density was determined in April or May; reduction as a percentage of nontreated controls.

<sup>d</sup> Means were pooled across locations, years (biomass data), and application timings.

<sup>e</sup> Abbreviation: NS, nonsignificant according to the *t* test on differences of least square means at  $P = 0.05$ .

<sup>f</sup> For stand reduction, herbicides were compared using *P*-values generated by PROC GLM using the Pdiff option (SAS 1999).

effect was present; therefore, data were pooled across locations. Additionally, no herbicide, application timing, or interaction effects were present; therefore, data were pooled across application timings for each herbicide. Herbicides reduced seedhead production by 79 to 94%, depending on the herbicide (no difference among herbicides).

Each herbicide and timing combination was equally effective on Japanese stiltgrass; therefore, land managers have flexibility in herbicide choice and application timing for selective POST Japanese stiltgrass control. Japanese stiltgrass was not as sensitive to application timing as was demonstrated by crabgrass seedlings (Chism and Bingham 1991; Neal et al. 1990). In contrast, Japanese stiltgrass may be controlled throughout the growing season. This wide window of application may be particularly important due to the cleistogamous flowering habit discussed previously. Additionally, the herbicides tested vary in selectivity, making it possible to control Japanese stiltgrass while maintaining desirable vegetation.

POST herbicide treatments in 2003 reduced Japanese stiltgrass stand density in 2004 (Table 1). No location

effect was present; therefore, data were pooled across locations. The main effect of herbicide was significant ( $P = 0.0099$ ); however, other main effects and interactions were not significant. Nontreated plots averaged 18,600 and 500 seedlings per  $m^2$  in North Carolina and Virginia, respectively. Averaged across application timings, stand reduction in the fenoxaprop-P treated plots was 89%, similar to sethoxydim (78% reduction) but greater than imazapic (70% reduction) (Table 1). Stand reduction in the sethoxydim- and imazapic-treated plots were similar. Because imazapic treated plots had the lowest stand reduction, herbicide residues were not considered a factor in germination the following spring. These results suggest that reducing seed production greater than 79%, as noted previously, for just one growing season has substantial impacts on emergence from the transient and persistent seed bank the following season. However, if not completely controlled, surviving seedlings will likely result in 100% cover by the fall and replenish the seed bank. Further research needs to be conducted to determine what level of control and how many seasons of control will be required to completely deplete the seed bank. Therefore, fenoxaprop-P, imazapic, or sethoxydim applied anytime throughout the growing season, but before flowering, will control both Japanese stiltgrass biomass and seed production and reduce seedling emergence the next growing season. Selectively controlling Japanese stiltgrass and depleting the seed bank may allow reestablishment of native vegetation, a critical component to reclamation of an invaded plant community (Miller 2003; Neal et al. 2004).

**Efficacy as Affected by Herbicide, Rate, and Application Frequency.** No year effect or treatment interactions with year were present for percent biomass reduction; therefore, data were pooled across years (Table 2). Averaged across years, response of Japanese stiltgrass to fenoxaprop-P and sethoxydim was similar. However, rate ( $P = 0.0133$ ), frequency ( $P \leq 0.0001$ ), and rate-by-frequency interaction ( $P = 0.0133$ ) were significant. The herbicides applied twice at  $1/2\times$  or  $1\times$  (4 wk apart) resulted in 92% control. However, one application of either herbicide at  $1/2\times$  rate reduced biomass by only 53%, whereas a single application at  $1\times$  reduced biomass by 77%. In this experiment, two applications were more effective than one application, even at the full-registered rate, while control was adequate with only one application in the previously mentioned experiment. Reduced rates are a feasible control option if herbicides are applied sequentially 4 wk apart. However, the lowest effective rate needs to be determined. Furthermore, as rates

Table 2. Biomass reduction of Japanese stiltgrass in 2002 and 2003 (pooled) as affected by postemergence applications of fenoxaprop-P and sethoxydim (data pooled across herbicides).

Herbicide rate <sup>a</sup>	Application frequency <sup>b</sup>	Biomass reduction <sup>c</sup>
		%
$1/2\times$	1 application	53
$1/2\times$	2 applications	92
$1\times$	1 application	77
$1\times$	2 applications	92
ANOVA <sup>d</sup>		( $P > F$ )
Rate		0.0133
Frequency		<0.0001
Rate by frequency		0.0133

<sup>a</sup> Fenoxaprop-P ( $1/2\times = 0.10$  kg ai/ha,  $1\times = 0.19$  kg ai/ha); sethoxydim ( $1/2\times = 0.28$  kg ai/ha,  $1\times = 0.56$  kg ai/ha).

<sup>b</sup> Herbicides were applied either once or twice (4-wk interval).

<sup>c</sup> Percent aboveground biomass reduction estimated visually using a 0 to 100% scale, where 0% = no plant response and 100% = complete control.

<sup>d</sup> Nonsignificant main effects and interactions are not shown.

are reduced, growth stage may become a significant variable (Anonymous, 2003b; Chism and Bingham 1991). Regardless, it is critical to understand how reduction in biomass affects seed production and contributions to the seed bank to effectively determine what level of control is needed.

These studies demonstrate that Japanese stiltgrass can be selectively controlled POST. Fenoxaprop-P, imazapic, or sethoxydim applied anytime throughout the growing season, but before flowering, will control Japanese stiltgrass biomass and seed production and reduce seedling emergence the following growing season. Furthermore, when applied twice at 4 wk apart, either fenoxaprop-P or sethoxydim applied at half of the full registered rate controlled Japanese stiltgrass. These results confirm that fenoxaprop-P, imazapic, and sethoxydim can be used for POST Japanese stiltgrass control in naturally occurring stands (Gover et al. 2003; Judge et al. 2005). For each of the POST herbicides, it will be necessary to confirm the site specificity of the product labels due to the complex range of ecosystems where Japanese stiltgrass control is desired. Depending on the management goals and level of selectivity desired, land managers of an invaded site have multiple POST herbicide treatment options for Japanese stiltgrass control.

#### ACKNOWLEDGMENTS

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**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

NO. PC4-14- 16

**TITLE:** Approving With Conditions an Application for a Waiver of Strict Compliance (Application Number 2012-0149.001)

Commissioner Avery moves and Commissioner Earlen seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Findings of Fact, Conclusion and the recommendation of the Executive Director that the following application for a Waiver of Strict Compliance be approved with conditions:

App. No. 2012-0149.001 Applicant: Jeremy Miller

Municipality: Stafford Township  
Management Area: Regional Growth  
Proposed Development: Single family dwelling served by an alternate design septic system (Date of Report: April 17, 2014).

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received; and

WHEREAS, the Pinelands Commission hereby adopts the Findings of Fact and Conclusion of the Executive Director; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval; and

WHEREAS, the Pinelands Commission hereby determines that the requested Waiver conforms to the standards for approving an application for a Waiver of Strict Compliance based on extraordinary hardship as set forth in N.J.A.C. 7:50-4.62, N.J.A.C. 7:50-4.63 and N.J.A.C. 7:50-4.65 if the conditions recommended by the Executive Director are imposed.

NOW, THEREFORE BE IT RESOLVED that the following application for a Waiver of Strict Compliance is hereby approved subject to the conditions recommended by the Executive Director:

App. No. 2012-0149.001 Applicant: Jeremy Miller

Municipality: Stafford Township  
Management Area: Regional Growth  
Proposed Development: Single family dwelling served by an alternate design septic system (Date of Report: April 17, 2014).

**Record of Commission Votes**

AYE NAY NP ABS				AYE NAY NP ABS				AYE NAY NP ABS			
Ashmun	X			Galletta	X			Prickett	X		
Avery	X			Jackson	X			Quinn	X		
Brown	X			Jannarone			X	Rohan Green	X		
DiBello	X			Lloyd	X			Witt			X
Earlen	X			McGlinchey			X	Lohbauer	X		

Adopted at a meeting of the Pinelands Commission

Nancy Wittenberg  
Nancy Wittenberg  
Executive Director

Date: May 9, 2014  
Mark S. Lohbauer  
Mark S. Lohbauer  
Chairman





# State of New Jersey

THE PINELANDS COMMISSION

PO Box 359

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www.nj.gov/pinelands



Chris Christie  
Governor

Kim Guadagno  
Lt. Governor

General Information: Info@njpines.state.nj.us  
Application Specific Information: AppInfo@njpines.state.nj.us

Mark S. Lohbauer  
Chairman

Nancy Wittenberg  
Executive Director

## REPORT ON AN APPLICATION FOR A WAIVER OF STRICT COMPLIANCE

April 17, 2014

Jeremy Miller  
1065 Midship Avenue  
Manahawkin, NJ 08050

Re: Application # 2012-0149.001  
Block 44.218, Lots 14 & 15  
Stafford Township

Dear Mr. Miller:

The Commission staff has completed its review of the above referenced application. Based upon the facts and conclusions contained in this Report, on behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its May 9, 2014 meeting.

### FINDINGS OF FACT

This application is for the development of a single family dwelling served by an onsite alternate design septic system on the above referenced 0.83 acre parcel in Stafford Township. The parcel is located in a Pinelands Regional Growth Area and in Stafford Township's R-90 Zoning District. In this zoning district, Stafford Township's certified land use ordinance establishes a minimum lot size of one acre for a single family dwelling that is served by an onsite alternate design septic system.

The parcel has been site inspected by a member of the Commission's staff. Additionally, the appropriate resource capability maps and data available to the staff have been reviewed.

As no Commission accepted alternate design onsite septic system will meet the two parts per million average nitrogen concentration in the groundwater at the property line of the 0.83 acre parcel, the applicant is also requesting a Waiver from the groundwater quality (septic dilution) requirements contained in N.J.A.C. 7:50-6.84(a)5iv.

A portion of the parcel is a wetland as defined in N.J.A.C. 7:50-6.5(a). The wetland continues onto adjacent lands. These wetlands are not impaired. Any development of the parcel would be located within 300 feet of wetlands. Based on the quality and location of the wetlands, the proposed development will cause a significant adverse impact on the wetlands. The applicant has demonstrated that no development will be located in wetlands. As there will be a significant adverse impact on wetlands located within 300



feet of the proposed development, the applicant is requesting a Waiver from the buffer to wetlands requirements contained in N.J.A.C. 7:50-6.14.

On March 26, 2014, a residential lot size variance was issued to the applicant by the Stafford Township Zoning Board of Adjustment.

The parcel includes all contiguous land in common ownership on or after January 14, 1981. The proposed single family dwelling will be the sole principal use of the entire contiguous parcel. A single family dwelling can be developed on the parcel without violating any of the criteria contained in N.J.A.C. 7:50-4.65(b) if the conditions recommended below are imposed.

Only if the parcel is developed in accordance with the conditions recommended below will the adverse impacts on wetlands and groundwater quality be minimized.

### PUBLIC COMMENT

The applicant has provided the requisite public notice. Public notice to all property owners within 200 feet of the parcel was completed on February 4, 2014. Newspaper public notice was completed on February 5, 2014. The application was designated as complete on the Commission's website on April 1, 2014. The Commission's public comment period closed on April 11, 2014. No public comments regarding this application were submitted to the Pinelands Commission.

### CONCLUSION

The Pinelands Comprehensive Management Plan (CMP, N.J.A.C. 7:50-4.62) sets forth the standards which must be met before a Waiver can be approved. The CMP (N.J.A.C. 7:50-4.62(a)) requires that for a Waiver application to be approved based on extraordinary hardship, the applicant must demonstrate that the conditions of either N.J.A.C. 7:50-4.63(a) or (b) have been met.

N.J.A.C. 7:50-4.63(a) sets forth five conditions which must be met for an applicant to qualify for an extraordinary hardship pursuant to that subsection.

The first condition is that the only relief sought is from one or more of the standards contained in N.J.A.C. 7:50-6 for certain specified development. One of the specified types of development is as follows:

- v. A single family dwelling on a parcel within a Regional Growth Area, Pinelands Town or Pinelands Village which is at least 20,000 square feet, excluding road rights-of-way, in size and is not served by a centralized waste water treatment system.

This application is for Waivers from the buffer to wetlands, lot size and groundwater quality requirements when an onsite septic system is utilized. The applicant is seeking to develop a single family dwelling with an alternate design septic system on a 36,000 square foot parcel. The parcel contains more than 20,000 square feet, excluding road rights-of-way, and is located in a Pinelands Regional Growth Area. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)1v.

The second condition is that the parcel includes all contiguous land in common ownership on or after January 14, 1981, including lands which are contiguous as a result of ownership of other contiguous

lands. Since the parcel includes all such contiguous land, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)2.

The third condition is that the proposed use will be the sole principal use on the entire contiguous parcel, except as expressly provided in N.J.A.C. 7:50-5.1(c). As the proposed single family dwelling will be the sole principal use on the parcel, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)3.

The fourth condition is that all necessary municipal lot area and density variances have been obtained if the parcel is located in a municipality whose master plan and land use ordinance have been certified by the Pinelands Commission. Stafford Township's master plan and land use ordinance have been certified by the Pinelands Commission. On March 26, 2014, a residential lot size variance was issued to the applicant by the Stafford Township Zoning Board of Adjustment. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)4.

The fifth condition is that the development of the parcel will not violate any of the criteria contained in N.J.A.C. 7:50-4.65(b). N.J.A.C. 7:50-4.65(a) precludes the granting of a Waiver which permits a parcel to be developed unless such development will be consistent with the purposes and provisions of the Pinelands Protection Act, the Federal Act and the CMP and will not result in a substantial impairment of the resources of the Pinelands Area. N.J.A.C. 7:50-4.65(b) sets forth the circumstances which do not comply with N.J.A.C. 7:50-4.65(a). With the conditions recommended below, the proposed development will not violate any of the circumstances contained in N.J.A.C. 7:50-4.65(b). As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)5.

Since the applicant meets all the conditions set forth in N.J.A.C. 7:50-4.63(a), the applicant has demonstrated that an extraordinary hardship exists pursuant to N.J.A.C. 7:50-4.62(a).

The CMP (N.J.A.C. 7:50-4.62(d)) requires that the Waiver only grant the minimum relief necessary to relieve the extraordinary hardship. The proposed single family dwelling, with the conditions recommended below, is the minimum relief necessary to relieve the extraordinary hardship which has been shown to exist.

The CMP (N.J.A.C. 7:50-4.62(d)1ii) requires the acquisition and redemption of any Pinelands Development Credits (PDCs) that are otherwise required pursuant to N.J.A.C. 7:50-5.27, 5.28 or 5.32. The CMP (N.J.A.C. 7:50-5.28(a)4) provides that any local approval, including variances, which grants relief from density or lot area requirements shall require that PDCs be used for all dwelling units or lots in excess of that otherwise permitted, unless a Waiver for the dwelling unit or lot has been approved by the Commission. As indicated above, the applicant previously received a municipal residential lot size variance for the proposed dwelling. Since the applicant qualifies for a Waiver, no PDCs are required for the municipal residential lot size variance.

The CMP (N.J.A.C. 7:50-4.62(d)1iii) requires the acquisition and redemption of 0.25 PDCs whenever a Waiver provides relief from one or more of the standards of N.J.A.C. 7:50-6. As the applicant is obtaining a Waiver from the minimum buffer to wetlands standard (N.J.A.C. 7:50-6.14) and the groundwater quality (septic dilution) requirements contained in N.J.A.C. 7:50-6.84(a)5iv., a condition is included to require the applicant to purchase the requisite 0.25 PDCs.

With the conditions recommended below, the applicant meets the requirements contained in N.J.A.C. - 7:50-4.62(d).

1. Except as modified by the below conditions, the proposed development shall adhere to the plot plan prepared by East Coast Engineering, dated October 1, 2013 and last revised January 23, 2014.
2. The septic system must be located in an area where the seasonal high water table is at least five feet below the natural ground surface.
3. The proposed dwelling must utilize an alternate design wastewater system authorized pursuant to the CMP on a 1.0 acre lot and approved for use by the Pinelands Commission and the New Jersey Department of Environmental Protection.
4. Except as provided in N.J.A.C. 7:50-5.1(c), the single family dwelling approved herein shall be the sole principal use of the parcel.
5. No development, including clearing and land disturbance, may extend beyond the "proposed wetlands buffer" as depicted on the above referenced plan.
6. Sufficient dry wells or a comparable alternative shall be installed to contain all stormwater runoff from the dwelling.
7. Prior to construction, silt fencing, hay bales or other appropriate measures shall be installed to preclude sedimentation from entering wetlands. The proposed sedimentation barrier shall be maintained in place until all development has been completed and the area has been stabilized.
8. The driveway must be constructed of crushed stone or other permeable material.
9. Prior to Commission issuance of a letter advising that any municipal or county permit or approval may take effect, a recorded copy of a deed consolidating Block 44.218, Lots 14 and 15 into one lot must be submitted to the Pinelands Commission.
10. Prior to Commission issuance of a letter advising that any municipal or county permit or approval may take effect, the Commission must receive a letter from the Pinelands Development Credit Bank indicating that the requisite 0.25 PDCs have been acquired and submitted to the PDC Bank for redemption.
11. This Waiver shall expire May 9, 2019 unless all necessary construction permits have been issued by that date. The Waiver shall also expire if any construction permit is allowed to expire or lapse after May 9, 2019 or if any renewal or extension of any permit or approval or issuance of a new construction permit is necessary after that date.
12. Prior to Commission issuance of a letter advising that any municipal or county permit or approval may take effect, a copy of a recorded deed containing all of the above conditions shall be submitted to the Pinelands Commission. The deed shall specify that the conditions are being imposed pursuant to a Waiver of Strict Compliance referring to the application number. The deed shall also state that the conditions are enforceable by the Pinelands Commission, Stafford Township and any other party of interest.

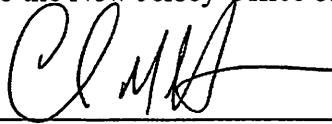
**APPEAL**

The CMP (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal this recommendation in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission within eighteen days of the date of this Report and must include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. a brief statement of the basis for the appeal; and
4. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

If no appeal is received, the Pinelands Commission may either approve the determination of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Recommended for Approval by: \_\_\_\_\_



Charles M. Horner, P.P., Director of Regulatory Programs

- c: Secretary, Stafford Township Planning Board (via email)  
 Stafford Township Construction Code Official (via email)  
 Stafford Township Environmental Commission (via email)  
 Secretary, Ocean County Planning Board (via email)  
 Ocean County Health Department (via email)