



# Vegetation Management Pollinator Habitat Program



# Managing for Pollinators is Consistent with Transportation Priorities

- **Safety**
  - Wildflower perennials & grasses are not favored by deer
  - Mowing only the shoulder allows line of sight, space for motorists to pull-off, prevents encroachment of shrubs/trees
- **Protection of roadway/roadside assets**
  - Native vegetation stabilizes slopes & reduces erosion; increases stormwater/nutrients retention due to deep roots; fit for our climate/less maintenance
  - Native plants can be the best defense against invasives & provide a smooth transition to adjacent properties
- **Efficient management of woody vegetation**
  - Reduced mowing saves money
  - Maintenance of problem vegetation reduced
- **Collateral benefit:**
  - Excellent PR in helping bring back pollinator species & Monarchs, one of America's iconic species
  - Reduction in use of herbicides



# How does this Project fit into VDOT?

- VDOT Vegetation Management Program has initiated a renewed effort to develop & implement an Integrated vegetation management strategy that applies statewide.

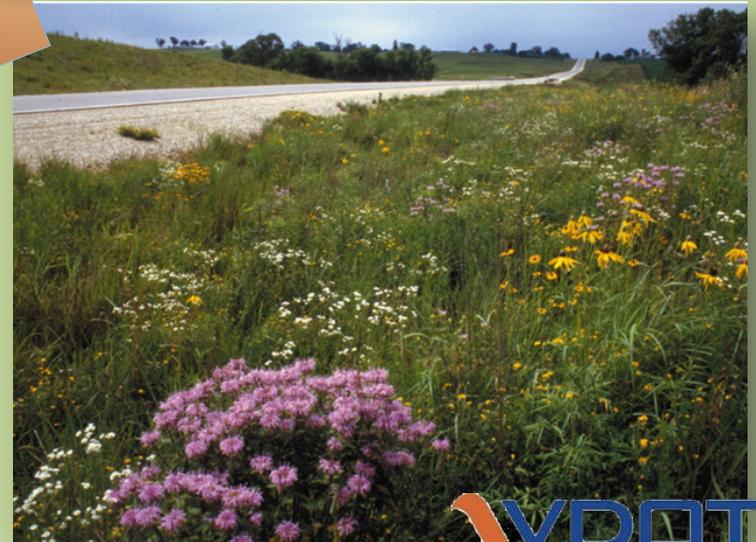
– Basis of IVMP include:

- Mechanical
- Chemical
- Biological
- Cultural



**Pollinator Habitat Program**

- The Pollinator Habitat Program is a part of VDOT's IVM Program.





# What is IVM?

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Integrated vegetation management is an approach to right-of-way maintenance that combines a variety of management techniques with sound ecological principles to establish and maintain safe, healthy, functional roadsides.

IVM can include judicious use of herbicides, spot mowing, habitat management & development, prescribed burning, mechanical tree and brush removal and the prevention and treatment of erosion and other disturbances to the right-of-way.

# Benefits of an Effective IVM Program

- Safety
- Economic
- Flexibility
- Environmental
- Appearance
- Positive Public Relations/Education



# Importance of Native Roadside Vegetation

- 🌸 Improves water quality
- 🌸 Increases soil retention
- 🌸 Improves aesthetics
- 🌸 Encourages tourism/economy
- 🌸 Offers habitat
- 🌸 Saves maintenance \$\$  
*(less mowing, pesticide/herbicide use, sustainable)*
- 🌸 Reduces driver fatigue/hypnotics
- 🌸 Discourages invasive take over





# Support From the TOP

For Immediate Release

June 20, 2014

## **Presidential Memorandum -- Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators**

*“... Pollinator losses have been severe. The number of migrating Monarch butterflies sank to the lowest recorded population level in 2013-14, and there is an imminent risk of failed migration. The continued loss of commercial honey bee colonies poses a threat to the economic stability of commercial beekeeping and pollination operations in the United States, which could have profound implications for agriculture and food. Severe yearly declines create concern that bee colony losses could reach a point from which the commercial pollination industry would not be able to adequately recover. The loss of native bees, which also play a key role in pollination of crops, is much less studied, but many native bee species are believed to be in decline. Scientists believe that bee losses are likely caused by a combination of stressors, including poor bee nutrition, loss of forage lands, parasites, pathogens, lack of genetic diversity, and exposure to pesticides...”* “

# What IS a Pollinator?

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A **pollinator** is an animal that causes plants to make fruit or seeds. They do this by moving pollen from one part of the flower of a plant to another part, or from one plant to another, to fertilize the plant. Only fertilized plants can make fruit and/or seeds. Without fruit and/or seed plants cannot reproduce.



# Why do we care?

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- *Pollinators contribute substantially to the economy of the United States and are vital to keeping fruits, nuts, and vegetables in our diets. Over the past few decades, there has been a significant loss of pollinators—including honey bees, native bees, birds, bats, and butterflies—from the environment. The problem is serious and poses a significant challenge that needs to be addressed to ensure the sustainability of our food production systems, avoid additional economic impacts on the agricultural sector, and protect the health of the environment.*
- Pollinators contribute more than **24 billion dollars** to the United States economy, of which honey bees account for more than **15 billion dollars** through their vital role in keeping fruits, nuts, and vegetables in our diets.
- Native wild pollinators, such as bumble bees and alfalfa leafcutter bees, also contribute substantially to the domestic economy. In 2009, the crop benefits from native insect pollination in the United States were valued at more than **9 billion dollars**.
- The Monarch butterfly migration, an iconic natural phenomenon that has an estimated economic value in the **billions of dollars**, sank to the lowest recorded levels this winter, with an imminent risk of failure.



# PHP Funding

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## Support the Program With a License Plate Purchase.

The Pollinator Habitat program is currently funded through the purchase of the Wildflower license plate.



Through newly passed legislation, the purchase of the new pollinator license plate will now (after July 1, 2016) yield money specifically for VDOT's PHP.



Thank you!

# Legislative language

## **WILDFLOWER PLATE.**

### **§ 46.2-749.29. Special license plates; supporters of Operation Wildflower; fees.**

A. On receipt of an application and payment of the fee prescribed by this section, the Commissioner shall issue special license plates to supporters of Operation Wildflower.

B. The annual fee for plates issued pursuant to this section shall be twenty-five dollars in addition to the prescribed fee for state license plates. For each such twenty-five-dollar fee collected in excess of 1,000 registrations pursuant to this section, fifteen dollars shall be paid into the state treasury and credited to a special non-reverting fund known as the Operation Wildflower Fund, established within the Department of Accounts. These funds shall be paid annually to the Virginia Department of Transportation and used to support its Operation Wildflower program. 1999, c. [883](#).

## **PROTECT POLLINATORS PLATE.**

**SENATE BILL NO. 434;** Offered January 13, 2016; Prefiled January 12, 2016

*A BILL to amend and reenact Chapter 690 of the Acts of Assembly of 2014, relating to special license plates for supporters of pollinator conservation bearing the legend: PROTECT POLLINATORS.*

Patrons—Barker and Deeds; Referred to Committee on Transportation

§ 1. Special license plates for supporters of pollinator conservation bearing the legend: PROTECT POLLINATORS.

A. On receipt of an application *and payment of the fee prescribed by this section* and following the provisions of § 46.2-275 of the Code of Virginia, the Commissioner of the Department of Motor Vehicles shall issue to the applicant special license plates for supporters of pollinator conservation bearing the legend: PROTECT POLLINATORS.

*B. The annual fee for plates issued pursuant to this section shall be \$25 in addition to the prescribed fee for state license plates. For each such \$25 fee collected in excess of 1,000 registrations pursuant to this section, \$15 shall be paid into the state treasury and credited to a special non-reverting fund known as the Pollinator Habitat Program Fund established within the Department of Accounts. These funds shall be paid annually to the Virginia Department of Transportation and used to support its Pollinator Habitat Program in Virginia. All other fees imposed under the provisions of this section shall be paid to, and received by, the Commissioner of the Department of Motor Vehicles and paid by him into the state treasury and set aside as a special fund to be used to meet the necessary expenses incurred by the Department of Motor Vehicles.*

# Sites We Initially Chose & Why

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- **Safety Rest Areas**
  - Safety
  - Centrally managed/initial mgmt consistency
  - Education opportunities
  - Promotes tourism through improved aesthetics
  - Easily Maintained by volunteers
  - PR Opportunities
- **Undeveloped Rest Areas**
  - Reduced maintenance needs
  - Sustainable
  - Shareable education opportunities





# 2014 Pilot Program Timeline

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**July 2014** – Central Office Vegetation Management staff (COVMS) meets with citizen group (CG) regarding mowing practices pertaining to milkweed plants and Monarch butterflies

**August 2014** – COVMS & CG begin searching for funding for alternative, safe pollinator plantings

**September 2014** – CG receives grant from Dominion Trust/ VA Dominion Power indicates interest in providing volunteers for project

**October 29 2014** – Four pilot pollinator plots are planted



# Initial Partners & their Parts

## VDOT Central Office Vegetation Management

- Overall project management
- Locate sites/Mark/Spray
- Initiate permit process
- Coordinate with NoVA AHQs/Residencies/P&R/SRA staff
- Technical support
- Public Relations/Communication



## Dominion Virginia Power

- Volunteers (community service hours)
- Equipment

## Loudoun Wildlife Conservancy

- Grant administration
- Order plants/Mulch/Topsoil
- Technical Expertise



# Initial Native Species Planted

- Common milkweed (*asclepias syriaca*)
- Swamp milkweed (*asclepias incarnata*)
- New England Aster (*Aster nova-angliae*)
- Purple Coneflower (*Echinacea purpurea*)
- Joe Pye (*Eupatorium maculatum*)
- Bee balm/Oswego Tea (*Monarda didyma*)
- Bergamot (*Monarda fistulosa*)
- Wrinkle-leaved Goldenrod (*Solidago rugosa*)
- Blue-stem Goldenrod (*Solidago caesia*)
- New York Ironweed (*Vernonia noveboracensis*)
- Stiff Goldenrod (*Solidago rigida*)
- Hoary Mountain Mint (*Pycnanthemum incanum*)
- Black-eyed Susan (*Rudbeckia fulgida* 'Goldsturm')

The plants will attract a multitude of pollinators including native and honey bees, monarchs and other butterfly species, hummingbirds and beetles. Additional natives have been added. The most recent plantings contain about 23 different species plus several native shrubs beneficial to pollinators.

# 2014 It All Comes Together!





# 2015 Program Timeline



- December 2014 & before** – Initial site for 2015 determined. Partners contacted. VA Dominion Power indicates interest in providing volunteers and small amount of funding for project. Needs assessment.
- July 2015** – Monies from wildflower license plates centralized (\$180K) Begin development of 5 year plan for SRA installations/education.
- August 2015** – Gather information for web site. Kiosks commandeered for education displays. Line up vendors, partners, procure contractor to prep 15,000 sq. ft. site.
- Early September 2015** – Site prep conducted. Diseased trees & stumps removed, area de-turfed, tilled & mulched in preparation. Plants start arriving (23 species, including milkweeds).
- September 29, 2015** – First large scale pollinator habitat site planted. PBS films it, White House interested. Over 50 volunteers.

# Large Scale 2015



# 2015 MEADOW PLANTING



## Planted fall 2014



## OUR TEAM



# Other projects



Dale City Meadow  
(Northbound)  
Summer 2016

Fredericksburg  
Meadow  
(Southbound)  
Summer 2016



New Market Southbound



Dec 2015



August  
2016



- **Other 2015 Activity.**
  - Statewide revision of mowing practices to encourage native populations along roadways.
    - **From BMP Manual: Pollinator Habitat Program**-Every effort should be made to preserve native pollinator plant species including but not limited to milkweed. Many of these plants are located within “Additional Mow Areas” and it is recommended that mowing of these areas occur in March and/or after October 31st. If there are large areas of pollinator species within the parameters of “Mow Areas” and there is no safety issue, delineate the areas and mow in March and/or after October 31st. Please contact the State Roadside Manager or District Roadside Manager for guidance regarding the pollinator habitat program.
  - Pilot seeding projects in Bristol District to determine what native seeds perform best/best planting methods.
- **Going Forward.**
  - **Education signs** installed spring/summer 2017 to explain program/differences in maintenance practices.
  - Gardens & Interpretive signage in most State Rest Areas.
    - Goal is 5-7 sites per year. Not yet meeting this.
    - 2 sites contracted for fall/spring 2016/17.
  - Native seed mixes used on roadsides and in select medians statewide.
  - Statewide education campaign/website/signage.
- **Partnerships created.**
  - Virginia Dominion Power/Dominion Trust
  - Valley Land
  - Loudoun Wildlife Conservancy
  - Virginia Tourism Corporation
  - MonarchWATCH
  - PBS Films
  - White House Office of Science & Technology
  - Virginia Native Plant Society

# Pollinator Habitat Program Recognition

- The White House Office of Science & Technology invited VDOT to speak at a nationwide DOT forum in November 2015.
- AASHTO is featuring the VDOT PHP as a Case Study on the AASHTO Center for Environmental Excellence webpage.  
[http://www.environment.transportation.org/environmental\\_topics/invasive\\_species/case\\_studies.aspx#bookmarksubVDOTProgramAidsPollinatorsWhileSupportingTransportationGoals](http://www.environment.transportation.org/environmental_topics/invasive_species/case_studies.aspx#bookmarksubVDOTProgramAidsPollinatorsWhileSupportingTransportationGoals)
- The program was blogged about on the National Geographic “The Plate” blog with the title *“Are Highway Rest Stops Pollinators’ Last Hope?”*
- PBS Films was present at the September meadow planting & will be including information in a film to be released in 2017.
- The PHP received a Virginia Green Travel Star Innovation Award for its commitment to green tourism practices.
- VDOT TV has produced at least 2 videos regarding the Pollinator Habitat Program.



# New Webpage

A webpage for the program has been added to the VDOT website.

The screenshot shows a web browser window displaying the VDOT website. The address bar shows the URL <http://www.vdot.virginia.gov/programs>. The page header includes the Virginia.gov logo, navigation links for Agencies and Governor, and a search bar. The VDOT logo and name are prominently displayed. A navigation menu includes links for About, Jobs, Contact, Site Map, Español, and 511 Mobile App. A search bar is located on the right side of the page. The main content area features a large banner image of children participating in a 'WALK TO SCHOOL DAY' event, holding a banner that reads 'Ms. Roma's 5th Grade'. Below the banner, there is a search bar and a link for 'First time to our site? Click here.' The page is divided into several sections: 'Traffic Information' with a 511 logo, 'Virginia Roads' with a link to maps and data, and 'Pollinator Habitat Program' with a description and a list of goals. A close-up image of a bee on a purple flower is also visible.

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VDOT Virginia Department of Transportation

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REPORT A ROAD PROBLEM 800-FOR-ROAD 800-367-7623

Home > Programs > Pollinator Habitat Program

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WALK TO SCHOOL DAY Ms. Roma's 5th Grade

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First time to our site? Click here.

**Traffic Information**

511 offers real-time traffic info. Anytime you need it, anywhere you are.

**Virginia Roads**

Your one-stop source for VDOT maps, data and project info.

**▶ Pollinator Habitat Program**

VDOT's Pollinator Habitat Program creates naturalized areas planted with native nectar and pollinator plant species along state-maintained roadways, within rest areas and park and rides. The goals of the program are to:

1. Provide habitat areas for threatened and dwindling pollinator species such as bees and butterflies.
2. Reduce maintenance costs by reducing mowing and other vegetation costs, such as invasive species control and herbicide applications.
3. Decrease erosion and stormwater runoff while providing

[http://www.virginiadot.org/programs/pollinator\\_habitat\\_program.asp](http://www.virginiadot.org/programs/pollinator_habitat_program.asp)

# Other IVMP Initiatives

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- Review/revise Mowing Practices
- Use of Native Seed mixes vs. high maintenance turf varieties in construction and other projects
- Landscape plans conducive to specific site
  - Right tree/right place
  - Proper care & maintenance to minimize safety concerns & removal & replacement costs
- Education in respect to mowing practices & IVMP practices – internal staff
  - /public/legislative/operators/ management



# How to Contact Us

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