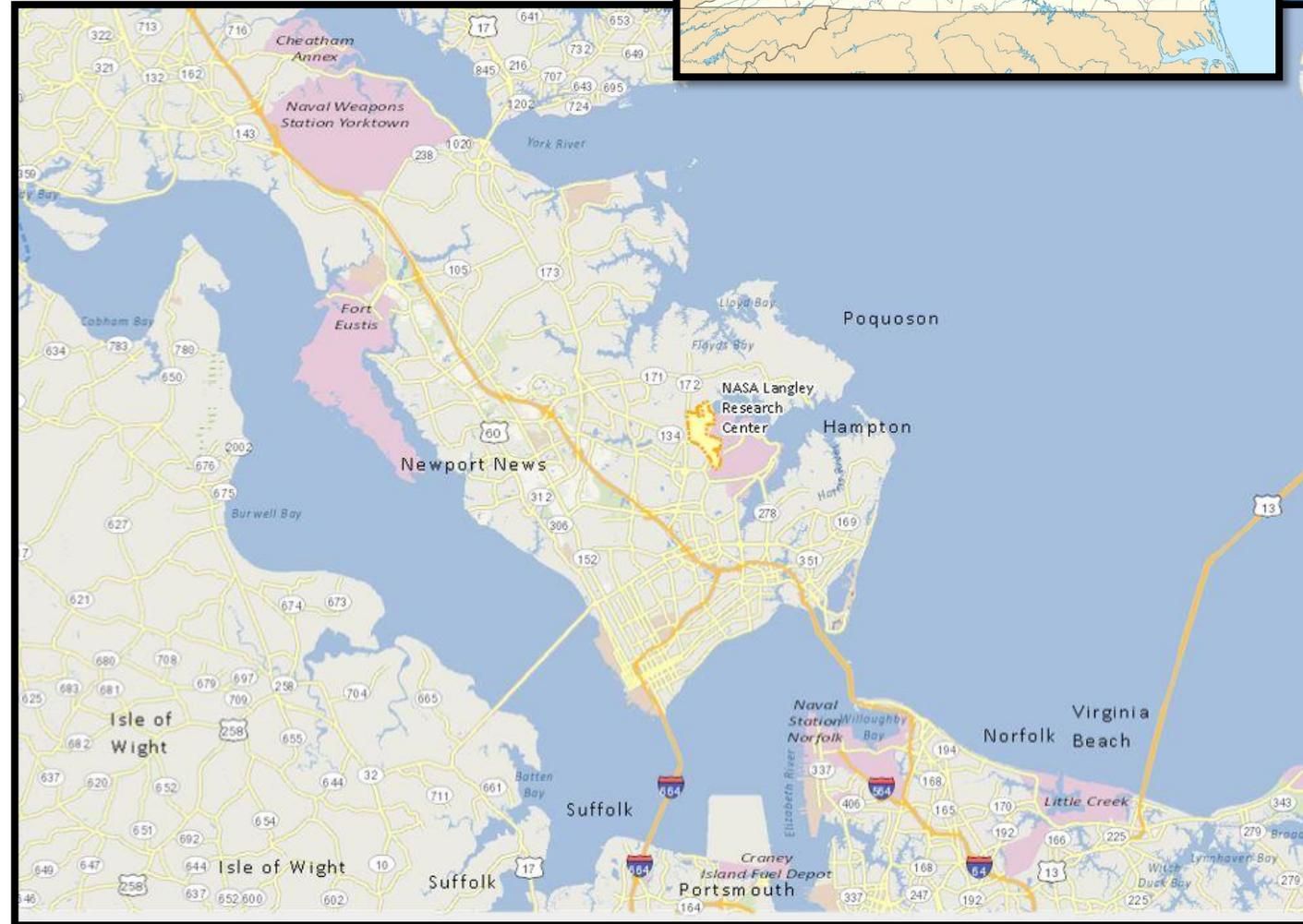


Pollinator Habitat on a Tight Budget

NASA Langley Research Center
POC: Peter VanDyke, (757) 751-4308

NASA Langley Research Center

- ▶ Located in Hampton, VA
- ▶ 764 acres near the Chesapeake Bay
- ▶ ~3,500 employees
- ▶ NASA's first Center and oldest property. Just celebrated 100 years of operation.



Pollinator Habitat Reality for Many Federal Agencies

- ▶ Most Natural Resource managers want to increase pollinator habitat. In a world of shrinking budgets and competition for land resources, it simply doesn't become a funding priority.

This means we have to get creative to increase pollinator habitats and plan ahead.



Quick summary of project:

- ▶ In 2011, LaRC created a historical garden (20'x20') featuring native plants including milkweed varieties. Unfortunately, the nearby building was being demolished in 2017 and the garden was not being maintained.
- ▶ The Environmental Branch wanted to save the extensive beds of milkweed/other key plants, and began outreach. A group of 6 volunteers formed.
- ▶ A new pollinator bed location was selected and a 30'x30' area was prepared. The milkweed and other pollinator plants were transplanted in 2017 prior to demolition in the area.
 - ▶ Paver bricks, a bird bath and other items were also salvaged and moved to the new bed.
- ▶ In 2018, the pollinator bed was completed with more plants, topsoil, mulch, and edge fencing all done by volunteers.

Challenges

- ▶ Old garden was overgrown and needed to be weeded before plants could be transplanted, just so we could access the 'good' plants
- ▶ Carefully relocating plants across the Center - plants had to be potted, then replanted in the cooler season
- ▶ Heavy workload for 6 volunteers



Old pollinator garden before weeding

Topsoil and Planting







'Bee' Thankful for Volunteers



Successes

- ▶ Milkweed transplant success rate was about 90%.
 - ▶ Key to transplanting milkweed was careful digging of the roots with a trench technique
- ▶ Increased pollinator garden size by 500 feet!
- ▶ No more overcrowding - New garden has plenty of space for future growth.
- ▶ New garden is located near the LaRC community garden and will increase pollination for other plants
- ▶ Plants at old garden were too dense and overgrown. We potted several plants and gave them away to 50+ LaRC personnel who were interested in pollinator habitats.
- ▶ Being certified as Waystation through Monarch Watch.



Cost Breakdown

- ▶ Clearing the 30'x 30' plot, roughening surface, remove Bermuda = \$239.25
- ▶ Milkweed transplant = Free (volunteer)
- ▶ Deliver topsoil and mulch = \$210.00
 - ▶ Spreading labor was free. Grounds contractor let us borrow hand tools.
- ▶ Adding additional pollinator plants = Free
(brought in from home gardens from volunteers)
- ▶ Edge fencing = \$104.50
- ▶ Monarch Way Station Certification and Sign = \$40.95

Total Cost for New Garden = \$594.70

Countless volunteer hours and new 900 sq ft. bed for pollinators = PRICELESS!

Keys to Low Budget Program

- ▶ Effective environmental outreach *before* you ask for volunteers. Create excitement first!!
 - ▶ Recurring blog page
 - ▶ Months before we wanted volunteers for this action we:
 - ▶ Ran articles on wildlife, monarchs, environmental benefits of pollinators, native plants
 - ▶ Held a bee keeping lunch and learn
 - ▶ Held a tour to a local learning garden
 - ▶ Earth Day and Arbor Day events/activities
 - ▶ Environmental trainings
 - ▶ Allows you to identify some potential volunteers



A screenshot of the NASA Langley Research Center's Environmental & Energy Program website. The page features a header with the program name and a navigation menu. Below the header is a large image of a bird in flight over a field. The main content area includes several blog posts with titles like "DO NOT FEED WILDLIFE ON CENTER", "Lunch and Learn: Beekeeping", and "All Earth Day and Arbor Day 2018 Events at LaRC". There are also sections for "New! Education on LaRC's Wildlife" and "Clean the Bay Day 2017". The right sidebar contains a search bar, a "Links" dropdown menu, and a "Recent Blog Posts" section with a list of article titles and dates.

Keys to Low Budget Program

- ▶ Federal mindset is usually large scale. We tend to do big actions, but small actions are ok.
 - ▶ Every bit of small pollinator habitat helps.
- ▶ Reward your volunteers.
 - ▶ Run a story on your internal website
 - ▶ Environmental Stewardship awards given out by senior leadership
- ▶ Other ways to help on a tight budget:
 - ▶ Limit use of pesticides on your property
 - ▶ Adjust mowing schedules, designate no-mow areas
 - ▶ Provide continuous outreach and education throughout year

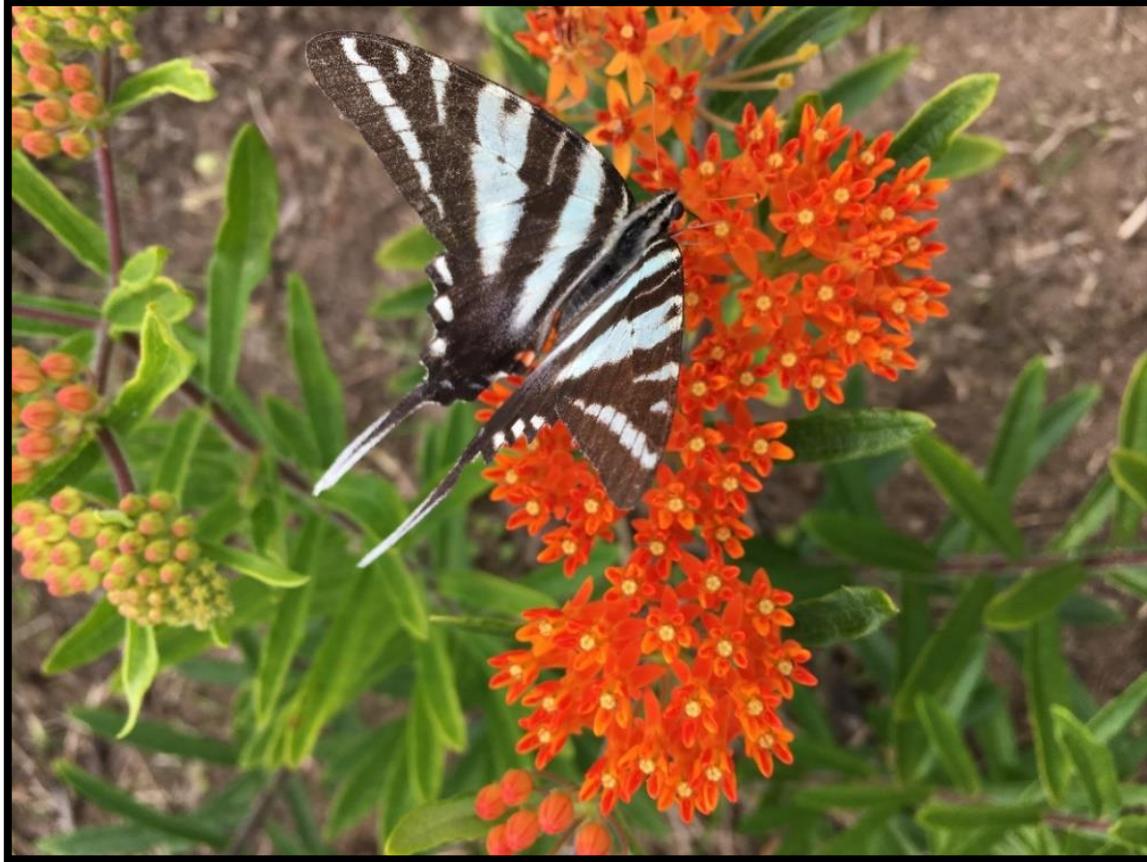
Keys to Low Budget Program

- ▶ Integrated Natural Resource Management Planning
 - ▶ Have small pollinator projects planned and ready to go, so if money opens up you can quickly execute
 - ▶ Don't forget about the trees.
- ▶ If you are a federal property, look into funding from the sale of recyclables. That money can typically only be spent on pollution prevention and environmental-related activities. May be a source of funding for pollinator projects.

Monarchs have moved in!



Zebra Swallowtails!



BEES!

