



CMM Garden Guild “Lead By Example” Green Projects



Calvert Marine Museum Volunteers’ landscape projects model good stewardship for visitors.

www.calvertmarinemuseum.com/323/Stewardship-starts-at-Home



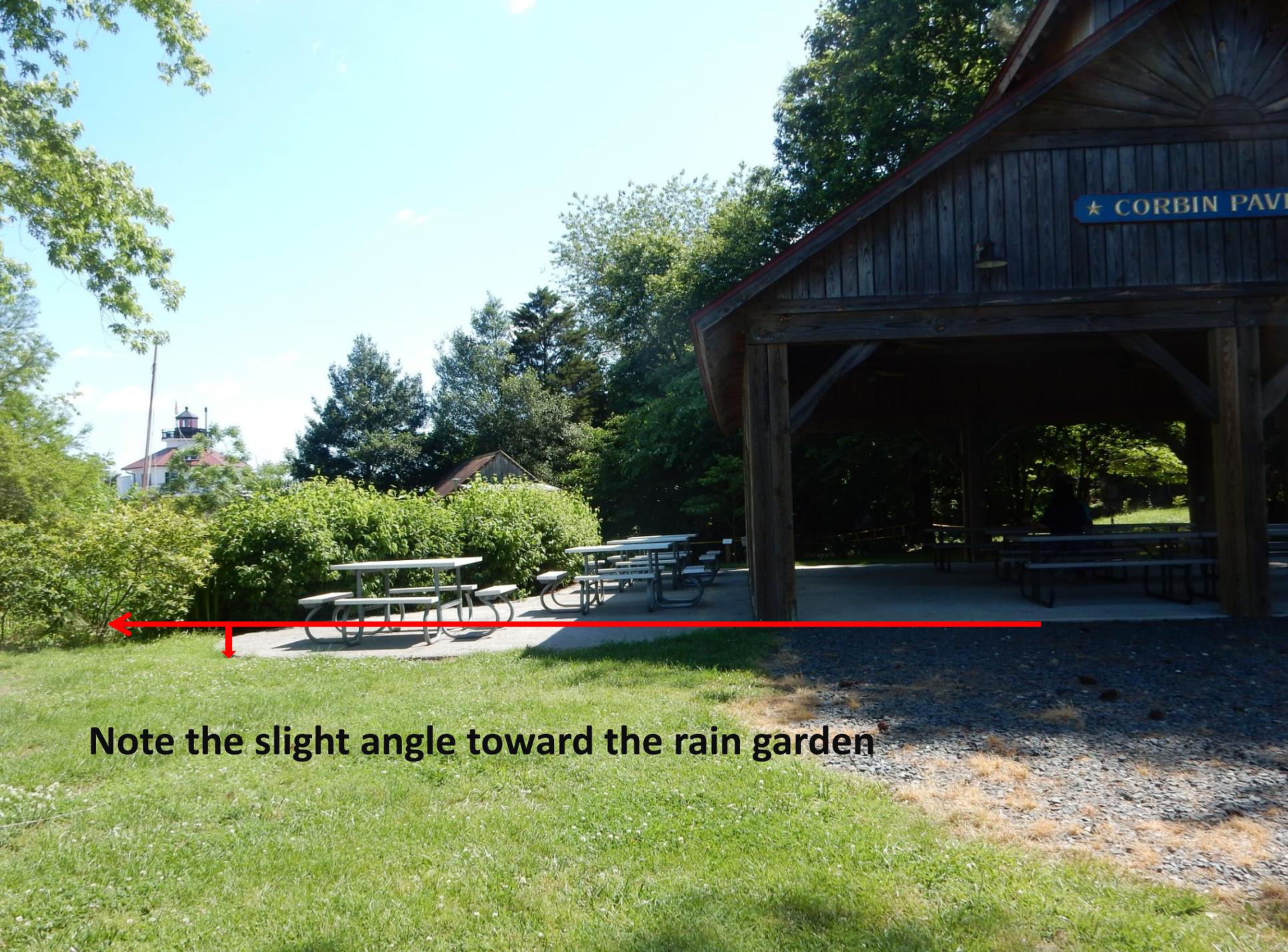
CMM Rain Garden

Landscaping to Capture
STORMWATER





Built in 2009, the Corbin Nature Pavilion is used for educational programs and events. Note concrete pad and building size.



★ CORBIN PAVILION



Note the slight angle toward the rain garden

How Do Rain Gardens Work?

- 💧 Capture first flush of runoff in rain event
- 💧 Allow filtering of runoff
- 💧 Provide site for pollution removal
- 💧 Prevent sediment from reaching waterways



Native Plants that prefer wet soil or easily adapt to wet soil are the best for rain gardens.



The CMM website has instructions on how to create your own rain garden.

Mobile Gardens

- CMM is a heavily used campus
- Moveable planters are adaptable to the many events
- They offer flexibility and 'curb appeal'
- Planters need to be sturdy and well maintained
- The Wetland Gardens and mobile planters can be put where needed or out of the way for events.
- The added landscape features are inviting to visitors, they soften the look of the paved area.
- The mobile planters add color and interest to the unadorned entrance.
- They provide pollinator habitat where there is none.



CALVERT MARINE MUSEUM
EXHIBITION HALL
MUSEUM STORE



CALVERT MARINE MUSEUM

Why Floating Wetlands at CMM?

- This type of treatment is an alternative to constructing wetlands (Stewart et al. 2008).
- Wetland islands enhances the CMM marshwalk experience, as well as benefitting water quality.
- In laboratory experiments floating vegetation reduced nutrients in water ten times greater than circulating water without plants.
- A 250 sq ft island has the equivalent of one acre of surface treatment (bio-retention systems).

Calvert Marine Museum Boardwalk

Location for floating wetland





We tried different screening to keep ducks out - this one worked until they figured out the top was open

Little Did We Know>>>>>

Ducks love the floats for the fish and small shrimp that live in the plant pots and under the floats



This is the final design-
We now feel smarter
Than the average duck 😊

Note the
block anchor



Signage explains the project to visitors

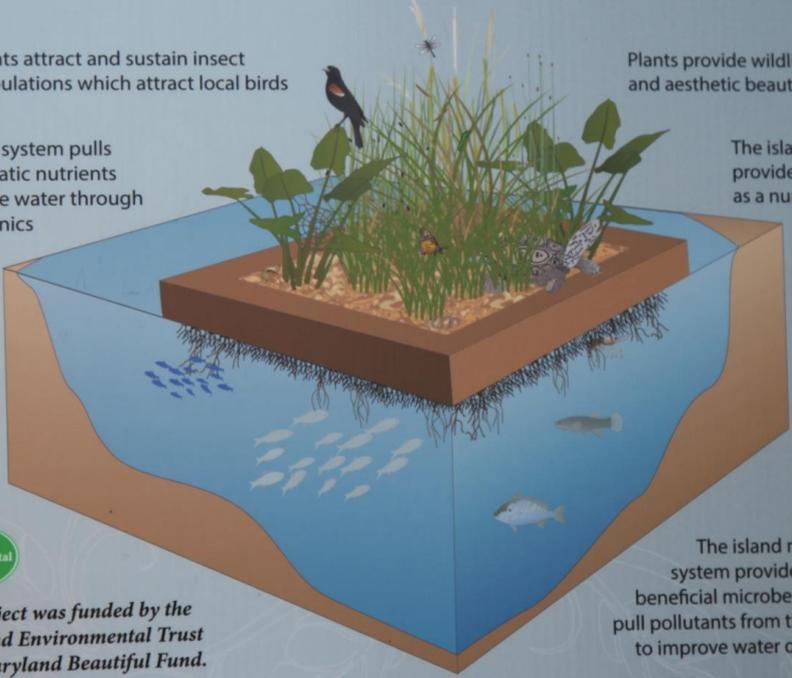
Floating Wetlands Gardens: *A natural solution to pollution* Calvert Marine Museum Yard Arms

Plants attract and sustain insect populations which attract local birds

Plants provide wildlife habitat and aesthetic beauty

The root system pulls problematic nutrients out of the water through hydroponics

The island and roots provide cover and act as a nursery area



Scan here to learn more about CMM's green projects.

Maryland Environmental Trust

This project was funded by the Maryland Environmental Trust Keep Maryland Beautiful Fund.

The island material and root system provide surface area for beneficial microbes to colonize and pull pollutants from the water helping to improve water quality and clarity

Composting at CMM

A demonstration project

- The Garden Guild adds leaves, landscape vegetation from pruning, and other appropriate materials to the compost bins.
- Staff contributes appropriate materials from their lunch and other events.
- Visitors add orange and banana peels, apple cores, grape stems, other non-edible but organic material.
- The three types of bins demonstrate the variety of choices that can be used at home.

This results in less organic material in the landfill and good quality compost for the gardens.



Treated timbers

Cedar Board

Trex Recycled
Material

Rain Barrels

- The roof on the Exhibition Hall is large and the surrounding access points generate surface water during rain events.
- Rain barrels capture the water from the roof.
- The water is available for watering and can also be used to clean tools and outdoor surfaces (picnic tables, buckets, trash bins).
- There is less water flowing into the creek, marsh, and local water features.



Rain Barrels

The rain barrels and compost bins were constructed by Calvert Marine Museum Yard Arm volunteers and Master Gardeners of Calvert County as part of the "Maryland Bay Wise Program" that promotes sustainable technologies for coastal residents. Funding was provided by the Chaney Foundation. See CMM website for more details.



Children's Garden



Resources

Funding

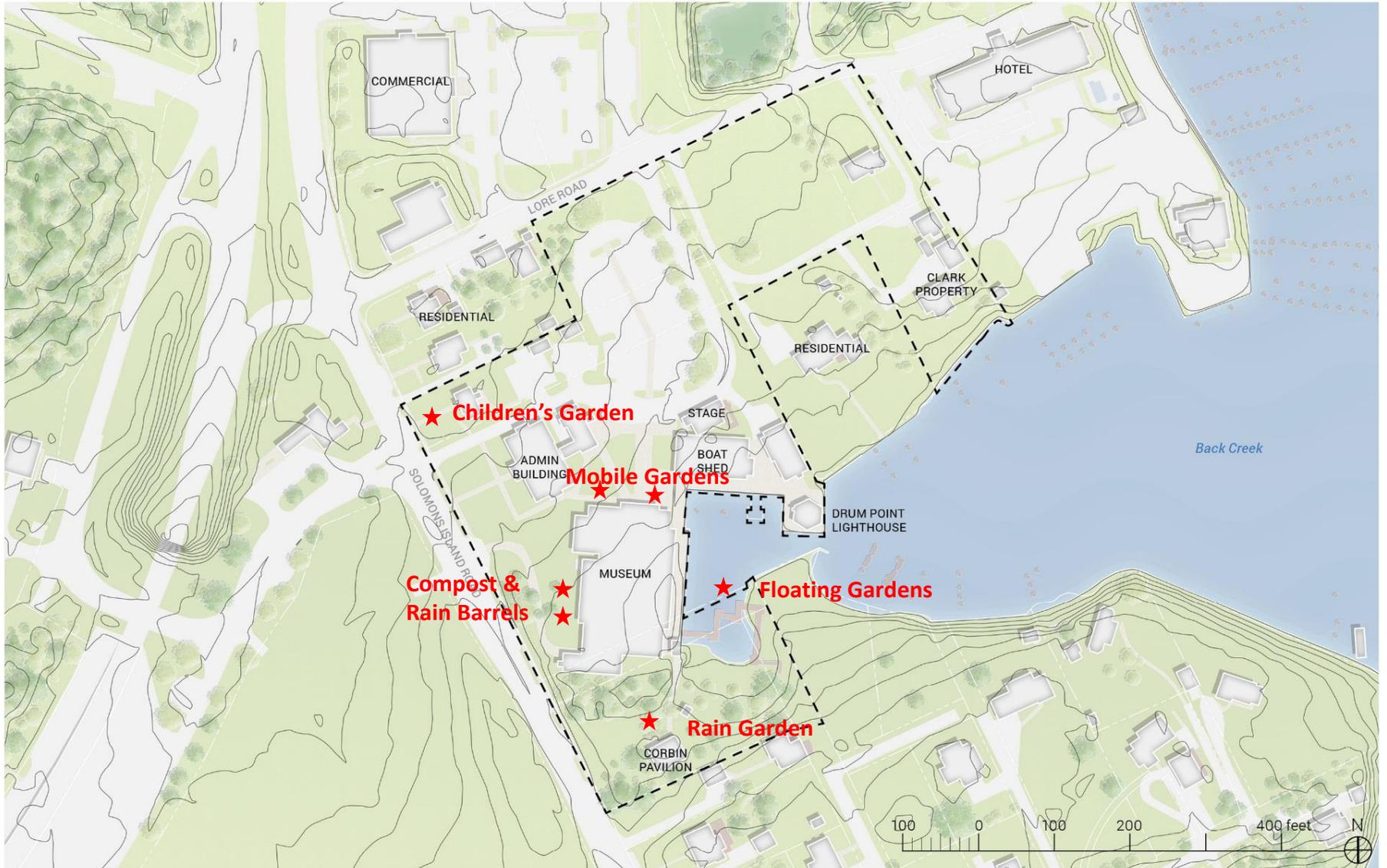
- ❖ Grants from Community Organizations
- ❖ Grants from Private Organizations
- ❖ State Grants (Keep Maryland Beautiful)
- ❖ National Fish & Wildlife Foundation

Technical Assistance

- ❖ Cooperative Extension (UMD)
- ❖ Soil & Water Conservation Districts
- ❖ MDE –Stormwater Design Manual
- ❖ Master Gardeners

For More info about the Garden Guild Green Projects:

www.calvertmarinemuseum.com/323/Stewardhip-Starts-at-Home



EXISTING ILLUSTRATIVE PLAN As it currently exists, The Calvert Marine Museum's property has expanded to include recently acquired parcels along Lore Road.

Interior Improvements



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- ✓ 80% of all general lighting in the Exhibition Building has been switched to LED
- ✓ All exhibit lighting being switched to LED
- ✓ Installed automatic sinks, toilets, and smart lighting in bathrooms
- ✓ The HVAC is remotely controlled and timed to be on only when spaces are in use, resulting in a dramatic reduction in electricity bills
- ✓ New clearstory thermal windows were installed in the Exhibition Hall that filter out UV rays
- ✓ Additional insulation was installed with the new Exhibition Building roof to further conserve heat.



Sea Scouts and Mariners assist with CMM event recycling. In about 60 days the cans recycled today will be back on store shelves as new cans.

CALVERT MARINE MUSEUM RECYCLING PROGRAM

The Calvert Marine Museum has started an initiative to help Calvert County and its visitors to make it a little easier to recycle.

The museum now takes all commingled recycle materials from our concerts, special functions, and festivals and sends them to the Calvert County recycling center instead of filling up our landfills with recyclable trash!

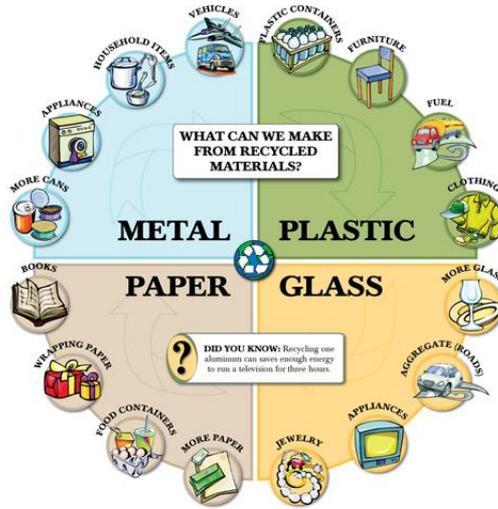
As a museum we recycle all cardboard and commingled materials from our everyday business as well.



Museum Store participates in cardboard recycling. Recycled cardboard can be used to make the paper bags the Museum Store uses.



CALVERT COUNTY RECYCLING



REDUCE • REUSE • RECYCLE

DID YOU KNOW? Plastics are derived from petroleum and natural gas and have a very high energy content. Today, there is increased interest in using segregated post-use plastics and paper in industrial fuel applications.

CALVERT COUNTY ALSO RECYCLES:

- GAS CYLINDERS
- BATTERIES
- USED OIL & ANTIFREEZE
- TEXTILES
- USED TIRES
- METAL
- CELL PHONES
- INKJET & LASER CARTRIDGES
- HOUSEHOLD HAZARDOUS WASTE
- COMPUTERS
- FLUORESCENT LIGHTS

WHAT DOES RECYCLING DO FOR US?

- **Saves us money;** yes, actually it does - a new landfill costs millions of dollars to develop and build - money that could better be spent on schools, roads, and public safety
- **it makes cents** - yes - more people are employed with recycling businesses and many people sell recyclable materials
- **conserves natural resources;** consider that if we didn't recycle newspaper we would have to cut more trees to produce new newspapers
- **conserves landfill space;** landfills would fill up proportionately to the amount of materials we don't recycle - if we didn't recycle anything, most landfills would be full 10-30% faster than had we all recycled

For more information about recycling in Calvert County, please call 410-326-0210 or visit www.cc.ca.md.us



Recycled tires can be used to make a cushioned surface for playgrounds. This helps to reduce the number of tires in landfills and provides a much friendlier environment for children to play on.



COMMUNITY RECYCLING

Both Calvert and St. Mary's Counties began recycling programs in 1992. Recycling areas are available at every compactor site in Calvert County. Everything from textiles to computers to used car oil to cell phones can be recycled in both counties.

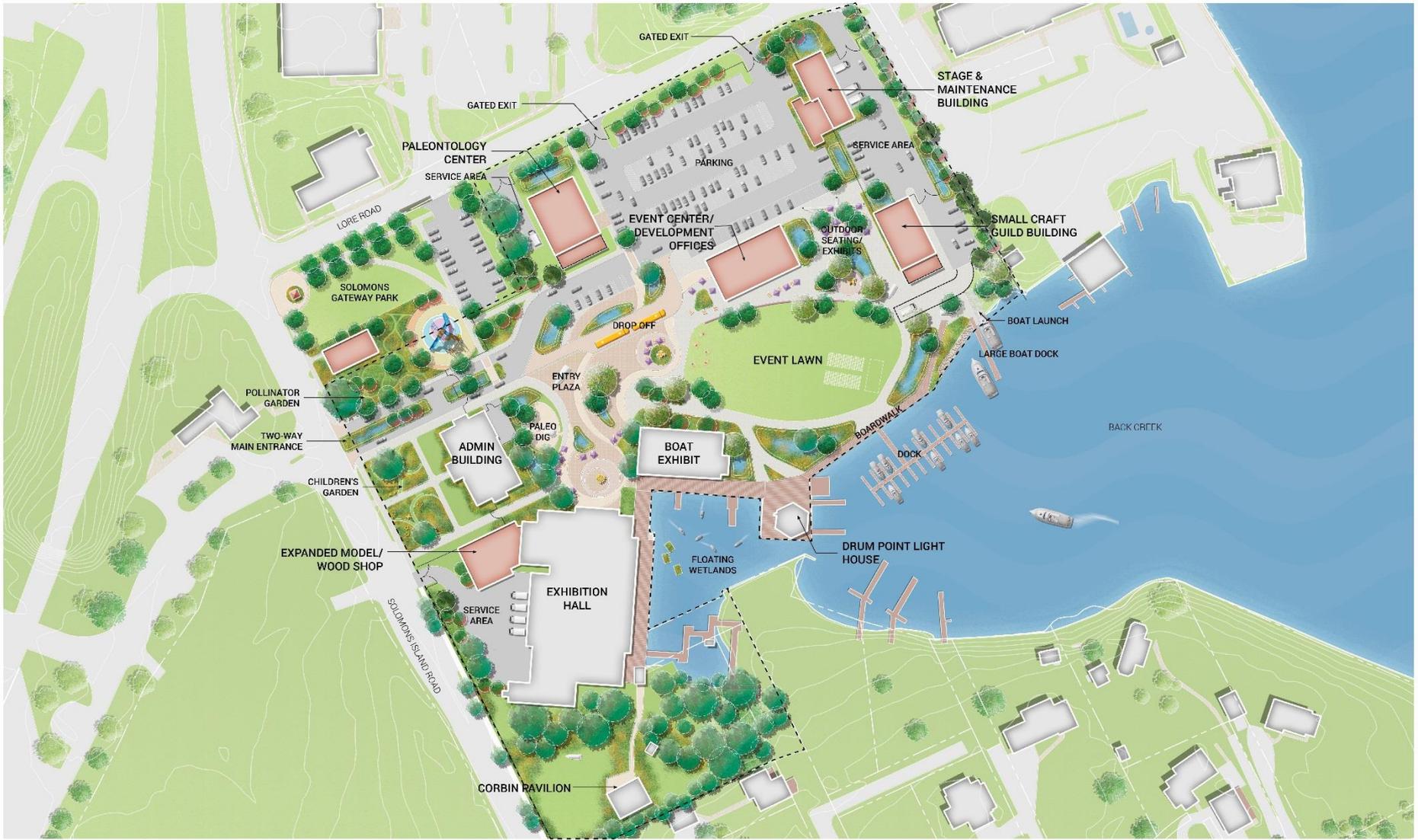
In the public schools, the students have a chance to learn how recycling can benefit society.

The hope is that community involvement would give adults the opportunity to learn about the benefits and instill in them the importance of recycling.



Calvert High School has an active recycling program. Getting today's youth to recycle will help to ensure recycling in the future.





NOVEMBER 2018

Green Infrastructure

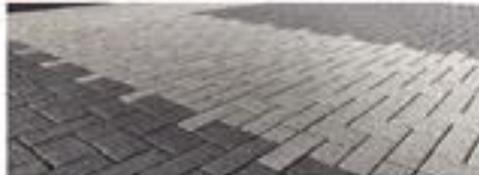
KEY

□ Site Boundary

■ Porous Concrete/Pavers

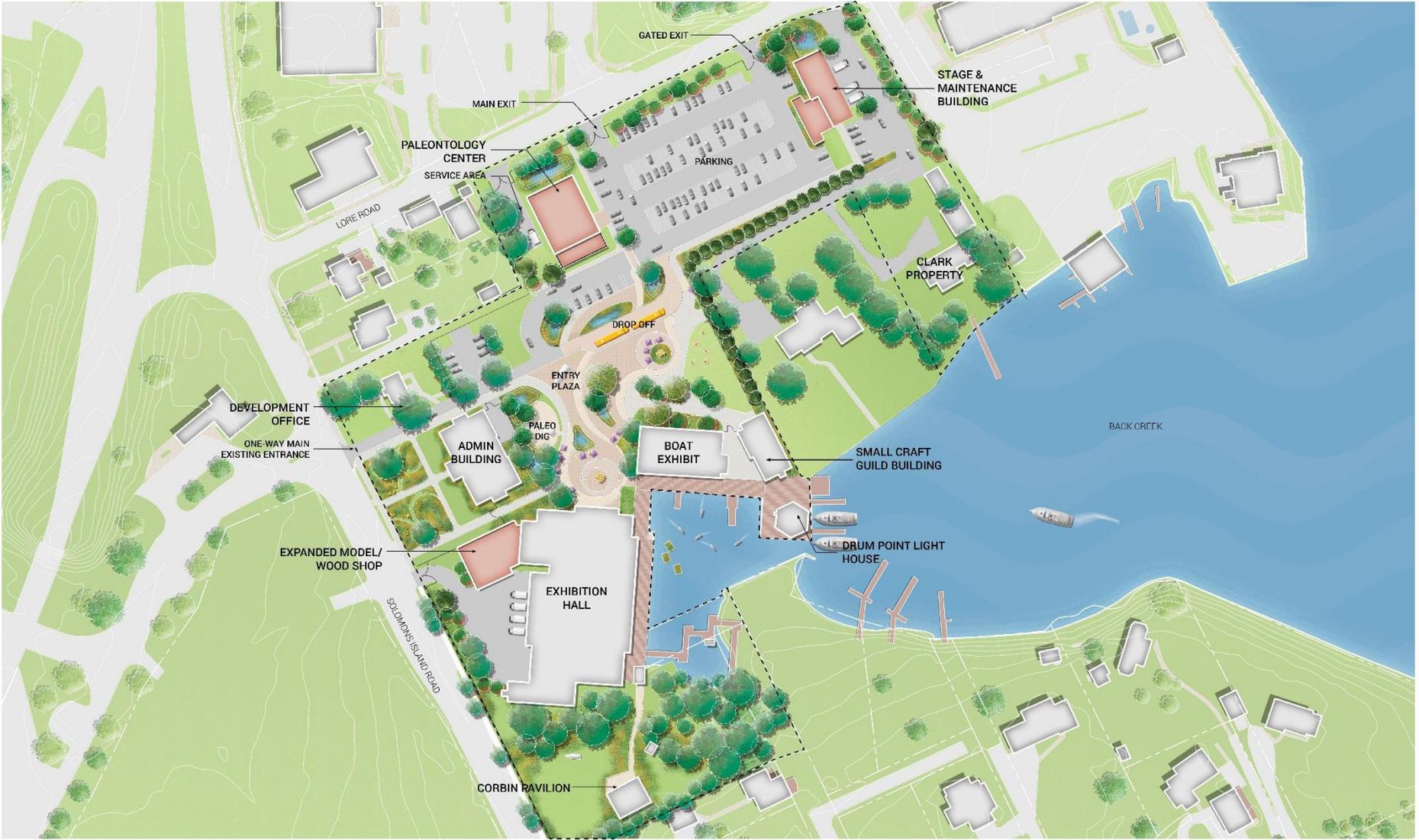


■ Porous Paving/Decorative Gravel



■ Stormwater Management





25 0 25 50 100 feet N

