Building in the Critical Area

Becoming Bay Smart: Living Within Maryland's Critical Area

February 25, 2012

Topics

- Critical Area versus 100-foot Buffer
- Critical Area Land Use Categories/Maps
- Standards for development in the Critical Area
- What Permit Do I Need?
- Tips on building “Bay Smart”

Critical Area vs. 100-foot Buffer

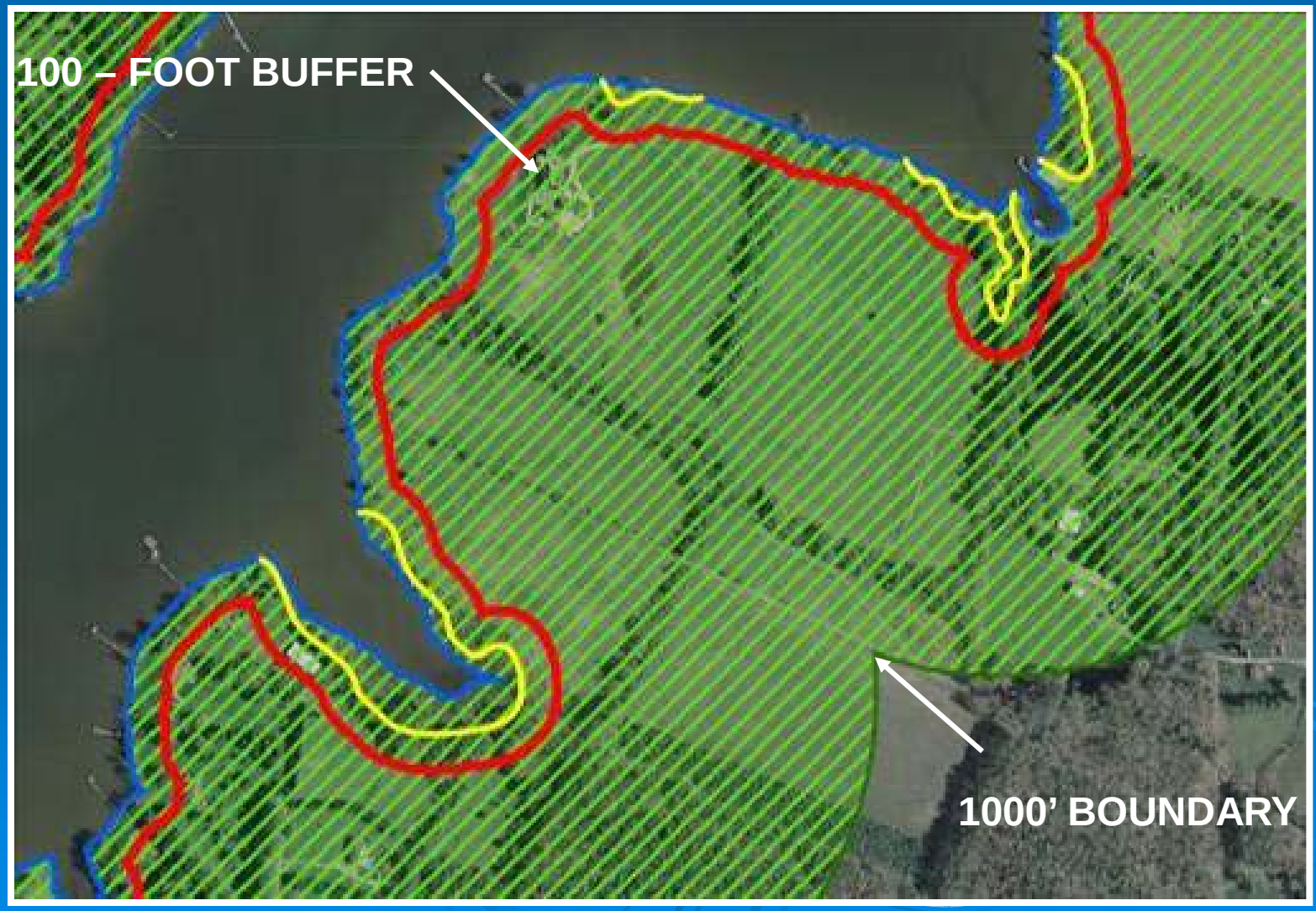
CRITICAL AREA

- All waters of the Chesapeake Bay, the Atlantic Coastal Bays, and their tributaries to the head of tide
- All land under these waters
- All land within **1,000** feet of the landward edge of tidal waters and tidal wetlands
- Approximately 11% of the State
- Critical Area Law and Criteria regulates development within this 1,000 feet

100-FOOT BUFFER

- Exists or may be established in natural vegetation
- Immediately landward from mean high water of tidal waters, the edge of a bank of a tributary stream or the edge of a tidal wetland
- Can be expanded for steep slopes, hydric soils, and/or highly erodible soils
- In general, no new development permitted

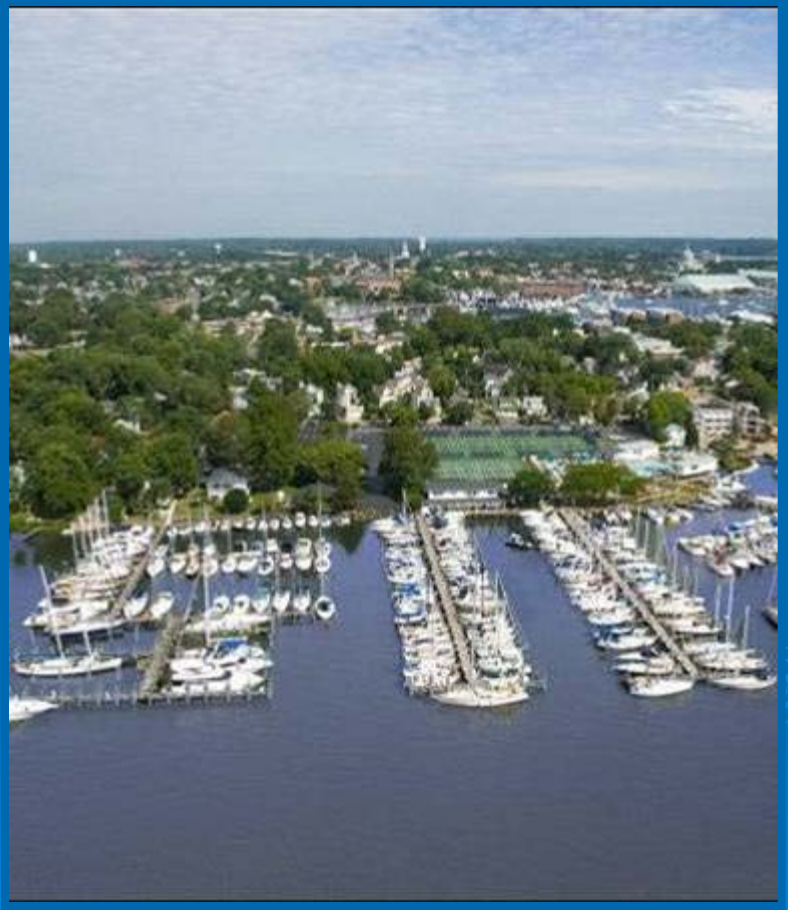
100-Foot Buffer and 1,000-Foot Boundary



Critical Area Program

Critical Area Designations

- Resource Conservation Area (RCA) – 80% of CA
- Limited Development Area (LDA) – 15% of CA
- Intensely Developed Area (IDA) – 5% of CA

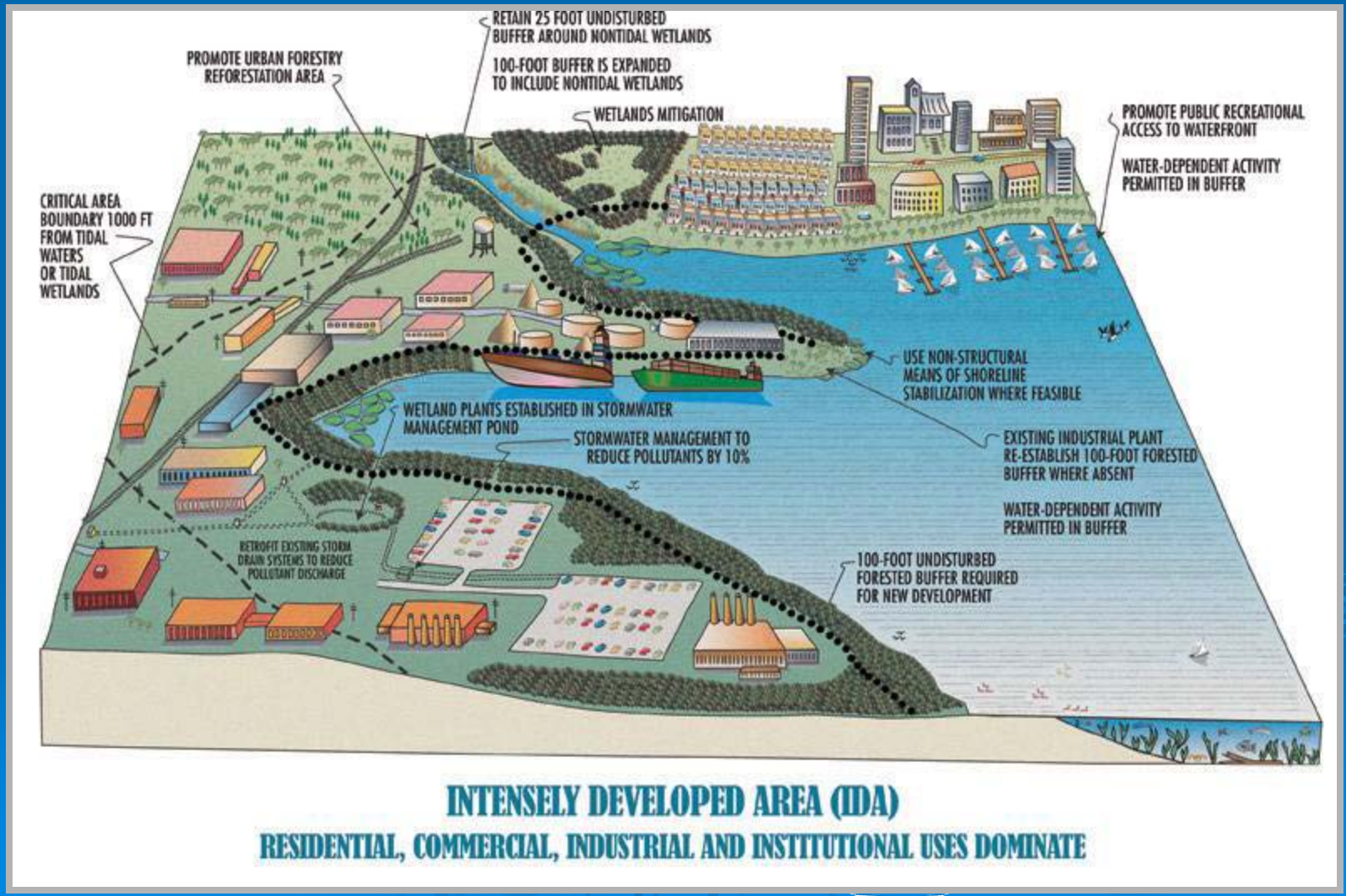


Critical Area Program

Intensely Developed Areas (IDAs)

- Existing urban, industrial, institutional, commercial and other developed areas
- Little existing natural habitat
- Intense development permitted, regulated by underlying zoning
- No clearing limits, establish vegetation where possible
- No lot coverage limits
- Stormwater management required as necessary to reduce pollutant loadings by 10%

IDA – Urbanized Areas

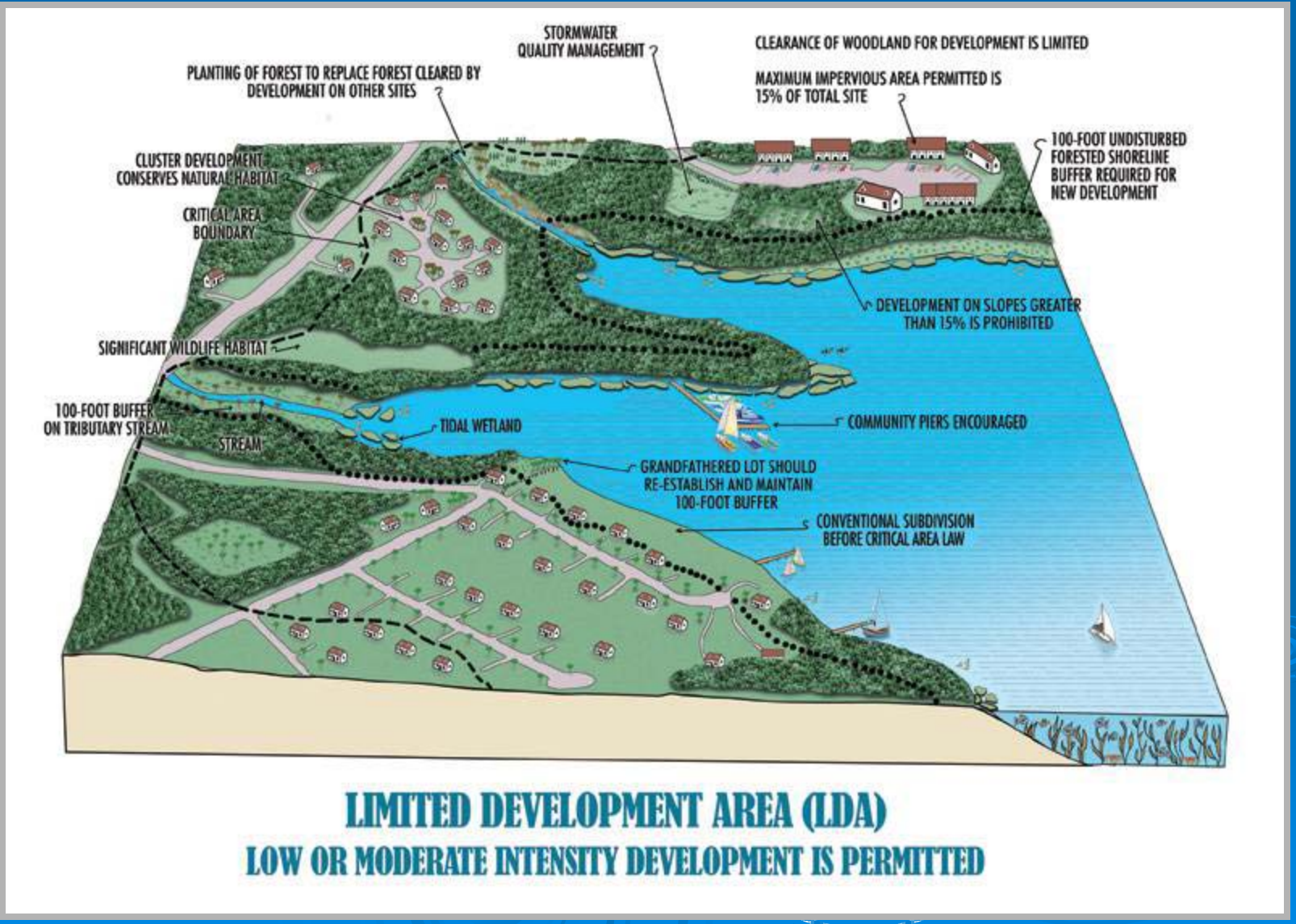


Critical Area Program

Limited Development Areas (LDAs)

- Residential and commercial areas of moderate intensity
- Some natural habitats exist
- Development of all types generally permitted, regulated by underlying zoning
- Reforestation required for all clearing
- Afforestation required on 15% of the site if site is unforested
- No construction on slopes greater than 15%
- Lot coverage limited to 15% of lot, depending on lot size and grandfathered status

LDA – Suburban Areas



Critical Area Program

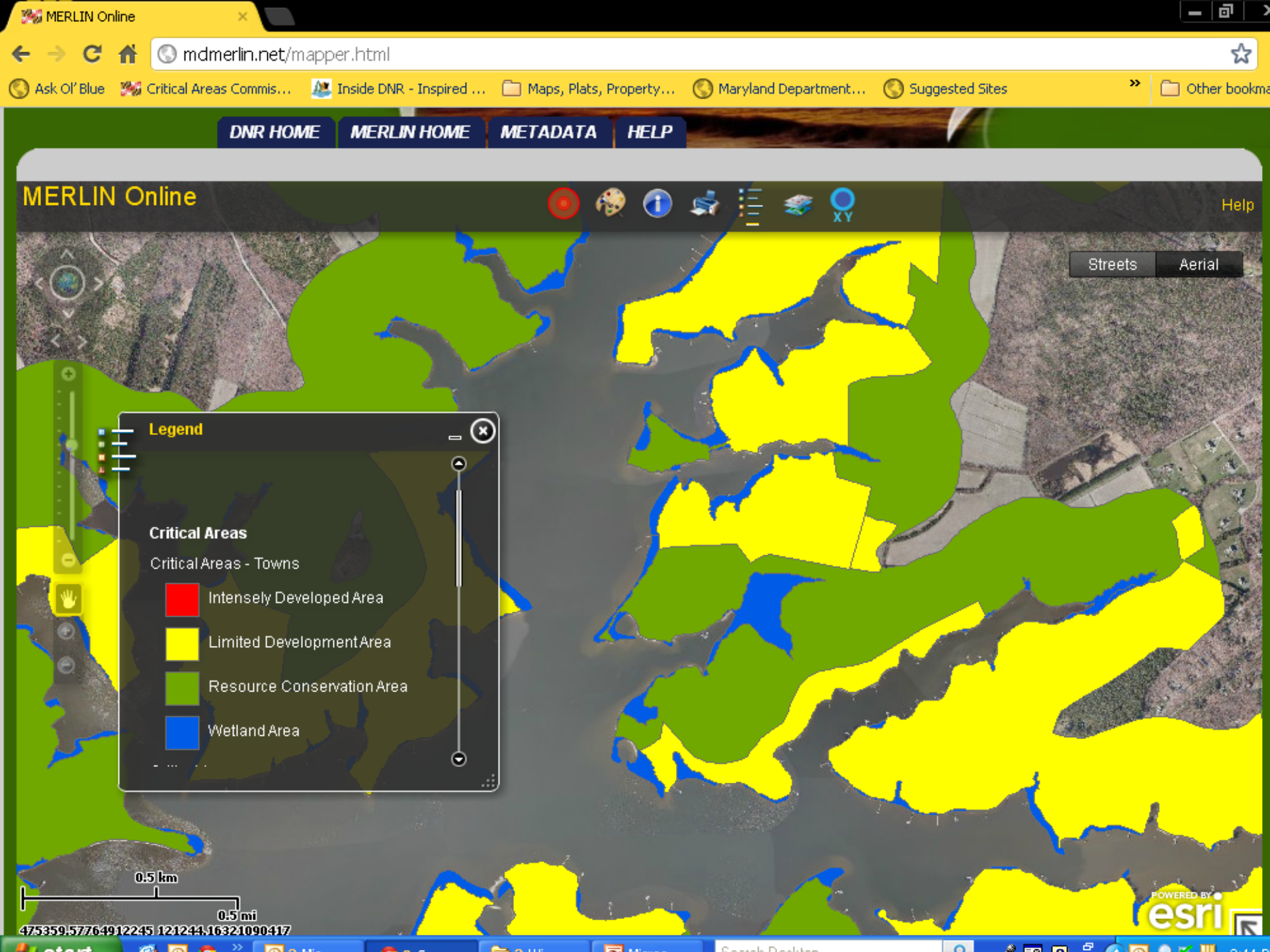
Resource Conservation Areas (RCAs)

- Farms, forests, wetlands, fields, and open spaces and low density residential development
- Development limited to agriculture, forestry, and fisheries and residential development at one unit per 20 acres
- Reforestation and afforestation the same as in LDA
- No construction on slopes greater than 15%
- Lot coverage generally limited to 15%
- 200-foot Buffer for New Subdivisions

RCA – Rural and Natural Areas

What Classification Is My Property?

- Consult With Local Jurisdiction's Maps
  - Most Accurate Source
- Merlin
  - http://www.mdmerlin.net
- Contact Critical Area Commission Staff
- NEW! Critical Area Mapping Update
  - http://www.dnr.state.md.us/criticalarea/mapupdate.asp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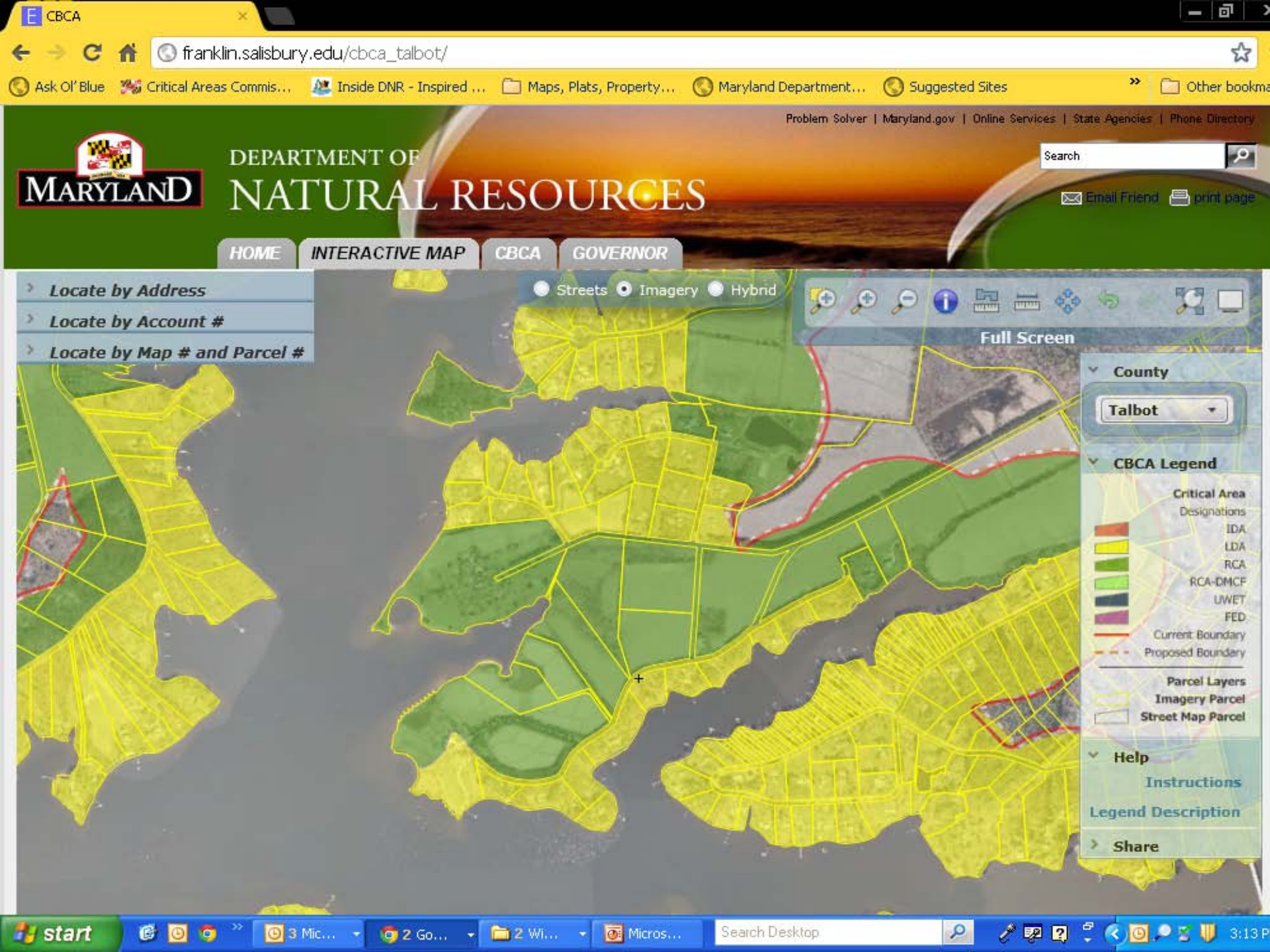
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Ask Ol' Blue
Critical Areas Commis...
Inside DNR - Inspired ...
Maps, Plats, Property...
Maryland Department...
Suggested Sites
Other bookma
Problem Solver | Maryland.gov | Online Services | State Agencies | Phone Directory
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DEPARTMENT OF
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Search
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Streets
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Talbot
CBCA Legend
Critical Area
Designations
IDA
LDA
RCA
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Development Standards

(Zoinks!)

Forest and Woodland Protection in the RCA and LDA

- Clearing up to 20% of existing forest requires 1 to 1 replacement
- Clearing between 20% and 30% of existing forest requires 1.5 to 1 replacement
- Clearing over 30% requires 3 to 1 replacement and a variance
- Sites with no forest must plant 15% of the site (afforestation)

Lot Coverage in the LDA and RCA

- Definition: The percentage of a total lot or parcel that is:
  - Occupied by a structure, accessory structure, parking area, driveway, walkway, or roadway; or
  - Covered with gravel, stone, shell, impermeable decking, a paver, permeable pavement, or any manmade material.
- Lot coverage includes the ground area covered or occupied by a stairway or impermeable deck.
- In general, limited to 15% in LDA and RCA

Lot Coverage

PERMEABLE PAVERS

GRAVEL DRIVEWAYS

OYSTER SHELL PATH

Lot Coverage

HOUSE (EVEN MICHAEL JORDAN'S!!!)

GARAGE

PARKING PAD

Lot Coverage Does NOT Include

- A fence or wall that is less than one foot in width that has not been constructed with a footer;
- A walkway in the Buffer or expanded Buffer, including a stairway, that provides direct access to a community or private pier (local governments shall ensure that impacts to the Buffer associated with access are minimized);
- A wood mulch pathway; or
- A deck with gaps to allow water to pass freely.

NOT Lot Coverage

FENCE WITHOUT A FOOTER

MULCH PATHWAY

DECK WITH GAPS

STAIRWAY TO PIER IN BUFFER

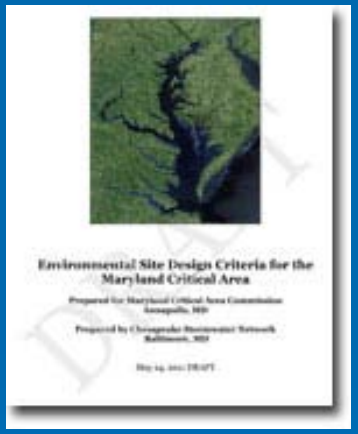
Stormwater

Current Conditions Are Not Good

- Stream habitat and biological diversity degraded in 10,000 stream miles in the Bay watershed from stormwater
- Stormwater impacts fish and bottom dwelling organisms in small estuaries and coastal creeks
- Runoff degrades existing watershed filters -- forests and wetlands
- Stormwater is largest source of P and N – causes harmful algae blooms

10% Phosphorus Reduction

- Required in IDA if more than 250 square feet of disturbance is proposed
- Simple spreadsheet calculation
- Residential properties can typically meet requirements through small best management practices
  - Rain gardens
  - Tree plantings



What Approval Do I Need?

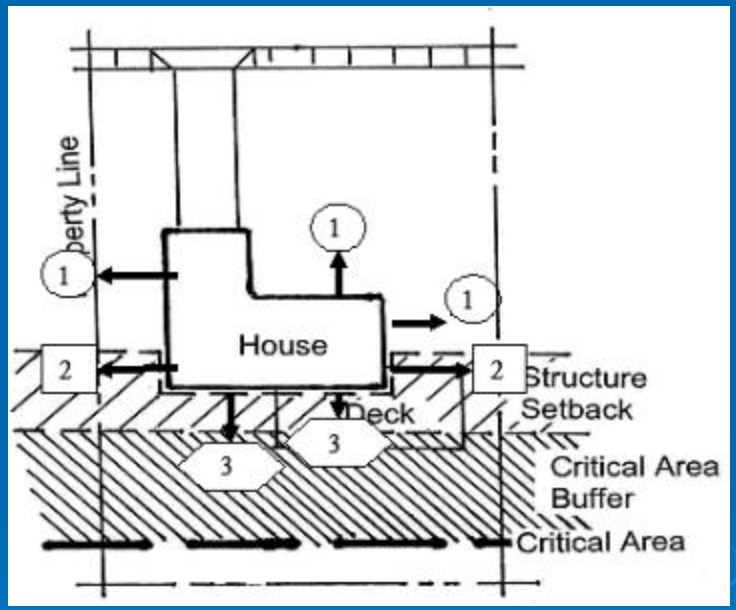
- Typical Approvals
  - Building Permit
  - Variance
  - Subdivision
  - Shore Erosion Control Permit
- Contact Local Jurisdiction for more details

Building Permit

- Typical Construction Activities
  - House
  - Accessory Structure
  - Driveway

Critical Area Variance

- Development Activity Inside the 100-foot or Expanded Buffer
- Exceeding Lot Coverage
- Exceeding Clearing Limits
- Disturbance to Steep Slopes
- Must Meet Variance Standards



Subdivision

- Can be classified as major or minor
- Often requires more intensive environmental review
  - DNR Wildlife and Heritage

Shore Erosion Control Permit

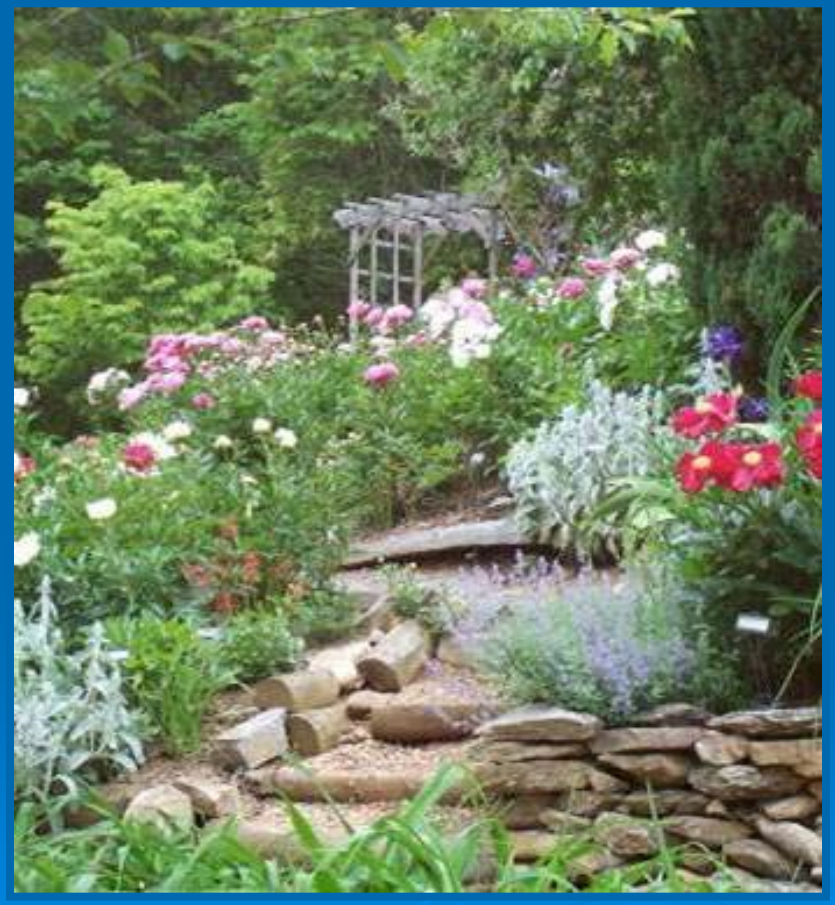
- Any repair, modification, or enhancement to shoreline
  - Living Shorelines
  - Bulkheads, Ripraps
  - Piers/Boat Ramps

Don’t Forget!!!!!

- ALL DISTURBANCE IN THE CRITICAL AREA REQUIRES A PERMIT

From the Backyard to the Bay
What You Can Do at Home

From the Backyard to the Bay
What You Can Do at Home



- Minimize lot coverage
- Plant or enhance a Buffer
- Manage stormwater better
- Make your lawn “Bay Smart”
- Increase tree and forest cover
- Landscape for aesthetics and the ecosystem
- Share the outdoors with wildlife
- Think Sustainability

Build “Bay Smart”
Minimize Lot Coverage

- Everything counts as lot coverage
- Assess needs - design to protect resources
- Be creative with site design - especially for driveways and parking
- Minimize footprint (i.e. build “up” not “out”)
- Accessory structures have impacts too

Lot Coverage
Opportunities for Conservation

- More effective limit on development
- More on-site area for water quality treatment and habitat
- More opportunities for wildlife corridors
- Low impact design
- Greater consistency

Shoreline, Wetland and Stream Buffers

Plant a Functioning Buffer

The Good …

The Bad …

Shoreline, Wetland and Stream Buffers

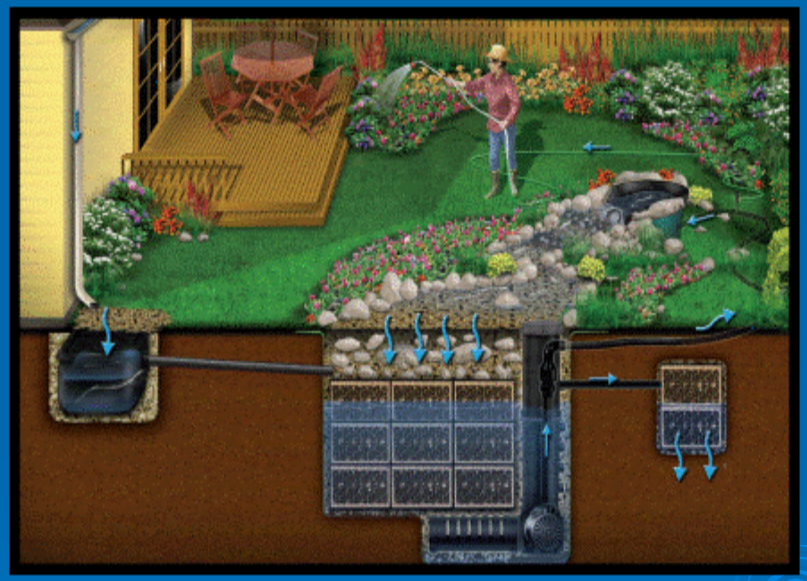
A Missed Opportunity …

THE AWFUL!

Stormwater

New Approaches

- Design to keep stormwater on site to allow infiltration and treatment:
  - Minimize lot coverage
  - Maximize forest canopy
  - Collect and utilize rooftop runoff
  - Utilize swales and infiltration for driveways, walkways, and patios
  - Use on-site “micro-practices” for treatment



Stormwater
Collect and Reuse Stormwater

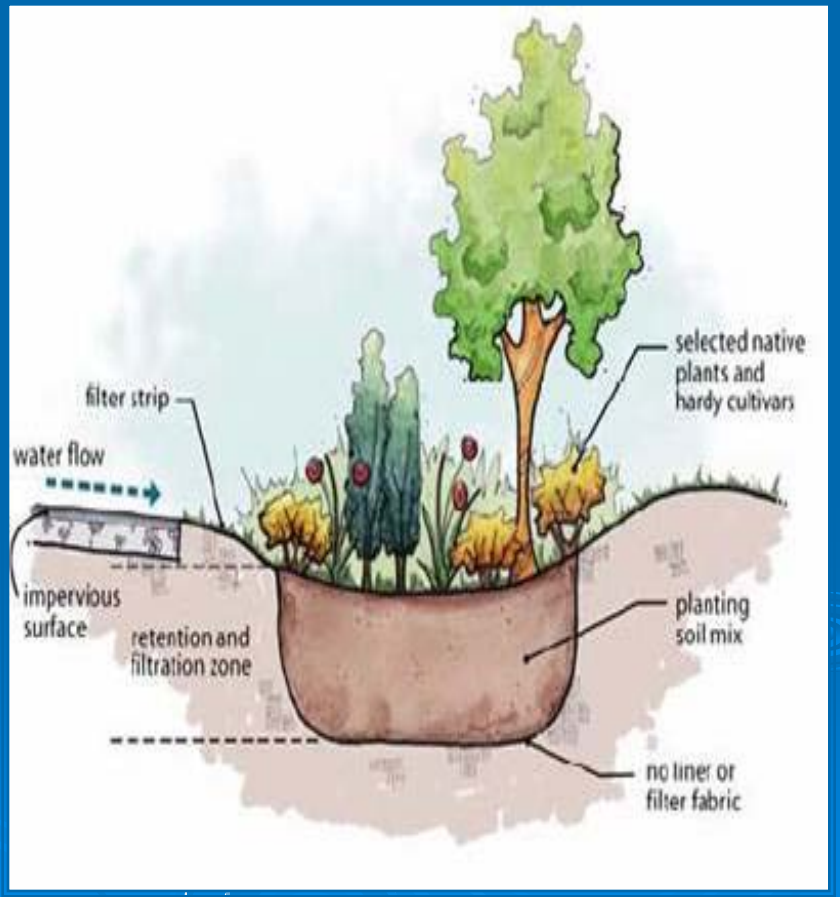
- Rooftop runoff can be collected in rain barrels and cisterns
- Many rain barrels are attractive and functional
- Collected rainwater can be used for gardens and landscaping

Stormwater
Reuse Is Beneficial

- Conserves water
- Reduces quantity and velocity of stormwater entering ditches and streams
- Avoids problems with temperature of runoff
- Maintains natural hydrologic patterns

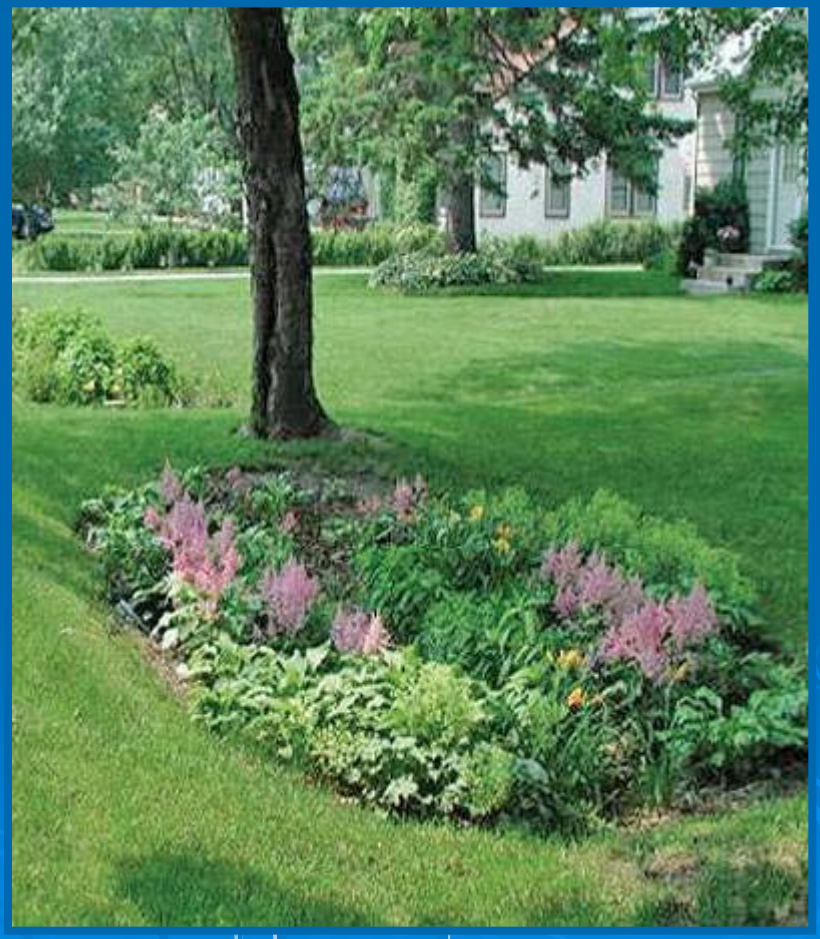
Stormwater
Install a Rain Garden

- Bioretention areas – “rain gardens” can be installed almost anywhere
- Water from downspout is directed to small 6” depression with plantings
- Soil amendments and plant selection are important



Stormwater
Rain Gardens Provide Benefits

- Infiltrate stormwater so it doesn't run off the land
- Provide nutrient uptake
- Provide habitat
- Require little maintenance
- Can be aesthetically pleasing



Stormwater Management
Infiltrate Runoff Where Feasible

- Provides groundwater recharge
- Minimizes volume
- Can serve small drainage areas
- Good pollutant removal
- Can be placed in medians, roadsides, parking lot edges, etc.
- Replicates pre-development hydrology

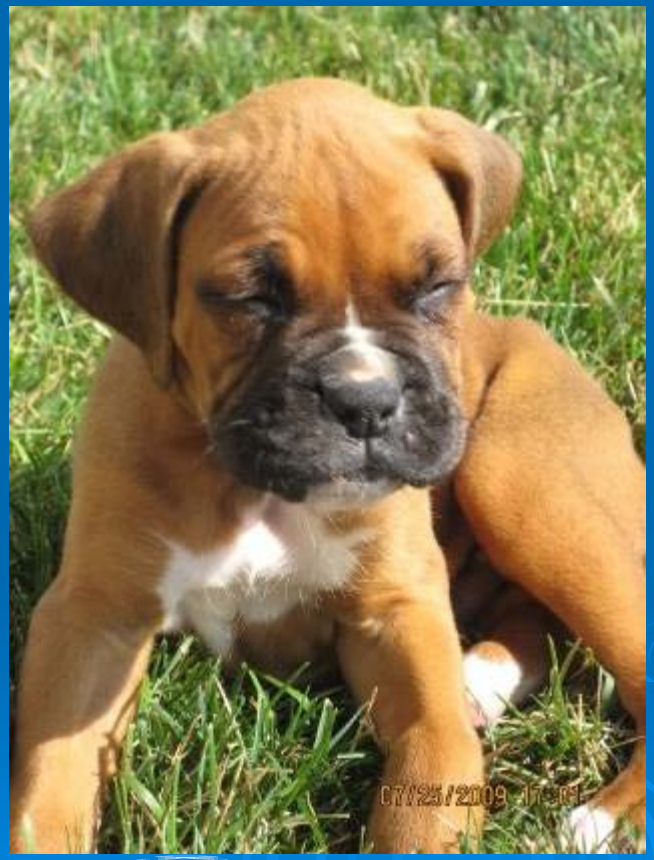
Lawn Care
Make Your Lawn “Bay Smart”

- Reduce the size of your lawn by allowing areas to naturalize or planting native trees and shrubs
- Minimize the use of pesticides and herbicides
- Have your soil tested so you know what kind and how much fertilizer is needed
- Use slow release fertilizers
- Use mulch to minimize weeding and maintenance

Lawn Care

“Bay Smart” at Home
Manage Pet Waste

- Don’t just “leave it”
- Put it in the trash or in the toilet
- Small things do matter
- Set a good example of “caring” for the environment
- Healthier for your pet(s)
- Yes, there are pet “septic systems”



Forest Cover
Maximize Tree Canopy

- Forests provide optimal water quality and habitat benefits
  - Promote infiltration
  - Intercept rainfall
  - Take up nutrients
  - Stabilize soils
  - Moderate runoff temperature
- Conservation of existing forest almost always better than replacement

“Bay Smart” at Home
Plant a Tree (Or Five …)

- Planting a tree (or trees) provides numerous benefits
- Use a variety of native species
- Consider structural diversity in terms of canopy and understory trees, large and small shrubs, and groundcover
- Grouping plants together provides more habitat benefits than spacing them apart

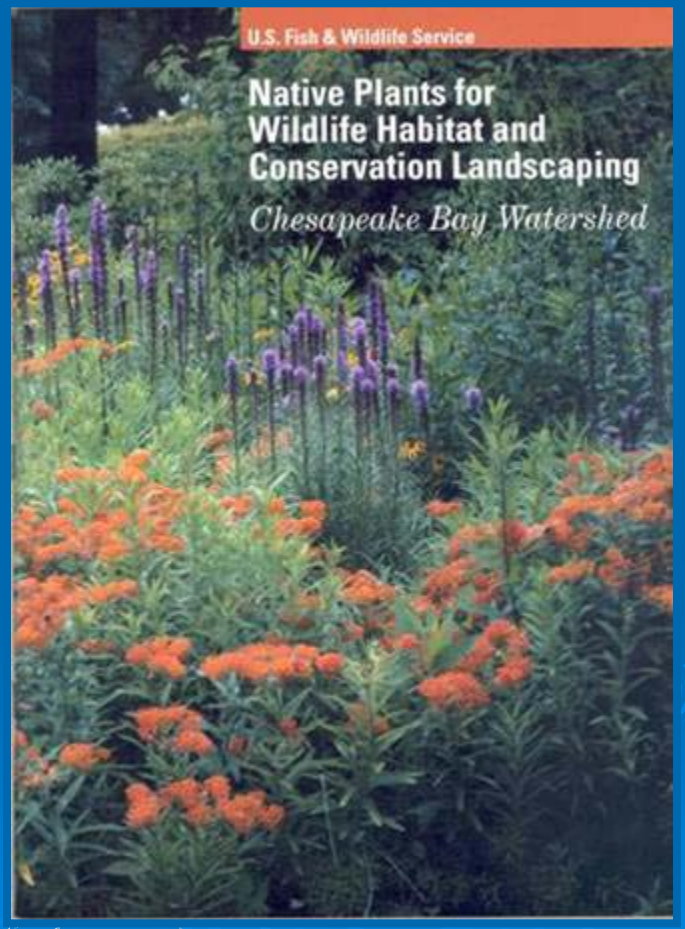
Landscaping
Native Plants Are Beneficial

- Native species are adapted to Coastal Plain soils, hydrology, and climate
- After initial establishment – generally drought tolerant
- Have natural resistance to common pests and diseases
- Spread and regenerate naturally

Landscaping

How Do I Know What to Plant?

- Get assistance
- Use this guide to select species
- Consider site conditions: soil, slope, sun, moisture, wildlife, and pets
- Many species – can meet design objectives and be aesthetically pleasing
- Plant densely
- Some care needed for 2 years



Landscaping
Use Natural Mulch

- Commercial, shredded wood mulch is best
- Gravel, shredded tires, colored mulch does not optimize benefits
- Mulch depth of 3”
  - Retains moisture
  - Improves soil composition
  - Provides slow release nutrients
  - Inhibits weed growth

Wildlife
Humans Cramp Their Style

- Development activity reduces wildlife habitat often forcing them into residential areas
- Human desire to “subdue nature” further minimizes habitat
- Leaving areas “natural” can provide important corridors
- Leave dead trees standing and fallen trees on the ground
- Maintain buffers from human activity
- Minimize the use of cleaners, fertilizers, pesticides

Wildlife

No Yard Is Too Small

- Birdhouses and birdfeeders are easy to install
- Amphibians can live in an overturned flowerpot
- Many native plant species attract hummingbirds and butterflies
- Bats may be creepy but they can eat more than 1,000 insects in an hour
- Downed woody debris provides cover, food, and habitat

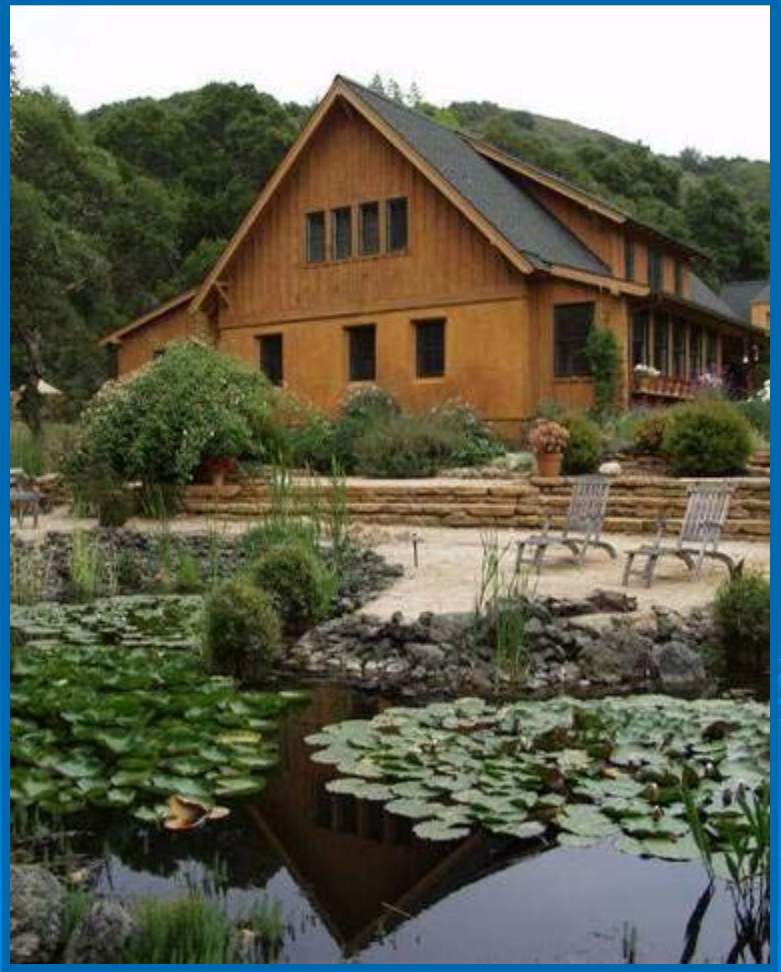
Wildlife

Riparian Habitat Is Important

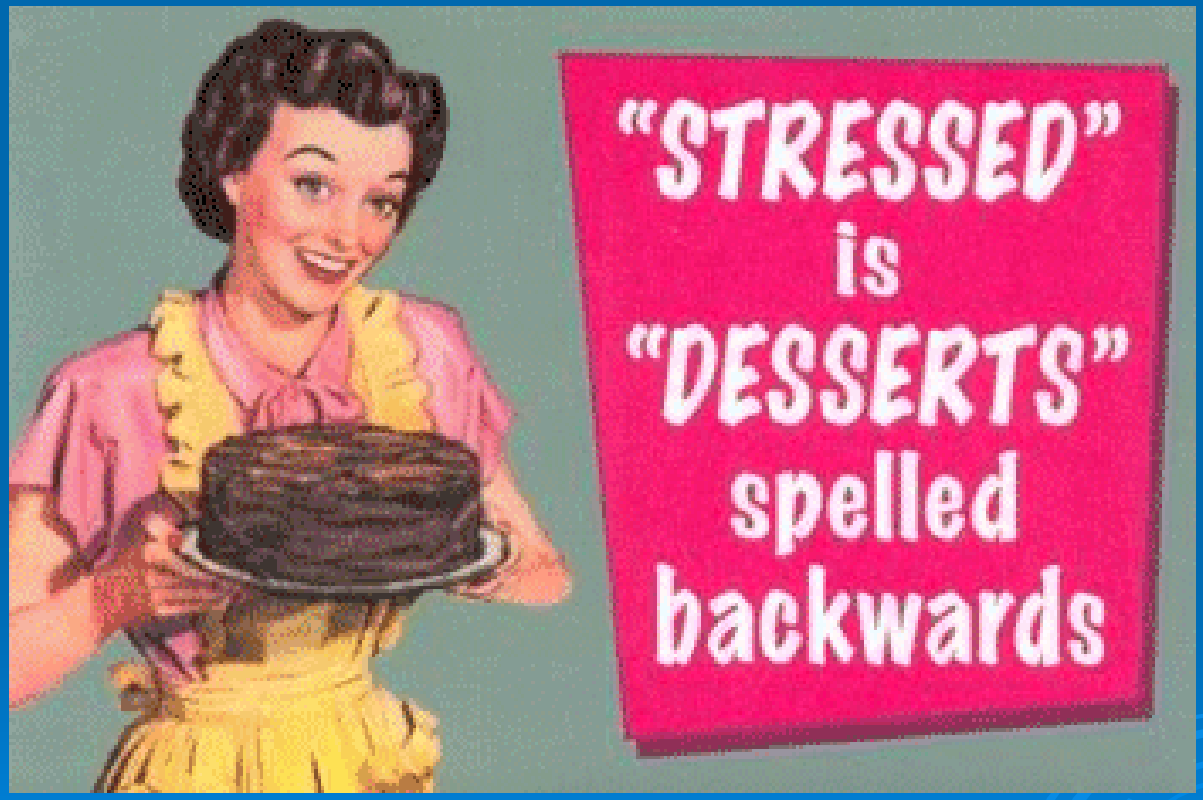
Many neotropical migratory birds use forested areas adjacent to wetlands and waterways for nesting and stopover habitat.

Build “Bay Smart”
Think Sustainability

- Use pervious pavers and materials where feasible
- Consider re-use of materials or recycled materials
- Think efficiency for appliances and light fixtures
- Consider alternative heating and cooling systems such as geothermal
- Install water conserving plumbing fixtures



Don’t Let the Bay Health Stress You Out!

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For further information:
www.dnr.state.md.us/criticalarea/