# State Agency Consultant Training
April 16, 2019

Critical Area Commission for the
Chesapeake and Atlantic Coastal Bays

What Is the Critical Area Program?

➢ Based on Chesapeake Bay Critical Area Act passed in 1984

➢ Land use and resource protection program implemented at the local level

➢ Involves additional regulatory requirements for development activity and changes in land use within the Critical Area
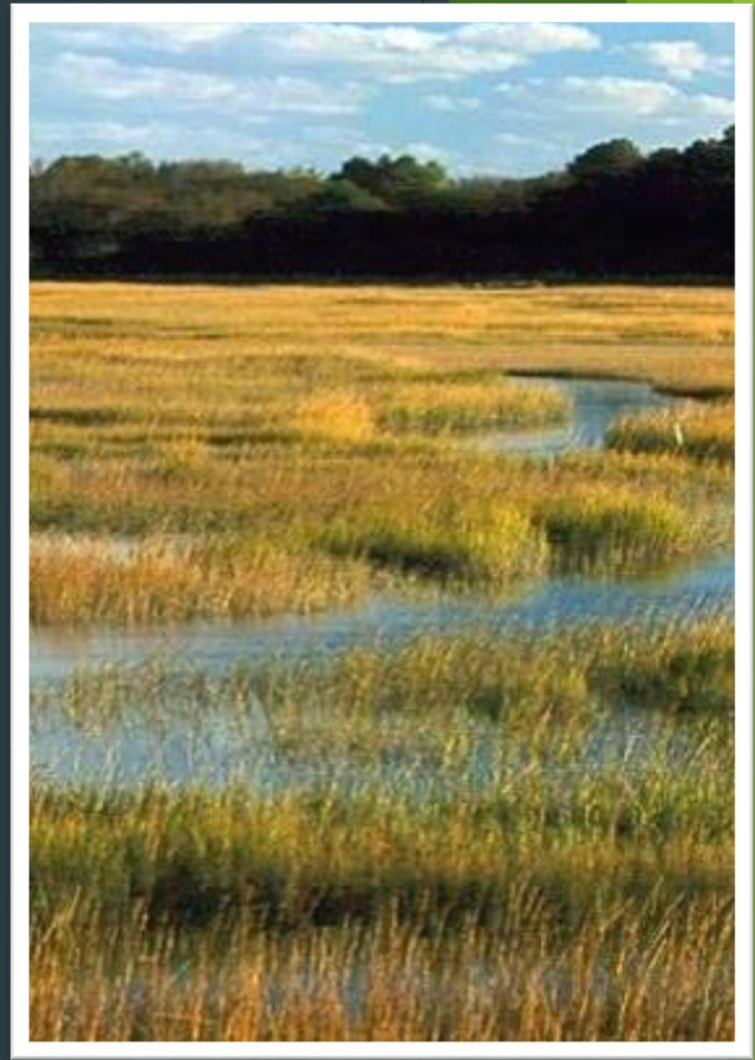
Goals of the Critical Area Act

➢ Minimize adverse impacts to water quality from run-off

➢ Conserve fish, wildlife, and plant habitat

➢ Accommodate growth and address the number, movement and activities of people in the Critical Area

# Where Is the Critical Area?

Maryland Critical Area

What is the Critical Area Commission?

➢ Appointed by the Governor – 29 members representing counties, towns and State agencies

➢ Approve State projects, approve amendments to local programs,

The Critical Area Commission Staff

- ➤ Assist local governments with project review

- ➤ Review State projects and present them to the Commission for approval

- ➤ Review changes to local programs

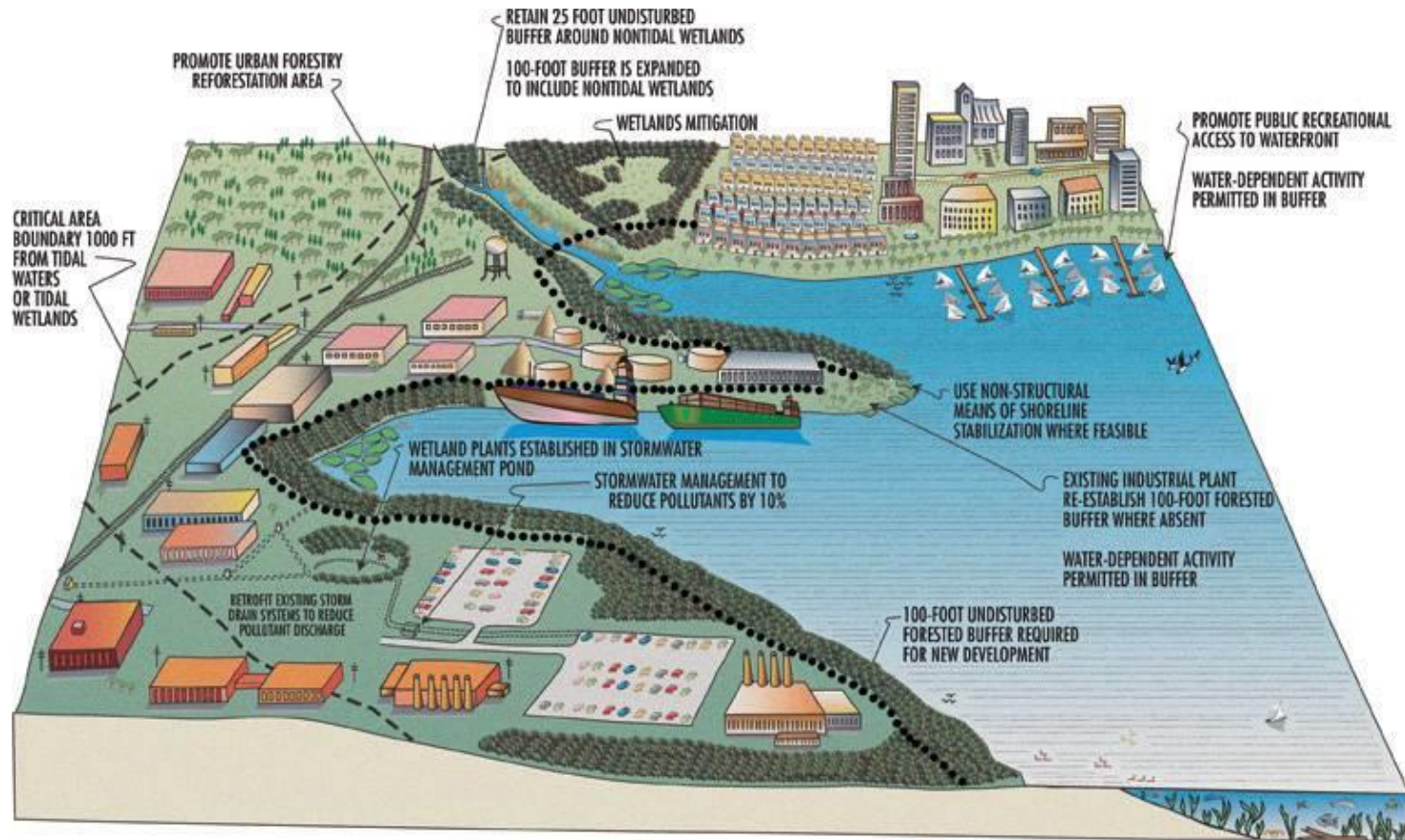- ➤ Conduct workshops and training

- ➤ Provide technical assistance
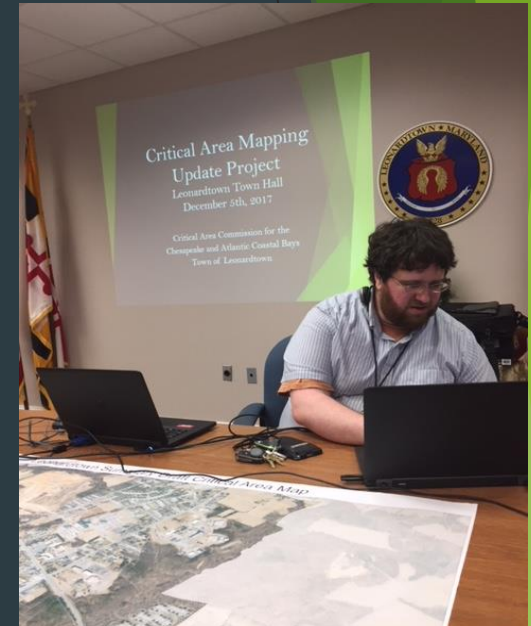
100-Foot Buffer and 1,000-Foot Boundary

100– FOOT BUFFER
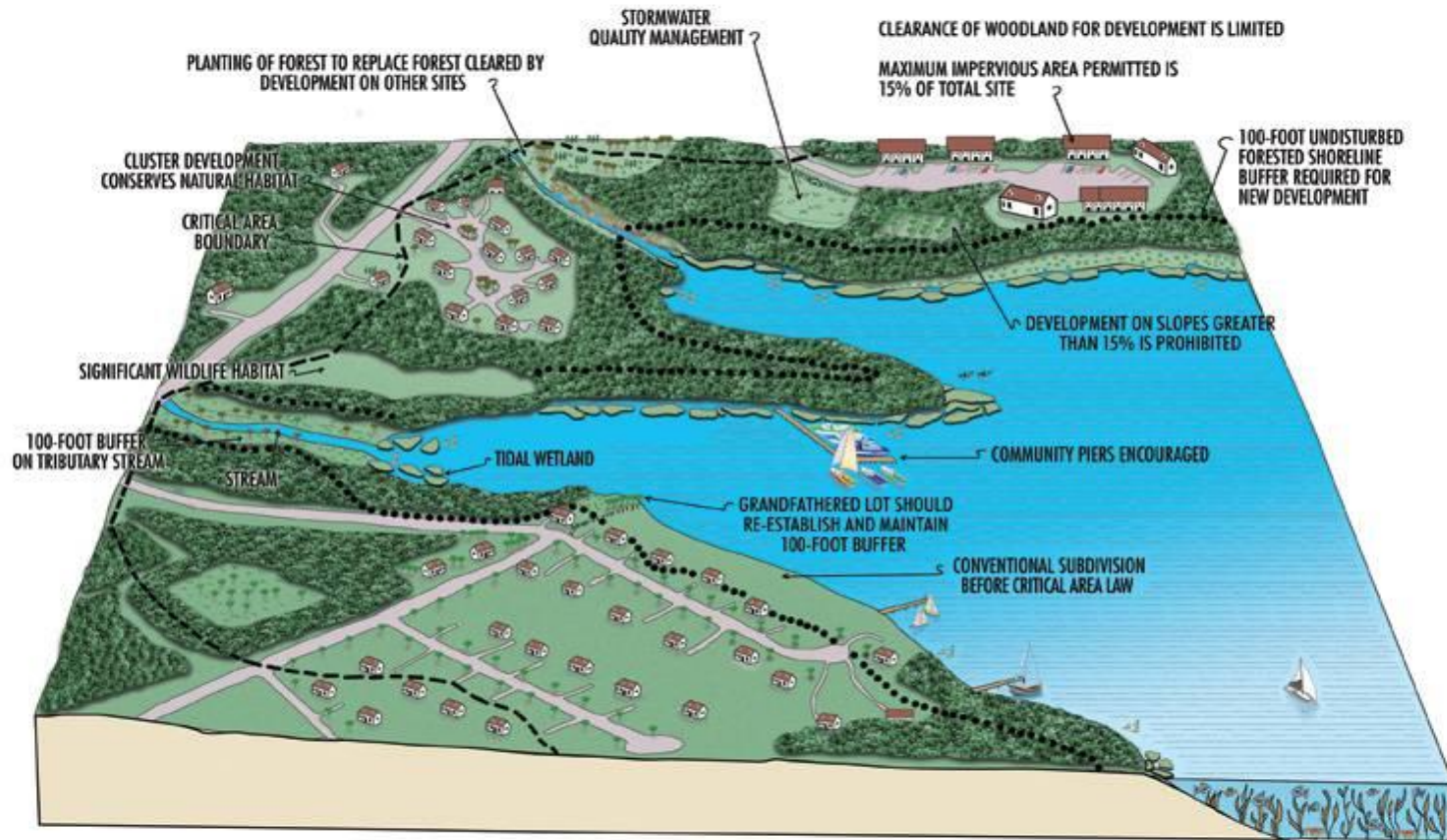
1000' CRITICAL AREA BOUNDARY
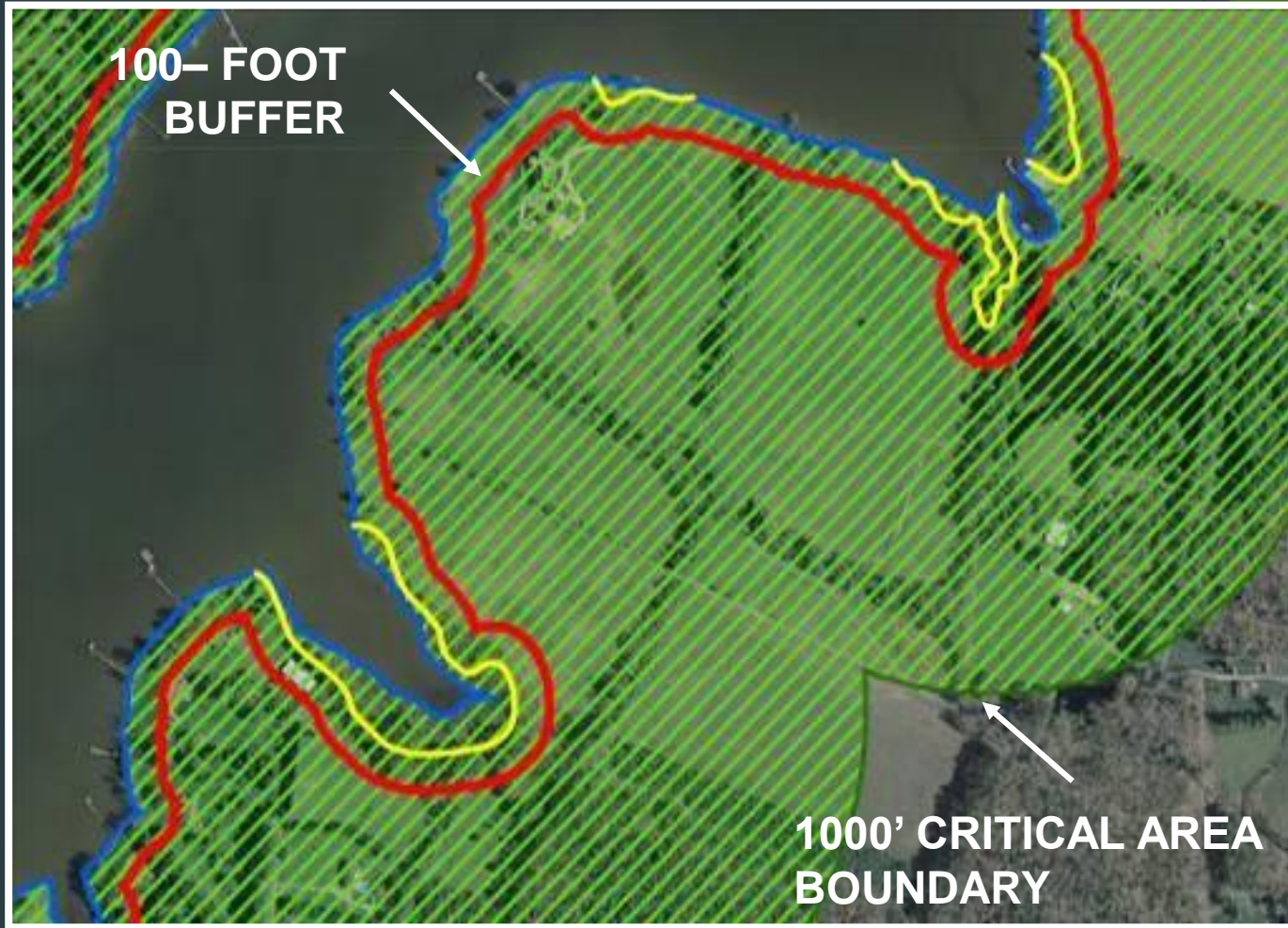
Critical Area Designations
Intensely Developed Areas

INTENSELY DEVELOPED AREA (IDA)
RESIDENTIAL, COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL USES DOMINATE
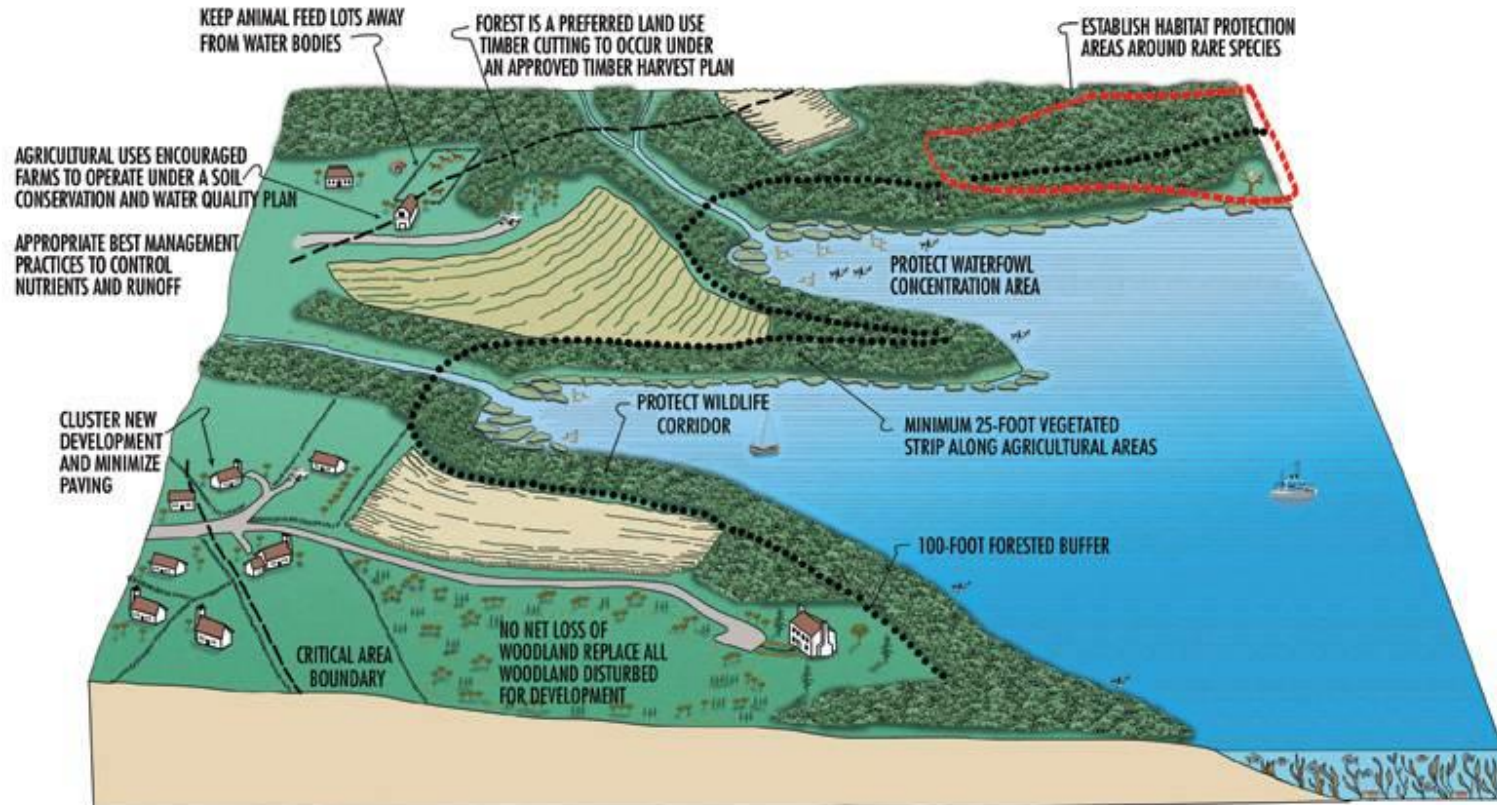
Critical Area Designations
Limited Development Area

LIMITED DEVELOPMENT AREA (LDA)
LOW OR MODERATE INTENSITY DEVELOPMENT IS PERMITTED

Critical Area Designations
Resource Conservation Area

KEEP ANIMAL FEED LOTS AWAY FROM WATER BODIES

FOREST IS A PREFERRED LAND USE TIMBER CUTTING TO OCCUR UNDER AN APPROVED TIMBER HARVEST PLAN

ESTABLISH HABITAT PROTECTION AREAS AROUND RARE SPECIES

AGRICULTURAL USES ENCOURAGED FARMS TO OPERATE UNDER A SOIL CONSERVATION AND WATER QUALITY PLAN

APPROPRIATE BEST MANAGEMENT PRACTICES TO CONTROL NUTRIENTS AND RUNOFF

PROTECT WATERFOWL CONCENTRATION AREA

CLUSTER NEW DEVELOPMENT AND MINIMIZE PAVING

PROTECT WILDLIFE CORRIDOR

MINIMUM 25-FOOT VEGETATED STRIP ALONG AGRICULTURAL AREAS

100-FOOT FORESTED BUFFER

CRITICAL AREA BOUNDARY

NO NET LOSS OF WOODLAND REPLACE ALL WOODLAND DISTURBED FOR DEVELOPMENT

RESOURCE CONSERVATION AREA (RCA)
NATURAL ENVIRONMENT PREDOMINATES

2008 – House Bill 1253 Mapping Provisions

➢ Requires change from Critical Area delineated on 1972 Tidal Wetlands Maps to Critical Area delineated on Statewide Base Map

Map Update

➤ Base maps were 1972 Tidal Wetlands Maps that were not ortho-rectified or georeferenced

➤ Boundary was drawn manually – inherent inaccuracies

➤ Extensive changes to the landscape, shoreline, and wetlands; maps must match the landscape

➤ Electronic maps are now the industry standard

➤ Critical Area boundary needs to be web-accessible

➤ Original 1,000-foot boundary not always consistent, and uniform

Mapping Process

➢ The maps are prepared and reviewed by the State and the local government.

➢ Notification and public information meetings occur.

➢ Draft maps are delivered to the local government for final approval.

➢ The Critical Area Commission approves the locally adopted maps.
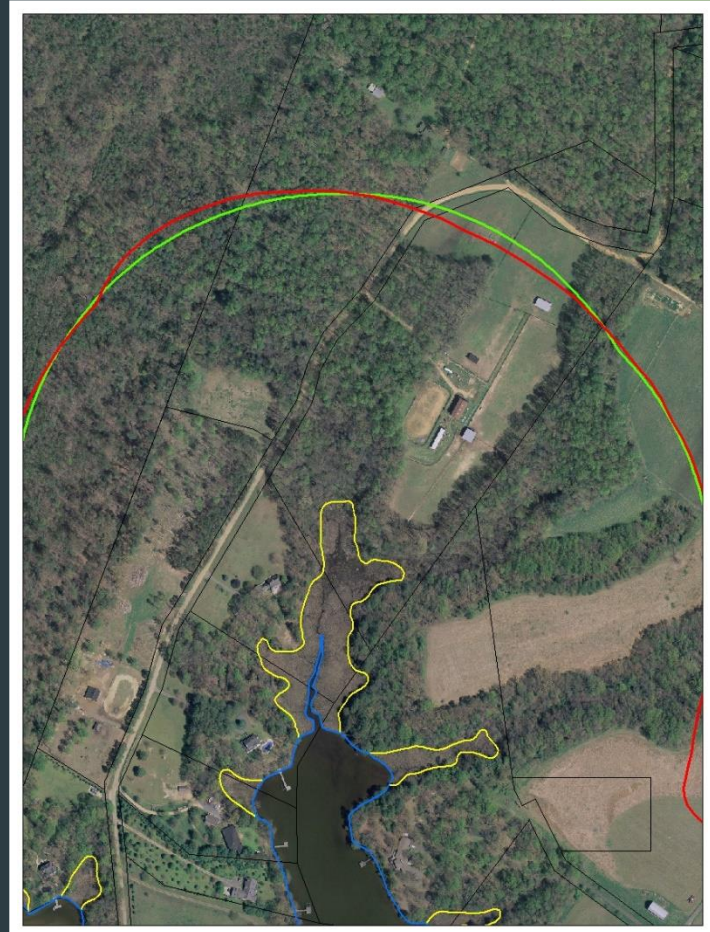
Mapping Process
Digitize Shoreline
Factors to Consider:

- Edge of open water
- Location of water at time of image capture
- Consideration given to tree canopy / shadows
- Width of channel

Mapping Process
Digitize Wetlands

Factors to Consider:
- Vegetation patterns
- Consideration given to tree canopy / shadows
- Multiple data sources needed to confirm
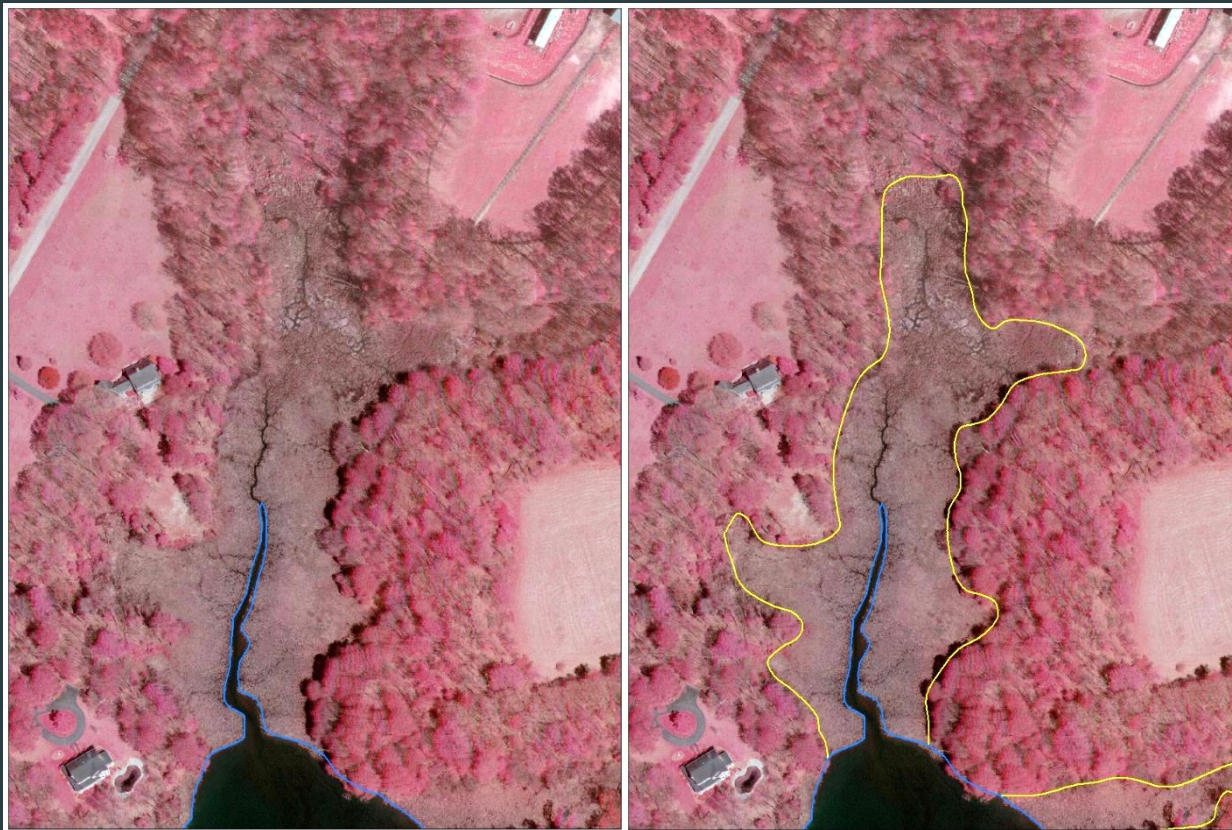
Mapping Process
Digitize Wetlands
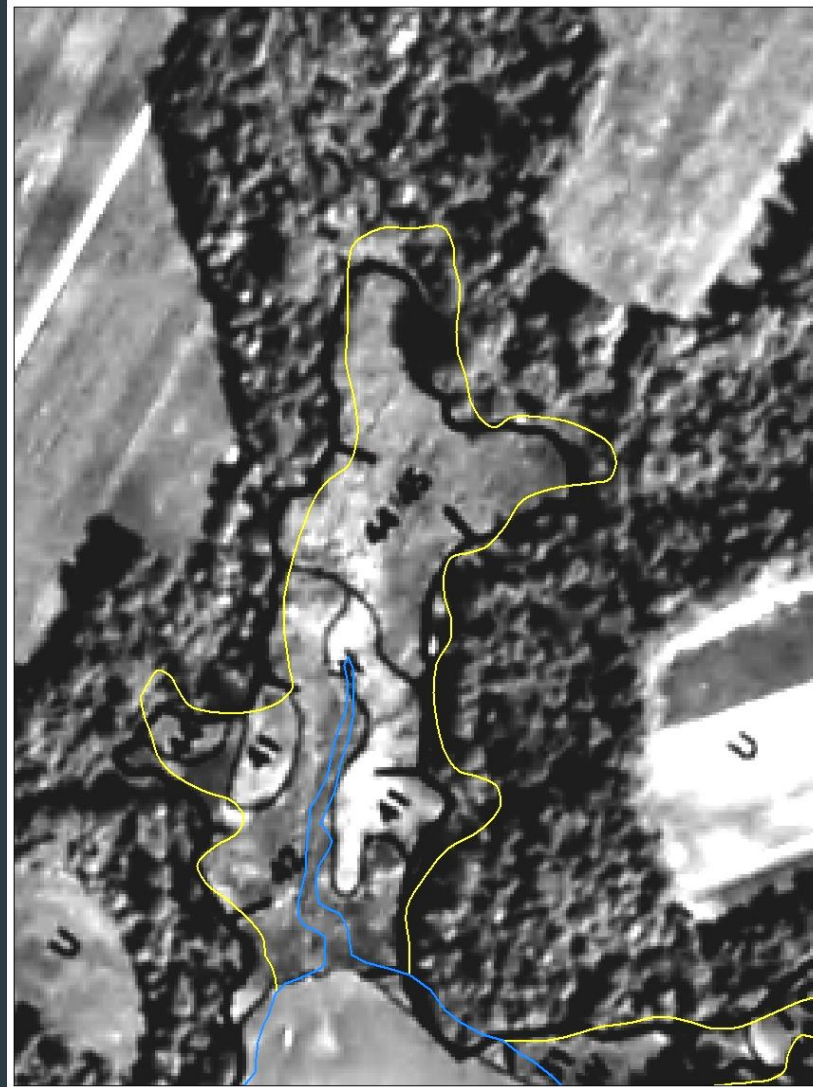
Mapping Process
Digitize Wetlands
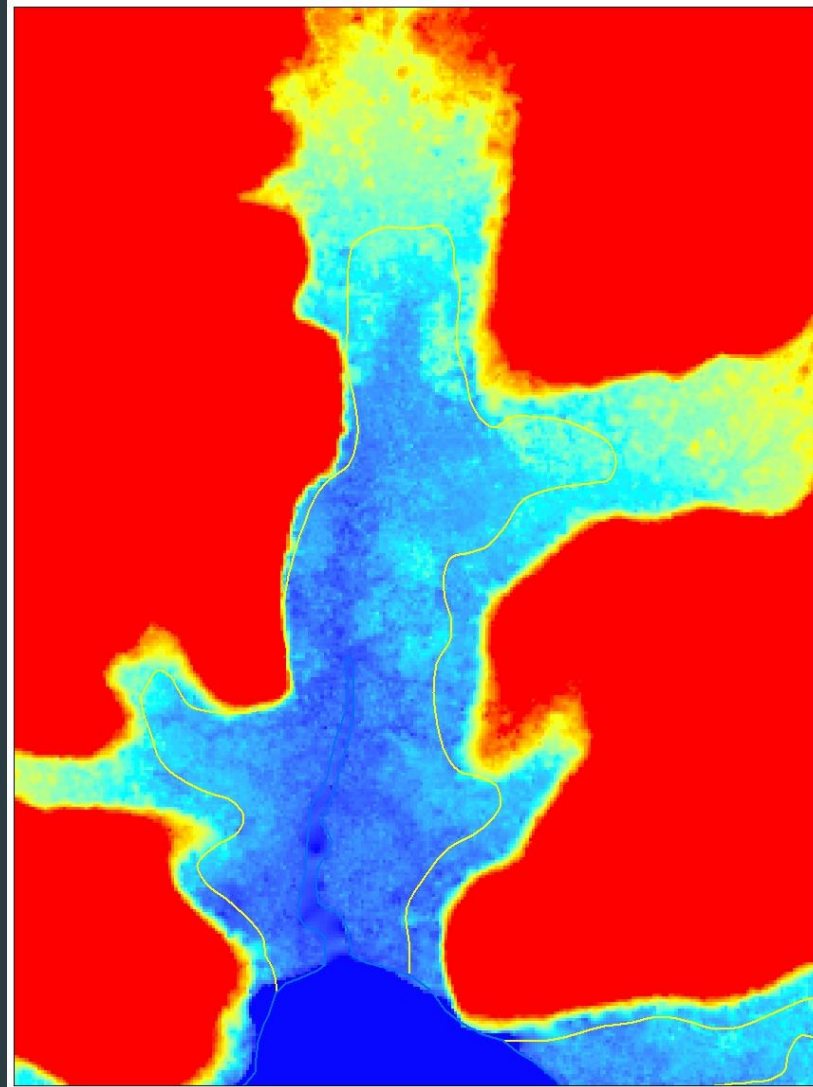
Mapping Process
Review Process

- Discrepancies, anomalies, inconsistencies identified by ESRGC, CAC, and local jurisdictions as review points

- WebEx/conference calls, review points are jointly analyzed

- Additional resources (permits, historical aerials, etc.) help resolve issues

- Ground truthing

- Multiple rounds

  - Shoreline/wetlands

  - Designations
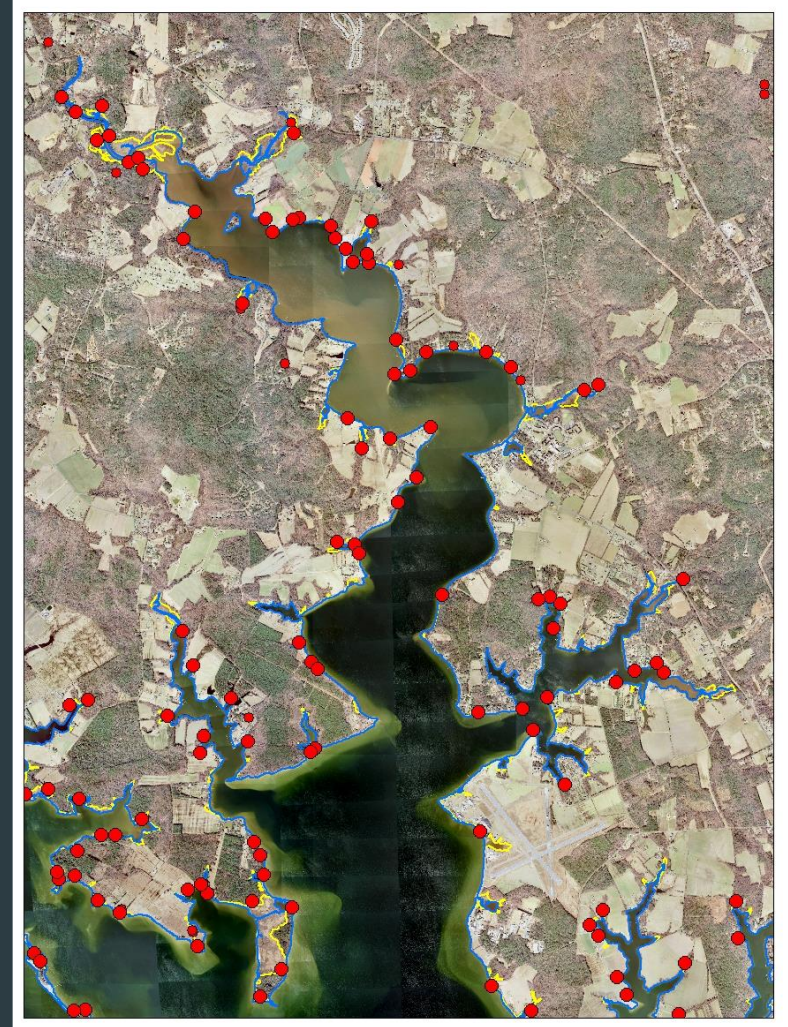
Mapping Process
Current Critical Area

Mapping Process
Proposed Critical Area

Red Line - Current CA Boundary

Green Area - Proposed CA

Interactive Mapping Tool

http://webmaps.esrgc.org/cbca/desktop/Map

Allows the public to easily determine if their property is in the Critical Area
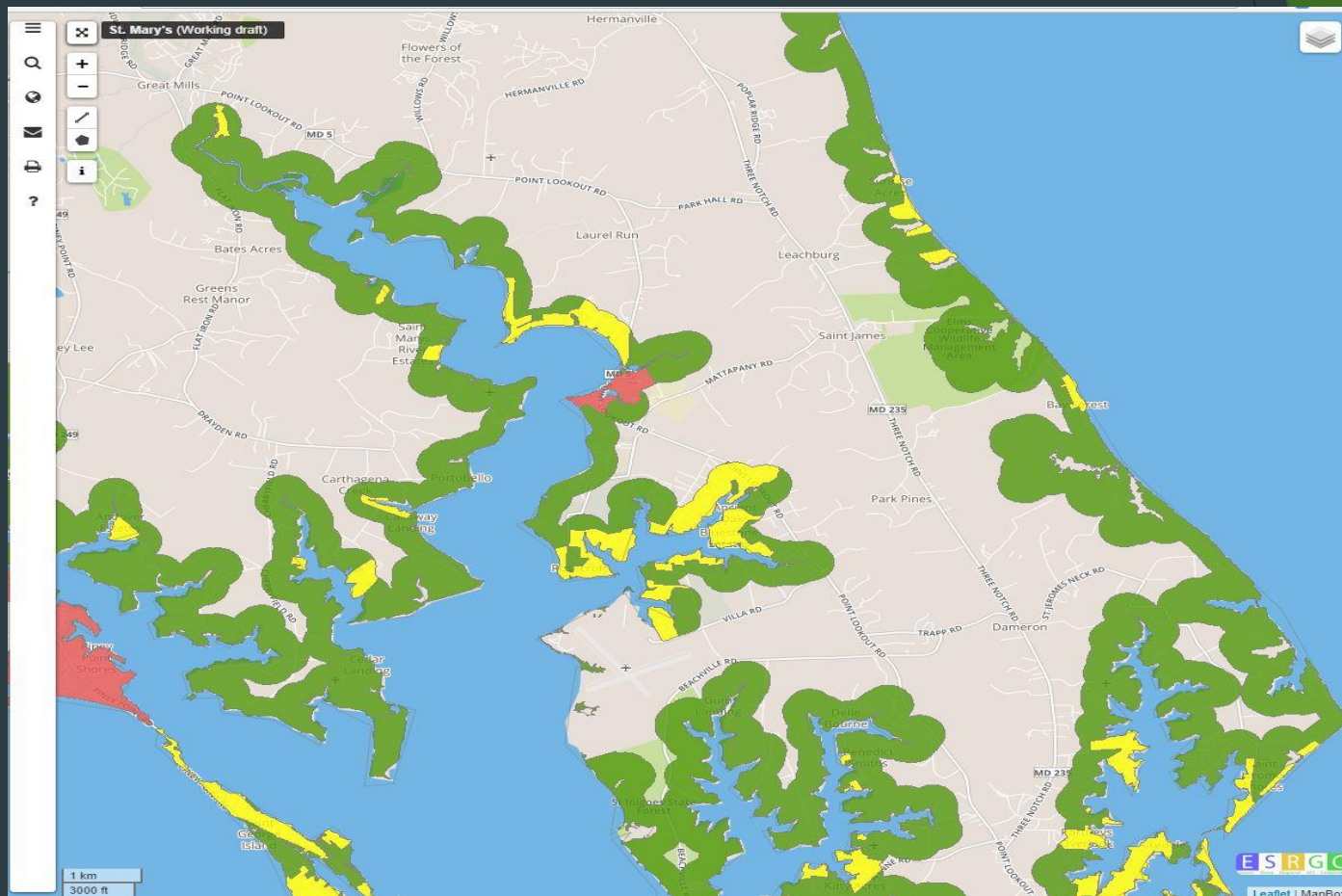
Current Status of Mapping Project
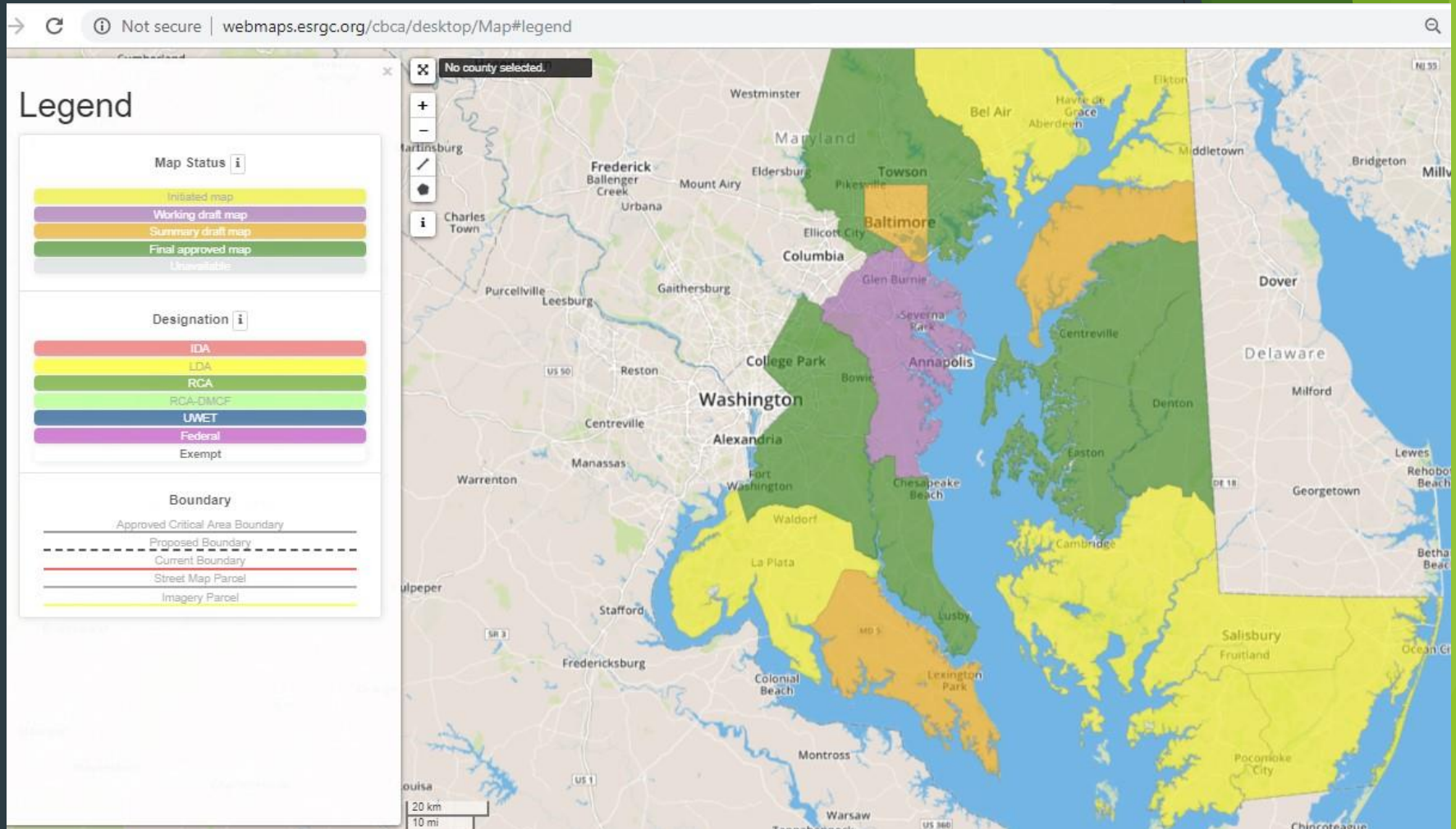
MD I-Map
Updated as the Critical Area Maps are Updated

► https://data.imap.maryland.gov/datasets/5e3a92c992494c7aa441375df24f1a49_1

Mapping Resources

DNR MERLIN http://dnrweb.dnr.state.md.us/MERLIN/

Water Resources Registry

https://watershedresourcesregistry.org/map/?config=stateConfigs/maryland.json

County or Town Websites

https://www.aacounty.org/departments/planning-and-zoning/critical-area-map/index.html

HABITAT PROTECTION AREAS (HPAs)

- Buffer

- Nontidal Wetlands

- Threatened & Endangered Species

- Plant & Wildlife Habitat

  - Anadromous Fish Habitat

  - Forest Interior Dwelling Bird (FID) Habitat

  - Waterfowl Staging & Concentration Areas

  - Colonial Water Bird Nesting Sites

  - Natural Heritage Area

  - Areas of Local Significance

What's so great about the Buffer?

A tree canopy can intercept up to 40% of the precipitation that falls on it.

Leaf litter left in place to decay provides food for wildlife and makes the soil spongier.

Vegetation filters pollutants in surface and subsurface runoff

HPAS

Nontidal Wetlands

Threatened & Endangered Species

HPAS

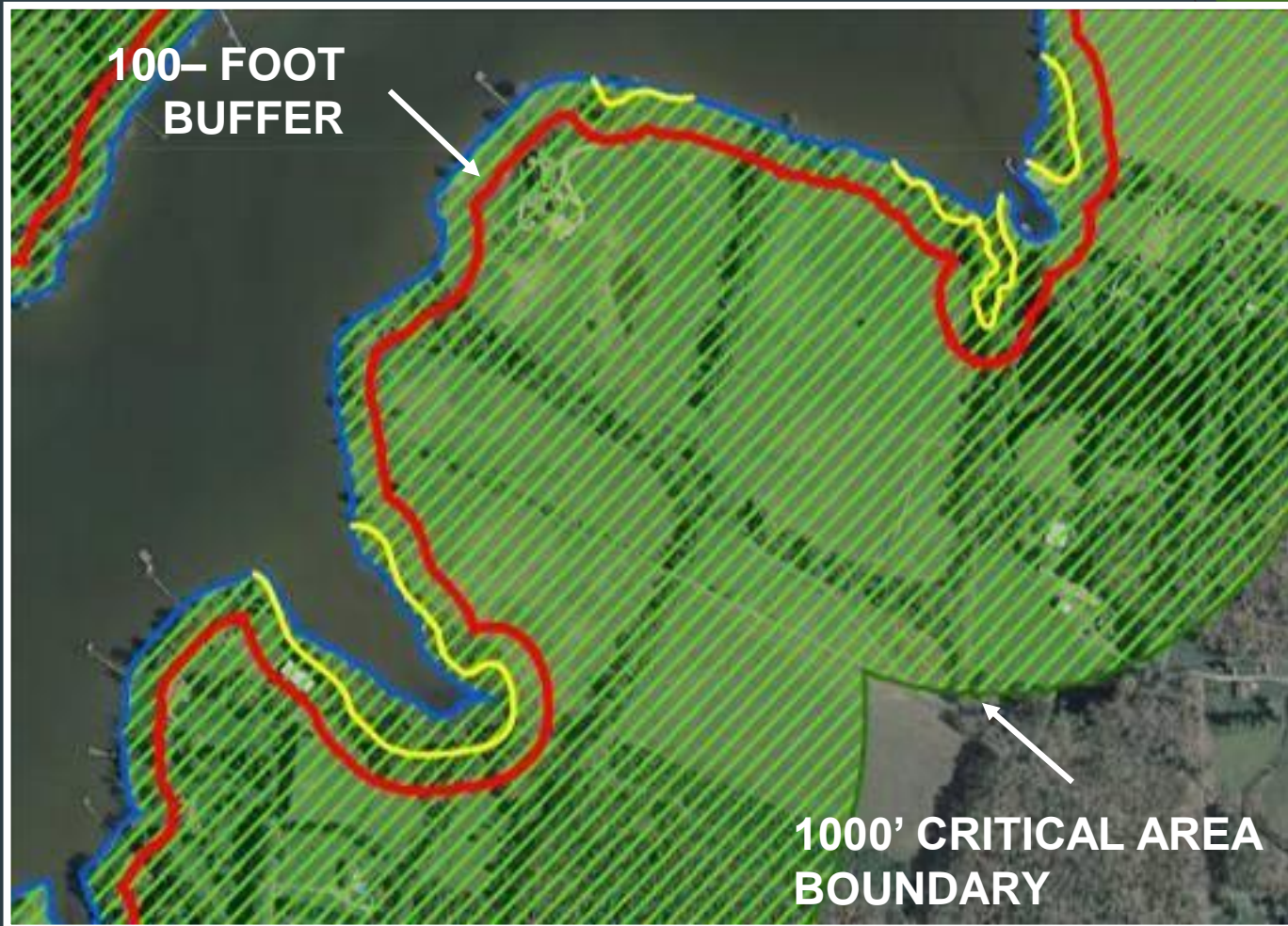Colonial Nesting Waterbirds

Anadromous Fish

HPA's - Plant & Wildlife Habitat
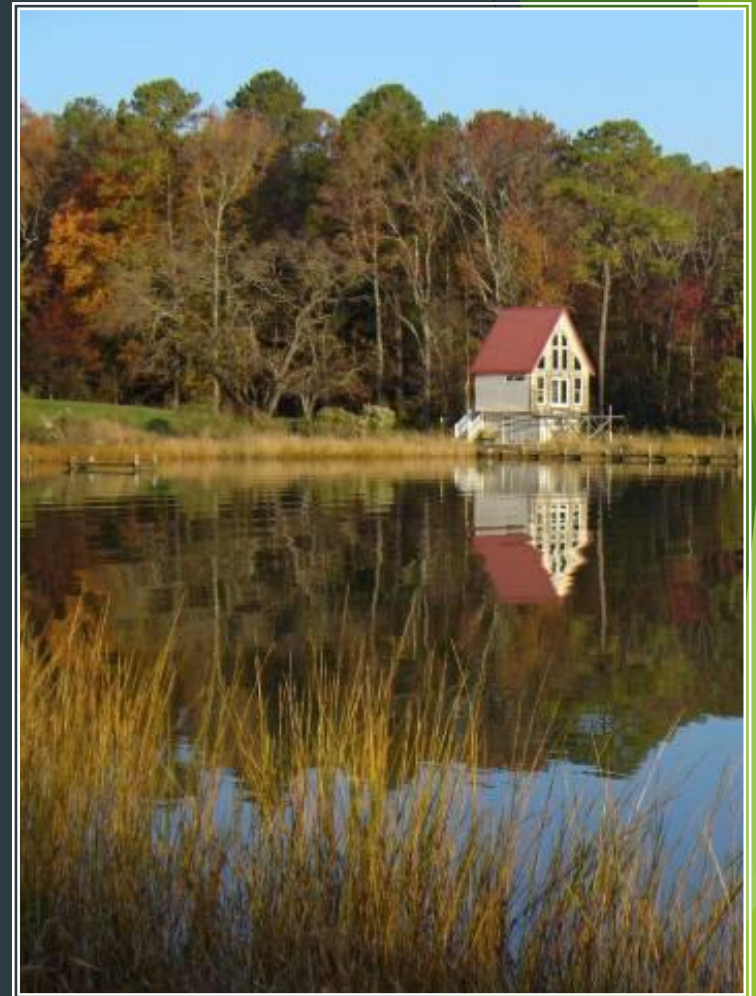*Forest Interior Dwelling Birds (FIDS)*

FID Impacts and Mitigation

Buffer Delineation
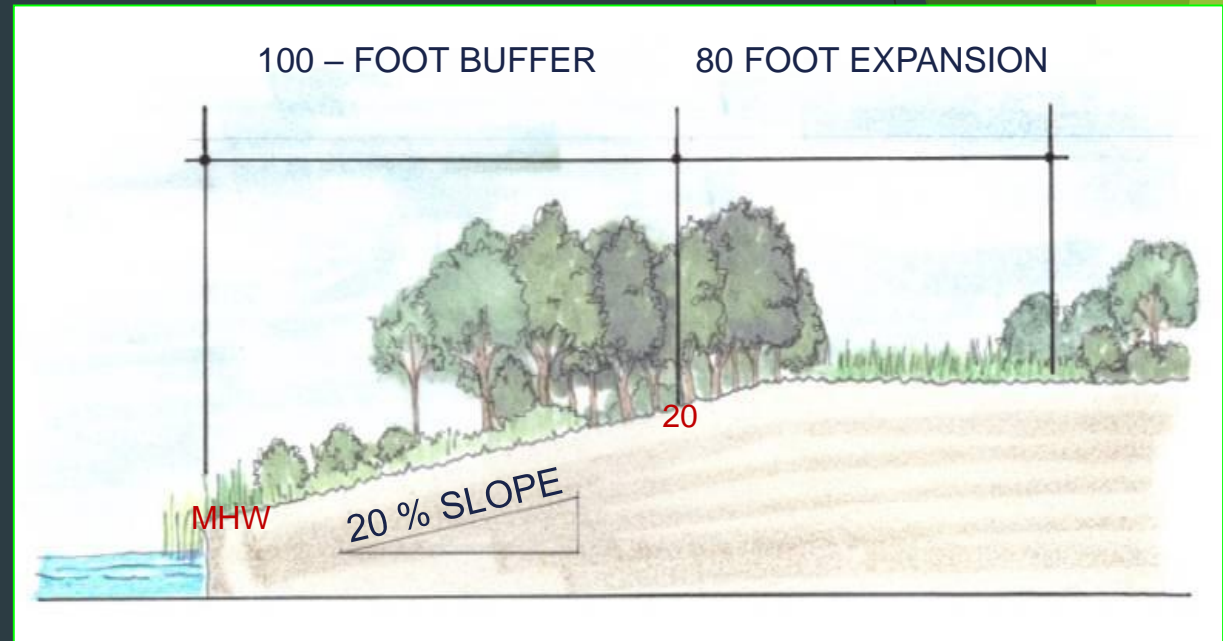

100– FOOT BUFFER

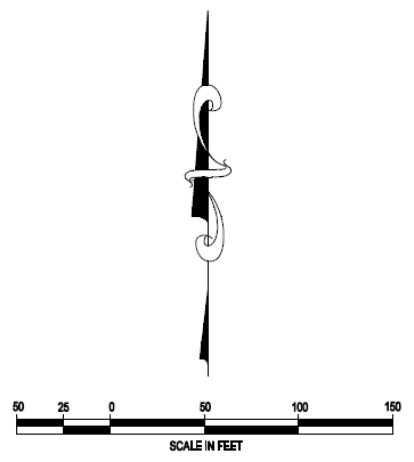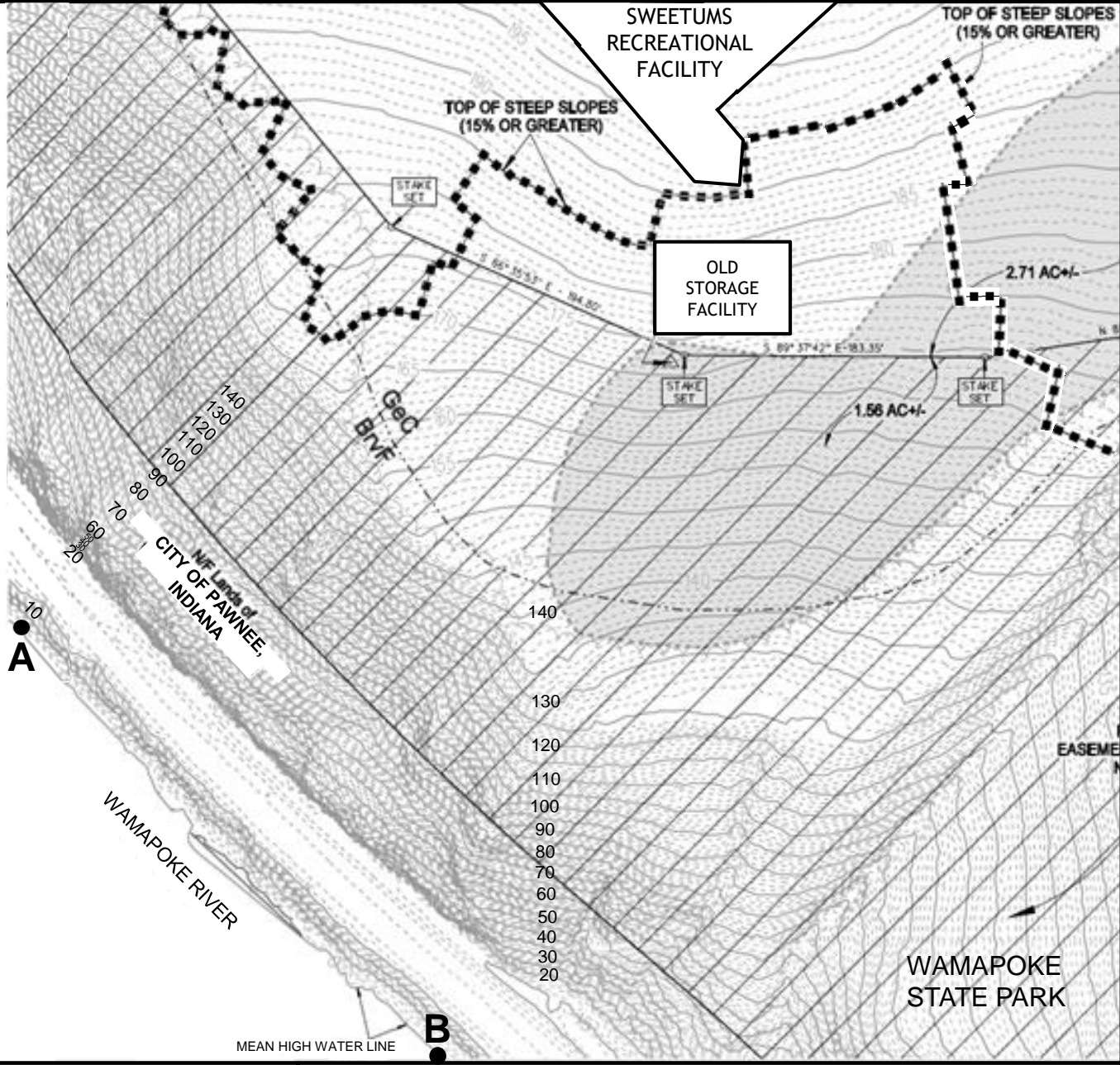1000' CRITICAL AREA BOUNDARY

Standard Buffer Delineation

- Field delineated based on current site conditions

- 100 feet minimum, from:
    - Mean high water of tidal waters
    - Upland boundary of tidal wetlands
    - Edge of tributary stream bank

Buffer Expansion – Steep Slopes

- Steep slopes > 15%

- When the Buffer is contiguous to a steep slope – expand 4 feet for every 1% of slope, or to the top of the slope – **whichever is greater**
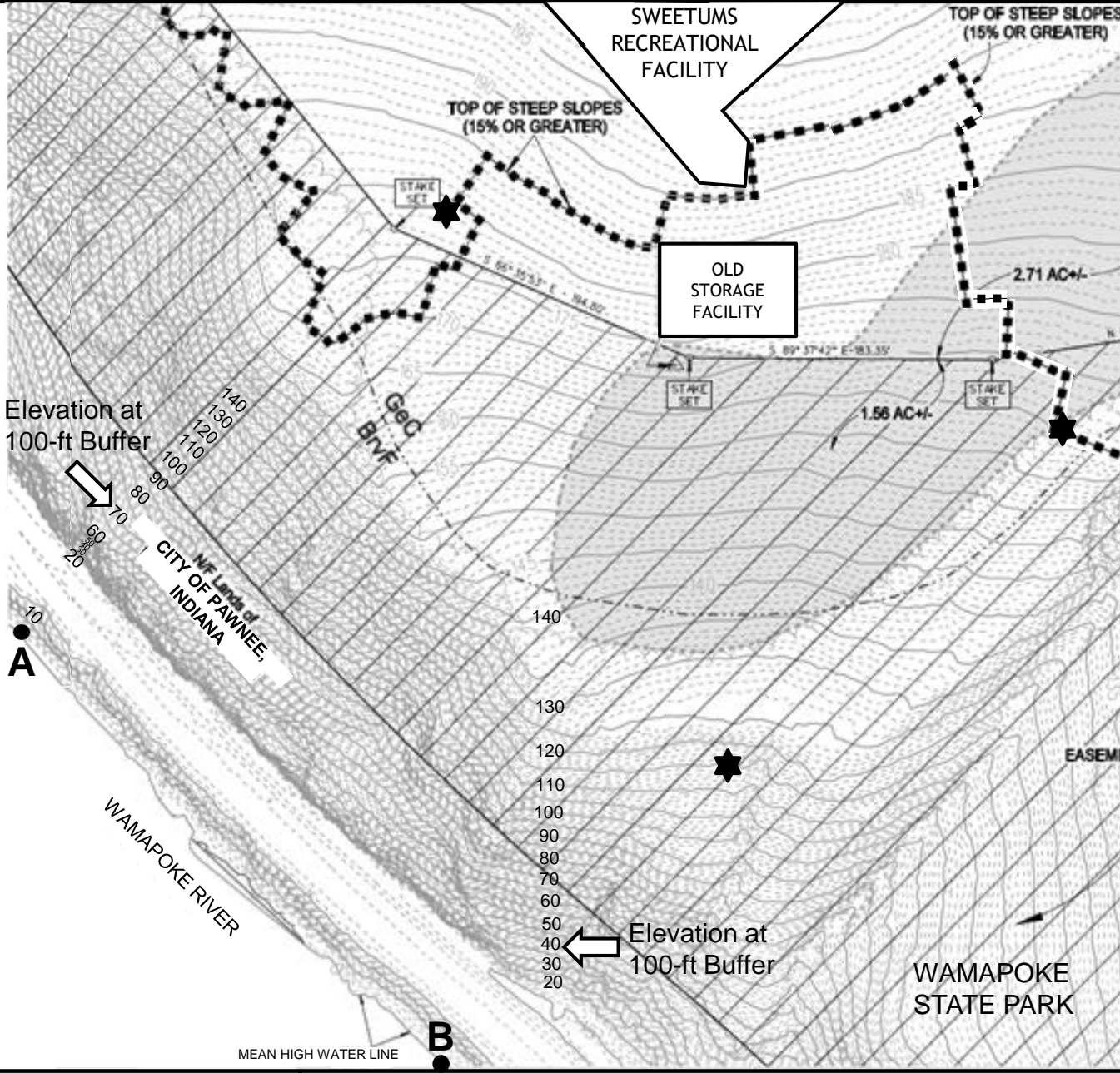
- No expansion when steep slope is contained

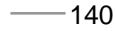

100 – FOOT BUFFER   80 FOOT EXPANSION

20

MHW

20 % SLOPE

SWEETUMS RECREATIONAL FACILITY

TOP OF STEEP SLOPES (15% OR GREATER)

TOP OF STEEP SLOPES (15% OR GREATER)

TOP OF STEEP SLOPES (15% OR GREATER)

STAKE SET

OLD STORAGE FACILITY

2.71 AC+/-

S 86° 35'57" E - 84.80'

S 89° 37'42" E - 183.35'

N 8...

STAKE SET

STAKE SET

1.56 AC+/-

GeC
BrvF

140
130
120
110
100
90
80
70
60
50
40
30
20

N/F Lands of
CITY OF PAWNEE, INDIANA

10
A

WAMAPOKE RIVER

140

130

120

110

100

90

80

70

60

50

40

30

20

EASEME... N...

WAMAPOKE STATE PARK

MEAN HIGH WATER LINE

B

SCALE IN FEET

50   25   0   50   100   150

LEGEND

	EXISTING DISTURBED AREA (FIELD LOCATED 7/21/2017)
MaD BrvF	SOILS DELINEATION LINE (W/SOIL TYPES)
—— 140 ——	INDEX CONTOUR
	INTERMEDIATE CONTOUR
■■■■■■	TOP OF STEEP SLOPES (15% OR GREATER)

VGBDC

Buffer Expansion – Steep Slopes
SWEETUMS RECREATIONAL FACILITY EXPANSION
JERRY GARY GERGICH ROAD, PAWNEE, INDIANA

SWEETUMS RECREATIONAL FACILITY

TOP OF STEEP SLOPES (15% OR GREATER)

TOP OF STEEP SLOPES (15% OR GREATER)

OLD STORAGE FACILITY

2.71 AC+/-

1.56 AC+/-

Elevation at 100-ft Buffer

140
130
120
110
100
90
80
70
60
50
40
30
20

GeC
Brvf

N/F Lands of
CITY OF PAWNEE, INDIANA

10

A

WAMAPOKE RIVER

140

130

120

110
100
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50
40
30
20

Elevation at 100-ft Buffer

WAMAPOKE STATE PARK

EASEME...

MEAN HIGH WATER LINE

B

SCALE IN FEET
50 25 0 50 100 150

A: $\dfrac{70}{100}$ = 70% x 4 = 280 ft expansion

280 ft + 100 ft = 380 ft ✸

B: $\dfrac{40}{100}$ = 40% x 4 = 160 ft expansion
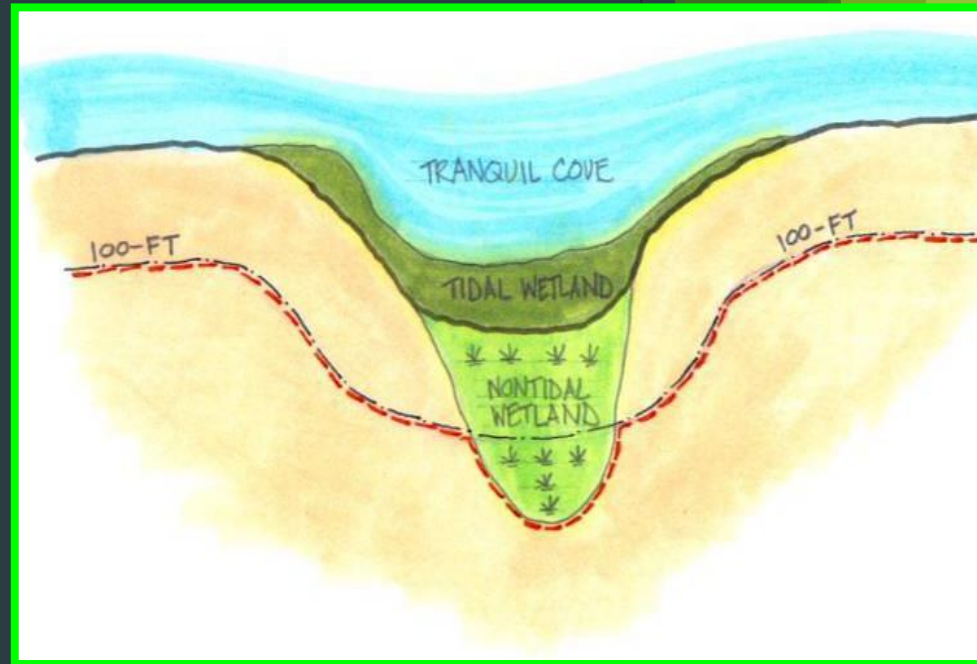
160 ft + 100 ft = 260 ft ✸

B is expanded to top of steep slope

VGBDC — VERY GOOD BUILDING AND DEVELOPMENT COMPANY, INC.

Buffer Expansion – Steep Slopes
SWEETUMS RECREATIONAL FACILITY EXPANSION

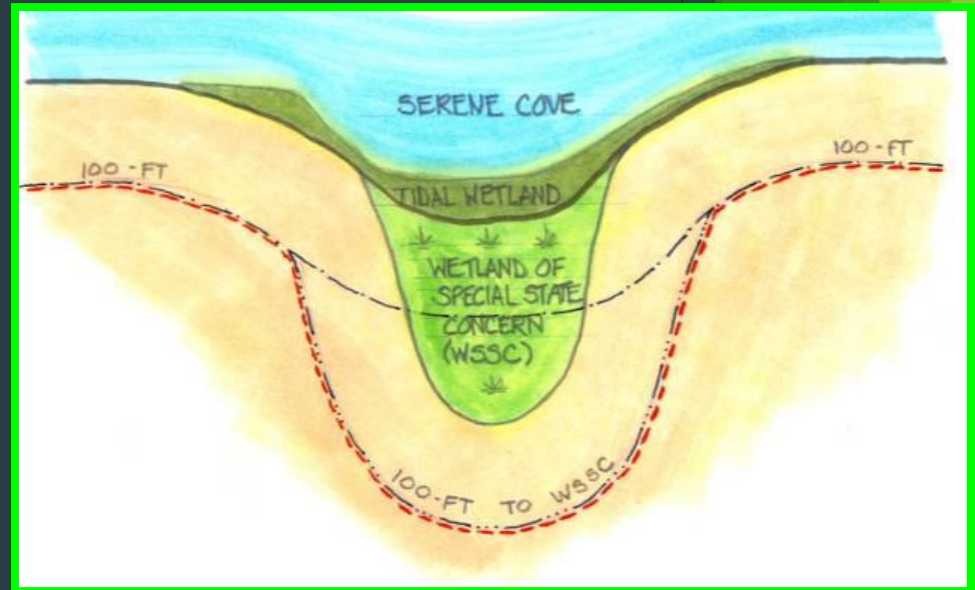JERRY GARY GERGICH ROAD, PAWNEE, INDIANA

Buffer Expansion – Nontidal Wetlands

▶ When the Buffer is contiguous to a nontidal wetland - expand Buffer to include entire wetland

Buffer Expansion – Nontidal Wetlands

▶ If the nontidal wetland is of special State concern – expand Buffer to include the wetland and the MDE-required 100 foot Buffer

# Buffer Expansion – Hydric & Highly Erodible Soils

▶ When the Buffer is contiguous to highly erodible soils on a slope less than 15%, or a hydric soil – expand to the landward edge, or 300 feet total – **whichever is less**

Buffer Expansion – Hydric Soils
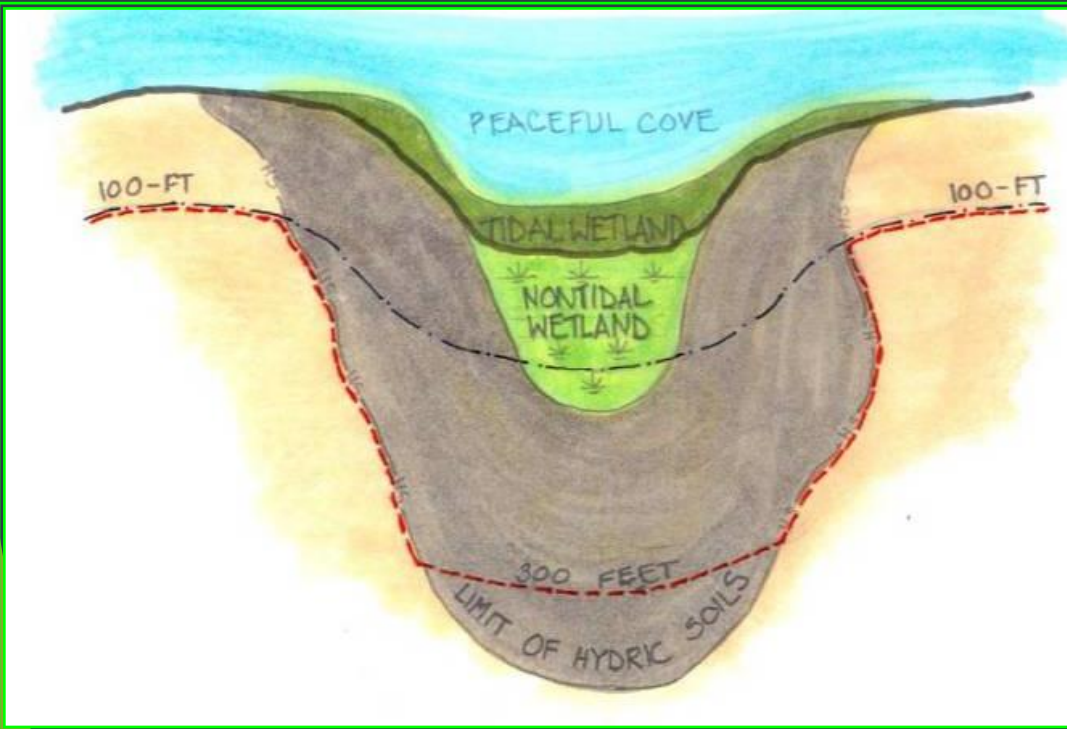
▶ Hydric Soils – are wet frequently enough to periodically produce anaerobic conditions, influencing plant species and growth

Buffer Expansion – Highly Erodible Soils
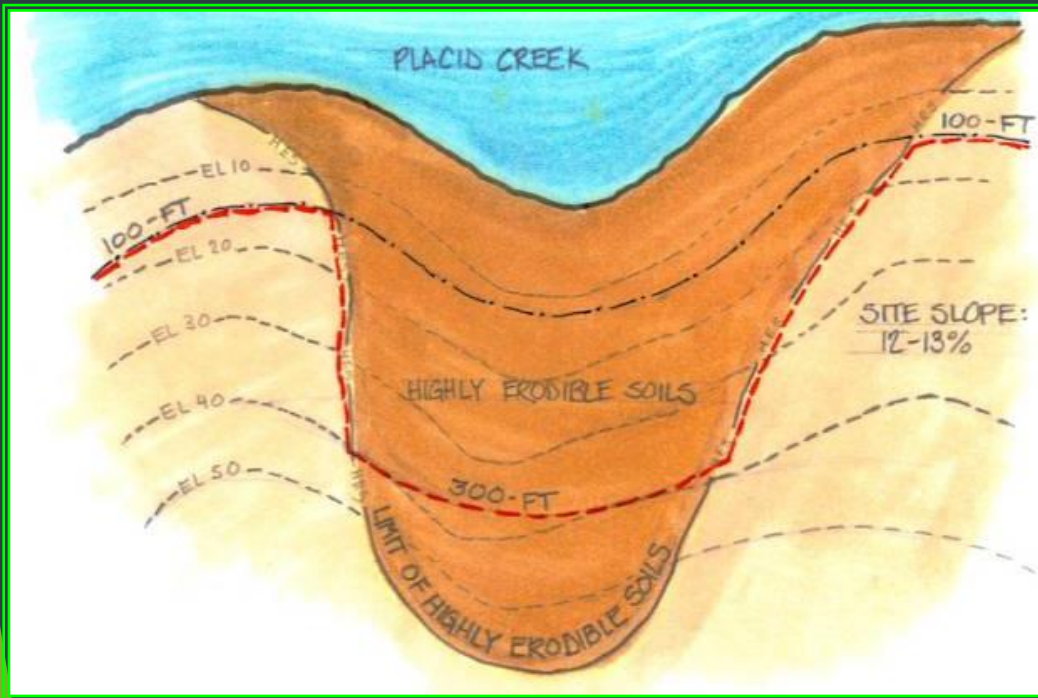
- Highly Erodible Soils – soils with a slope > 15%, or with K value > 0.35 and slope > 5%

Resources Demonstration

Merlin

Questions?