

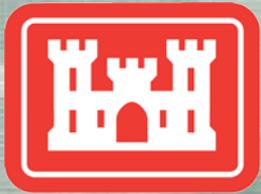
# Vegetation

**Mark G. McIntosh**

Regulatory Specialist

Piedmont Branch

December 8, 2011



®

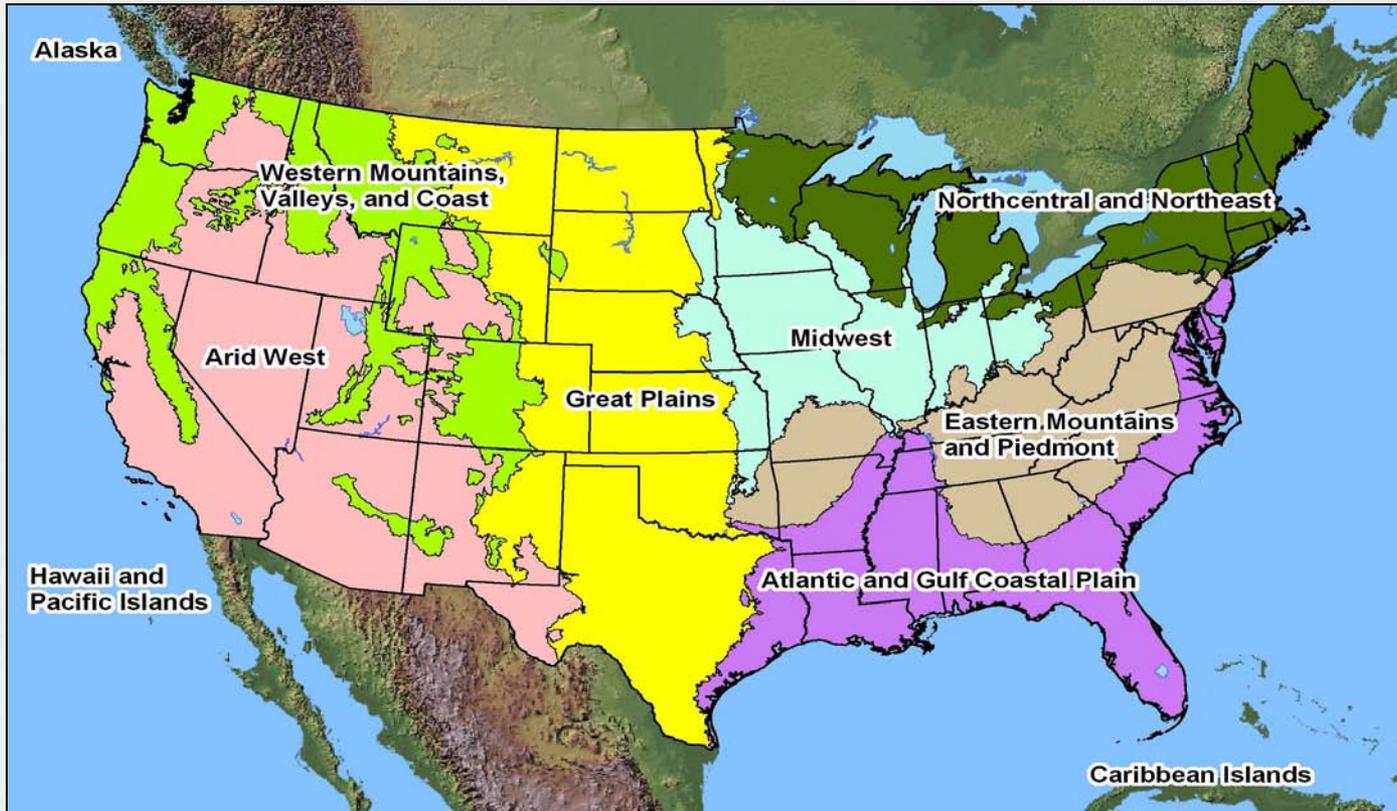
US Army Corps of Engineers  
**BUILDING STRONG**®

# Hydrophytic Vegetation Indicators

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test
- 3. – Prevalence Index
- If hydrology indicators and hydric soil are present proceed to Section 5 of Supplement for Problem Hydrophytic Vegetation.
- Step process outlined on pp 36 of AGCP Regional Supplement



# Future Plant List Regions



# Plant Lists

If a species is not on the plant list:

- It may be listed under another name
  - Check the “Synonymy” section of the plant list.
- For Species listed as NI (no regional indicator) or NO (no known occurrence in the region at the time the list was compiled), apply indicator status assigned to the species in the nearest adjacent region. If the species is listed as NI or NO but no adjacent regional indicator is assigned, do not use the species to calculate hydrophytic vegetation indicators.



# Vegetation Strata Notes

- Atlantic and Gulf Coastal Plain Regional Supplement recommends using five vegetation strata.
- A stratum for sampling purposes is defined as having 5% or more total plant cover.
- A stratum with  $< 5\%$  aerial cover during the peak of the growing season, then those species and their cover values can be combined into other similar woody or non-woody strata for sampling purposes.



# Definitions of Vegetation Strata

<b>Tree</b>	<b>Woody plants, excluding vines <math>\geq</math> 20 feet in height &amp; <math>\geq</math>3 inches DBH, regardless of height</b>
<b>Sapling</b>	<b>Woody plants, excluding vines, <math>\geq</math> 20-ft in height &amp; <math>&lt;</math> 3-in DBH</b>
<b>Shrub</b>	<b>Woody plants, excluding vines, from 3 to 20 ft (1 to 6 m) in height.</b>
<b>Herb</b>	<b>All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, <math>&lt;</math> 3 ft (1 m) in height.</b>
<b>Woody Vine</b>	<b>Consists of all woody vines <math>\geq</math> 3.28 ft in height.</b>

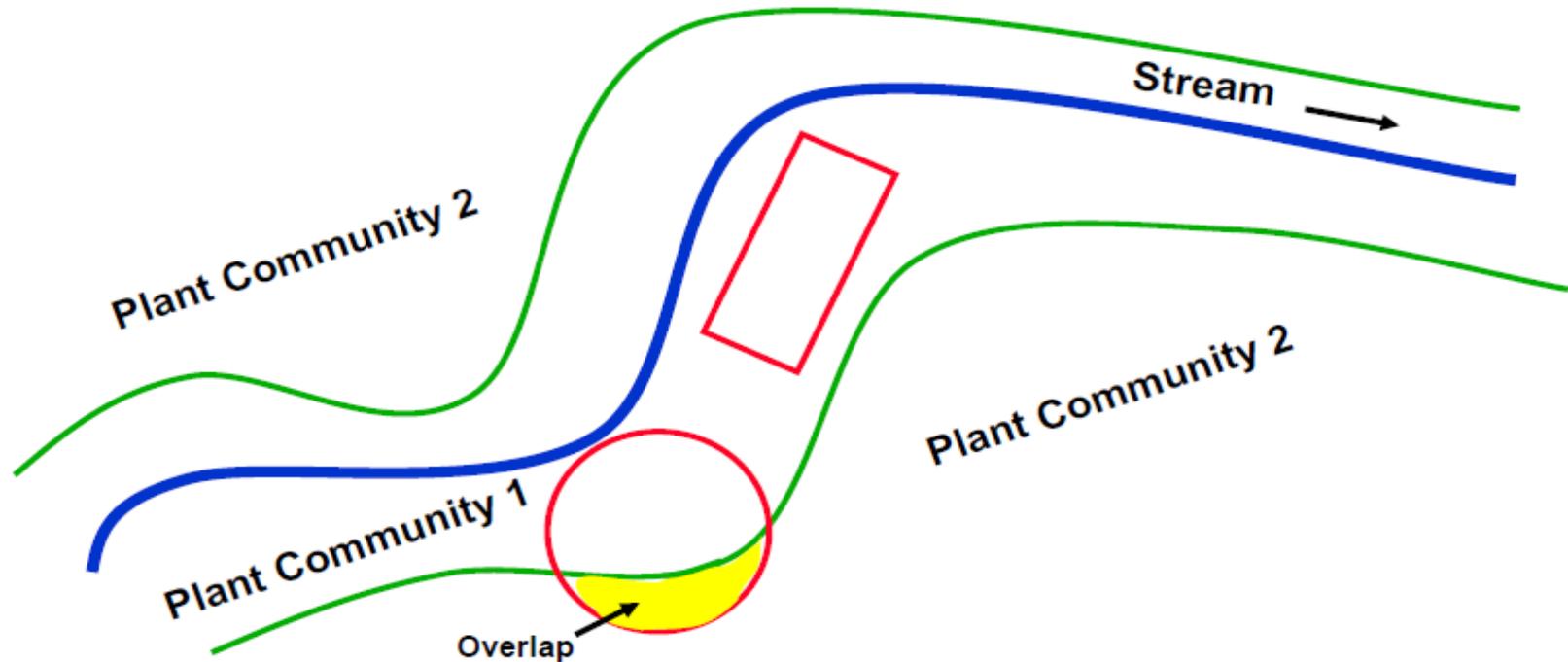
# AGCP Regional Supplement Vegetation Sampling

- Identify the major landscape or vegetation units
- Sampling plots should be established within representative locations within each plant community.
- Sampling Plots -- 30-ft-(9.1-m-) radius plot for all strata.
- Size and shape of plot, may be modified as appropriate to adapt to site conditions and should be recorded on the field data forms



# Adjust Vegetation Plot as needed

If circular plot would overlap two different plant communities then use rectangular plot of same square footage



# Absolute Percent Cover

- Use absolute percent cover for all species and strata.
- Absolute percent cover – the percent of the ground surface that is covered by the aerial portions (leaves and stems) of a plant species when view from above.
- Due to overlapping plant canopies, the sum of absolute cover values for all species in a community may exceed 100 percent.
- Allows the use of the Dominance Test and Prevalence Index on the same data



# Absolute Percent Cover

- Based on visual estimates of percent cover of plant species made within one or more sampling plots.
- Exclude plants that overhang the plot if rooted in different soil and/or hydrologic conditions. (ie. different plant community, wetland boundary)
- Species that are dominants in two or more strata should be counted two or more times in the dominance test



# Indicator 1 ( Rapid Test for Hydrophytic Vegetation)

- All dominant species across all strata are OBL or FACW, or a combination of the two, based on visual assessment.
- No quantitative sampling required
- Record only the dominants on the data form.
- If the plant community passes the rapid test, then the vegetation is hydrophytic and no further vegetation analysis is required.



# Indicator 2: Dominance Test

## The “50/20 rule”:

- More than 50 percent of the dominant plant species across all strata are rated OBL, FACW, or FAC.
  - Plus (+) and minus (-) modifiers are not used in hydrophytic vegetation indicators.
- Dominant species are the most abundant plant species that individually or together account for more than 50 percent of the total coverage of vegetation in the stratum, plus any additional species that, by itself, comprises at least 20 percent of the total.



# Selection of Dominant Species

Example for the sapling/shrub stratum:

<u>Species Present</u>	<u>% Cover</u>	Absolute
<i>Cornus foemina</i>	25*	
<i>Spiraea alba</i>	20*	
<i>Cornus amomum</i>	15*	
<i>Rhamnus frangula</i>		10
<i>Toxicodendron vernix</i>	<u>5</u>	
TOTAL COVER	75	

\* Selected as dominants

## 50/20 Thresholds:

50% of total cover =  
50% of 75 = 37.5%

20% of total cover =  
20% of 75 = 15%

- If the plant community fails the dominance test, but indicators of hydric soil and wetland hydrology are both present, proceed to Indicator 3.



# Indicator 3: Prevalence Index

- Prevalence index (PI) for hydrophytic vegetation is  $\leq 3.0$
- PI is a weighted-average wetland indicator status of all (or nearly all) species in the sample
  - OBL=1, FACW=2, FAC=3, FACU=4, UPL= 5
  - Weighted by percent cover
  - At least 80 % of the total plant cover must be correctly identified and have an assigned wetland indicator status
  - Plus (+) and minus (-) modifiers are not considered



# Problem Areas

- If hydric soils and wetland hydrology indicators are present and site fails Hydrophytic Vegetation Indicators I – III
- Proceed to Chapter 5 “Problematic hydrophytic vegetation” in the AGCP Regional Supplement.
- Document Site Conditions Extensively



# QUESTIONS??

