Wetland Assessment Procedure Test
July 2004

Results

Test Goals:

- Assess consistency of scores
- Attain overall opinions on methods
- Refine field sheet

- All wetlands assessed within the period May 2 to May 22 period
- 21 participants
- Brief training

Cypress Creek Wellfield (4 sites)

- Cypress G (W-56)
- Marsh D (W-16)
- W-11
- W-41

Morris Bridge Wellfield (6 sites)

- X-3 Marsh
- Well Marsh (MBR-42)
- X-4 Cypress (MBR-89)
- Clay Gully Cypress (MBR-88)
- Trout Creek Marsh
- South Cypress Marsh (MBR-29)

Observed “Apparent Errors”

- Species misidentification or missing significant species
  - Sometimes it may matter, sometimes it may not
- Mistakes(?) in assigning wetland status
  - Are alternative lists consistent with Vegetative Index?

Observed “Apparent Errors”

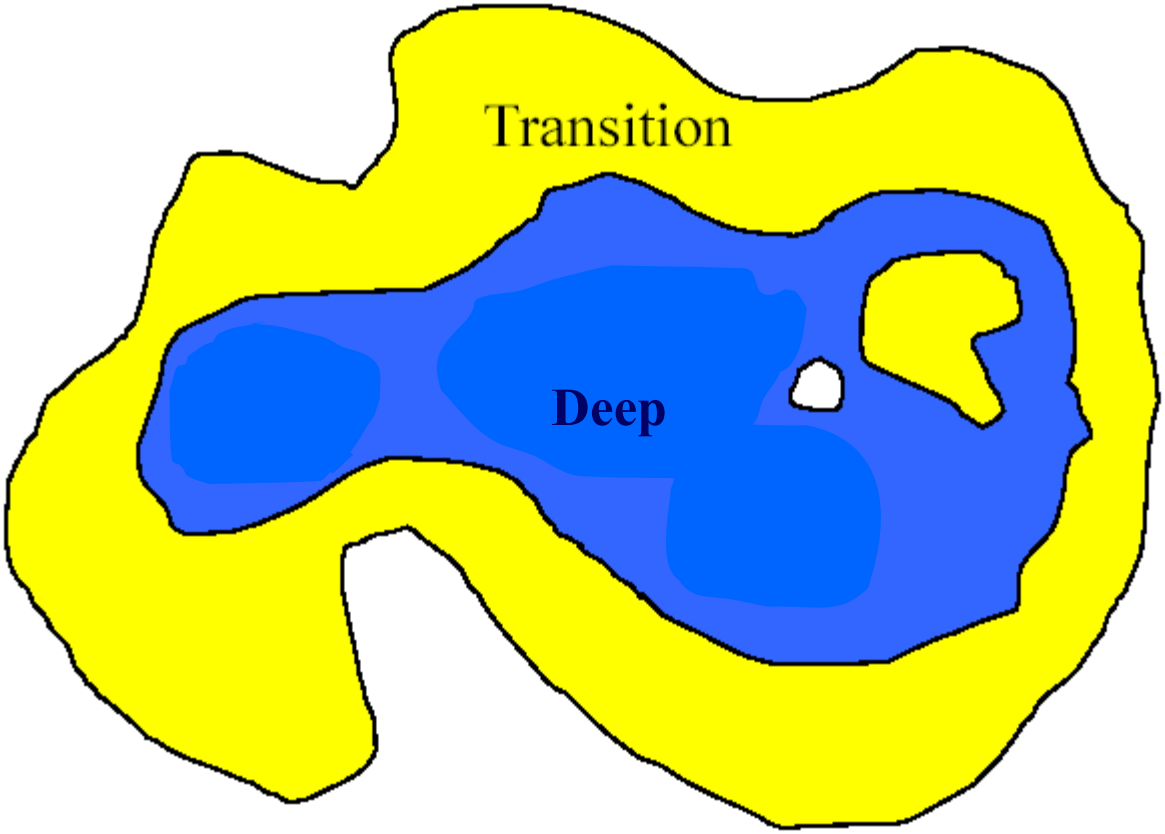
- Percentages – wide variability
  - For trees – use cover or trunks?
  - Inconsistencies in including dead or dormant vegetation?
- Inconsistent application of Assessment Area – 10 meters versus field of view

Observed “Apparent Errors”

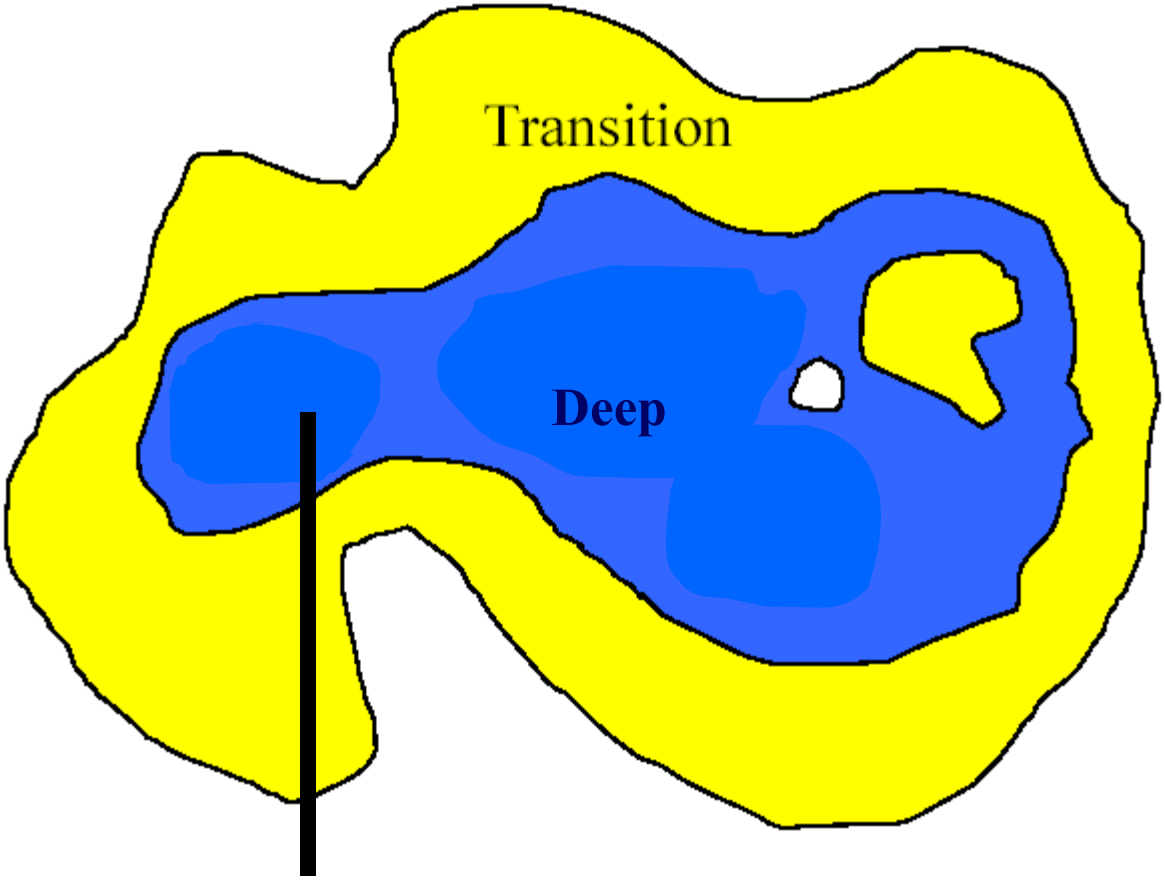
- Slash pine is upland, not FACW
- Wax myrtle is never a tree
- Sabal palm should not be assessed
- Confusion on stressed plants
- General lack of comments

Observed “Apparent Errors”

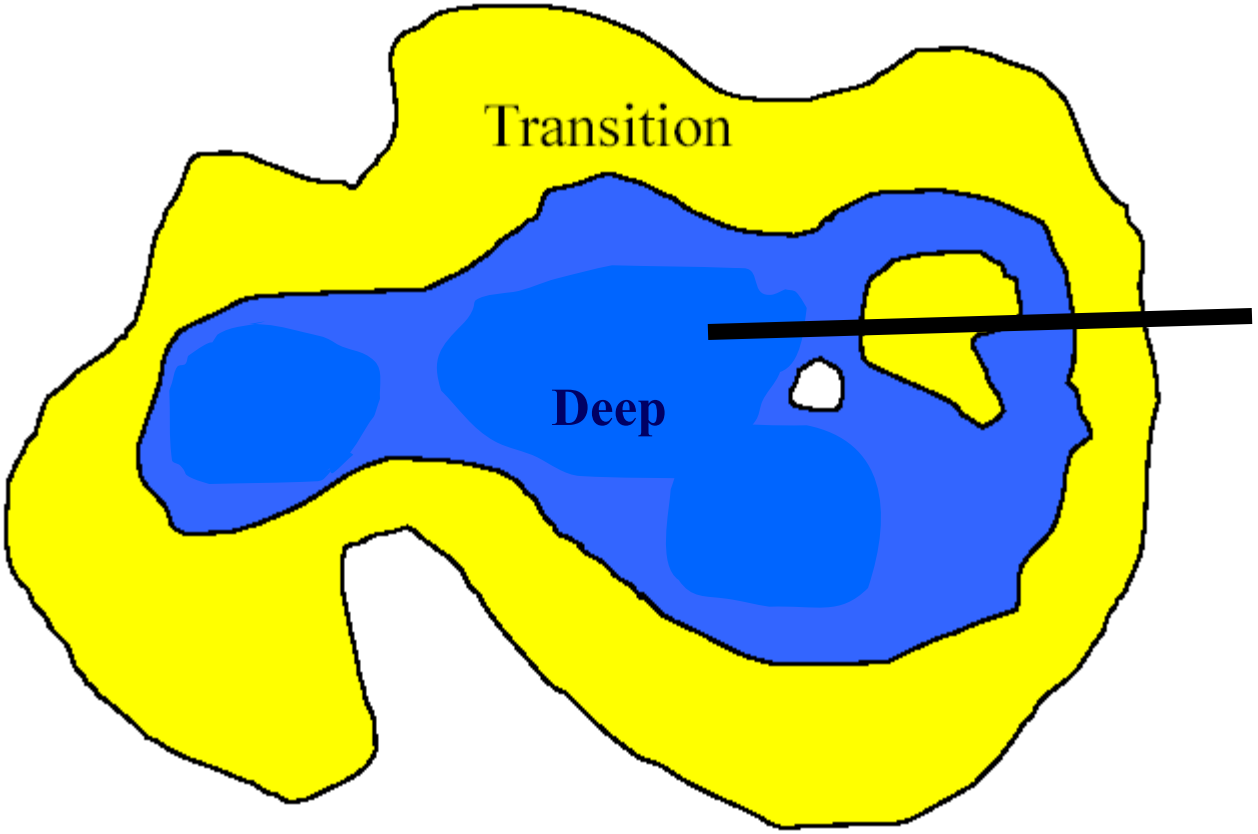
- Hummocks – don’t list species, but include in comments
- There should be no palmetto in the transition zone (for the test sites)
- “Islands” - Mistakes in assigning zones – not all of area in wetland interior is deep zone – this is difficult!



Theoretical Wetland



Theoretical Wetland



Theoretical Wetland

TBW Questions

- How about once a year monitoring?
- Should we switch from a 3 scale to a 5 scale? Is it a good idea, and what happens to our old data?
- The new method wants a lot of comments. How do we deal with them in the data base?

TBW Questions

- We still need more discussion on the revised normal pool method
- What do we need to survey, and who does it?
- Soil scientists work – who contracts, who pays, how do we ensure consistencey?

TBW Questions

- How will the phase-in work (budgets and time are an issue)?
- We need a discussion on using the state vs custom vegetation lists
- We need a discussion on photography

TBW Questions

- We need to discuss the use of cover classes vs individual percentages
- The NP-6 concept needs discussion
- We still have some miscellaneous text/wording suggestions

General Comments Received

- Suggestions on improving the field form
- Alternatives for the NP-6
- Importance of history and review of past scores
- Ideas on the use of cover classes rather than percentages (should there be minimum cutoffs?)

General Comments Received

- What goes in the boxes in the stress categories?
- Some liked the time of assessment, some did not
- How about more lists with check boxes (esp. for species names)

General Comments Received

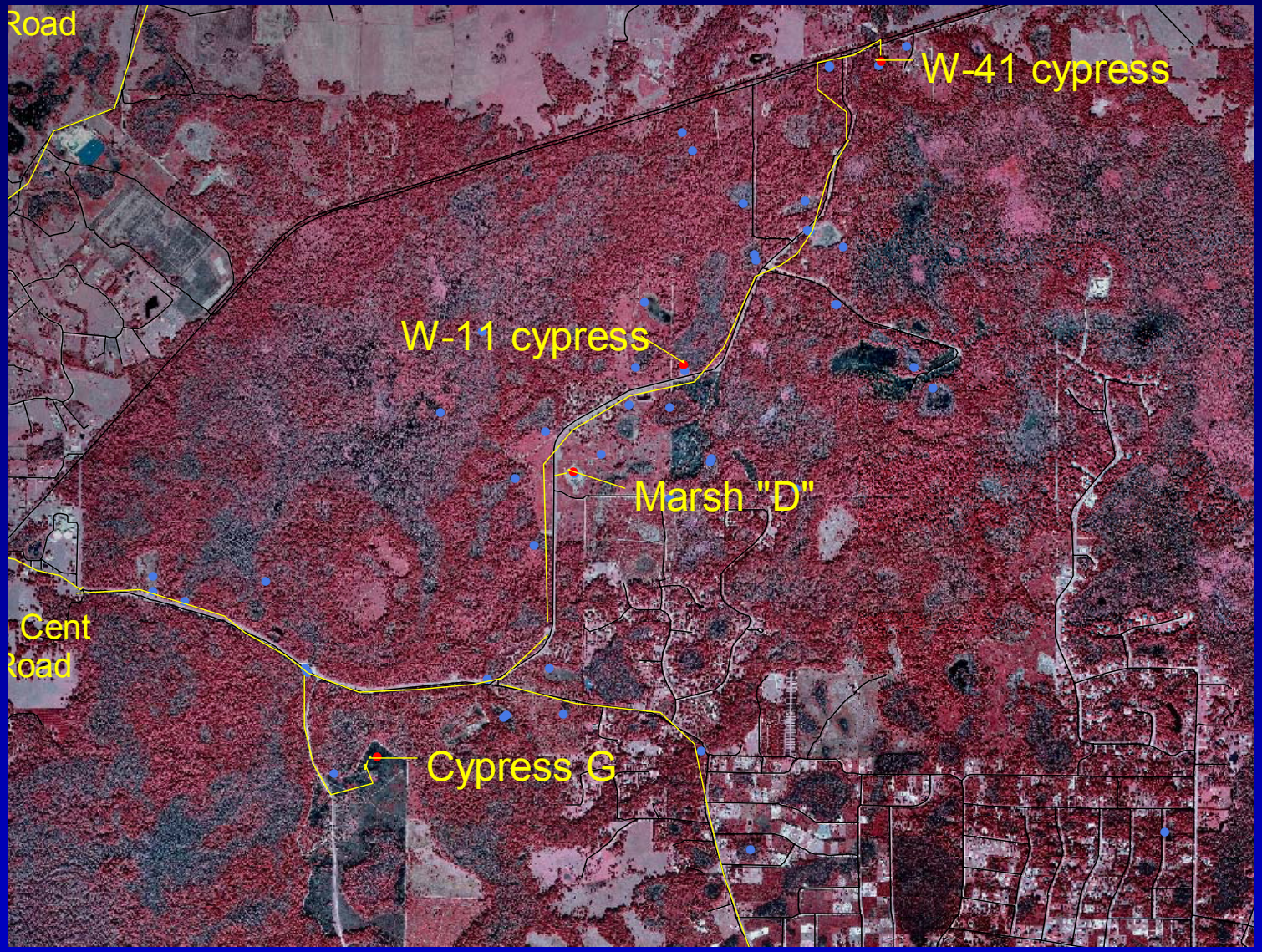
- Maybe we should use permanent plots
- Why have the assessor indicate wetland status?
- Is no cover normal or N/A?
- Comments on the vegetative index
  - “some categories seem incorrect”

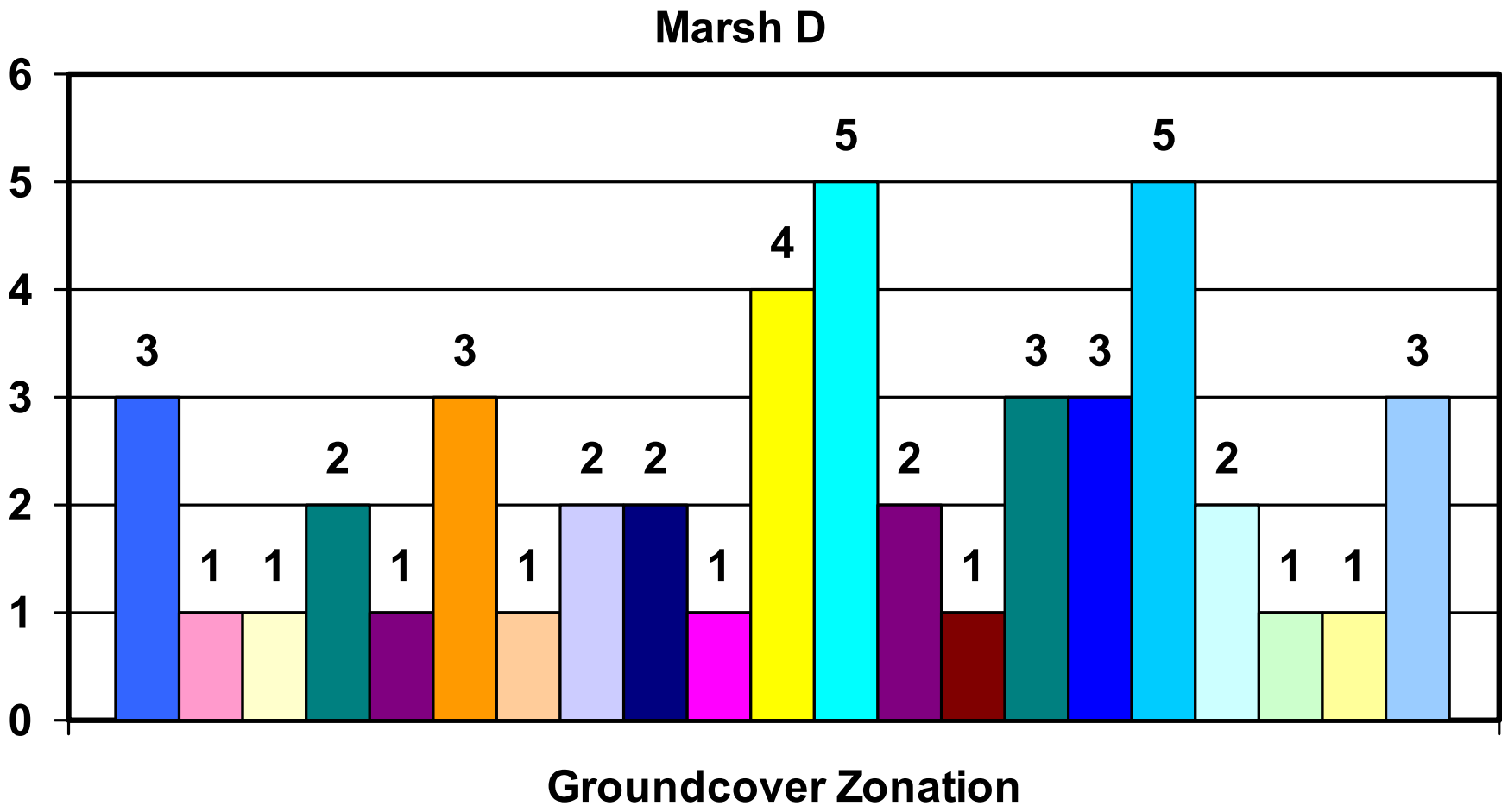
General Comments Received

- Some important details are buried in the text
- Five percent tree fall is a lot
- How will wetlands be graded?
- The assessment areas may need more definition

General Comments Received

- Zonation needs a choice for problems in the deep zone only
- Some seemed to want exotic species and nuisances species back in, along with plants on hummocks


Road
W-41 cypress
W-11 cypress
Marsh "D"
Cent
Road
Cypress G


Marsh D
6
5
4
3
2
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3
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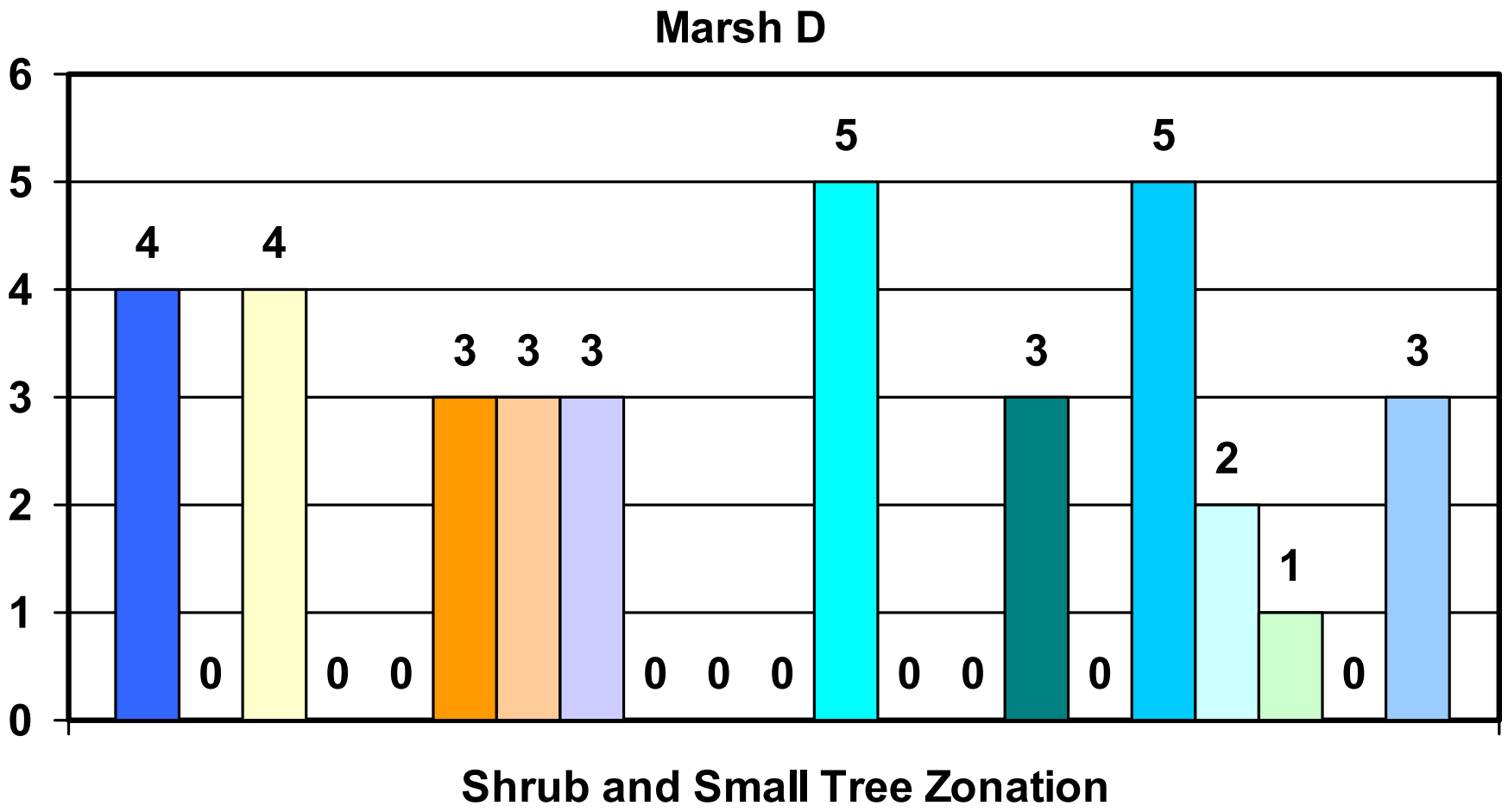
3
Groundcover Zonation


Marsh D
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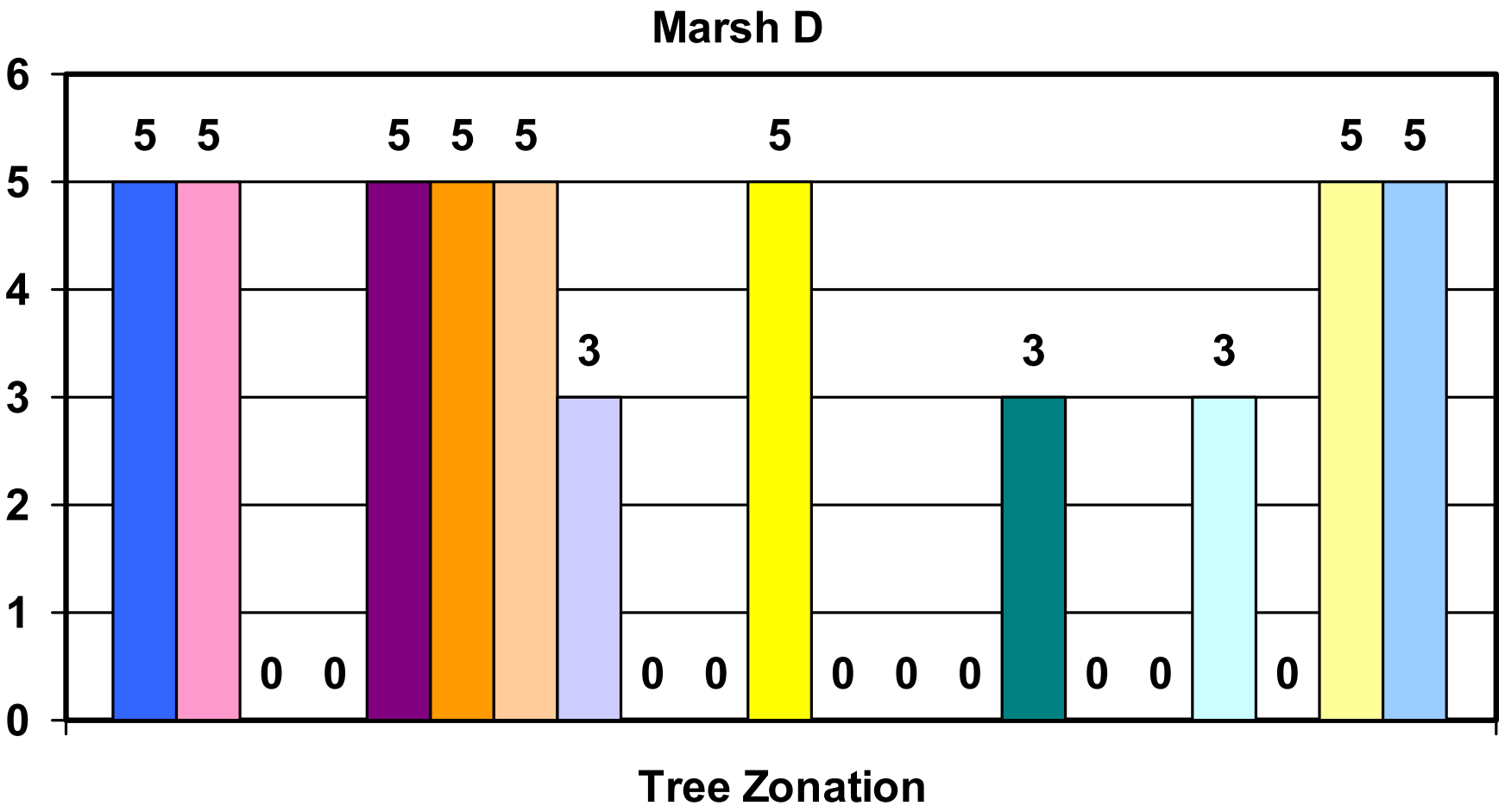
Shrub and Small Tree Zonation


Marsh D
6
5
4
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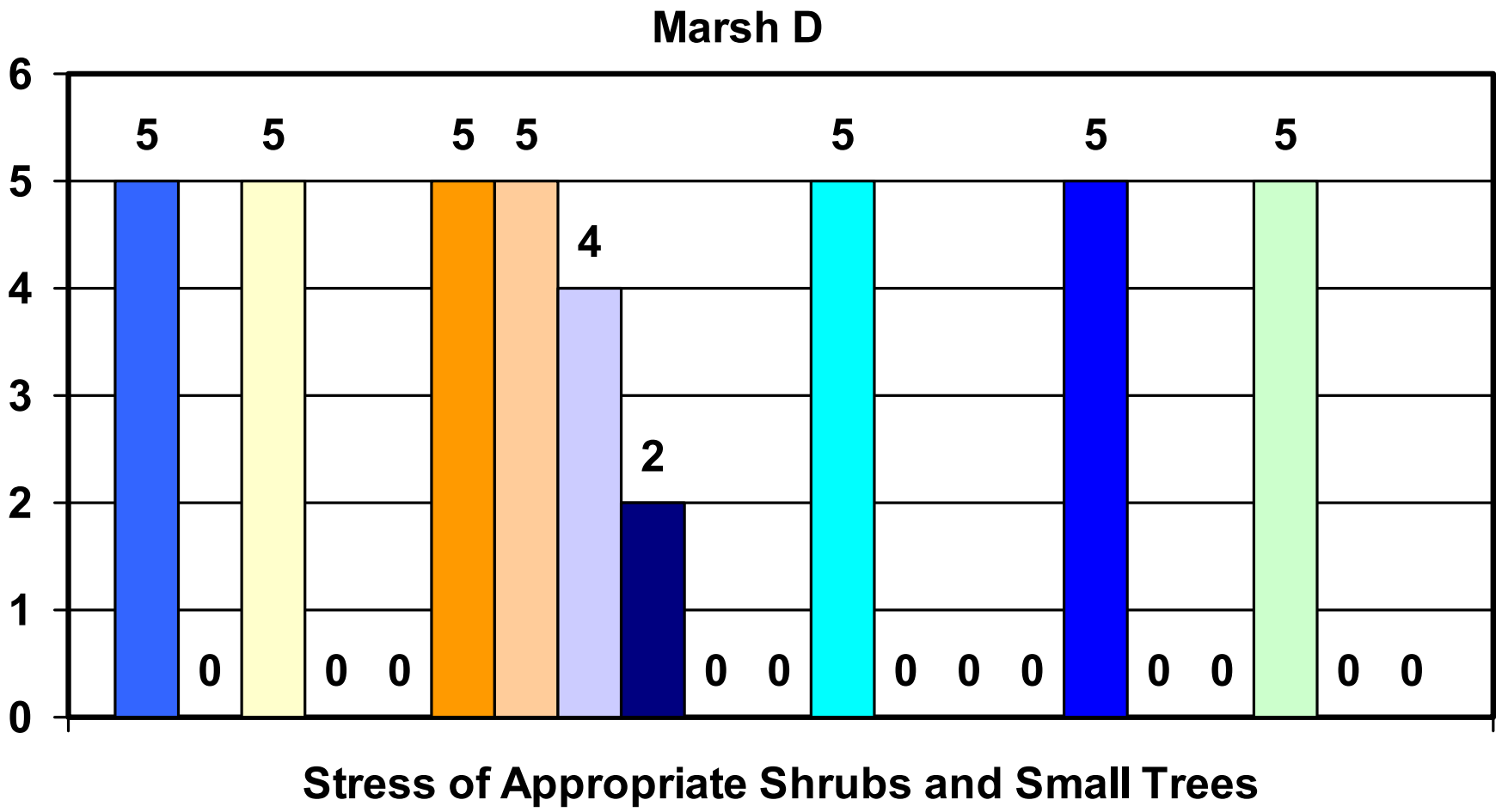
5 5 5 5 5 5 5
3 3 3
0 0 0 0 0 0 0 0
Tree Zonation


Marsh D
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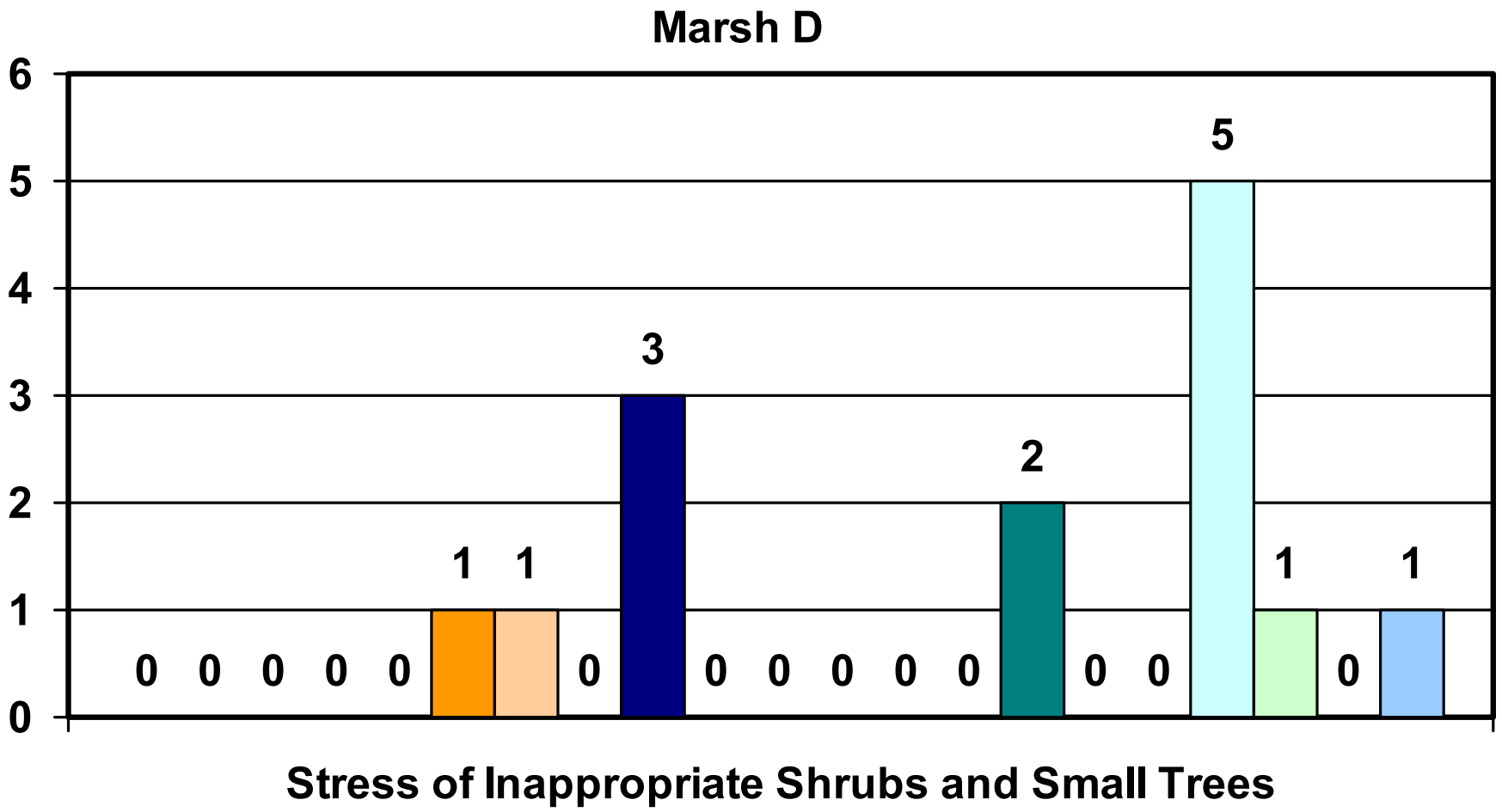
Stress of Appropriate Shrubs and Small Trees


Marsh D
6
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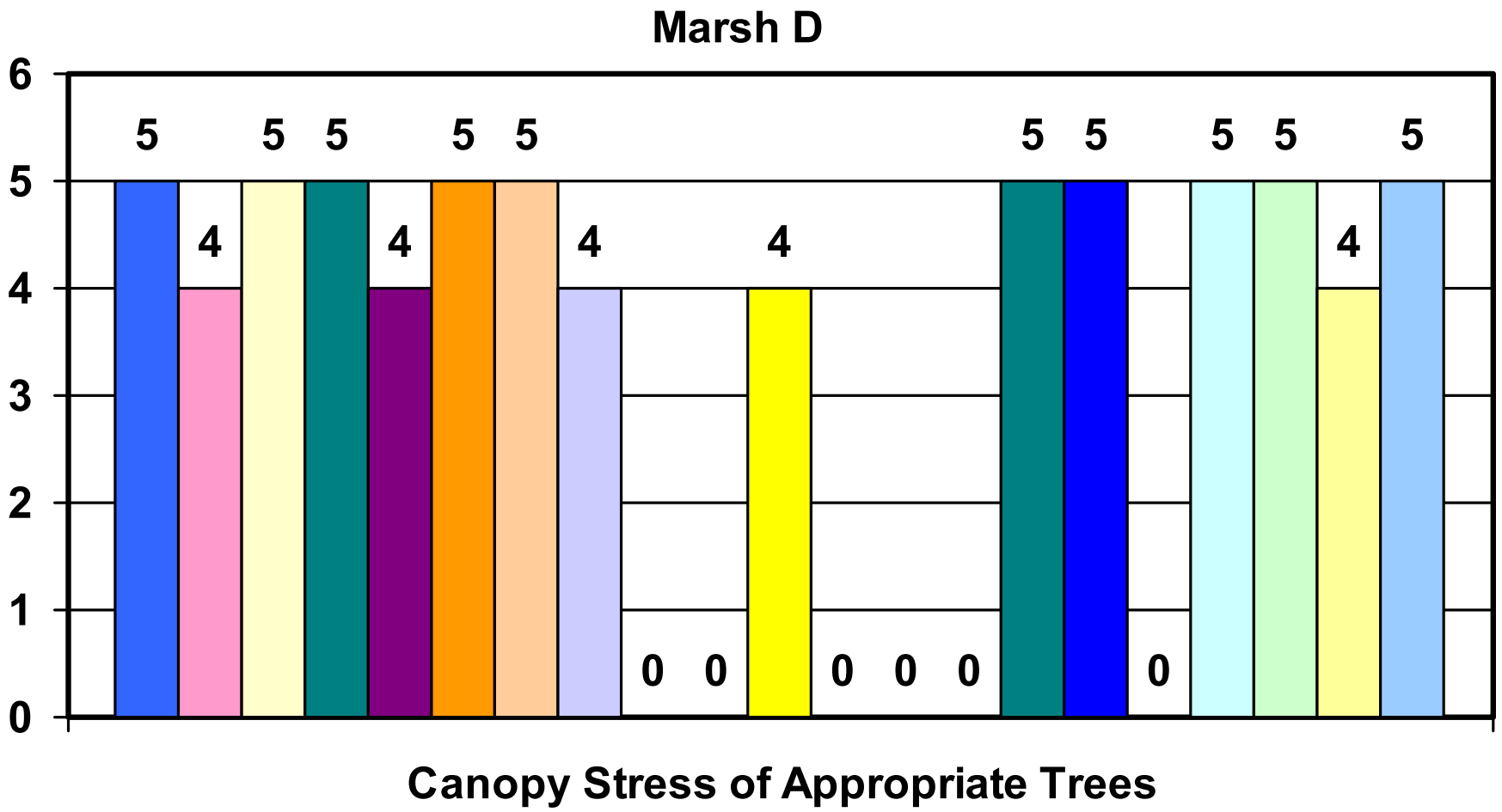
Stress of Inappropriate Shrubs and Small Trees


Marsh D
6
5
4
3
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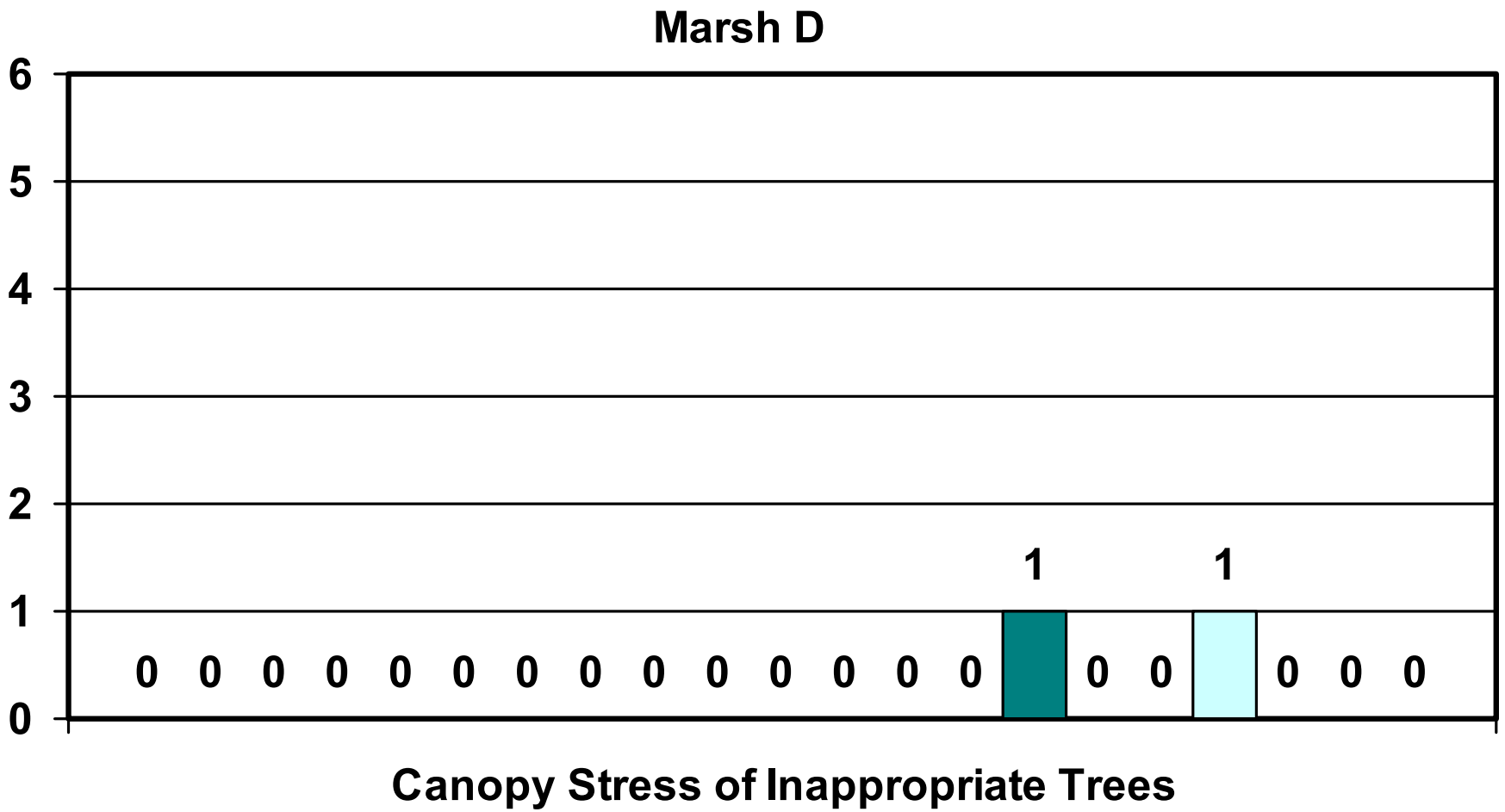
5 5 5 5 5 5 5 5 5
4 4 4 4 4
0 0 0 0 0
Canopy Stress of Appropriate Trees


Marsh D
6
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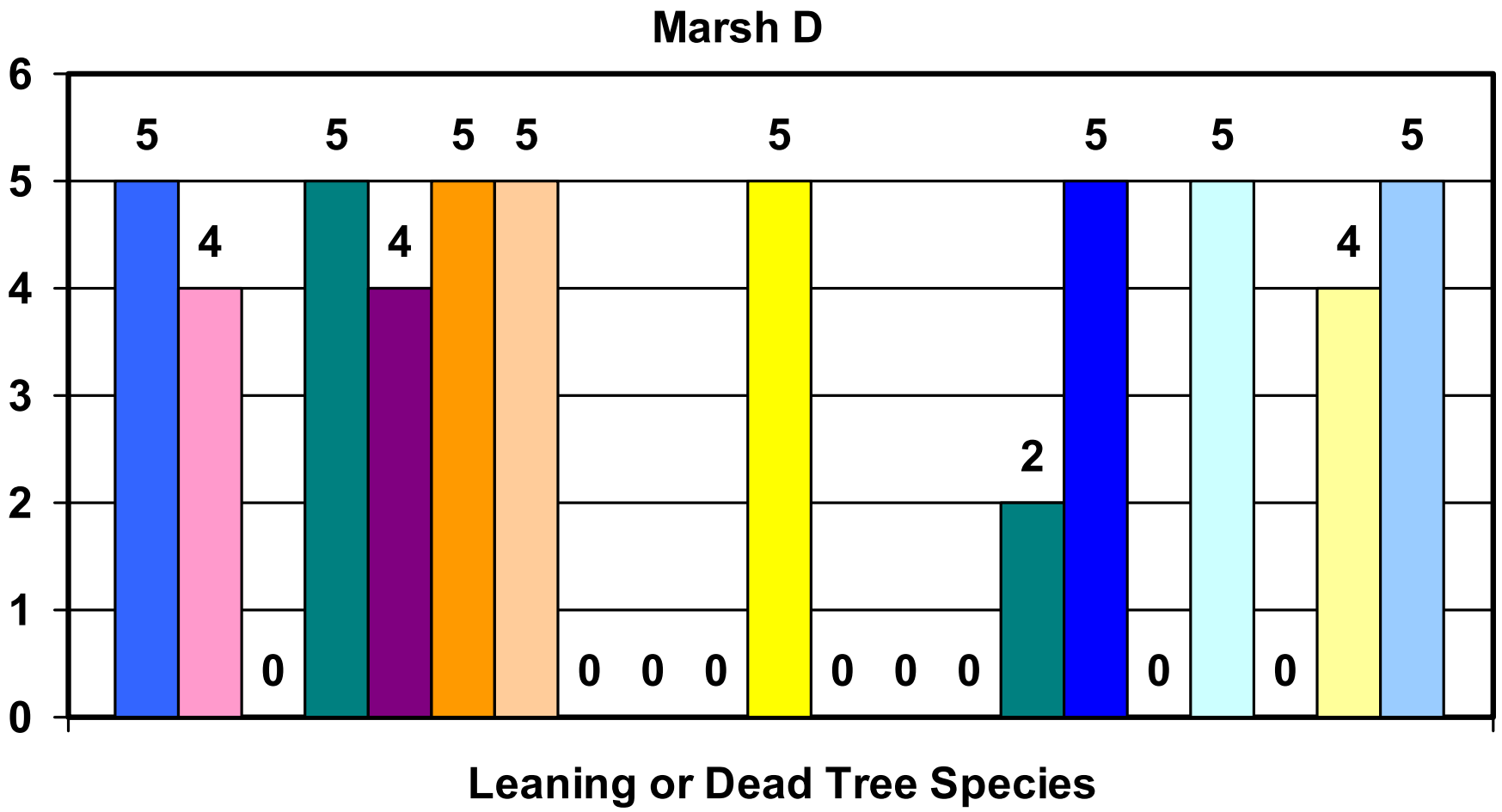
0 0 0 0
Canopy Stress of Inappropriate Trees


Marsh D
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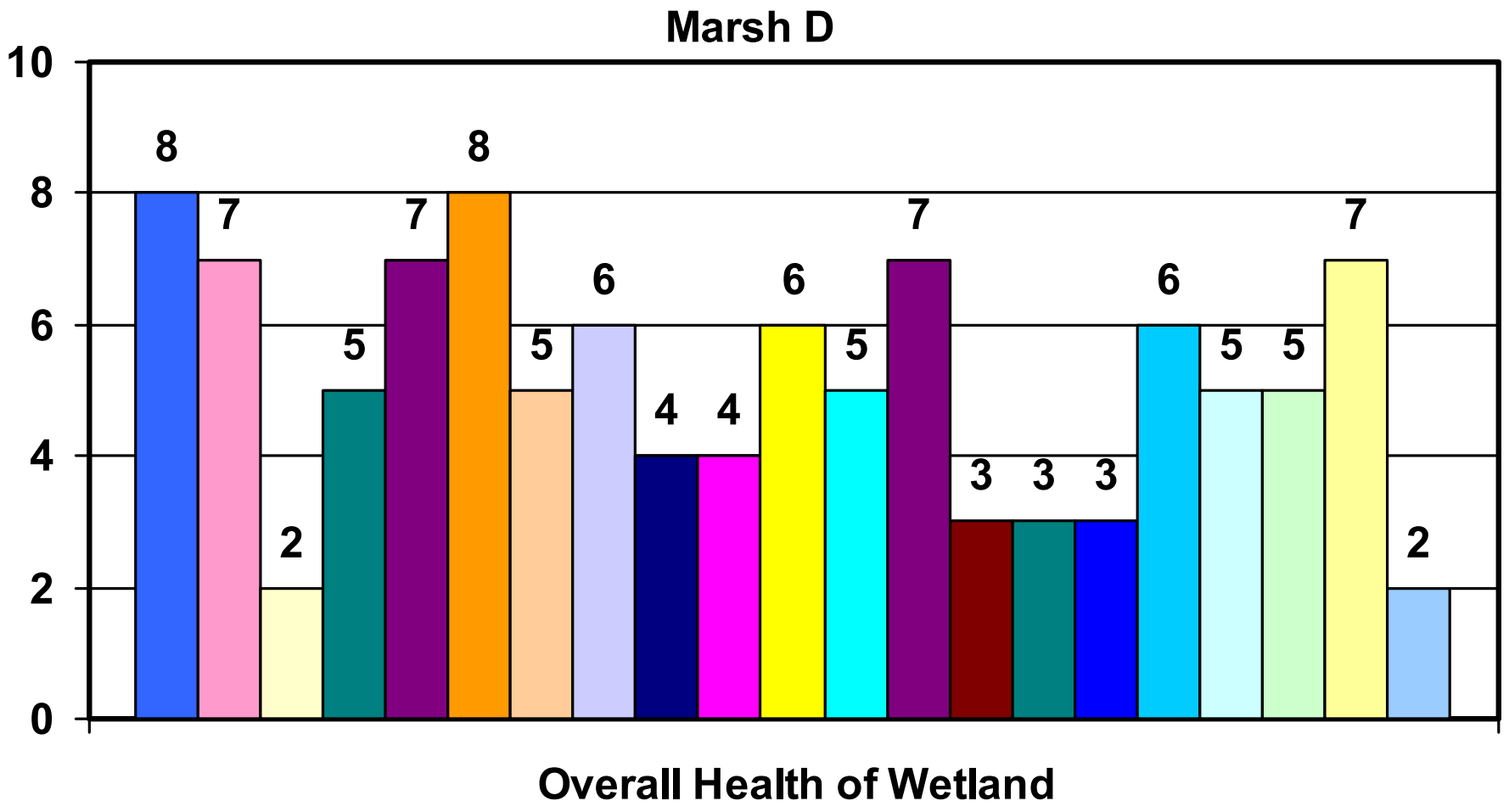
Leaning or Dead Tree Species


Marsh D
10
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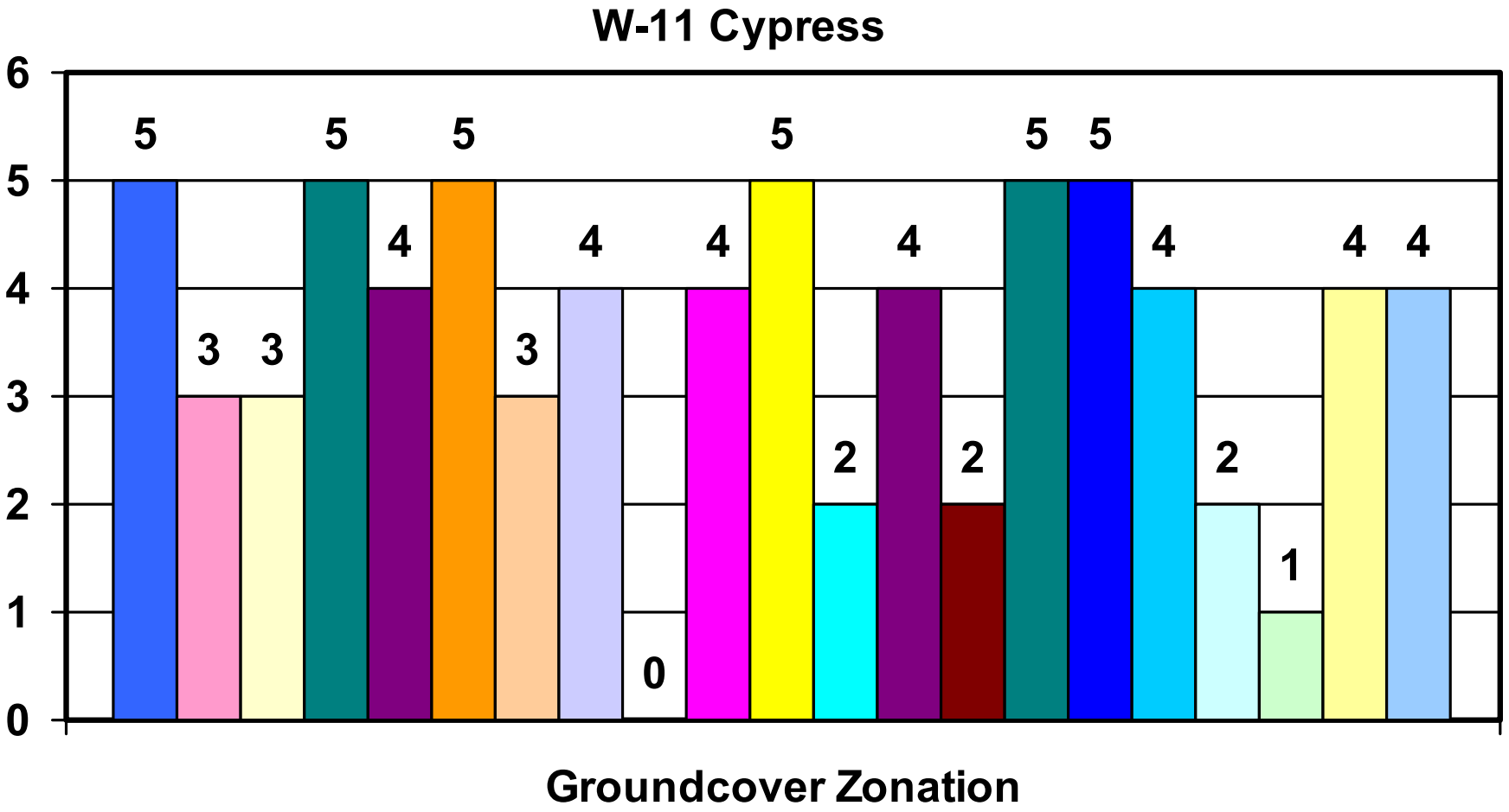
Overall Health of Wetland


W-11 Cypress
6
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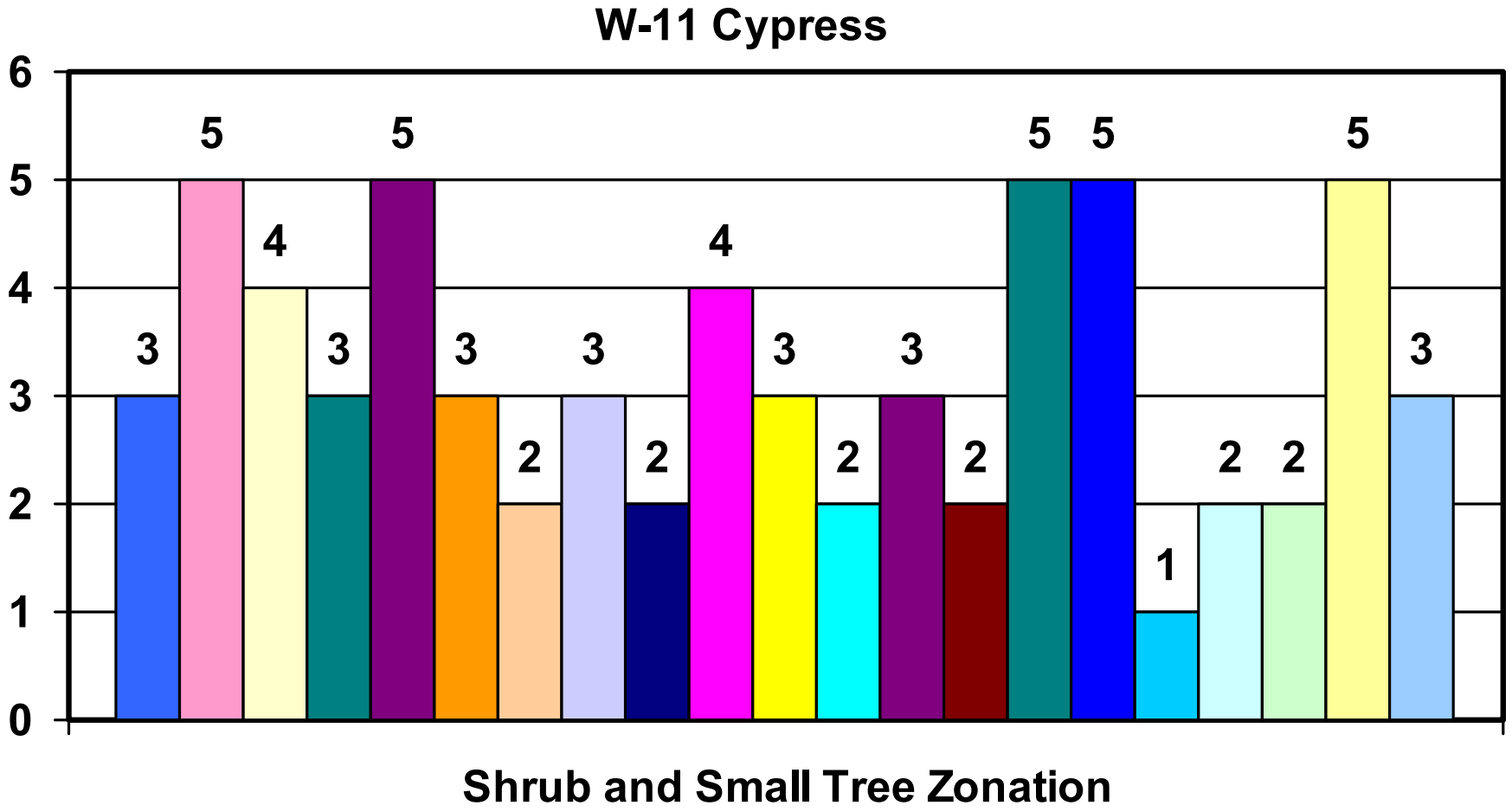
Groundcover Zonation


W-11 Cypress
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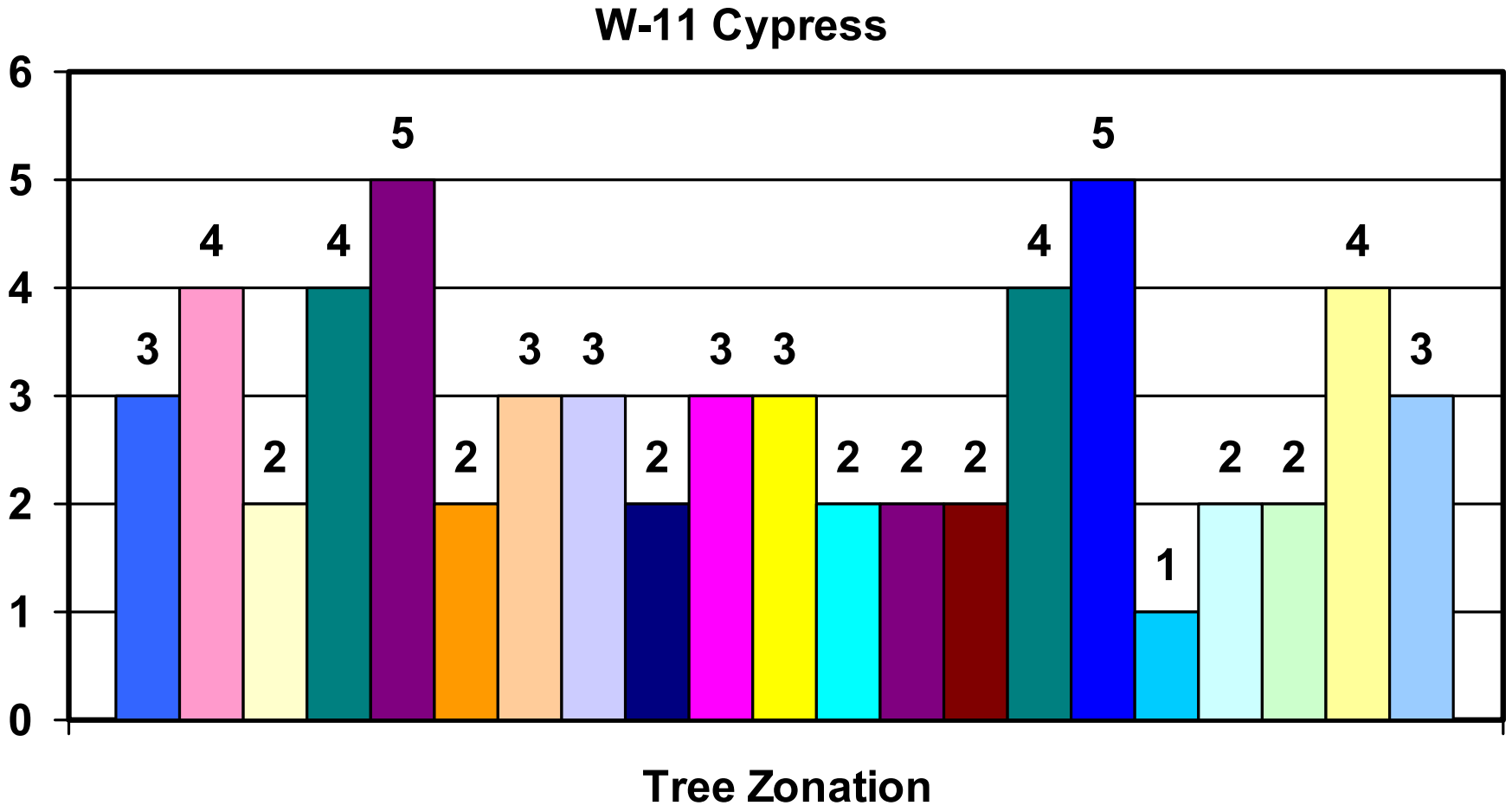
3
Shrub and Small Tree Zonation


W-11 Cypress
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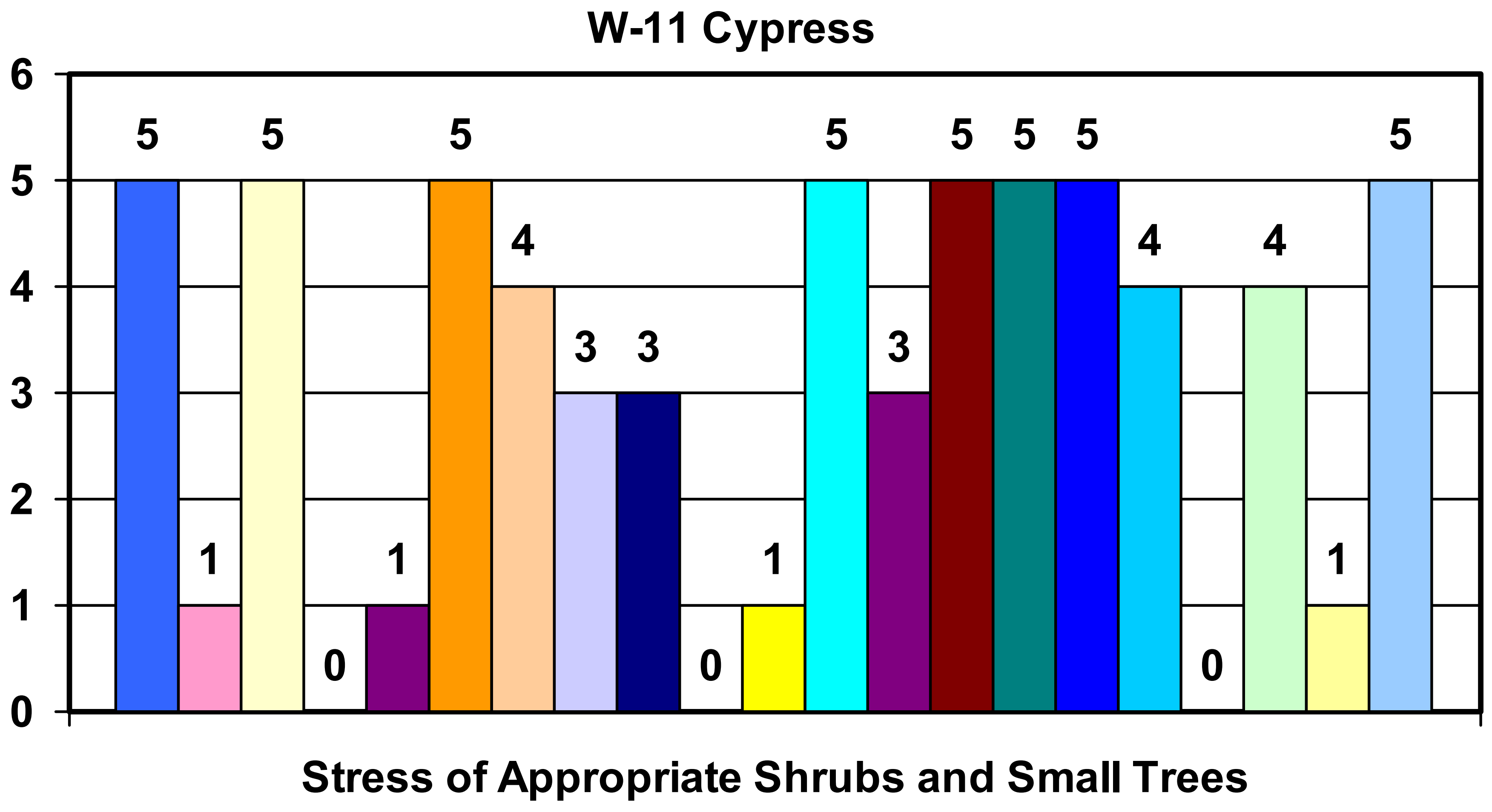
4
3
Tree Zonation


W-11 Cypress
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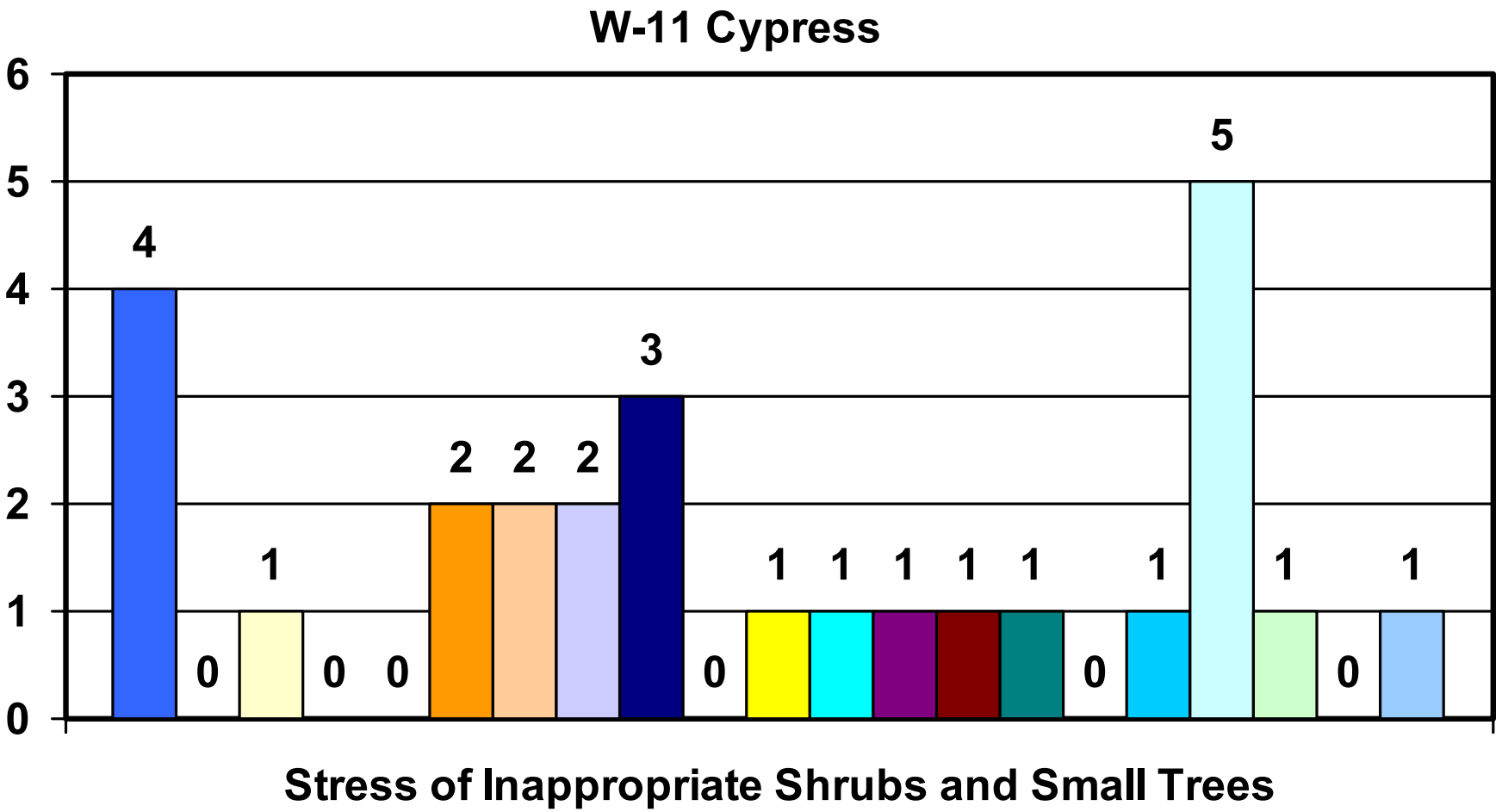
Stress of Appropriate Shrubs and Small Trees


W-11 Cypress
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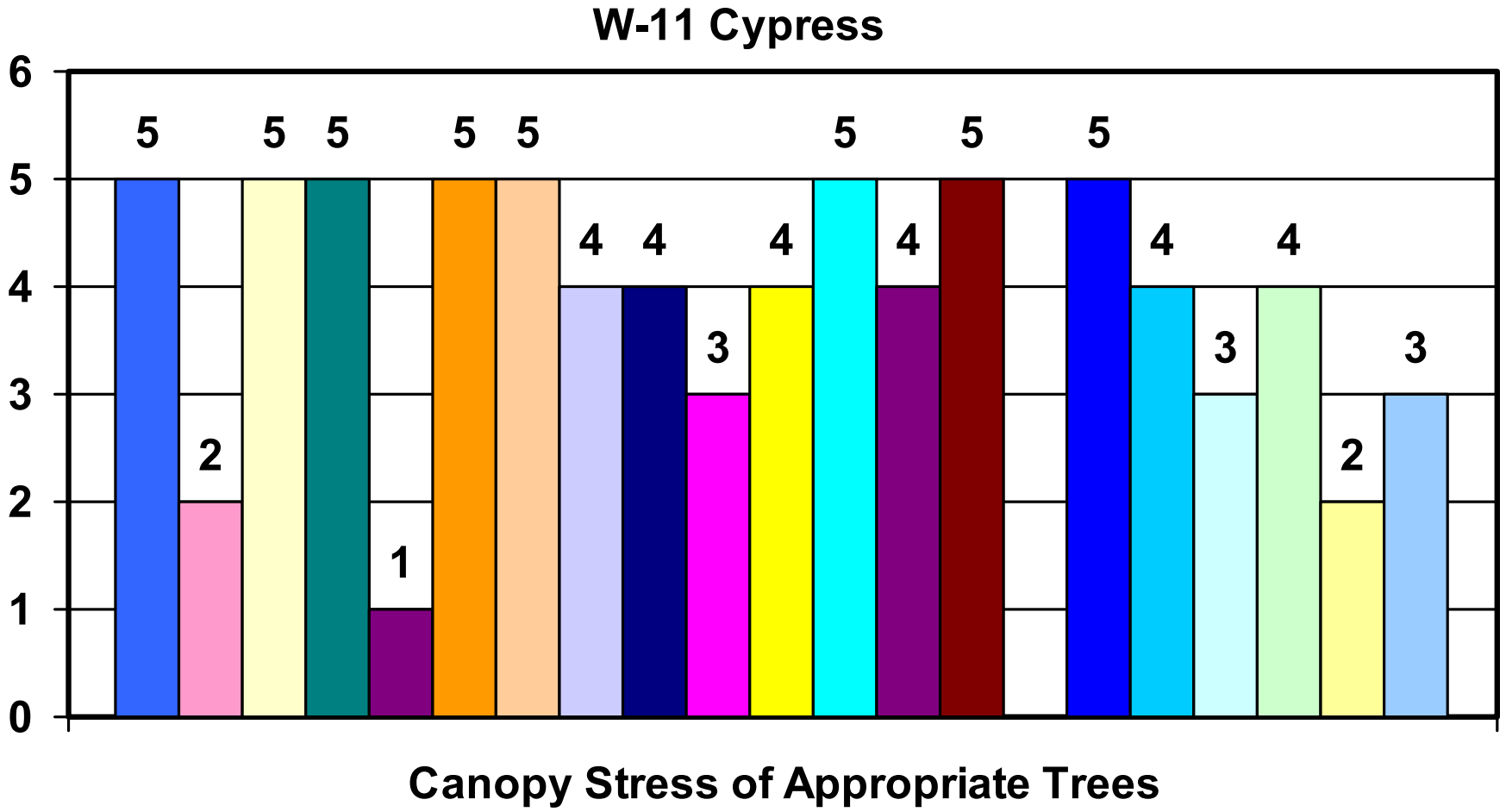
Stress of Inappropriate Shrubs and Small Trees


W-11 Cypress
6
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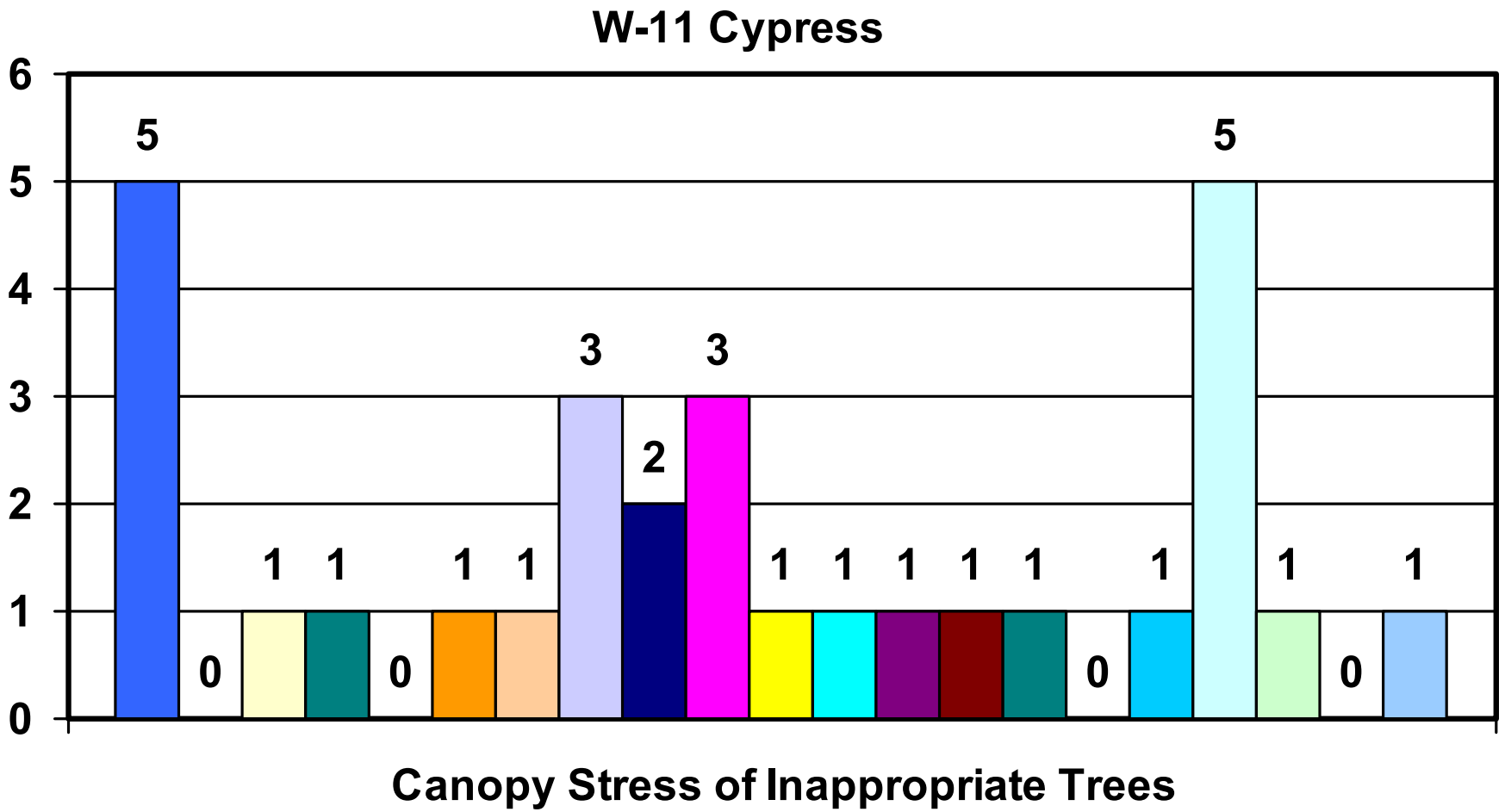
Canopy Stress of Appropriate Trees


W-11 Cypress
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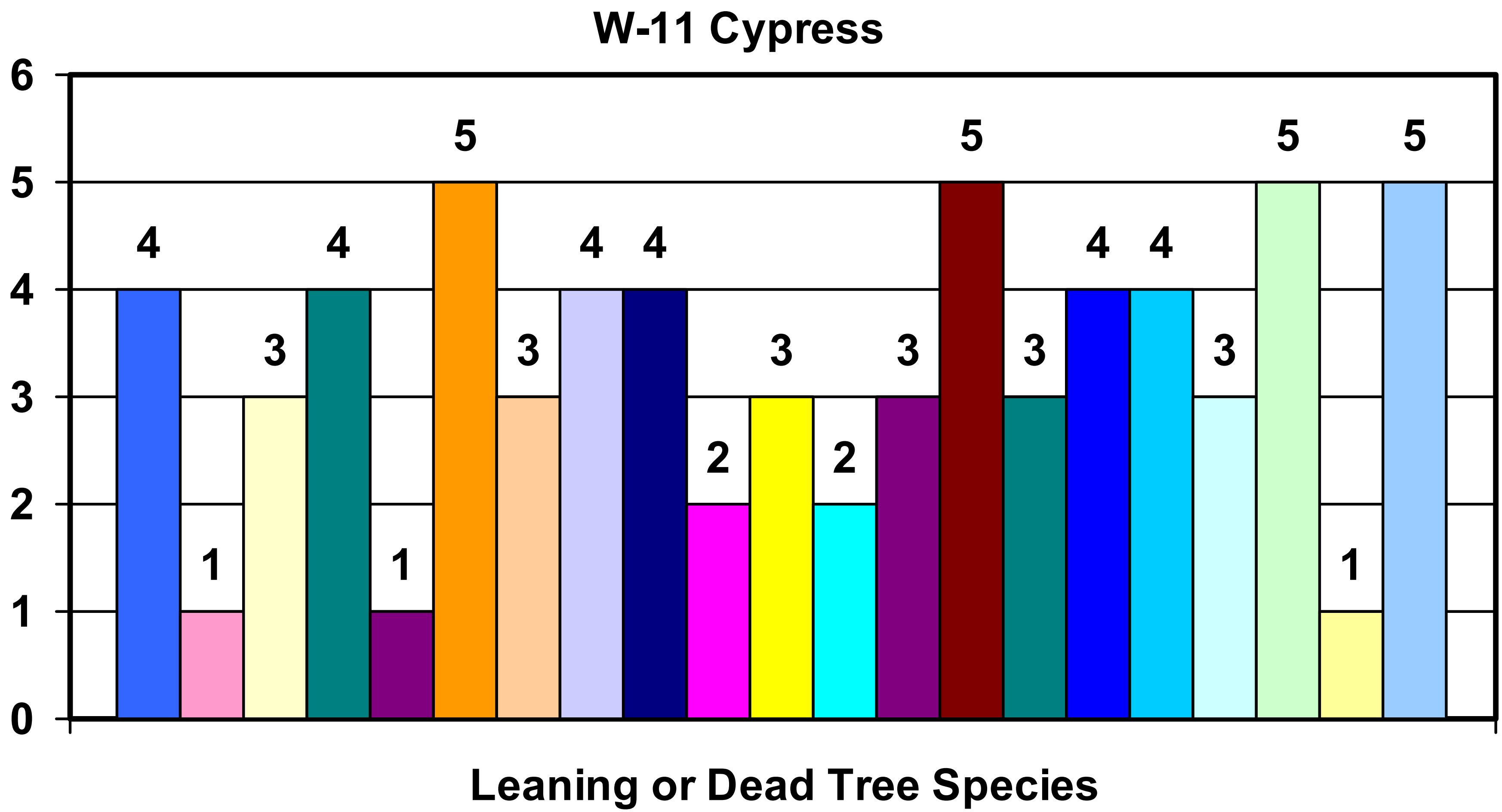
1
Canopy Stress of Inappropriate Trees



W-11 Cypress
6
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4
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2
1
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4
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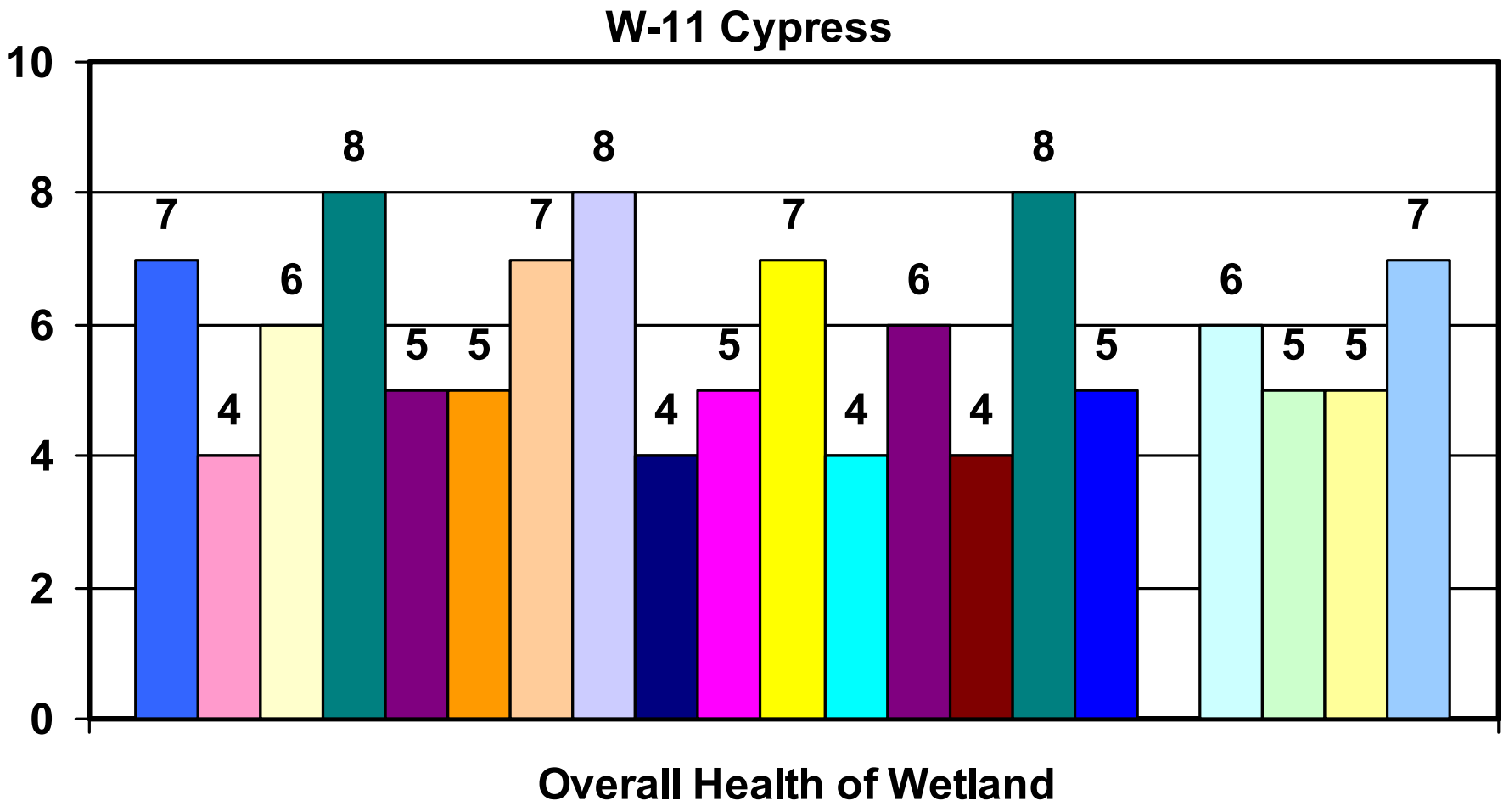
5
Leaning or Dead Tree Species


W-11 Cypress
10
8
6
4
2
0
7
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6
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7
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6
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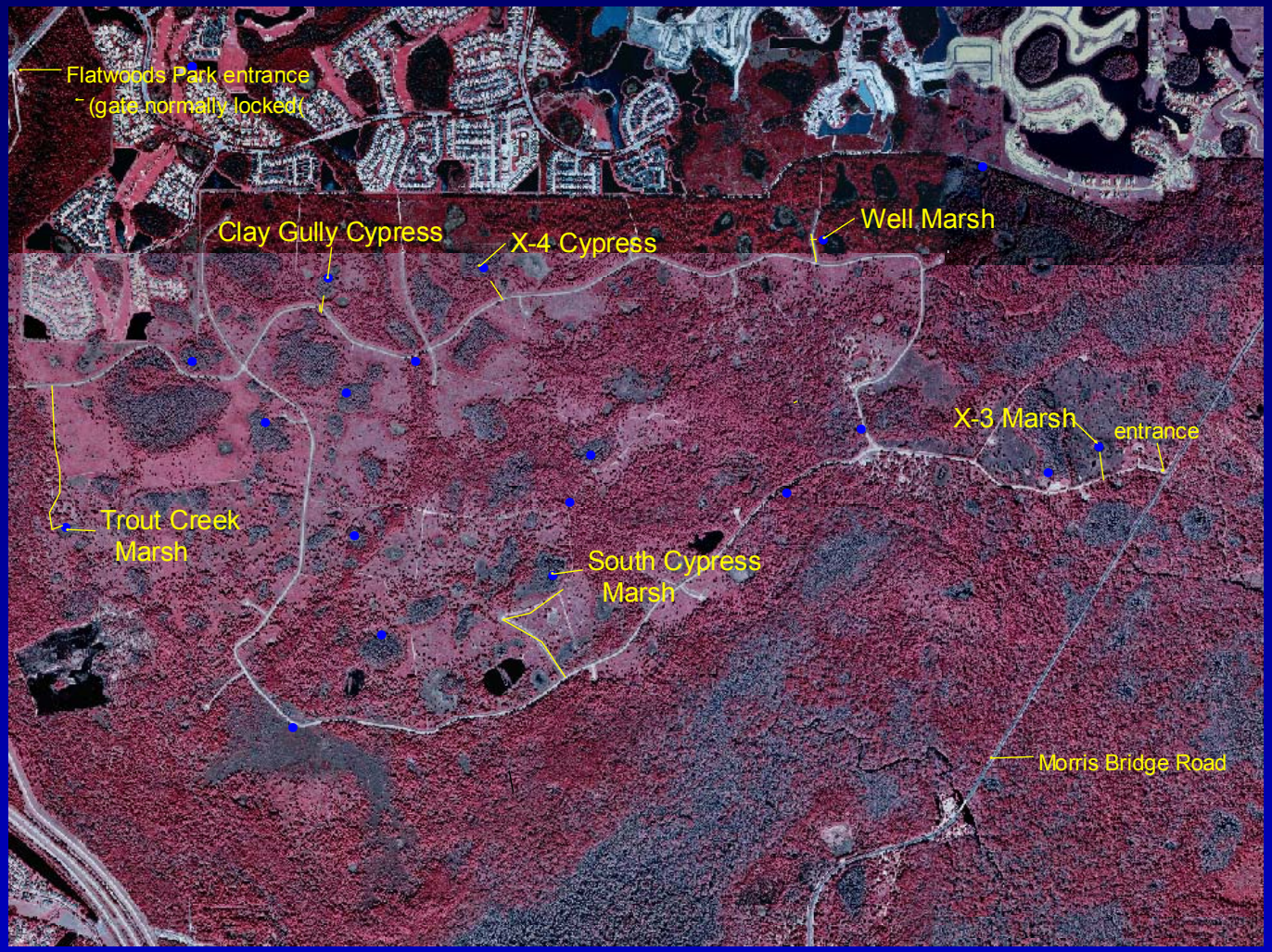
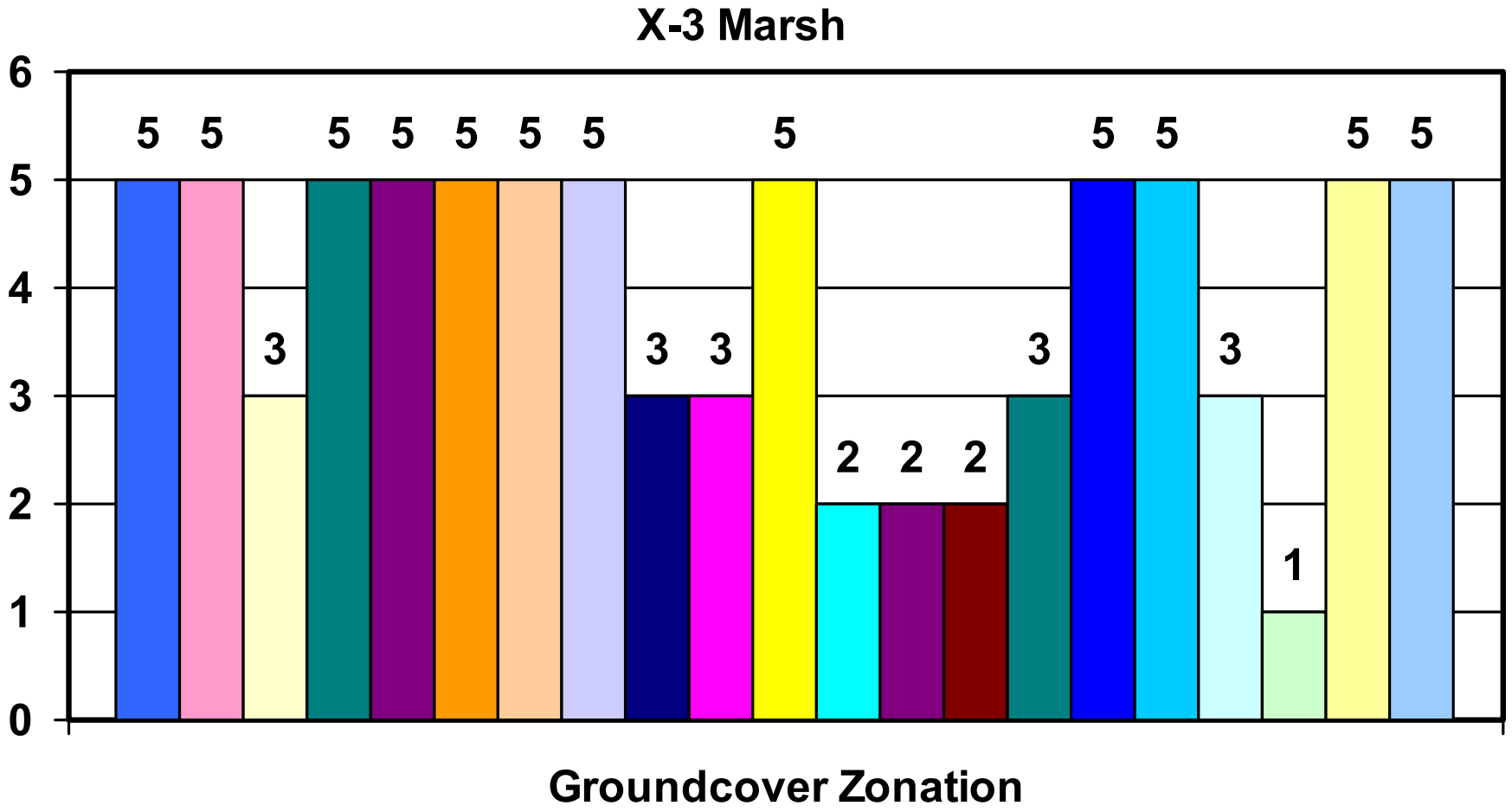
5
7
Overall Health of Wetland


Flatwoods Park entrance
(gate normally locked)
Clay Gully Cypress
X-4 Cypress
Well Marsh
X-3 Marsh
entrance
Trout Creek
Marsh
South Cypress
Marsh
Morris Bridge Road


X-3 Marsh
6
5
4
3
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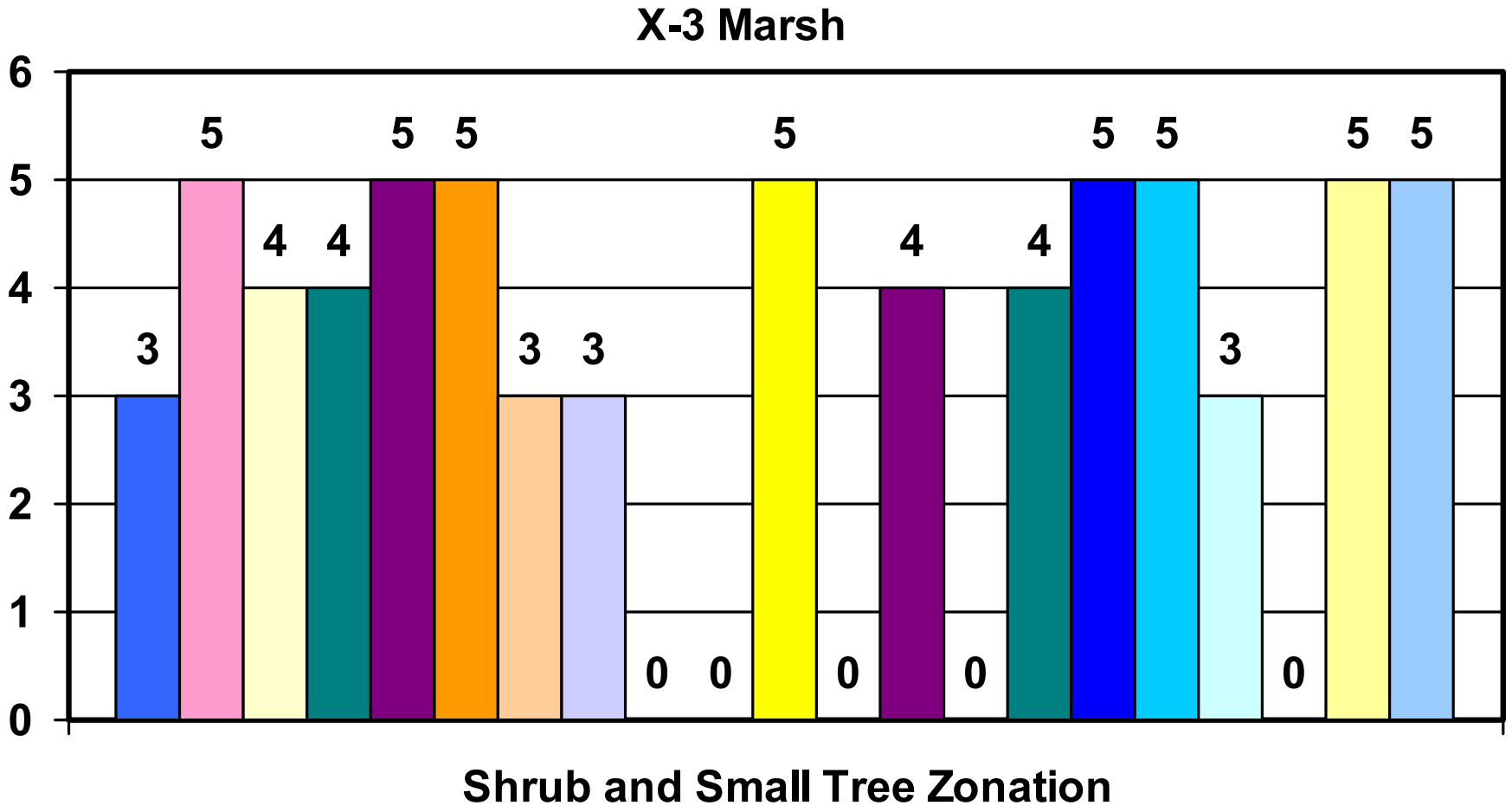
5 5 5 5 5 5 5 5 5 5 5
3 3 3 3
2 2 2
1
Groundcover Zonation


X-3 Marsh
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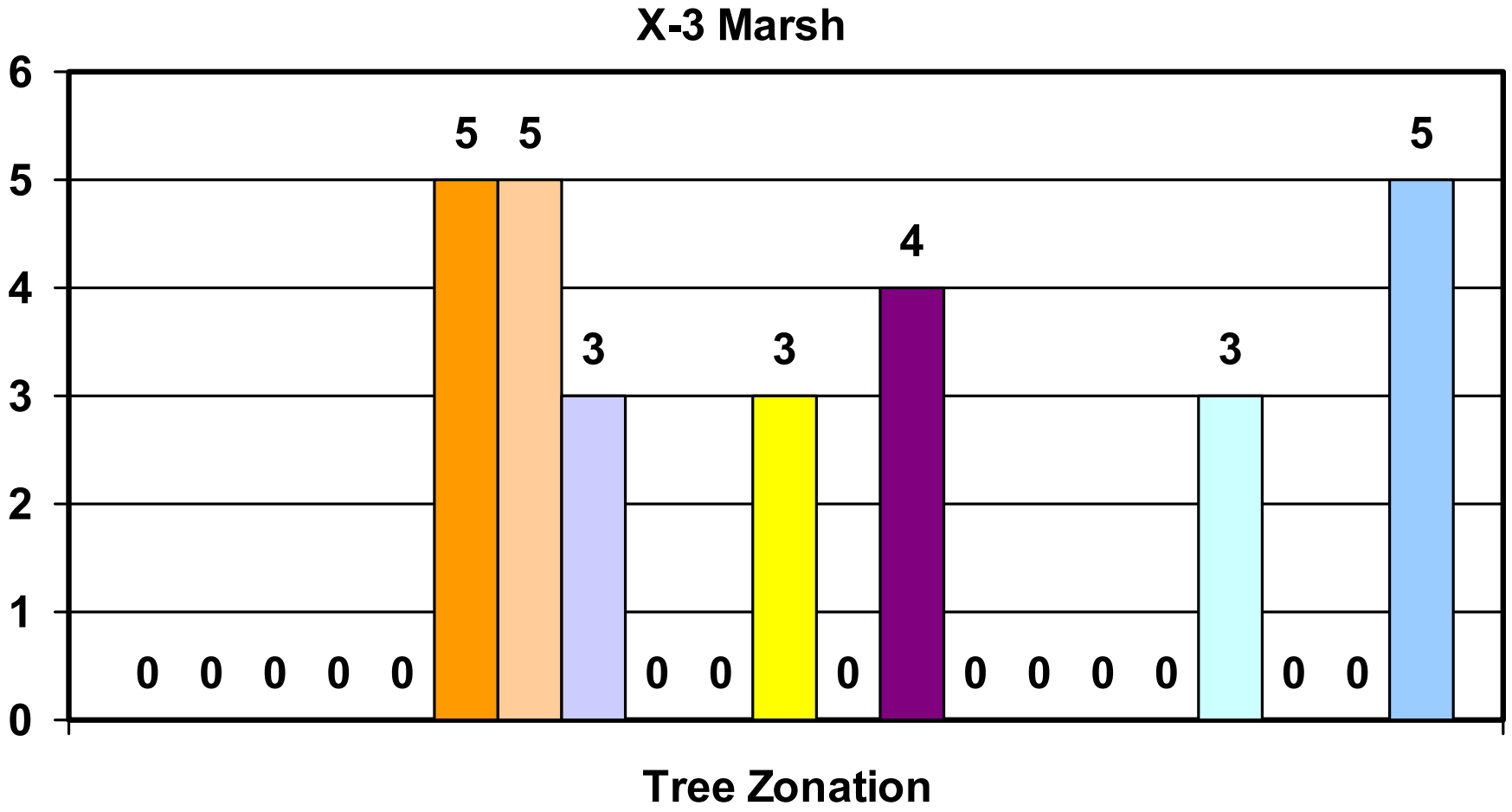
Shrub and Small Tree Zonation


X-3 Marsh
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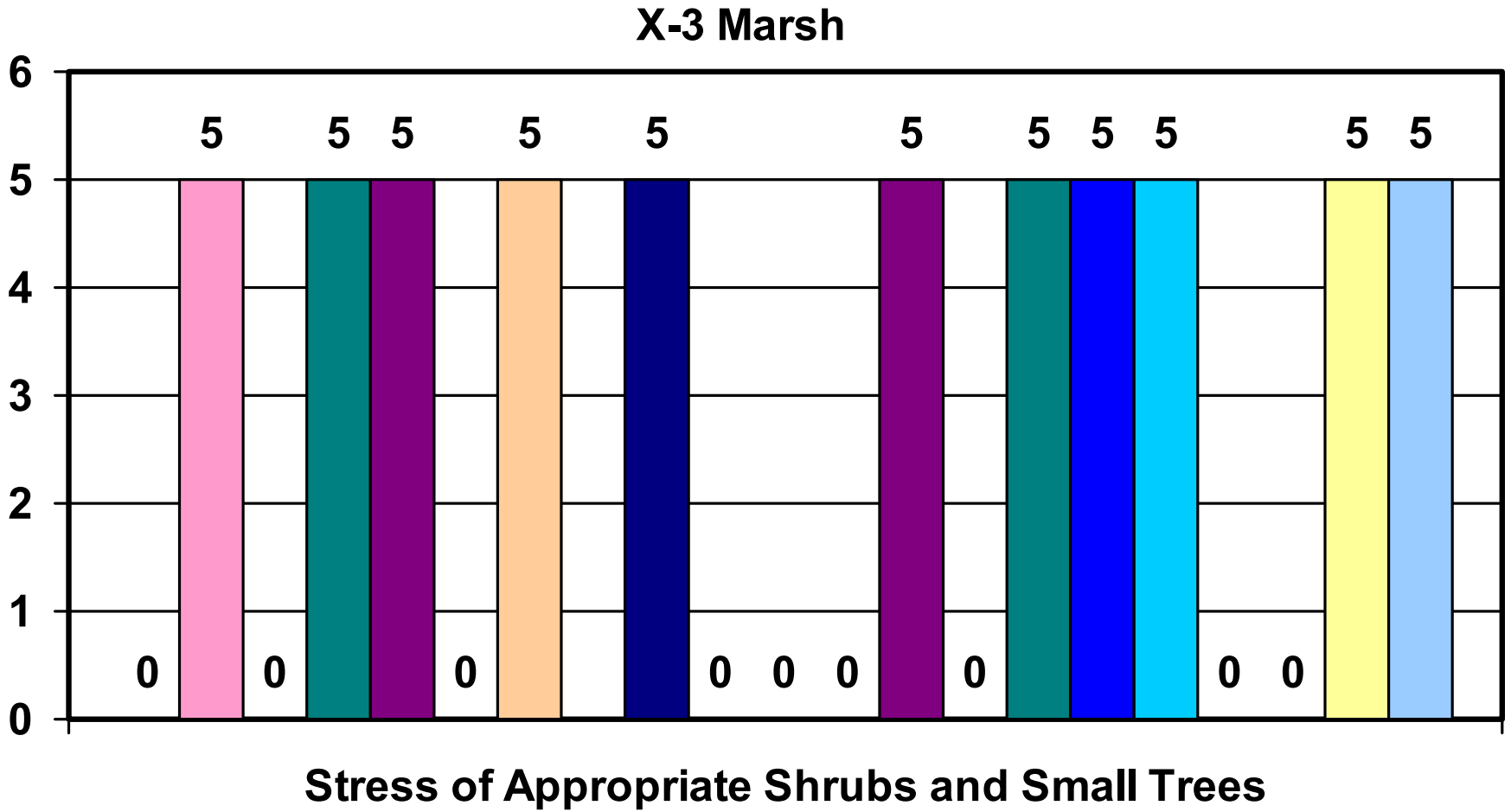
5
Tree Zonation


X-3 Marsh
6
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5 5 5 5 5 5 5 5 5 5
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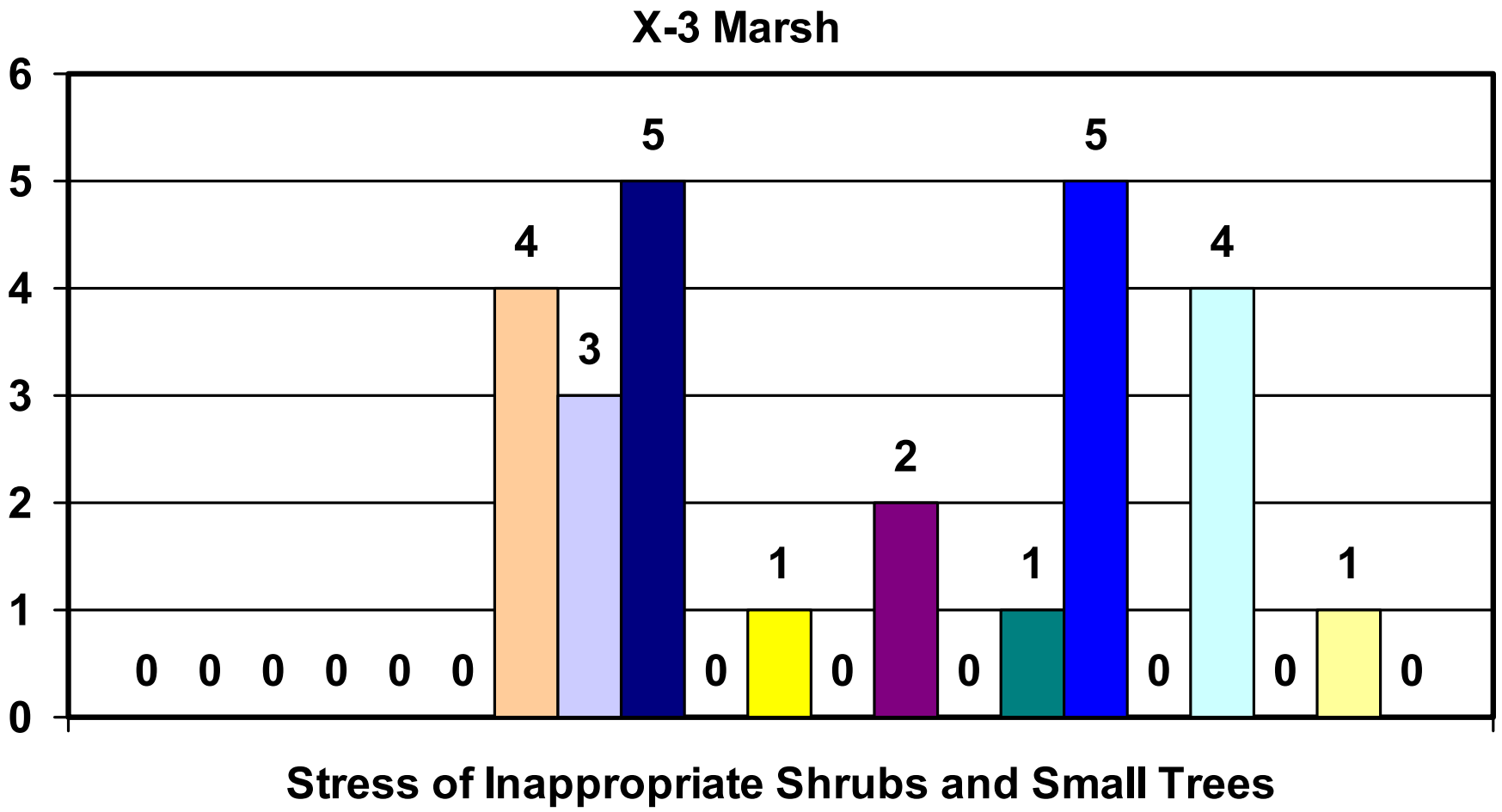
Stress of Appropriate Shrubs and Small Trees


X-3 Marsh
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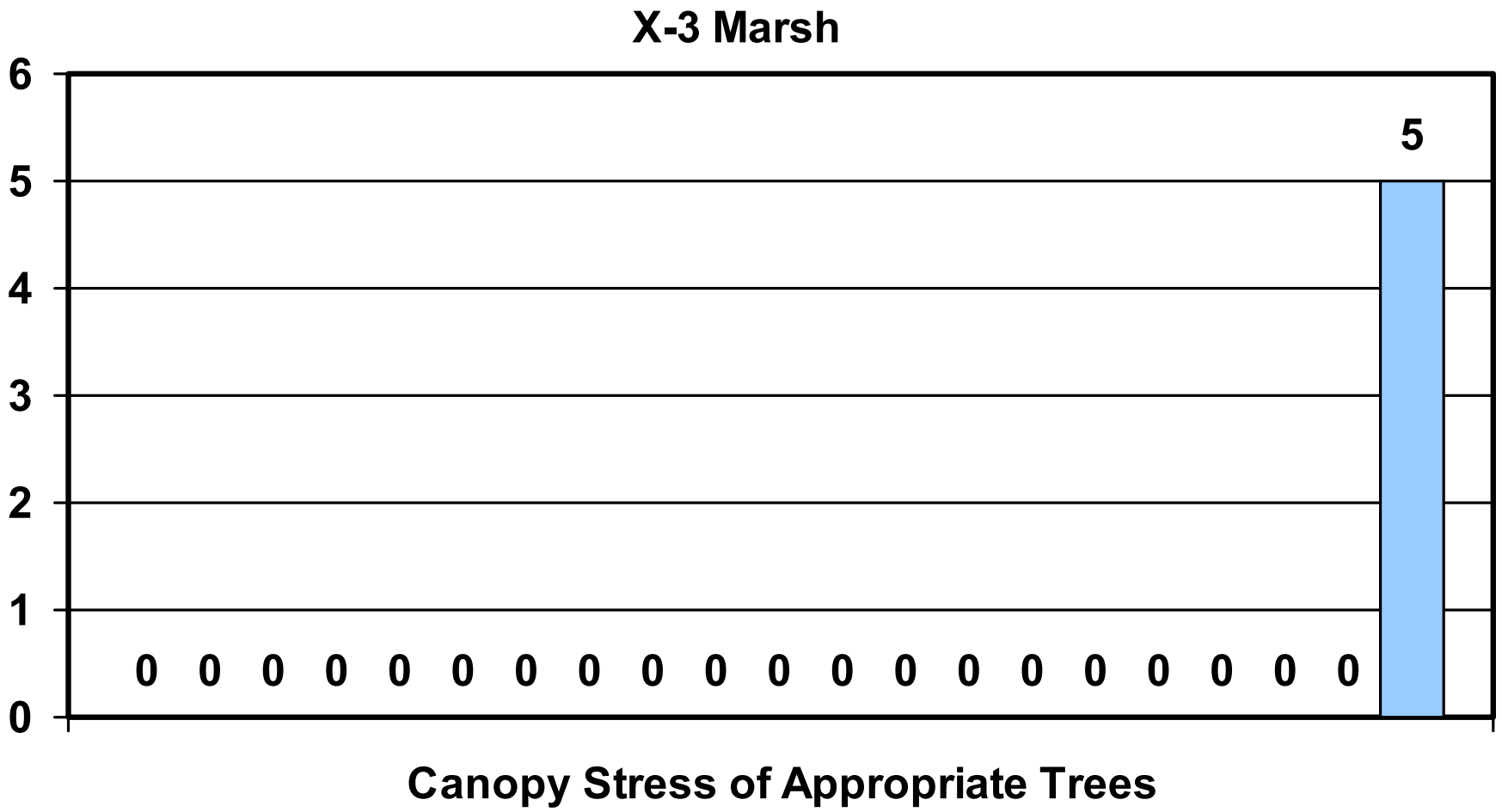
4
0
1
0
Stress of Inappropriate Shrubs and Small Trees


X-3 Marsh
6
5
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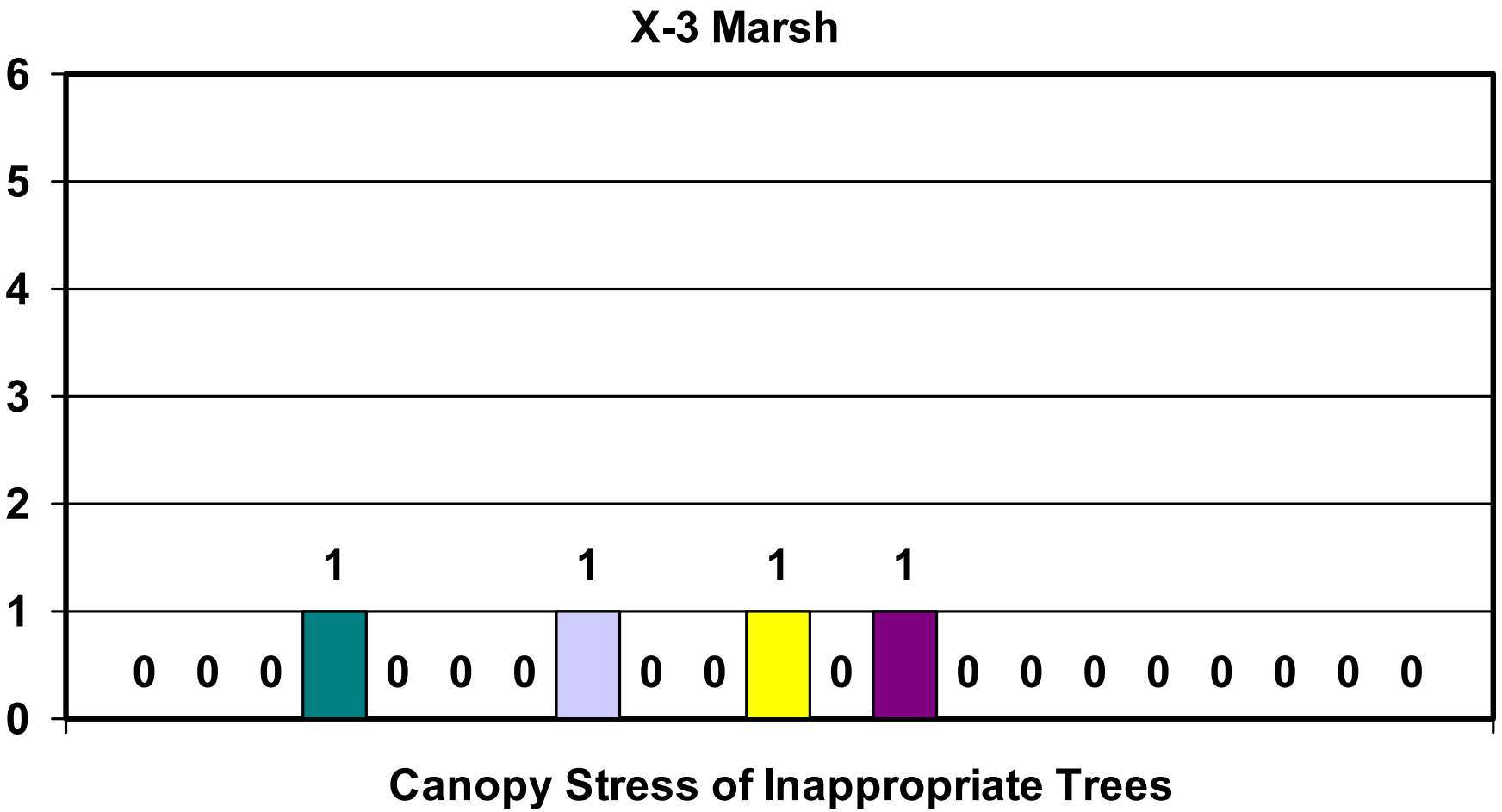
0
5
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Canopy Stress of Appropriate Trees


X-3 Marsh
6
5
4
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2
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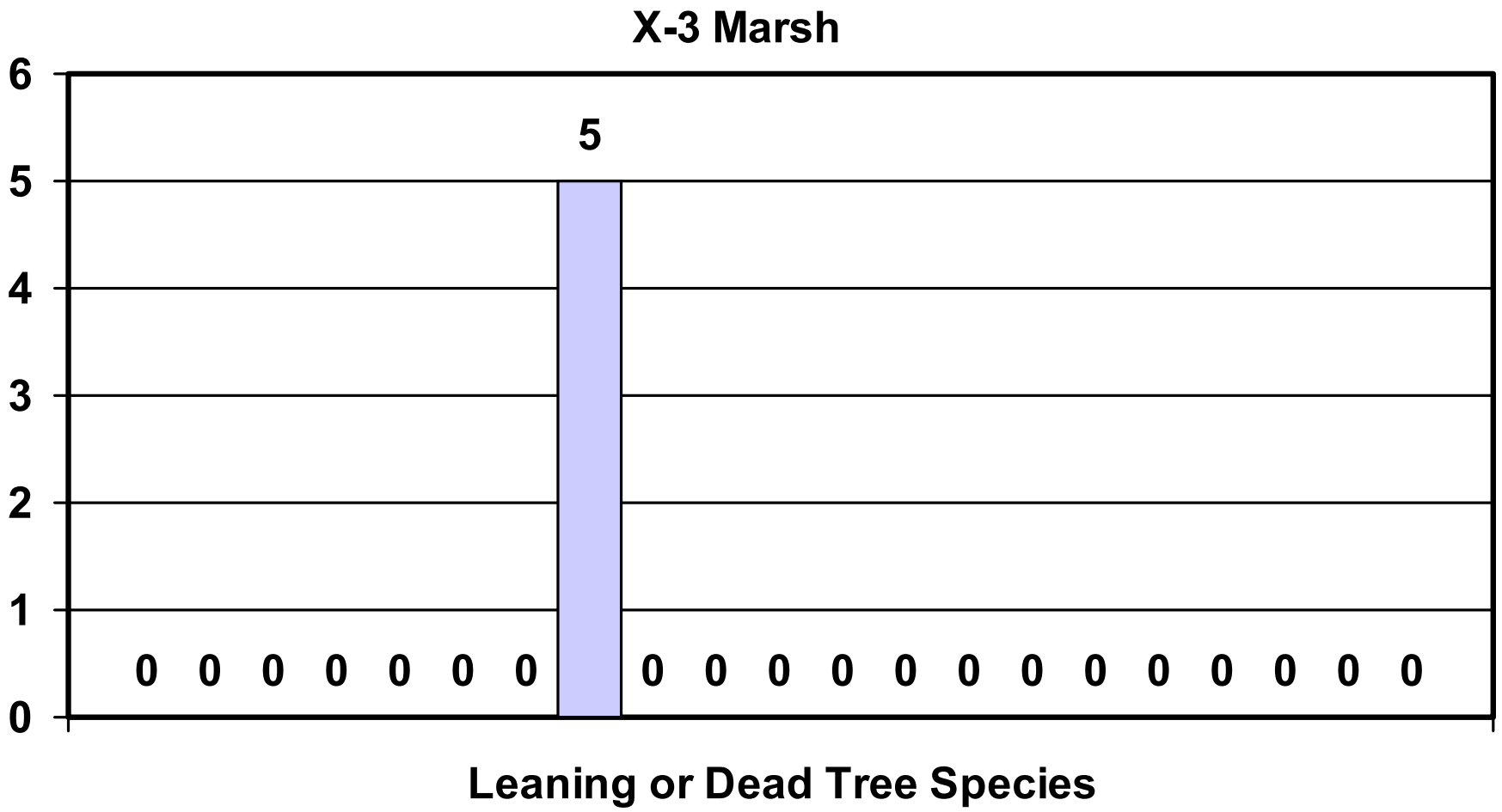
Canopy Stress of Inappropriate Trees


X-3 Marsh
6
5
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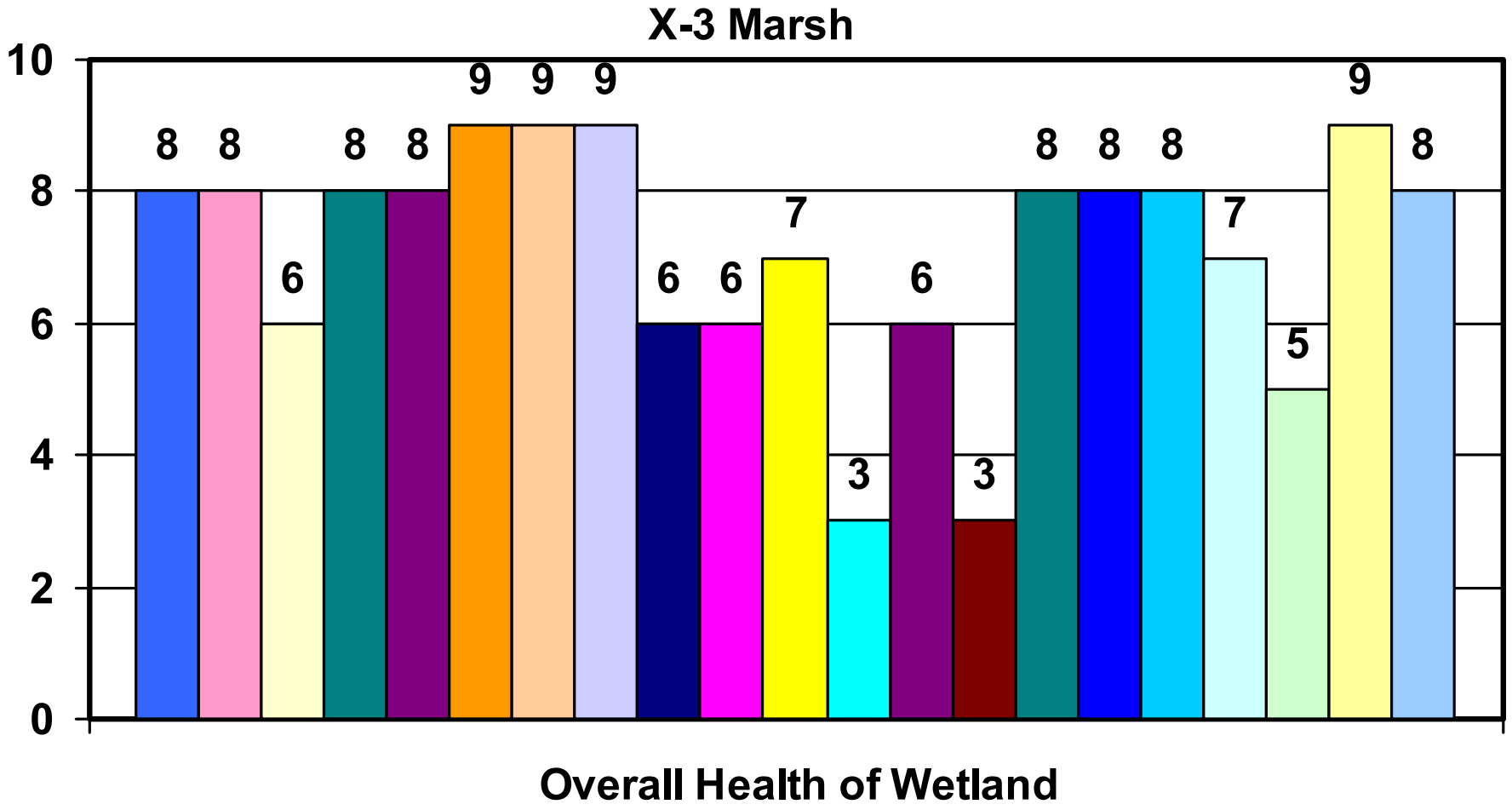
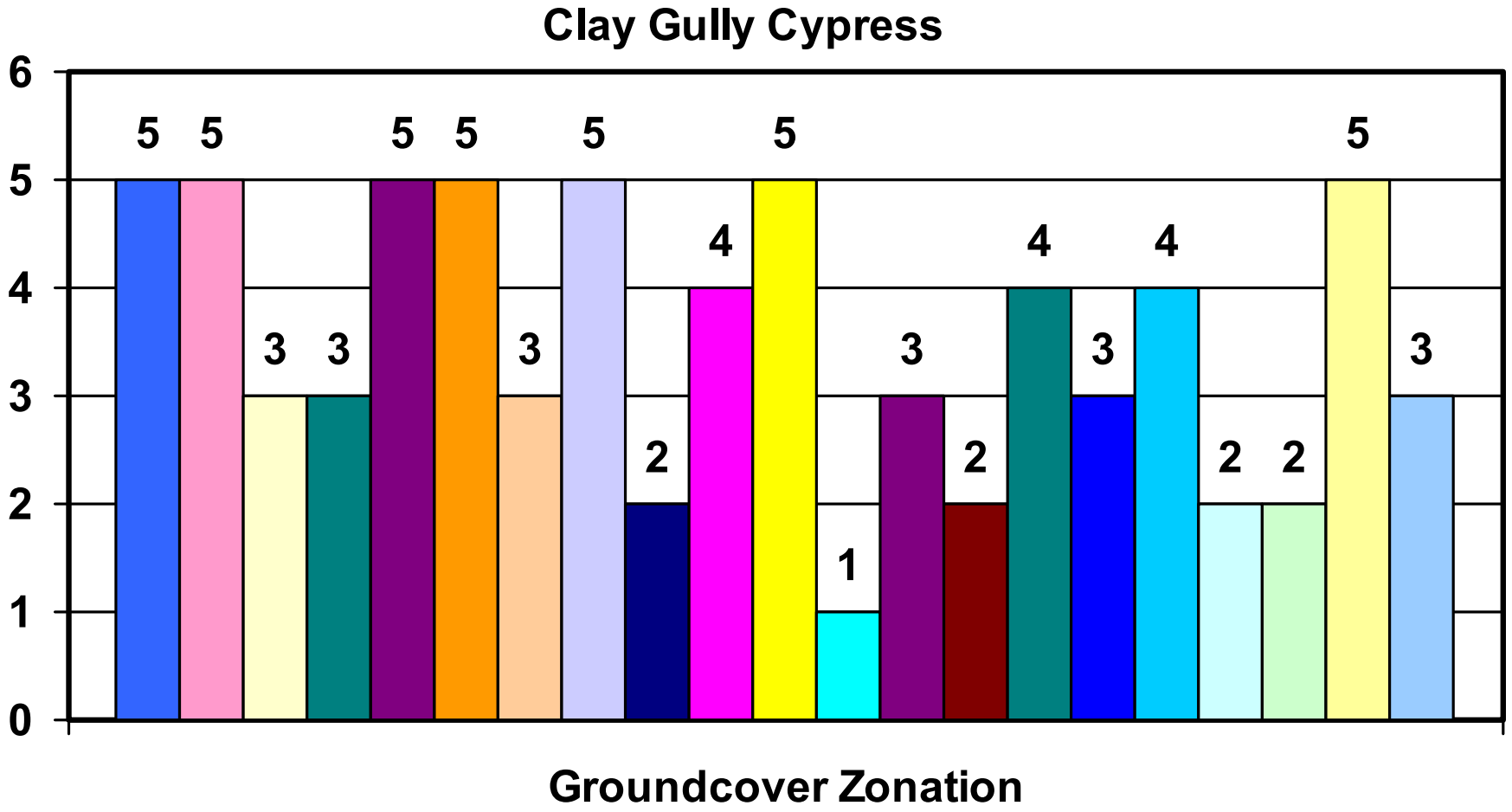
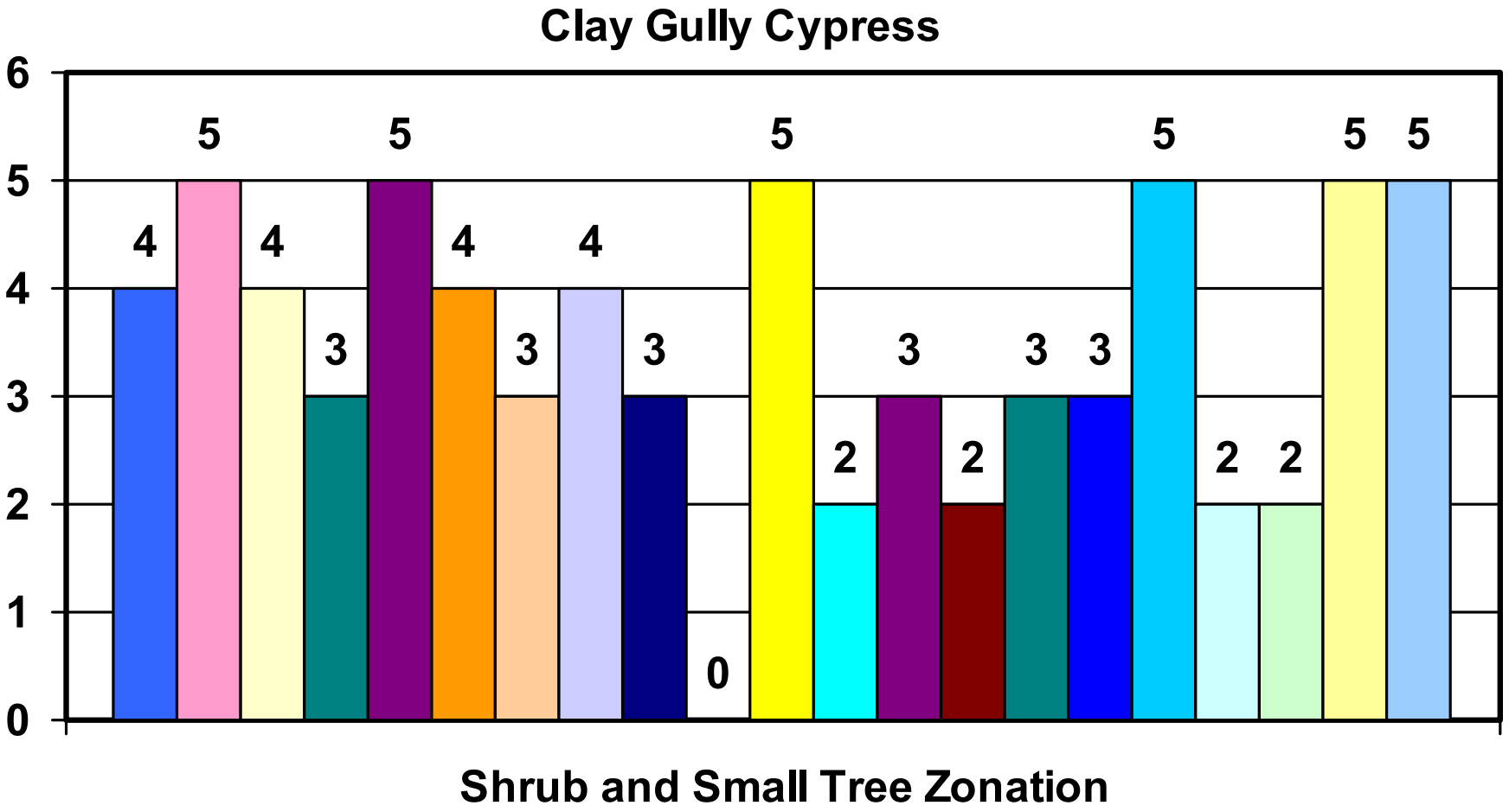
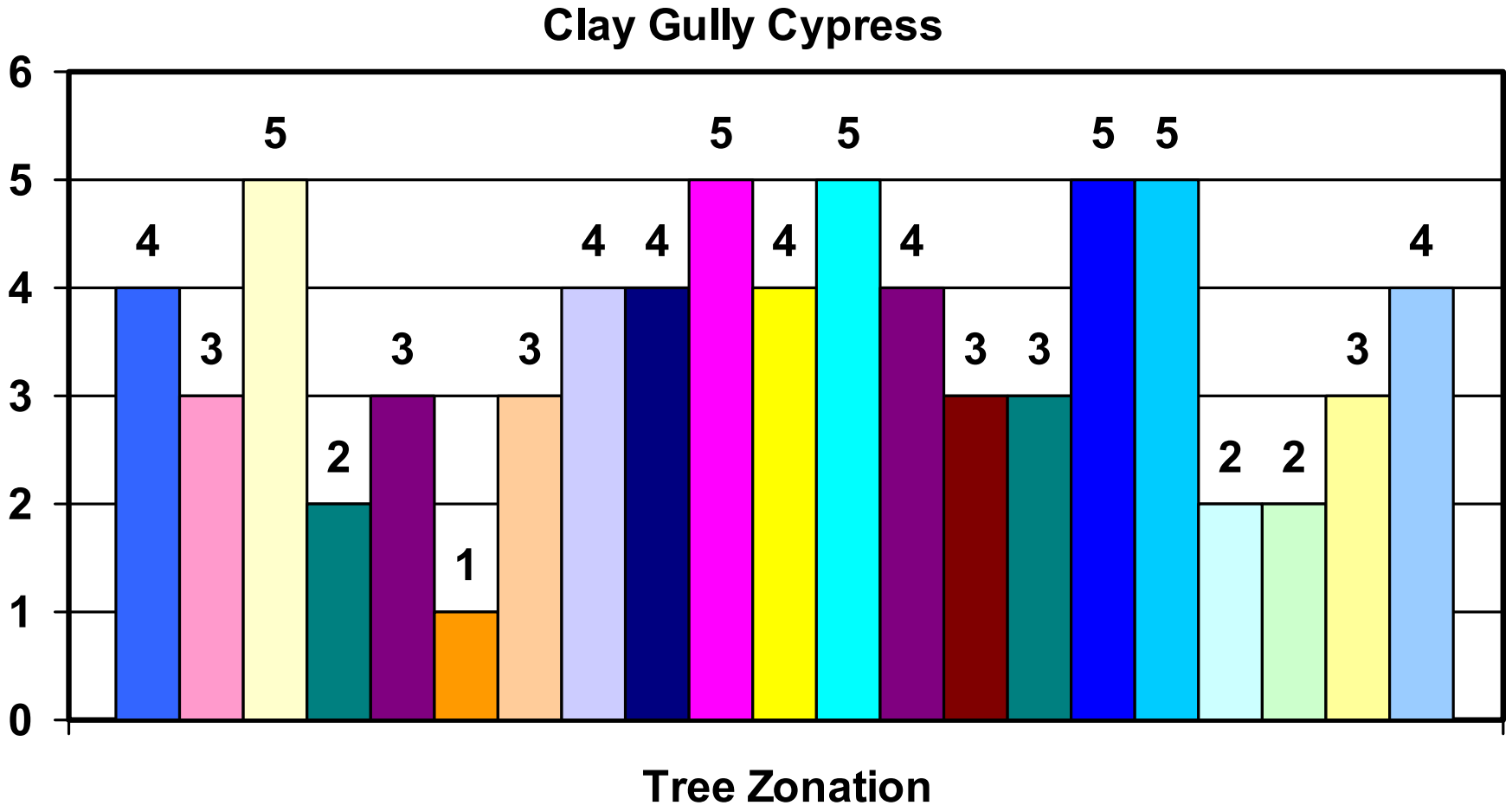
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Leaning or Dead Tree Species


X-3 Marsh
10
8
6
4
2
0
8 8 6 8 8 9 9 9 6 6 7 3 6 3 8 8 8 7 5 9 8
Overall Health of Wetland


Clay Gully Cypress
6
5
4
3
2
1
0
5 5 5 5 5 5 5
3 3 3 3 3 3 3 3
2 2 2 2
4 4 4
1
Groundcover Zonation


Clay Gully Cypress
6
5
4
3
2
1
0
5
5
5
5
5 5
4
4
4
4
3
3
3
3
3
3
2
2
2
2
0
Shrub and Small Tree Zonation


Clay Gully Cypress
6
5
4
3
2
1
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3
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3
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5
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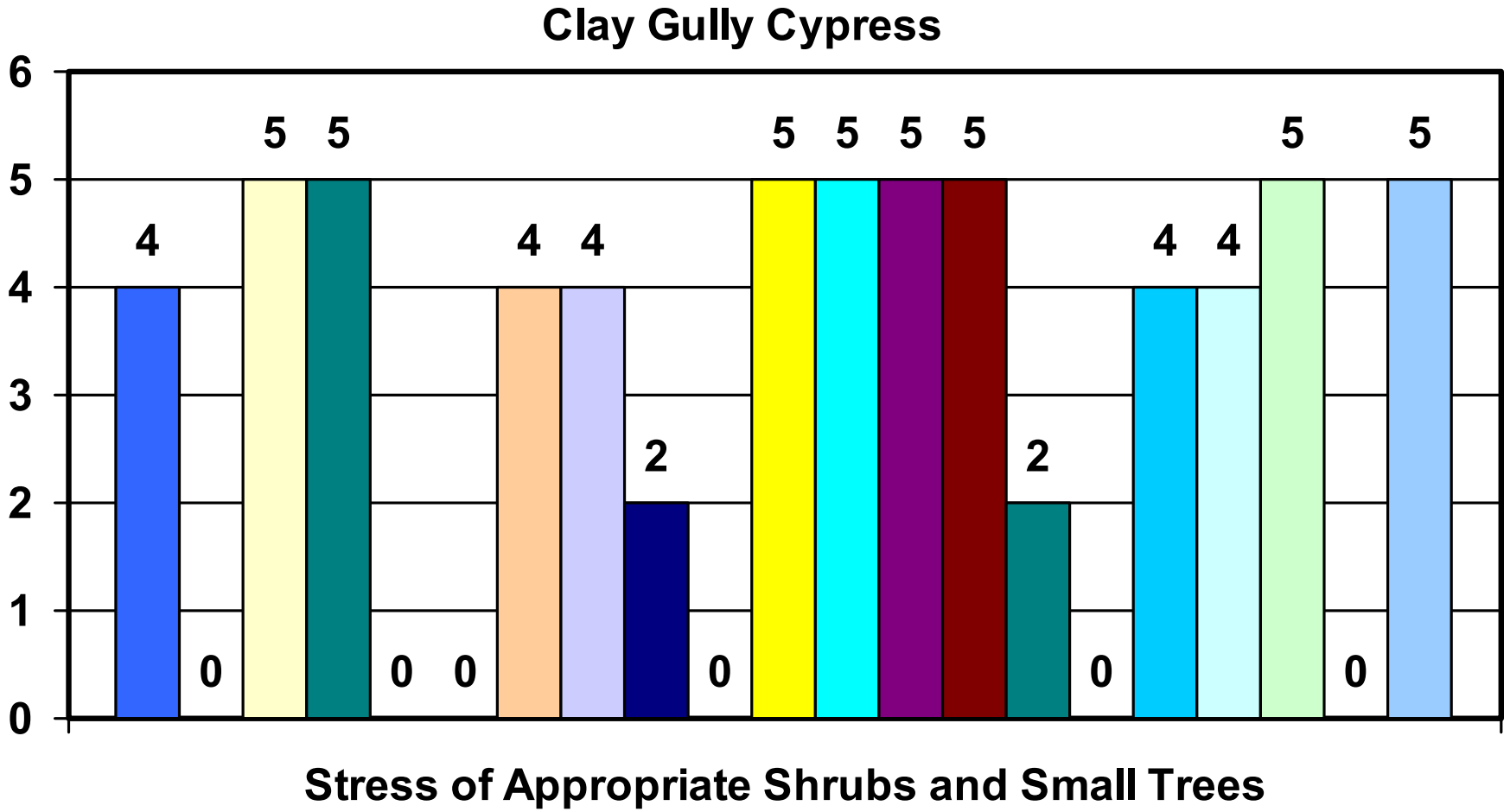
2
3
4
Tree Zonation


Clay Gully Cypress
6
5
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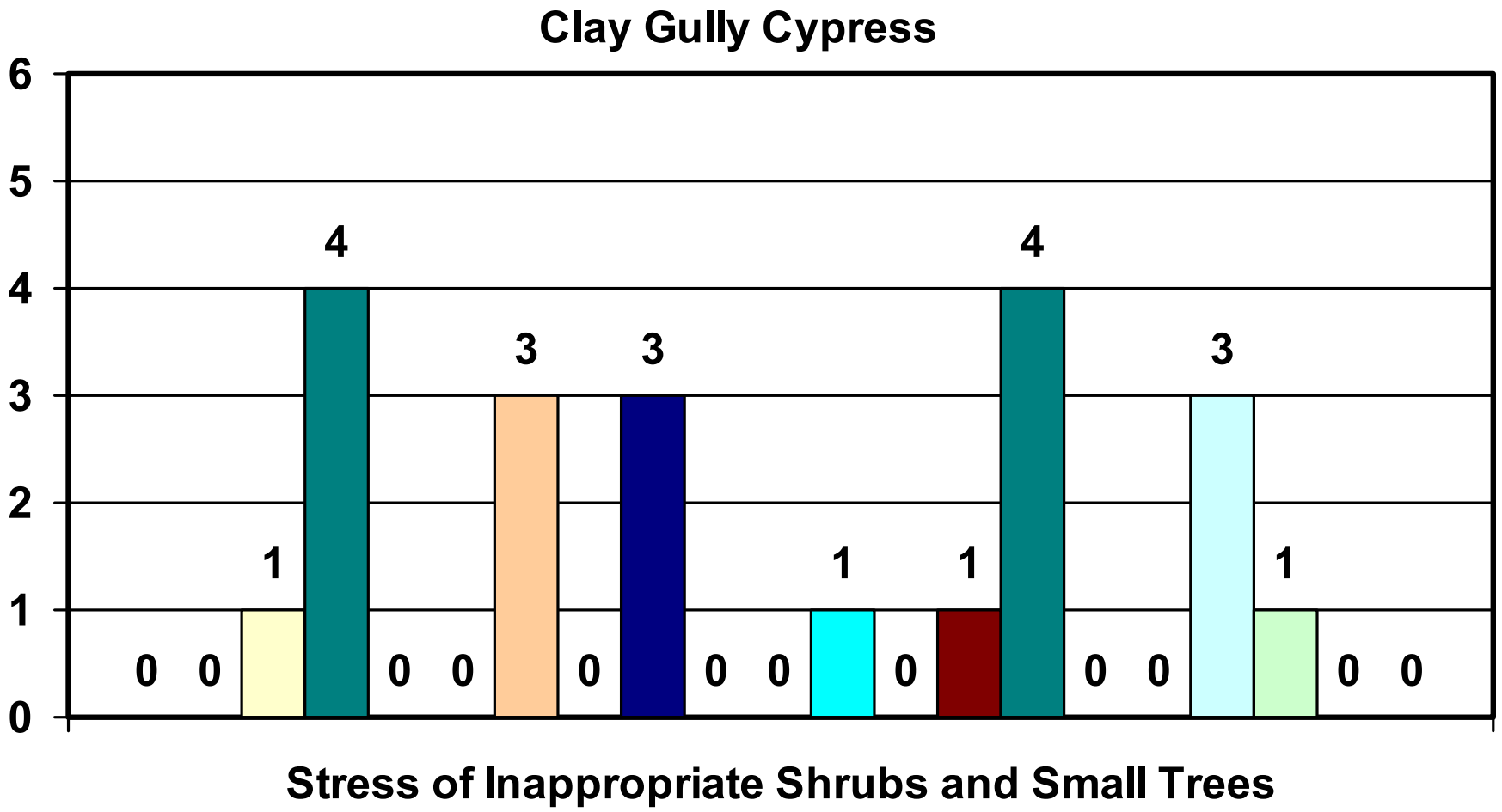
5
Stress of Appropriate Shrubs and Small Trees


Clay Gully Cypress
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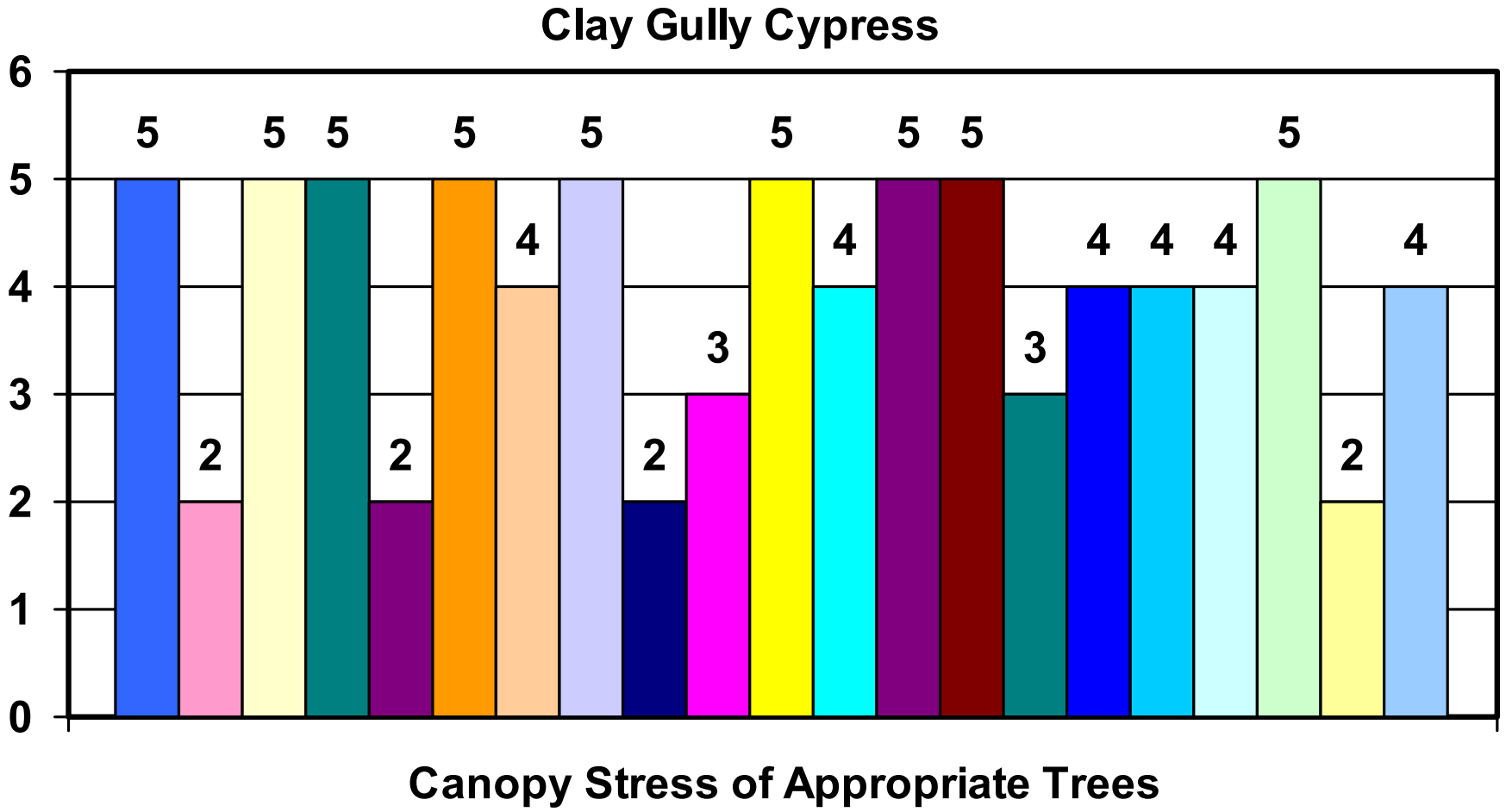
Stress of Inappropriate Shrubs and Small Trees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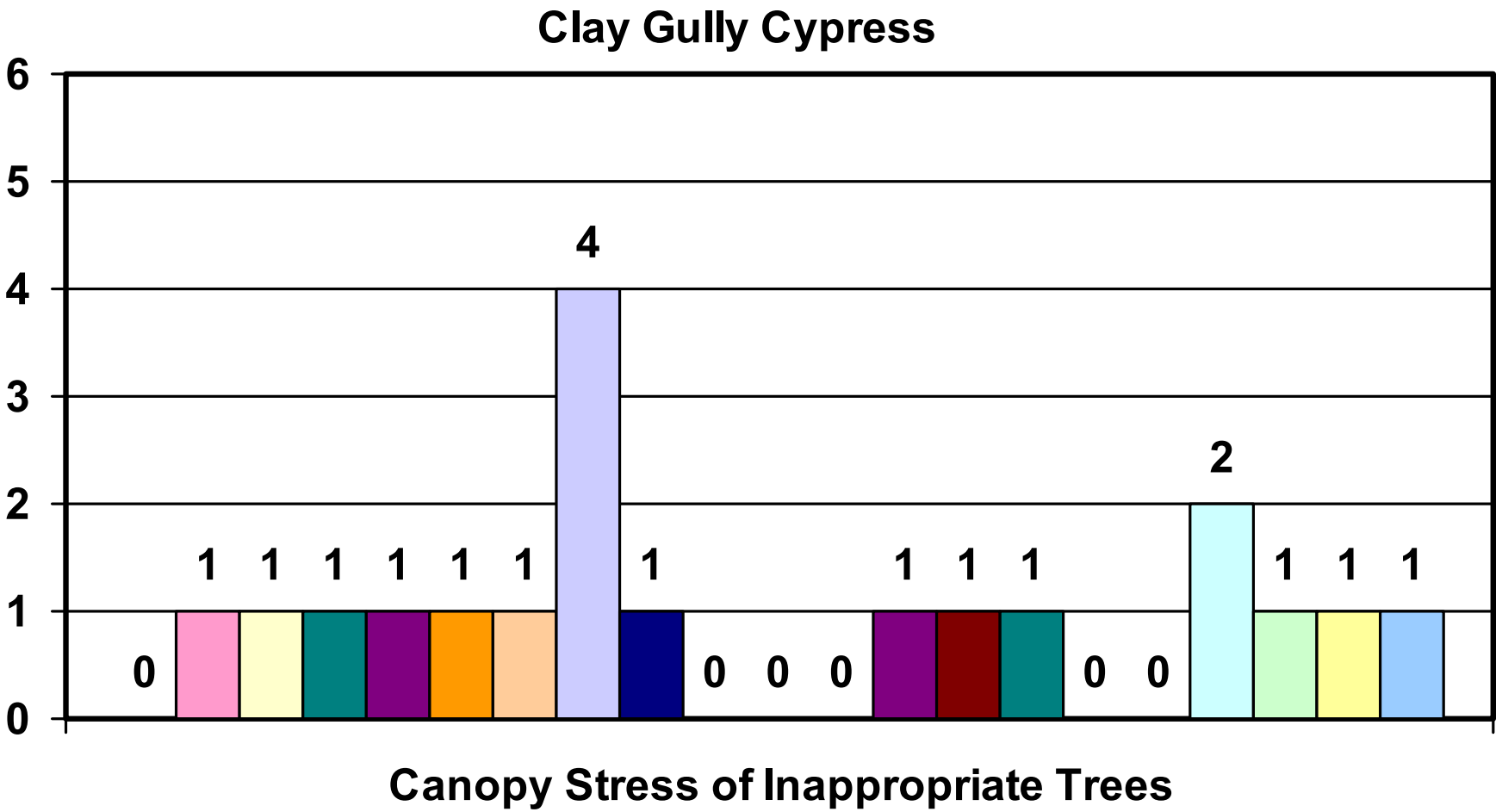
Canopy Stress of Appropriate Trees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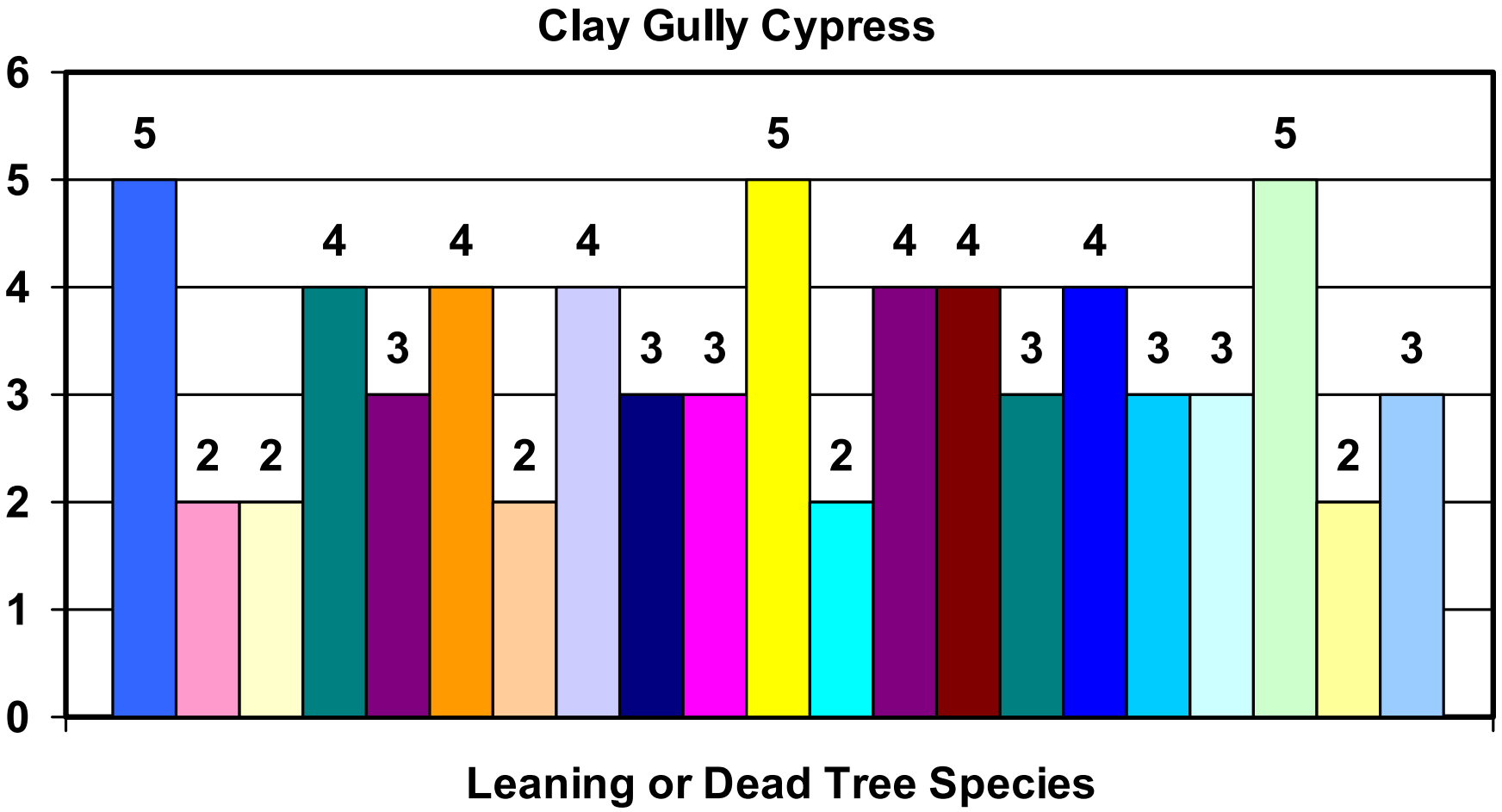
Canopy Stress of Inappropriate Trees


Clay Gully Cypress
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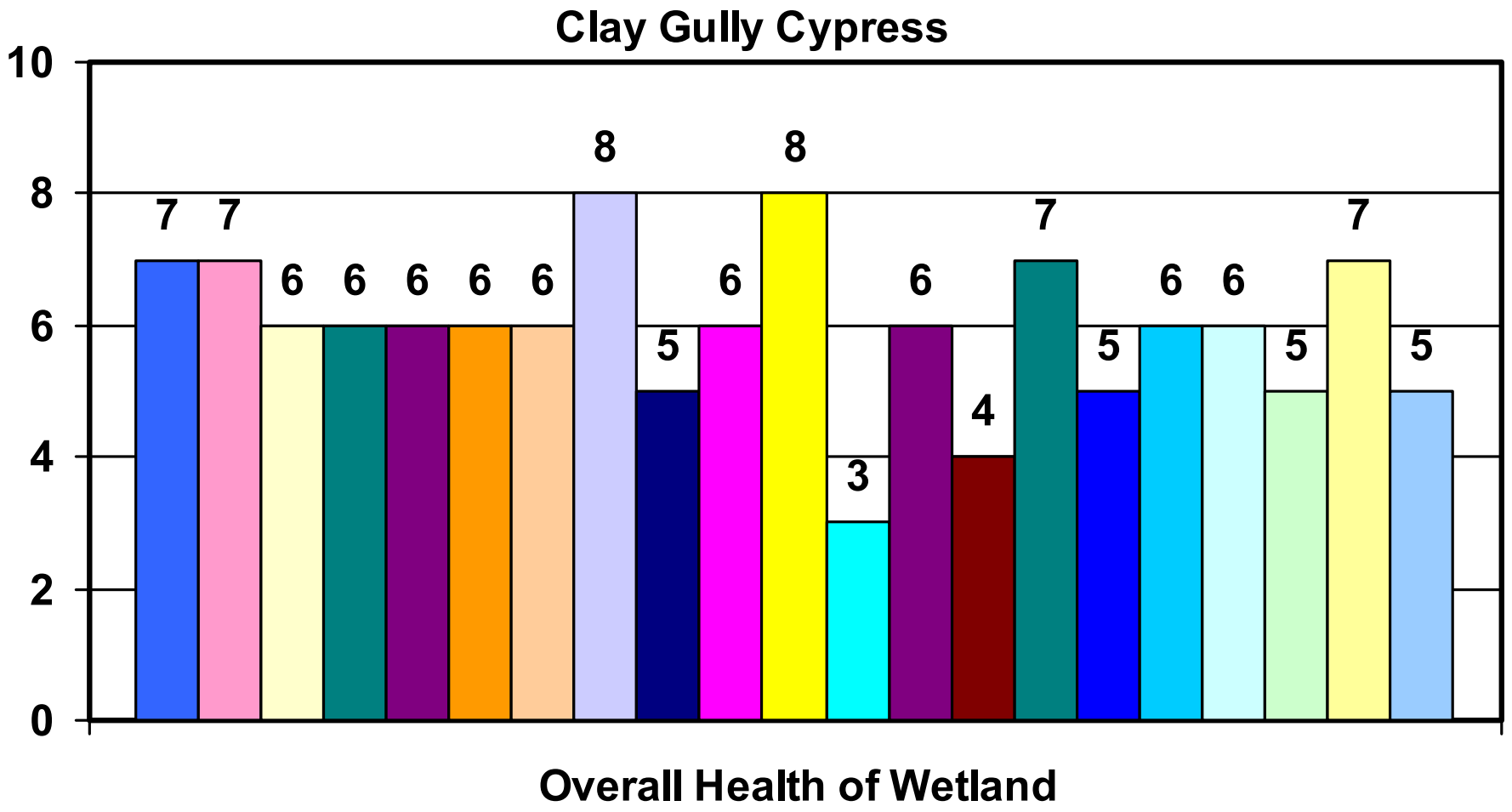
Leaning or Dead Tree Species


Clay Gully Cypress
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Overall Health of Wetland

Analyses Performed

- Manual review and comparison of scores, species, comments
- Correlation assessments using time, scores, experience, etc.
- Categorical assessments
- Field checks

	Feet below MFL in 2003			Average	
	6 year	10 year	1 year	Overall Health	Range
Clay Gully Cypress	1.0	0.5	-1.2	6.0	3-8
X-4	-0.7	-1.0	-1.3	5.8	3-8
W-41	4.3	3.6	-1.7	4.4	2-8
G	-0.4*	?	-1.5	7.4	5-8
W-11	1.4	1.3	-1.6	5.8	4-8

*based on 5-year record

Observations and Thoughts

- There is a wide-variety of opinion out there
- Plant species identification is not easy, and it does not appear that the wetland status is a strong help to many – something simpler is needed

Improve Plant Identification

- Training (esp. difficult species)
- Simplification of choices
- Improved quality control
- Spend more time
- Work in teams
- Different time of year (once a year)

Improve Wetland Status ID

- Training
- Quality Control
- Simplified/alternative list
- Automated system?

Minimize percentage estimate errors

- Agree on techniques and approaches
- Tools?
- Alternatives?
- Likely related to plant and wetland status ID

Follow Instructions

- Do it anyway
- Training
- Quality Control

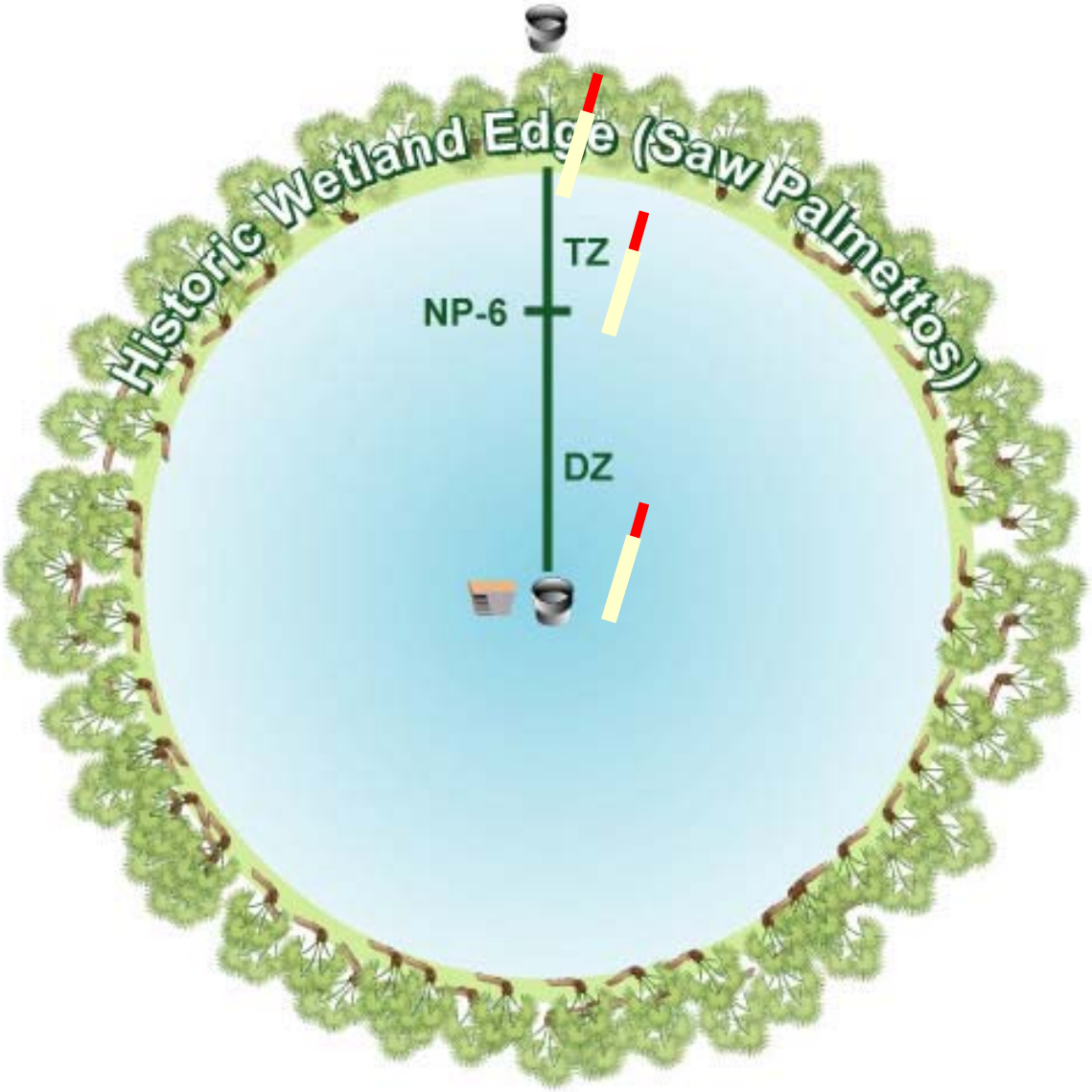
Other

- Consistent Assessment Areas
- Need more comments (check-boxes)
- Minimize professional judgment

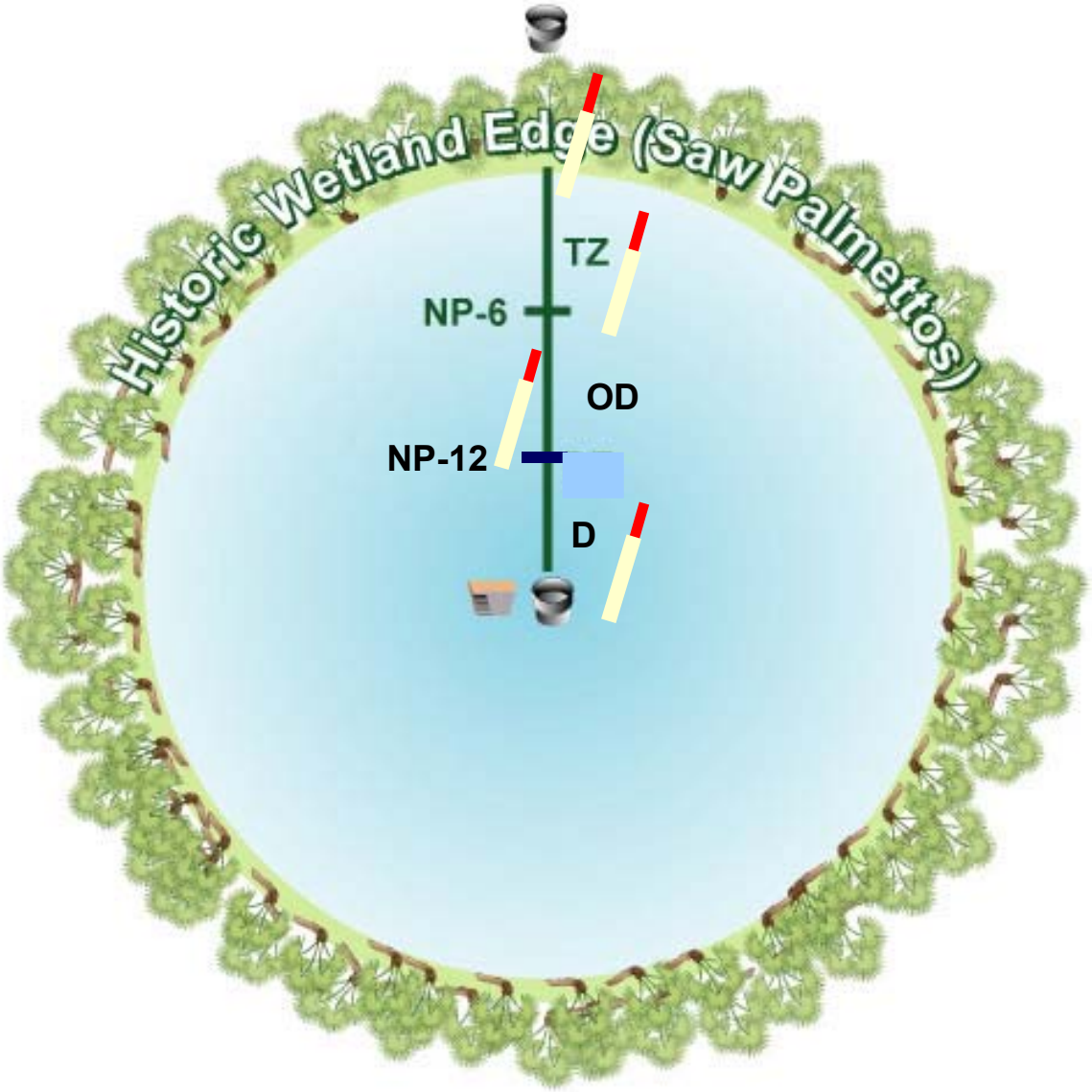
New (?) idea – Zone approach

- Species list can be boiled down to a more workable size
- Divide the Deep zone in 2

Transect Set-up



Transect Set-up



Divide all plants into a new "zone" classification

Upland (U) – Plant species that are designated as Upland by DEP, and are not expected to be seen in wetlands. It is possible that a few of these species may be found along wetland edges, but are not expected throughout the transition zone.

Adaptive (AD) – Plants species designated as FAC or Upland by DEP, but are commonly seen in the transition zone in limited numbers. When adaptive plants are found in the outer deep or deep zones, they should be treated the same as transition zone plants.

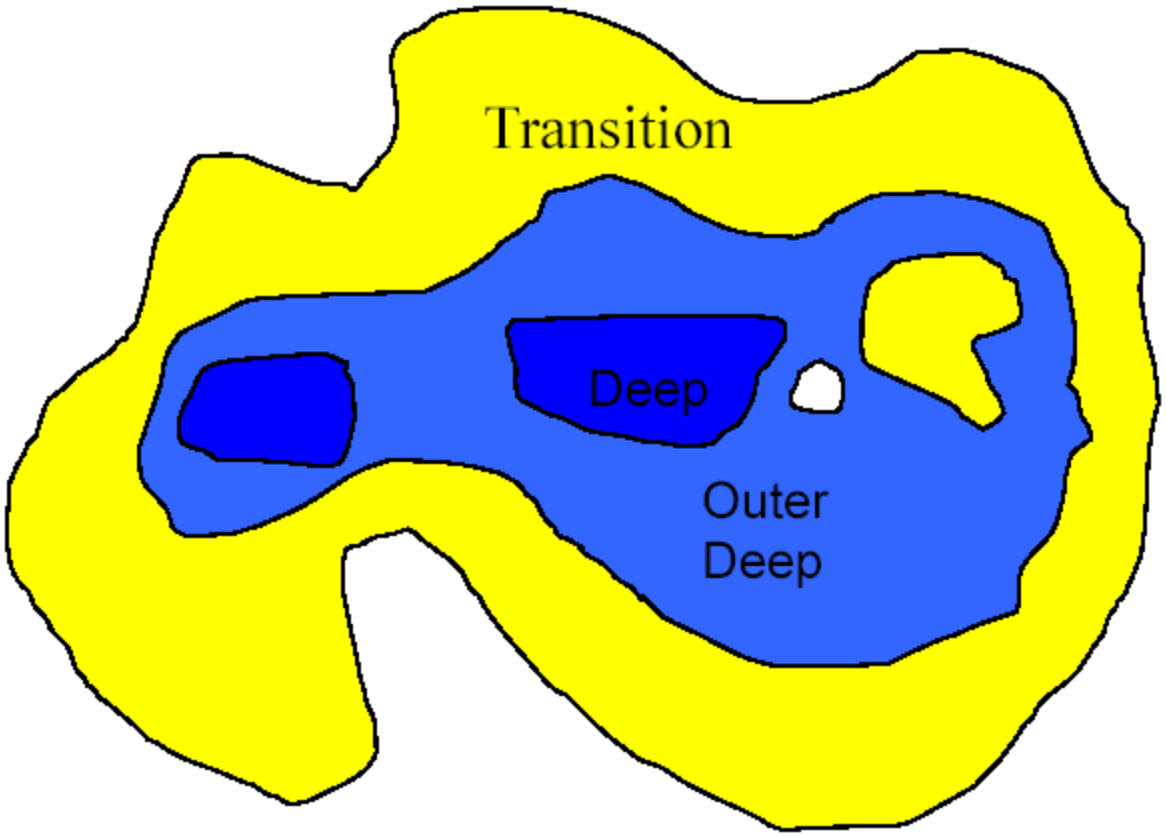
Transition Zone (T) – Plant species commonly found in the transition zone, and designated either FACW or OBL by DEP.

Outer Deep (OD) – Plant species commonly found in the outer deep zone, and designated either FACW or OBL by DEP.

Deep (D) - Plant species commonly found in the deep zone, and designated either FACW or OBL by DEP.

New (?) idea – Zone approach

Species	DEP Wetland Status	Wetland Zone
Acer rubrum	FACW	OD
Acer saccharinum	OBL	T
Alternanthera philoxeroides	OBL	OD
Amphicarpum muhlenbergianum	FACW	T
Andropogon glomeratus (Campbell)	FACW	T
Andropogon virginicus (Campbell)	FAC	AD
Aristida stricta	FAC	AD
Axonopus furcatus	FAC	AD
Baccharis halimifolia	FAC	AD
Bacopa caroliniana	OBL	OD
Berchemia scandens		T
Blechnum serrulatum	FACW	OD
Callicarpa americana	U	U
Carex gigantea	OBL	OD
Carex glaucescens	FACW	T
Carex longii	FACW	T
Carex lupulina	FACW	T
Carex spp.		
Carex verrucosa	FACW	OD
Carex walteriana	OBL	T
Celtis laevigata	FACW	OD
Cephalanthus occidentalis	OBL	D
Cirsium nuttallii	FACW	T
Cladium jamaicense	OBL	D
Conyza canadensis	U	AD
Cynodon spp.	U	AD



Theoretical Wetland

New (?) idea – Zone approach

1. Plants have moved in three zones in high numbers and distribution.

2. Plants have moved in two zones in high numbers and distribution, and/or some plants have moved in three zones.

3. Plants have moved in one zone in high numbers and distribution, and/or some plants have moved in two zones.

4. Plants have moved in one zone in enough numbers and distribution to be of concern, and/or adaptive plants are extensive in number and distribution in the transition zone.

5. Normal zonation. Some plants may have migrated inward one zone, but they are small in number and/or right along the zone edge. Adaptive plants in the transition zone are only considered abnormal if they are extensive in numbers and distribution.

N/A Not enough **groundcover** to make evaluation


What to do with maidencane???

Other Issues

- Normal Pool
- Surveys
- Number of Wetlands