APPENDIX C – TECHNICAL DATA

Common Name	Scientific Name
American ginseng*	Panax quiquifolius
America hog peanut	Amphicarpaea bracteata
American beautyberry	Callicarpa americana
American beech	Fagus grandifolia
American lopseed	Phyrma leptostachya
Beaked panic grass	Panicum anceps
Black gum	Nyssa sylvatica
Black walnut	Juglans nigra
Black oak	Quercus veluntina
Bog hemp	Bohmeria cylindrica
Box elder	Acer negundo
Broad beech fern	Thelypteris hexagonoptera
Canada black snakeroot	Sanicula canadensis
Canada wild lettuce	Lactuca canadensis
Carolina buckthorn	Rhamnus carolinanus
Cherrybark oak	Quercus pagoda
Chestnut Oak	Quercus montana
Chinese Privet*	Ligustrum sinense
Christmas fern	Polystichum acrostichoides
Crane's fly orchid	Tipularia discolor
Deciduous holly	llex decidua
Devil's walking stick	Aralia spinosa
Ebony spleenwort	Asplenium platyneuron
Elephants foot	Elephantopus carolinianus
Flowering dogwood	Cornus florida
Green ash	Fraxinus pennsylvanica
Hackberry	Celtis laevigata
Hairy bedstraw	Galium pilosum
Hairy skullcap	Scuttelaria elliptica
Harvest lice	Agrimonia parviflora
Heal-all	Prunella vulgaris
Heart-leaf skullcap	Scuttelaria ovata
Hound's tongue	Cynoglossum virginicum
Indian tobacco	Lobelia inflata
Japanese honeysuckle**	Lonicera japonica
Japanese Stilt grass**	Microstegium venimum

 Table C-1
 Plant List of Species Observed on August 3, 2005

Common Name	Scientific Name
Jewel weed	Impatiens capensis
Jumpseed	Polygonum virginicum
Lizard's tail	Saururus cernuus
Loblolly pine	Pinus taeda
Mayapple	Podophyllum peltatum
Mockernut hickory	Carya tomentosa
Muscadine grape	Vitis rotundifolia
Naked tick treefoil	Desmodium nudiflorum
Northern red oak	Quercus rubra
Pawpaw	Asimina triloba
Persimmon	Diospyros virginiana
Poison ivy	Toxicodendron radicans
Rattan vine	Berchemia scandens
Rattlesnake fern	Botrychium virginianum
Red bud	Cercis canadensis
Red maple	Acer rubrum
Red mulberry	Morus rubrus
Resurrection fern	Pleopeltis polypodioides var michauxii
Roundleaf greenbrier	Smilax rotundifolium
Sassafras	Sassafras albidum
Shagbark hickory	Carya ovata
Silky dogwood	Cornus amoemum
Silver maple	Acer saccharinum
Slender lespedeza	Lespedeza virginica
Slender woodoats	Chasmanthium laxum
Slippery elm	Ulmus rubra
Smart weed	Persicaria pennsylvannica
Smooth sumac	Rhus glabra
Snowberry	Symphoricarpos orbiculatus
Solomon's plume	Smilicina racemosa
Southern lady fern	Athyrium filix-femina var asplenoides
Southern red oak	Quercus falcata
Spotted wintergreen	Chimaphila maculata
Strawberry bush	Euonymus americanus
Summer grape	Vitis aestivalis
Sweetgum	Liquidambar styriciflua
Tall goldenrod	Solidago altissima
Tulip poplar	Lireodendron tulipifera
Velvetleaf tick tree foil	Desmodium viridiflorum

Common Name	Scientific Name
Virginia pine	Pinus virginiana
Virginia creeper	Parthenocissus quiquefolius
White ash	Fraxinus americana
White oak	Quercus alba
White vervain	Verbena urticifolia
Wild black cherry	Prunus serotina
Wild hydrangea	Hydrangea arborescens
Wild yam	Dioscorea villosa
Willow oak	Quercus phellos
Winged elm	Ulmus alata
Winged sumac	Rhus copalina

* Species not observed by TVA botanist, but reported from the site ** Denotes nonnative exotic species

TVA VISUAL RESOURCES

SCENIC VALUE CRITERIA FOR SCENERY INVENTORY AND MANAGEMENT

The criteria for classifying the quality and value of scenery has been adapted from a scenic management system developed by the U.S. Forest Service and integrated with current planning methods used by the Tennessee Valley Authority. The classification process is also based on fundamental methodology and descriptions adapted from Landscape Aesthetics, A Handbook for Scenery Management, Agriculture Handbook Number 701, U.S. Forest Service, U.S.D.A. 1995.

The process and criteria are used to compare the value of scenery to other resource values during inventory and land planning tasks. They are also used to evaluate the extent and magnitude of visual changes that could result from proposed projects, as part of the environmental review required under NEPA. In addition they can be useful to help establish management objectives for improving or maintaining the scenic quality of managed lands.

Scenic Attractiveness - 3 levels

Attractiveness is a measure of scenic quality based on human perceptions of intrinsic beauty as expressed in the forms, colors, textures, and visual composition of each landscape. The combination of rock outcrops, water bodies, landforms, vegetation patterns, and other natural features that shape landscape character also help define scenic importance. The presence or absence of these features, along with valued attributes such as variety, uniqueness, mystery, pattern, order, vividness, harmony, and balance are used to classify the scenic attractiveness of a landscape.

- **Category 1**: Distinctive Areas where the variety of land forms, rock, vegetation patterns, water, and other features have outstanding or unique visual quality. These areas have strong, positive attributes that are relatively uncommon in the characteristic landscape. This category also includes areas in visually strategic locations that have somewhat more common attributes.
- **Category 2**: Common Areas where the land forms, rock, vegetation patterns, water, and other features have ordinary or common visual quality. These areas have generally positive but typical attributes, with a basic variety of forms, colors, and textures that are normally seen throughout the characteristic landscape.
- **Category 3**: Minimal Areas where the natural features have little change in form, line, color or texture resulting in low visual quality. Rock forms and vegetation patterns of any consequence are often not present, and these areas generally have weak or missing attributes. All areas not classified as 1 or 2 are included in this category.

Scenic Integrity - 4 levels

Integrity is a measure of scenic importance based on the degree of visual unity and wholeness of the natural landscape character. Human alteration can sometimes raise integrity, such as an impounded water body that unifies the landscape while adding variety, mystery, harmony, and balance. Most often scenic integrity is lowered by human alteration and the addition of visually disruptive elements. The presence and degree of discordant alteration is used to classify the scenic integrity of a landscape.

- **High**: Areas where the valued landscape character appears to be intact and unaltered, with very minor deviation. Any deviation present must repeat the form, line, color, texture and pattern of the landscape so closely and at such a scale that they are not evident.
- **Moderate**: Areas where the valued landscape character appears to be slightly altered. Noticeable deviations must be visually subordinate to the landscape being viewed, and borrow much of the natural form, line, color, texture and pattern.
- Low: Areas where the valued landscape character appears to be modestly altered. Deviations begin to dominate the landscape being viewed, but the alterations should share natural color, shape, edge pattern, and vegetation characteristics in order to remain compatible or complimentary.
- **Very Low**: Areas where the valued landscape character appears to be heavily altered. Deviations strongly dominate the landscape and may not share any of the visual attributes. The alterations may be visually disruptive and provide significant negative contrast to the natural landscape characteristics.

Scenic Visibility - 2 parts, 3 levels each

Landscape visibility is a measure of scenic importance based on several essential interrelated considerations which include viewer context and sensitivity, number of viewers, frequency and duration of view, level of detail seen, and seasonal variation. A large number of highly concerned viewers who view the landscape for a long time period may raise the scenic importance significantly. The importance may be much lower when only a few viewers with low concern see the landscape for a brief period. These considerations are combined in two parts which are used to classify the scenic visibility of a landscape.

Sensitivity : The level of scenic importance based on expressed human concern for the scenic quality of land areas viewed. Sensitivity may be derived/confirmed by resident and visitor surveys.

- Level 1: Areas seen from the reservoir, lake shore residents, and lake view residents, where the number of viewers and concern for scenic quality are normally quite high.
- Level 2: Areas seen from principle roadways, use areas, and other public viewing areas. Concern for scenic quality is generally high while the number of viewers, view frequency and duration are moderate.
- Level 3: Areas seen from secondary travel routes, use areas, and any not included in the other levels. Concern may be high in some areas, but number of viewers is generally low.

View Distance: A principal indicator of scenic importance based on the distance an area can be seen by observers, and the degree of visible detail within that zone.

- **Foreground**: From 0 feet to ½ mile. A distance zone where the individual details of specific objects are important and easily distinguished. Details are most significant within the immediate foreground, 0 300 feet.
- **Middleground**: From ½ mile to 4 miles. The zone where most object characteristics are distinguishable, but their details are weak and they tend to merge into larger patterns. When landscapes are viewed in this zone they are seen in broader context. Human alteration may contrast strongly with the larger patterns and make some middleground landscapes more sensitive than the foreground.
- **Background**: From 4 miles to the horizon. The distant landscape, where specific features are not normally discernible unless they are especially large, standing alone, or have a substantial color contrast. Details are generally not visible and colors are lighter.

Scenic Value Class - 4 levels

The value class of a landscape is determined by combining the levels of scenic attractiveness, scenic integrity and visibility. The table below shows the various combinations and the resulting scenic class. It is a general guide, and is intended to complement both a thorough field analysis and careful review of the visual absorption capacity.

- **Excellent**: Areas with outstanding natural features that appear unaltered. Very minor deviations may be present but are generally unnoticeable even in the foreground. These areas are highly visible in the foreground and middleground from both land and water. Unaltered areas that may be less outstanding but are in a visually strategic location also have excellent scenic value.
- **Good**: Areas with attractive but common scenic quality and no distinctive natural features. Minor human alteration may be seen in the foreground but is barely noticeable in the middleground. These areas have relatively high visibility from both land and water.
- Fair: Areas of common or minimal scenic quality with little or no interesting features. Moderate human alteration is seen in the foreground but is less distinct in the middleground due to compatible form and color. These areas have relatively high visibility from both land and water.
- **Poor**: Areas that have very little scenic importance and/or visually significant disturbances resulting from human activity. The alterations provide discordant contrast in the natural landscape due to incompatible size, shape, color, and material. The areas are clearly visible in the foreground and middleground, and have relatively high visibility from both land and water.

	Scenic Va	lue (Clas	s Se	elect	tion	Tab	le					
Visibility Levels: Sensitivity View Distance			1 egro	und	mic	1 dgrou	und	for	2 egro	und	2 midground		
Scenic Attractiveness Ca	ategories	1	2	3	1	2	3	1	2	3	1	2	3
	High	Е	G	F	E	E	G	Е	G	F	Е	Е	G
Scenic Integrity Levels	Moderate	G	G	F	E	G	F	G	G	F	E	G	F
	Low	F	F	Ρ	F	F	Р	F	F	Ρ	F	F	Ρ
	Very low	Ρ	Ρ	Ρ	F	Ρ	Ρ	Ρ	Ρ	Ρ	F	Ρ	Ρ
			E	= Exc					Class F = Fi	air; F	• = P	oor	

Visual Absorption Capacity

Absorption capacity indicates the relative ability of a landscape to accept human alteration with the least loss of landscape character and scenic value. These indicators are useful to help predict potential difficulty or success with proposed development and scenic management. They are based on characteristics of the physical factors found in a landscape. Each characteristic has a capacity range from less to more, and the primary ones are shown in the list below. Visual absorption is also affected by the variety of landscape patterns, and the amount of screening provided by landforms, rock, water bodies, and vegetation.

Factor	Least Capacity to Absorb Change	Greatest Capacity to Absorb Change
Slope	Steep	Level
	Unstable geology	Stable geology
Vegetation	Sparse cover	Dense cover
	Low cover, grasses and shrubs	Tall cover, trees
	Few species, little or no pattern	Multiple species, diverse pattern
Landforms	Simple shape	Diverse shapes, heavily dissected
Soils	Easily eroded	Erosion resistant
	Poor, slow revegetation	Rich, fast revegetation
Shoreline	Simple line, little or no interruption	multiple interruptions, diverse features
Color	Narrow range of indigenous colors	Broad range of indigenous colors

Desired Landscape Character

Scenic attractiveness and the existing level of scenic integrity serve as the foundation for selecting the preferred landscape character. Lake adjacency and ecosystem trends should be considered along with the historic visual character to help any changes be more complete, attractive, and sustainable. Several types of landscape character and the related long range objectives for scenic integrity are described below.

Natural Evolving landscape character expressing the natural change in

ecological features and processes with very limited human intervention.

Natural Appearing landscape character that expresses predominantly natural qualities but includes minor human interaction along with cultural features and processes that are relatively unobtrusive.

Pastoral landscape character expressing dominant human developed pasture, range, and meadow, along with associated structures, reflecting historic land uses, values, and lifestyles.

Rural landscape character that expresses sparse but dominant human residential and recreational development, along with associated structures and roadways that reflect current lifestyles.

Urban landscape character expressing concentrations of human activity in the form of commercial, residential, cultural, and transportation, facilities, along with supporting infrastructure.

Visual Management Objectives

Based on the scenic value class, management objectives may be developed to accomplish or maintain

the visual character desired for each area.

Preservation:

Areas classified Excellent, and managed for a natural evolving landscape character. Only very low

impact recreational and scientific activities are allowed, and no facilities are permitted.

Retention:

Areas classified Good, and managed for a natural appearing landscape character. Permitted activity or

minor development should repeat the natural form, line, color, and texture of the area and remain

visually subordinate to the surrounding landscape. Changes in the size, intensity, direction and pattern

of activity should be unobtrusive and not readily evident.

Modification: Areas classified Good or Fair, and managed for pastoral or rural landscape character. Permitted activity and development may dominate the original character but should remain visually compatible with the remaining natural landscape. Vegetation and landform alterations should repeat the natural edges, forms, color, and texture of the surrounding area. The scale and character of structures, roads, and other features should borrow naturally established forms, lines, lines, colors and patterns to provide the greatest possible visual harmony.

Maximum Modification: Areas classified Fair or Poor, and managed for urban landscape character. Permitted activity and development generally dominates the original visual character. Vegetation and landform alterations should remain visually harmonious with the adjacent landscape. When seen In the foreground and middleground, they may not fully borrow the surrounding natural forms, lines, colors and textures. Likewise, development features seen from the same distances may be out of

scale and have significant details that are discordant with the natural landscape character. Overall development should be directed toward achieving the greatest possible visual harmony.

Enhancement: Any area classified less than Excellent, with a relatively short term management objective intended to restore and/or improve the desired scenic quality. Rehabilitation activities may include alteration, concealment, or removal of obtrusive and discordant elements. Enhancement activities may include addition or modification of natural elements and man-made features to increase the variety and attractiveness of spaces, edges, forms, colors, textures, and patterns.

Wetland	Descri	ptors

Sample ID: B-3	P	hoto IC)(s):										
Flagging Description:									_		_		
Drawing:									_		_		
Please Include: North Arrow, Pro	ect	Center	fine, Su	rvey (Corridor Bound	laries.	Leng	gth of Wetland	Fea	ature. Distances fro	m	Centerline, Photo I	ocations
				τ	PLAND	TE	ST	PLOT.					
Obvious Connections to	_	-											
Waters of the US/State? Primary Water Source		Yes		No	Waterbody	_	shed				_	-	
(If other, note in comments)	\vdash	Cap	. Fringe	-	Overbank	ing		Sheet Flow		Groundwater		Precipitation	Other
TVARAM SCORE: Description of Wetland and Oth		omme			ATEGORY:	hitat fa	atur	as hadrologic r	-	me: description of t	lan 1	metland outside of a	e adlacent
to ROW; erosion potential, existing	dis	turban	oes, adja	cent l	and use, wildlif	e obser	rvati	ons, station num	abe	rs, lat-long, etc)	IFC	wedanio outside of e	e asjacene

- role	ct: Elk River Res	ort (Doss)	Invest	igator: P.C.	Durr	Norma	al Circun	nstances:	×	Sample ID:	Wet	and A: Pk	ot 1 (A-1)
Coun	ty: Lauderdale					Atypic	al Situat	ion:	Ц	Station/Structure #(s):			
State	: Alabama		Date:	8/25/05		Proble	em Area:			Cowardin Code:	PEM	VPSS/PF	01Ch
Veg	etation												
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2.	Acer saccharinu	m		Tree	Fa	acw	10.	Ludwigia	urugu	ayensis		Herb	Obl
3.	Acer rubrum			Tree	F	ac	11.	Triadenu	m wai	tevri		Herb	Obl
4.	Cephalanthus oc	cidentalis		Shrub	0	ы	12	Boehmen	nia cyń	indrica		Herb	Facer
5.	Comus amomum	9		Shrub	Fa	cw+	13.	Abernard	thera p	ahiloxeroides		Herb	Obl
6.	Ainus semulata			Shrub	Fa	CW+	14.	Saururus	cem	AUS		Herb	Obl
7.	Brunnichia cimho	25.8		Vine	F.	acw	15.	Polygon	um pu	nctatum		Herb	Facw
8.	Murdannia keisa	k		Herb	0	ы	16.	Carex ky	pulina			Herb	Obl
Perce	ent of Dominant	Species That are	OBL, FAC	W, or FAC:	16/16 =	100%							
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Wetland Descriptors

Sample ID: A-1	PI	hoto II	0(s): Ph	otos	1-4.					
Flagging Description: Outside p	erin	neter o	fwetland	i has	been flagged.	These a	re to be located b	y a licensed surveyor	r,	
Drawing:										
Please Include: North Arrow, Pro	ject	Cente	rline, Sur	vey (Corridor Bound	laries, Le	ngth of Wetland F	eature, Distances fro	m Centerline, Photo	Locations
		``````````````````````````````````````	Non-USA PFO		PF010 PF010 P551Ch		PEMICh	ER River (Wheeler Res.)		
Obvious Connections to	×	Yes		No	Waterbody/	Watershe	d: Elk River/Whe	eler Reservoir		
Waters of the US/State? Primary Water Source (If other, note in comments)	x	Ca	p. Fringe	Т	Overbanki		Sheet Flow	Groundwater	Precipitation	Other
TVARAM SCORE:	Γ	60	TVAR	AM C	ATEGORY:					-
Description of Wetland and Oth to ROW; crosion potential, existing This wetland is driven primar generally lack hydric soils and are includes 35% PEM, 25% PFO, 10	ily fr	terban om pe akly de	riodic flo ilimited b	oding	and use, wildlift of the area by cultative" vege	the adjo	tions, station num ining reservoir. W se Plot A-3). The	ers, lat-long, etc) etlands associated w	vith intermittent drai	nages

	ect: Elk River Res	ort (Doss)	Investiga	tor: P.C. Du	rr	Norma	al Circum	istances:	×	Sample ID:	Wet	land A, Pk	ot 2 (A-	2)
Cour	nty: Lauderdale					Atypic	al Situat	ion:		Station/Structure #(s):				
State	e: Alabama		Date: 8/	25/05		Proble	em Area:			Cowardin Code:	non	USACE P	FO	
Vec	getation										_			
		lant Species		Stratum	Indi	cator	<u> </u>		F	Nant Species	1	Stratum	Indi	ato
1.	Pinus taeda			Tree	F	ac	9.	Sambuco	us can	adensis		Shrub	Fa	CW-
2.	Cetis laevigata			Tree	Fa	icw.	10.	Partheno	cissu	s quinquefolia		Vine	F	ас
3.	Liriodendron tuly	pifera		Tree	F	ac	11.	Taxicode	Indiron	radicans		Vine	E.	ас
4.	Acer negundo			Tree	Ea	icw.	12.	Microste	gium v	imineum		Herb	Fa	iC+
5.	Morus rubra			Tree	F	ac	13.	Impation	s cape	misis		Herb	Fa	CW
6.	Ulmus american	a.		Sapling	Fa	w.	14.	Polygon	im ce	spitosum		Herb	Fa	cw-
7.	Cetis laevigata			Sapling	Fa	icw.	15.							
8.	Ligustrum sinen:	50		Shrub	F	ac	16.							
Perc	ent of Dominant	Species That are	OBL, FAG	W, or FAC:	14/14 =	100%								
	drology													
	pth to Free Water i pth to Saturated S	oil:	(in.)	_	turated in diment D		12 in.			Marks	Water	Stained Le	aves	5
Dep	pth to Saturated S arks: Hydrology in			\$4	diment D	eposits		_× (	Draina			Stained Le	saves	-
Rem Sol	pth to Saturated S arks: Hydrology in			\$4	diment D	eposits		_× (	Draina	ge Patterns			No	
Rem Soil	pth to Saturated S narks: Hydrology in <b>i/s</b>			rbanking of a	diment D	eposits		_× (	Draina	ge Patterns				
Dep Rem Soil Prof	pth to Saturated S narks: Hydrology in i <b>fs</b> Unit:		asional ove	stanking of a	diment D	eposits intermite	ent areek	x (	oraina age fr	ge Patterns			No	
Dep Rem Soil Prof	pth to Saturated S marks: Hydrology in ils Unit: Ne Description:	s provided by occa Matrix Color (	asional ove	stanking of a	diment D nearby i class:	eposits intermite	ent areek	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil?			No	
Dep Rem Soil Prof	pth to Saturated S arks: Hydrology in I/s Unit: Ne Description: apth (Inches)	s provided by occu Matrix Color ( 10Y	asional ove Munsell M	stanking of a	diment D nearby i class:	eposits intermite	ent creek Aunsell I	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil?		Textu	No re m	
Dep Rem Soil Prof	oph to Saturated S marks: Hydrology in ifs Unit: Ne Description: opth (Inches) 0-3	s provided by occu Matrix Color ( 10Y	asional ove Munsell M R 3/3	stanking of a	diment D nearby i class:	oposits intermitte Colors (N	ent creek Aunsell I	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%)		Textur sit loa	No re m	
Dep Rem Soil Prof	oph to Saturated S marks: Hydrology in ifs Unit: Ne Description: opth (Inches) 0-3	s provided by occu Matrix Color ( 10Y	asional ove Munsell M R 3/3	stanking of a	diment D nearby i class:	oposits intermitte Colors (N	ent creek Aunsell I	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%)		Textur sit loa	No re m	
Dep Rem Soil Prof	oph to Saturated S marks: Hydrology in ifs Unit: Ne Description: opth (Inches) 0-3	s provided by occa Matrix Color ( 10Y1 7.5Y	asional ove Munsell M R 3/3	stanking of a	diment D nearby i class:	oposits intermitte Colors (N	ent creek Aunsell I	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%)		Textur sit loa	No re m	
Rem Soil Prof	pth to Saturated Se arks: Hydrology in I/s Unit: Ne Description: epth (Inches) 0-3 3-10+	s provided by occu Matrix Color ( 10Y 7.5Y s:	asional ove Munsell M R 3/3	stanking of a	diment D nearby i class: Mottle C	oposits intermitte Colors (N	ant creak Aunsell I 3/3	x (	oraina age fr	ge Patterns om adjoining side slopes. Listed hydric soil? Attle Abundance (%)	Yes	Textur sit loa sandy lo	No re m	-
Rem Soil Prof	narks: Hydrology in ils Unit: Ne Description: epth (Inches) 0-3 3-10+ ric Soil Indicators	s provided by occu Matrix Color ( 10Y 7.5Y s:	asional ove Munsell M R 3/3	stanking of a	diment D nearby i class: Mottle C	Colors (N 10YR Epipedo	Aunsell I 3/3	x (	Me	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%) <-5 Aquic Moi	Yes	Textur sit loa sandy lo	No re m	-
Rem Soil Prof	pth to Saturated S arks: Hydrology in ils Unit: Ne Description: apth (Inches) 0-3 3-10+ ric Soil Indicators Gleyed or Low (	s provided by occu Matrix Color ( 10Y 7.5Y s:	asional ove Munsell M R 3/3	stanking of a	diment D nearby i e class: Mottle C	Colors (N 10YR Epipedo Organic (	Aunsell I 3/3 n Cont. Su	X (	Mk	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%) <-5 Aquic Moi	Yes sture Re	Textur sit loa sandy lo egime ons	No re m aam	-
Rem Soil Prot Hyd	th to Saturated Saturated Saturated Saturated Saturated Saturated Saturated Saturated Saturated Saturates Saturated Saturates	s provided by occu Matrix Color ( 10Y 7.5Y s: Chroma Colors	Munsell M R 3/3 R 4/6	oist)	diment D nearby i class: Mottle C - Histic - High C - Organ	Colors (N 10YR Epipedo Drganic ( ic Streal	n Cont. Su	X ( and drains Moist) f. Layer Si andy Soils	Mk	ge Patterns  m adjoining side slopes.  Listed hydric soil?  ttle Abundance (%)  <5  Soils Aquic Moi Reducing Other (Exp	Yes sture Re	Textur sit loa sandy lo egime ons	No re m aam	
Rem Soil Prof Hyd	th to Saturated Set arks: Hydrology in ils Unit: Ne Description: epth (Inches) 0-3 3-10+ ric Soil Indicators Gleyed or Low ( Sufficic Odor Concretions	s provided by occu Matrix Color ( 10Y 7.5Y s: Chroma Colors	Munsell M R 3/3 R 4/6	oist)	diment D nearby i class: Mottle C - Histic - High C - Organ	Colors (N 10YR Epipedo Drganic ( ic Streal	n Cont. Su	X ( and drains Moist) f. Layer Si andy Soils	Mk	ge Patterns  m adjoining side slopes.  Listed hydric soil?  ttle Abundance (%)  <5  Soils Aquic Moi Reducing Other (Exp	Yes sture Re	Textur sit loa sandy lo egime ons	No re m aam	
Rem Soil Prof Hydr Rem /etfla	the balance of the second seco	s provided by occu Matrix Color ( 10Y1 7.5Y s: Chroma Colors : meet USACE hys ation n Present?	Munsell M R 3/3 R 4/6 dric soil par	Drainage oist)	diment D nearby i class: Mottle C - Histic - Histic - Organ - Organ - me ATV	Colors (N Colors (N 10YR Epipedo Drganic ( ic Streal impacts	Aunsell I 3/3 n Cont. Su king in S were not	X ( and drain Moist) f. Layer Si andy Soils ted near pt	Me Andy S	ge Patterns om adjoining side slopes. Listed hydric soil? ttle Abundance (%) <-5 <-5 <	Yes sture Re	Textur silt loa sandy lo egime ons Remarks)	No re m nam	×
Rem Soil Prof De Hyd	th to Saturated Se arks: Hydrology in is Unit: Ne Description: epth (Inches) 0-3 3-10+ ric Soil Indicators Gleyed or Low C Sufficic Odor Concretions arks: Soils do not arks: Soils do not	s provided by occu Matrix Color ( 10Y1 7.5Y s: Chroma Colors : meet USACE hys ation n Present?	Munsell M R 3/3 R 4/6	Drainage	Histic Histic Organ Mottle C	Colors (N Colors (N 10YR Epipedo Organic ( ic Streat impacts	Aunsell I Aunsell I 3/3 0 Cont. Su king in S were not this Sam	X ( and drain Moist) f. Layer Si andy Soils ted near pt	Andy S andy S t With USPV	ge Patterns  m adjoining side slopes.  Listed hydric soil?  ttle Abundance (%)  <-5  Soils Aquic Moi Reducing Other (Exp oints 5 and 6.  n a USACE Welland?	Yes sture Re Condition	Textur sit loa sandy lo egime ons Remarks)	No m nam	

Wetland Descriptors														
Sample ID: A-2	Pt	noto ID	(s): Pt	hotos :	5-7.									
Flagging Description: Outside p	erin	seter of	wetlan	nd has	been flagged.	These	are	to be located	by a	a licensed survey	or.			
Drawing:														
Please Include: North Arrow, Proj	ect	Centeri	ine, Su	irvey (	Corridor Bound	Jaries, L	.eng	th of Wetland	Fea	ature, Distances f	rom	Centerline, Photo	Loca	tions
		SEI	E DI	RA	VING FO	OR V	NE	TLAND	А	-1.				
Obvious Connections to Waters of the US/State?	х	Yes		No	Waterbody/	Watersh	hed:	Elk River (W	hee	eler Reservoir)				
Primary Water Source (if other, note in comments)	х	Cap	. Fring	e	Overbank	ing	Τ	Sheet Flow		Groundwater		Precipitation	Т	Other
TVARAM SCORE:	-		TVAR	AM C	ATEGORY:		-							
Description of Wetland and Oth											the	wetland outside of	or ad	ljacent
to ROW; erosion potential, existing	dist	urbano	rs, adja	scent la	and use, wildlif	e observ	vatio	ns, station nun	aber	rs, lat-long, etc)				
This level area near the emba support hydric soil formation. The	are	a conta	ins sor	me bra	ided channels	which s	supp	ort intermitten	t or	ephemeral flow.	AT	V damage to thes	e cha	innels is
moderate. The overstory is strong 100 ft tall.	iy o	ominate	id, in s	ome a	reas, by large	lobiolly	pine	s which exce	ed 2	2.5 ft in diameter.	M	ost trees also appe	ar to	be >

Proje	ct: Elk River Re	sort (Doss)	Investiga	tor: P.C. Dun	,	Norma	al Circur	istances:	×	Sample ID:	~~~~	land A, Pl	of 3 (A-3	'n
	ity: Lauderdale	and the search		CALL CONCERNEN			al Situat		Ĥ	Station/Structure #(s):			10010	
	: Alabama		Date: 8/	25/05			m Area:		$\vdash$	Cowardin Code:	Link	and Test		
Constru	. Presente		Daw. or	20100		Filden	an Poles.			constant code.	Opt	ing reat		_
Veg	etation						,				-		-	
_	,	Plant Species		Stratum	Indic	cator				Plant Species	- 1	Stratum	Indica	ator
1.	Pinus taeda			Tree	F.	ас	9.	Comus fi	lorida		$\rightarrow$	Shrub	Fac	au
2.	Quercus stellat	a		Tree	Fa	ou	10.	Fagus gr	andik	vlia		Shrub	Fac	ou
3.	Liriodendron tui	lipifera		Tree	Fa	ac	11.	Lonicera	japor	ica		Vine	Fac	⊳
4,	Prunus serctine	•		Sapling	Fa	icu	12.	Berchem	ia sca	indens		Vine	Fac	w
5.	Carya ovalis			Sapling	Fa	IOU	13.	Taxicode	vidror	radicans		Vine	Fac	C
в.	Liriodendron tui	ipřera		Sapling	F	ас	14.	Partheno	cissu	s quinquefolia		Herb	Fac	c
7.	Carya tomentos	58		Sapling	U	ipil	15.	Vitis rotu	ndifol	a		H erb	Fac	0
8.	Carya ovalis			Shrub	Fa	icu	16.	Sanicula	cana	denais		Herb	Fac	u
Perce	ent of Dominant	Species That a	re OBL, FAG	W, or FAC:	7/16 = 4	3.8%								
Hve	irology													
_	Observations:			Wetland Hydr	ology ir	dicator	s							-
	oth of Surface Wa	ster:		rimary Indic							Seco	idary Indi	cators	
			(in.)	-	ndated				Drift Li	nes		ed Root C		
Liep	on to Pree water													
	oth to Free Water oth to Saturated 5		-	Sat	urated in	Upper	12 in.		Nater	Marks	Water	Stained L	NEVES.	
	oth to Saturated 5		(in.)	_		h Upper	12 in.			Marks	Water	Stained Lo	naves	
			-	_	urated ir liment D		12 in.			Marks	Water	Stained L	eaves	
Dep	oth to Saturated S		(in.)	_			12 in.				Water	Stained Lo	eaves	
Dep Rem	oth to Saturated S arks: No hydrolo	Soil:	(in.)	_			12 in.				Water	Stained L	eaves	
Dep Rem Soil	oth to Saturated S arks: No hydrolo	Soil:	(in.)	_	liment D		12 in.				Water		No	
Dep Rem Soil Soil	oth to Saturated S arks: No hydrolo <b>/s</b> Unit:	Soil:	(in.)	Sed	liment D		12 in.			ge Patterns				
Dep Rem Soil Profi	oth to Saturated S arks: No hydrolo Is Unit: Ie Description:	Soil:	(in.) sent.	Sec	liment D	eposits			Draina	ge Patterns			No	
Dep Rem Soil Soil Profi	oth to Saturated S arks: No hydrolo Is Unit: le Description: pth (Inches)	Soil:	(in.) sent.	Sec	liment D	eposits	12 in.		Draina	ge Patterns		Textu	No	
Dep Rem Soil Profi	arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3	Soil: gy indicators pre Matrix Color 10	(in.) sent. (Munsell M	Sec	liment D	ieposits	Aunsell I		Draina	ge Patterns		Textu	No	
Dep Rem Soil Profi	oth to Saturated S arks: No hydrolo Is Unit: le Description: pth (Inches)	Soil: gy indicators pre Matrix Color 10	(in.) sent.	Sec	liment D	eposits	Aunsell I		Draina	ge Patterns		Textu	No	
Dep Rem Soil Profi	arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3	Soil: gy indicators pre Matrix Color 10	(in.) sent. (Munsell M	Sec	liment D	ieposits	Aunsell I		Draina	ge Patterns		Textu	No	
Dep Rem Soil Profi	arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3	Soil: gy indicators pre Matrix Color 10	(in.) sent. (Munsell M	Sec	liment D	ieposits	Aunsell I		Draina	ge Patterns		Textu	No	
Rem. Soil Soil De	arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3	Soil: gy indicators pre Matrix Color 10 7.6	(in.) sent. (Munsell M	Sec	liment D	ieposits	Aunsell I		Draina	ge Patterns		Textu	No	
Rem. Soil Soil De	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator	Soil: gy indicators pre Matrix Color 10 7.6	(in.) sent. (Munsell M	Sec	class: Aottle C	ieposits	Aunsell I 3/3		Draina	ge Patterns	Yes	Textua Ioam siit Ioa	No	
Rem. Soil Soil De	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator	Soil: gy indicators pre Matrix Color 10 7.6	(in.) sent. (Munsell M	Sec	class: Nottle C	Colors (N 10YR Epipedo	Aunsell I 3/3		M	Listed hydric soil?	Yes	Textu loam sit loa	Nio re m	
Rem. Soil Soil De	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator Gieyed or Low	Soil: gy indicators pre Matrix Color 10 7.6	(in.) sent. (Munsell M	Sec	dass: dottle C Histic   High C	Colors (N 10YR Epipedo Organic (	Aunsell I 3/3 n. Cont. Su	Moist)	Mk	Listed hydric soil?	Yes	Textu Ioan sit Ioa	Nio re m	
Dep Rem. Soil 1 Profi De	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator Gleyed or Low Suffic Odor Concretions	Soil: gy indicators pre Matrix Color 10 7.6	(in.) sent. (Munsell M YR 3/3 YR 4/3	Sec	dass: dottle C Histic   High C	Colors (N 10YR Epipedo Organic (	Aunsell I 3/3 n. Cont. Su	Moist)	Mk	Listed hydric soil?	Yes	Textu loam sit loa	Nio re m	
Rem. Soil Profi De	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator Gleyed or Low Suffic Odor Concretions	Soil: gy indicators pre Matrix Color 10 7.6  rs: Chroma Colors soil indicators pre	(in.) sent. (Munsell M YR 3/3 YR 4/3	Sec	dass: dottle C Histic   High C	Colors (N 10YR Epipedo Organic (	Aunsell I 3/3 n. Cont. Su	Moist)	Mk	Listed hydric soil?	Yes	Textu loam sit loa	Nio re m	
Rem Soil Profi De Hydr	th to Saturated S arks: No hydrolo S Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator Gieyed or Low Suffic Odor Concretions arks: No hydric s arks: No hydric s	Soil : gy indicators pre Matrix Color 10 7.5 Chroma Colors soil indicators pre ation on Present?	(Munsell M YR 3/3 YR 4/3 sent.	Drainage	dass: dottle C Histic High C Organi	Epipedo Drganic ( ic Streal	Aunsell I 3/3 n Cont. Su king in S	Moist) rf. Layer Si andy Soils	Mk	Listed hydric soil?  Listed hydric soil?  Listed hydric soil?  Adjuic Mon Soils Adjuic Mon Reducing Other (Ex in a USACE Wetland?	Yes	Textua Ioam siit Ioa egime ons Remarks)	No No	×
Rem. Soil Profi De Hydr Rem. Vetla	th to Saturated S arks: No hydrolo Is Unit: Ie Description: pth (Inches) 0-3 3-10+ ic Soil Indicator Gieyed or Low Sufficic Odor Concretions arks: No hydric o	Soil: gy indicators pre Matrix Color 10 7.5 Chroma Colors soil indicators pre ation ation present?	(Munsell M YR 3/3 YR 4/3	Drainage	Histic C Organ	Epipedo Crganic C ic Streal	Aunsell I 3/3 n Cont. Su king in S this Sam pes area	Moist) rf. Layer Si andy Soils	andy :	Listed hydric soil?  Listed hydric soil?  ttle Abundance (%)     ottle Abundance (%)    <5	Yes isture R Condition	Textu loam sit loa egime ons Remarks)	No m	

#### Wetland Descriptors

Sample ID: A-3	Photo ID(s):
Flagging Description:	
Drawing:	
Please Include: North Arrow, Pro	ect Centerline, Survey Corridor Boundaries, Length of Wetland Feature, Distances from Centerline, Photo Locations
Obvious Connections to Waters of the US/State?	Yes x No Waterbody/Watershed:
Primary Water Source (If other, note in comments)	Cap. Fringe Overbanking Sheet Flow Groundwater Precipitation Other
TVARAM SCORE:	TVARAM CATEGORY:
Description of Wetland and Oth- to ROW; erosion potential, existing	or Commonts: (i.e. forest age class; habitat features; hydrologic regime; description of the wetland outside of or adjacent disturbances, adjacent land use, wildlife observations, station numbers, lat-long, etc)
	UPLAND TEST PLOT.

						Norma					140-44	and B, Pl	lot 1 (B	
Proje	ect: Elk River Res	ort (Doss)	Investiga	tor: P.C. Du	Υ.		al Circun	istances:	×	Sample ID:	VVet.			-10
Cour	nty: Lauderdale					Atypic	al Situat	ion:		Station/Structure #(s):				
State	e: Alabama		Date: 8/	25/05		Proble	em Area:		Cowardin Code		PEM/PSS/PF01Ch			
Veg	etation													
_	P	lant Species		Stratum	Indi	cator			Plant Species			tratum	Indi	cate
1.	Liquidamber styr	raciflua		Tree	Fa	BC+	9.	Berchern	Berchemia scandens			Vine	Fi	icw
2.	Liriodendron tuly			Tree	Tree F		10.	Ludwigia	lepto	carpa		Herb	0	Obl
3.	Linodendron tuly			Sapling	E	ac	11.	Triadenu	m wa	teri		Herb	0	ы
4.	Acer rubrum			Sapling	F	ac	12.	Ateman	thera (	ohiloxeroides		Herb	0	ж
5.	Liquidamber sty	raciflua		Sapling	Fa	ac+	13.	Eclipta a	lba			Herb	Fa	Cer-
6.	Cephalanthus or	ocidentalis		Shrub	0	ы	14.	Boehme	nia cyl	indrica		Herb	Fa	0w+
7.	Cornus amomun	n		Shrub	Fa	Cw+	15.	Hydrocol	lyle sp	h		Herb		
8.	Smilax rotundifo	ña -		Vine	F	ac	16.	Bidens s	ρ.			Herb		
Perc	ent of Dominant	Species That are	OBL, FAC	W, or FAC:	14/14 =	100%								
														_
	drology 1 Observations:			Vetland Hyd										_
Dep	pth to Free Water i	in Pit: 0	(in.)	Inc					Drift L					5
Dep	oth to Saturated S	oil: 0	(in.)	x Sa x Se	turated in diment D				Nater	Marks x ge Patterns	Water \$	Stained L	eaves	5
Dep	oth to Saturated S arks: Hydrology in	oil: 0	(in.)	x Sa x Se					Nater	Marks ×	Water 5	itained L	eaves	5
Dep Rem Sol	oth to Saturated S arks: Hydrology in	oil: 0	(in.)	x Sa x Se	diment D				Nater	Marks ×	Water S	Stained L	No	•
Des Rem Soil	oth to Saturated S arks: Hydrology in <b>//s</b>	oil: 0	(in.)	x Sa x Se ervoir level.	diment D				Nater	Marks X ge Patterns		Itained L		5
Dep Rem Soil Prof	oth to Saturated S arks: Hydrology in <b>Is</b> Unit:	oil: 0	(in.) pally by res	x Sa x Se ervoir level. Drainage	diment D	Deposits			Nater Draina	Marks X ge Patterns		Textu	No	5
Dep Rem Soil Prof	oth to Saturated S arks: Hydrology in Is Unit: Ile Description: opth (Inches)	oil: 0 s controlled princi Matrix Color (	(in.) pally by res Munsell M	x Sa x Se ervoir level. Drainage	diment D	Deposits			Nater Draina	Marks × ge Patterns		Textu	No	5
Dep Rem Soil Prof	oth to Saturated S arks: Hydrology in Is Unit: Ne Description: opth (Inches) 0-7	oil: 0 s controlled princi Matrix Color 10Y	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D	Colors (8	Nunsell		Nater Draina	Marks × ge Patterns		Textu	No	5
Dep Rem Soil Prof	oth to Saturated S arks: Hydrology in Is Unit: Ile Description: opth (Inches)	oil: 0 s controlled princi Matrix Color 10Y	(in.) pally by res Munsell M	x Sa x Se ervoir level. Drainage	diment D	Deposits	lunsell		Nater Draina	Marks × ge Patterns		Textu	No	5
Dep Rem Soil Prof	oth to Saturated S arks: Hydrology in Is Unit: Ne Description: opth (Inches) 0-7	oil: 0 s controlled princi Matrix Color 10Y	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D	Colors (8	lunsell		Nater Draina	Marks × ge Patterns		Textu	No	s
Rem Soli De	oth to Saturated S arks: Hydrology in Is Unit: Ne Description: opth (Inches) 0-7	oil: 0 s controlled princi Matrix Color 10Y 10Y	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D	Colors (8	lunsell		Nater Draina	Marks × ge Patterns		Textu	No	5
Rem Soli De	oth to Saturated Se arks: Hydrology in I/s Unit: I/e Description: o-7 7-10+	oil: 0 s controlled princi Matrix Color 10Y 10Y E	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D class: Mottle C	Colors (8	Junsell 3/2		Nater Draina	Marks × ge Patterns	Yes	Textu sit	No	5
Rem Soli Prof	oth to Saturated S arks: Hydrology in 75 Unit: Ne Description: o-7 7-10+ ric Soil Indicators	oil: 0 s controlled princi Matrix Color 10Y 10Y E	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D class: Mottle C	Colors (N 10YR Epipedo	Munsell 3/2		Mater	Marks × ge Patterns Listed hydric soil? ttle Abundance (%) 5 Aquic Mo	Yes	Textu silt silty cl	No	5
Rem Soil Prof De	oth to Saturated Se arks: Hydrology in Is Unit: Ne Description: o-7 7-10+ ric Soil Indicators Gleyed or Low (	oil: 0 s controlled princi Matrix Color 10Y 10Y E	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D class: Mottle C	Colors (N 10YR Epipedo Organic (	Wunsell 3/2 in Cont. Su	Moist)	Mater Draina Me	Marks × ge Patterns Listed hydric soil? ttle Abundance (%) 5 Aquic Mo	Yes isture Re Conditio	Textu sit sity cl gime ns	No ire	5
Rem Soil Prof De Hydr	th to Saturated Se arks: Hydrology in Is Unit: Ite Description: o-7 7-10+ ric Soil Indicators Gleyed or Low C Suffdic Odor	oil: 0 s controlled princi Matrix Color 10Y 10Y E	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D class: Mottle C	Colors (N 10YR Epipedo Organic (	Wunsell 3/2 in Cont. Su	Moist)	Mater Draina Me	Marks × ge Patterns Listed hydric soil? ttle Abundance (%) 5 5 Soils Aquic Mo	Yes isture Re Conditio	Textu sit sity cl gime ns	No ire	s
Rem Soil Prof De Hydr X X Rem	oth to Saturated Se arks: Hydrology in is Unit: Ne Description: or or or or or or or or or or or or or	oil: 0 s controlled princi s controlled princi Matrix Color 107 107 s: Chroma Colors ation	(in.) pally by res Munsell M R 3/2	x Sa x Se ervoir level. Drainage	diment D class: Mottle C	Colors (N 10YR Epipedo Organic ( ic Streal	Nunsell 3/2 n Cont. Su king in S	Moist) rf. Layer Si andy Solls	Mater Draina Me	Marks X ge Patterns Listed hydric soil? Listed hydric soil? ttle Abundance (%) 5 5 5 5 5 5 5 5 6 6 6 7 7 7 7 7 7 7 7 7	Yes isture Re Conditio	Textu sit sity cl gime ns	No ire	s
Rem Soil Prof De Hydr X X Rem	th to Saturated Se arks: Hydrology in Is Unit: Ne Description: opth (Inches) 0-7 7-10+ 7-10+ in Soil Indicators Gleyed or Low C Sufficio Odor Sufficio Odor Concretions arks: arks:	oil: 0 s controlled princi s controlled princi Matrix Color ( 107 107 5: Chroma Colors ation h Present?	(in.) pally by res Munsell M R 3/2 R 5/2	x Sa x Se ervoir level. Drainage oist)	diment D class: Mottle C Histic Organ	Colors (N 10YR Epipedo Drganic G ic Streal	Munsell 3/2 in Cont. Su king in S this Sam	Moist) rf. Layer Si andy Solls	Mater Draina andy 3	Marks × ge Patterns Listed hydric soil? ttle Abundance (%) 5 5 Soils Aquic Mo Reducing Other (Ex n a USACE Wetland?	Yes isture Re Condition plain in P	Textu silt silty cl gime ns temarks)	No ire lay	5
Rem Soil Prof De Hydr X X Rem Vetla	oth to Saturated Se arks: Hydrology in is Unit: Ne Description: or or or or or or or or or or or or or	oil: 0 s controlled princi s controlled princi Matrix Color ( 107 107 5: Chroma Colors ation h Present?	(in.) pally by res Munsell M R 3/2 R 5/2	x Sa x Se ervoir level. Drainage oist)	Histic Organ	Colors (N 10YR Epipedo Organic ( iic Streal	Munsell 3/2 in Cont. Su king in S this Sam oes area	Moist) rf. Layer Si andy Solls	Mater Draina andy :	Marks X ge Patterns Listed hydric soil? Listed hydric soil? ttle Abundance (%) 5 5 5 5 5 5 5 6 6 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Yes isture Re Conditio plain in R	Textu silt silty cl gime ns temarks)	No ire lay	s

#### Wetland Descriptors

Sample ID: B-1	P	hoto ID	(s): 8-	10.								
Flagging Description: Outside p	erir	neter of	wetlan	d has	been flagged.	These a	are to be located	by a licens	ed survey	or.		
Drawing:												
Please Include: North Arrow, Pro	ject	Center	line, Su	irvey (	Corridor Bound	taries. Lo	ength of Wetland	Feature, D	istances f	from	Centerline, Photo	Locations
Non-USACE PFO PFO	-	Ope	n Wat	tor	AND	_	M1Ch	Photo 8			River eeler Res.)	
Obvious Connections to	Ţ	Yes		No	Waterbork	Watersh	ed: Els River M	heeler Res	ervoirt			
Waters of the US/State? Primary Water Source	×	Yes	Erie	No	· · · ·		ed: Elk River (W				Provinitation	Alber
Waters of the US/State?	××	Cap	. Fringe	•	Overbank		ed: Elk River (W Sheet Flow		ervoir) ndwater		Precipitation	Other
Waters of the US/State? Primary Water Source (If other, note in comments) TVARAM SCORE:	×	Cap 61	TVAR	AM C	Overbank	ing	Sheet Flow	Grour	ndwater			
Waters of the US/State? Primary Water Source (If other, note in comments)	×	Cap 61	TVAR	AM C	Overbank ATEGORY: st age class; ha	ing bitat feat	Sheet Flow	Grour	ndwater	fthe		

Proje	ect: Elk River R	esort (Doss)	Investigat	estigator: P.C. Durr			al Circun	istances:	×	Sample ID:	Wetland B, Plot 2 (B-2)			3-2)
Cour	nty: Lauderdale					Atypic	al Situat	ion:		Station/Structure #(s):				
State	e: Alabama		Date: 8/2	25/05		Proble	m Area			Cowardin Code:	non-4	USACE I	PFO	
Veg	getation													
		Plant Species		Stratum	Indi	cator				Plant Species	S	tratum	Ind	icator
1.	Liquidambar a	tyracifiua		Tree	Fa	80+	9.	Berchem	ia sca	indens		Vine	F	acw
2.	Linodendron tulipifera			Tree	Tree Fa		10.	Impatien	s cap	ensis		Herb	E	acw
3.	Acer saccharinum			Tree	Tree Fa		11.	Microste	gium	vimineum	Herb		F	ac+
4.	Liniodendron tulipifera			Sapling Fi		90	12.	Boehmer	ria cyl	indrica	11	Herb	Fa	CW+
5.	Acer negundo			Shrub	Fa	ICW	13.	Polygon	ITT CO	spitosum		Herb	F	acw
6.	Ligustrum sin	ense		Shrub	F	ac	14.							
7.	Lonicera japo	nica	1 1 1	Vine	F	ac-	15.							
8.	Parthenocissu	is quinquefolia		Vine	F	ac	16.							
Perc	ent of Domina	nt Species That are	OBL, FAC	W, or FAC:	12/13 =	92.3%								
Hyd	drology													
Field	d Observations	:	v	Netland Hyd	irology la	ndicator	5:							
Dep	pth of Surface V	later:	(in.) P	rimary Indi	cators						Second	dary Ind	licators	s
Dep	pth to Free Wat	ar in Pit:	(in.)	Inv	undated			1	Drift Li	nes	Oxidized	d Root C	hanne	łs
Dep	pth to Saturated	Soil:	(in.)	Sa	turated in	n Upper	12 in.		Nater	Marks ×	Water S	tained L	.eaves	
				Se	diment D	eposits		×	Draina	ge Patterns				
Rem	arks: This area	receives periodic ov	antanic for	-	the inter	n hatfin	nek							
Pogni	arks. This area	receives periodic of	Nor Dank, Inc.	w rom a nea	rey men	intern G	een.							
Soi	ils ,												_	
Soil	Unit:			Drainage class:						Listed hydric soil?	Yes		No	
Prof	le Description													
De	epth (Inches)	Matrix Color (	Munsell M	oist)	Mottle C	colors (N	Aunsell	Moist)	M	ottle Abundance (%)		Textu	æ0	
	0-4	1097	R 4/2									silt loa	am	
	4-7	1091	R 3/3			7.5YR	4/4			25		silt loa	am	
	7-10+	7.5Y	R 5/4			7.5YR	4/3			25	,	silty clay	loam	
Hyd	ric Soil Indicate	ors:												
	Gleyed or Lo	w Chroma Colors			Histic	Epipedo	n			Aquic Mois	ture Rep	gime		
	Sulfidic Odor				High (	Organic (	Cont. Su	rf. Layer Si	andy 3	Soils Reducing (	ondition	15		
	Concretions				Organ	ic Streak	king in S	andy Soils		Other (Exp	lain in R	emarks)	,	
Rem	arks: No hydric	soil indicators prese	ent.											
Vetla	and Determi	nation												
	rophytic Vegetat		Yes	× N	0	ls	this San	pling Point	With	in a USACE Wetland?	Yes		No	х
Wet	and Hydrology	Present?	Yes	× N	0	De	oes area	only meet	USF	VS wetland definition?	Yes	×	No	
Hydr	ric Soils Present	?	Yes	N	0 X	ls	wetland	mapped or	NW	?	Yes	_	No	х
Estir	mated size:													_
							_		_					_

Wetland Descriptors													
Sample ID:	PI	hoto ID	(s): Ph	oto 1	1.								
Flagging Description:	_												
Drawing:									_		_		
Please Include: North Arrow, Pro	ject	Center	line, Su	rvey (	Corridor Bound	laries,	Leng	th of Wetland	Fei	ature, Distances fi	om	Centerline, Photo I	Locations
		SE	E DF	RA۱	NING FO	DR	WE	ETLAND	E	3-1.			
Obvious Connections to Waters of the US/State?	х	Yes	Π	No	Waterbody	Waters	shed	Elk River (W	hee	eler Reservoir)			
Primary Water Source (If other, note in comments)	x	Cap	. Fringe	,	Overbank	ing	Т	Sheet Flow	Γ	Groundwater		Precipitation	Other
TVARAM SCORE:	۲		TVAR	AM C	ATEGORY:		-		_				
Description of Wetland and Oth	er C	omme				bitat fe	atur	es: hydrologic r	eel	me: description of	the	wetland outside of a	or adjacent
to ROW; erosion potential, existing												inclassic calculate of t	
This area meets the USFWS or ephemeral flow. ATV damage													
or opiniting and the state opining of	10-11	0.00 011	di intensi i					our our of the output		o donn gradeni			
									_				

			Investigation		r	Norma	al Circun		x		Wet	land B, Pi	ot 3 (B-3)
Proje	ect: Elk River Re	rsort (Doss)	invesoga	tor: P.C. Dur				istances:	L ^	Sample ID:			
Cour	nty: Lauderdale					Atypic	al Situat	ion:		Station/Structure #(s):			
State	e: Alabama		Date: 8/	25/05		Proble	em Area			Cowardin Code:	Upla	and Test	
Veg	getation												
Plant Species				Stratum	Indi	cator			Plant Species			Stratum	Indicat
1.	Carya ovata	serotina		Tree	Fa	licu	9.	Araila sp	inosa			Shrub	Fac
2.	Prunus seratin			Tree		BOU	10.	Ulmus americana				Shrub	Face
3.	Quercus albe					HOU	- 11.	Ligustrum	n sine	nse		Shrub	Fac
4.	Ulmus alata			Sapling	Fa	cu+	12.	Berchem	ia sca	ndens		Vine	Facw
5.	Carya ovata			Sapling	Fi	ecu.	13.	Rubus ar	gutus			Herb	Facu
6.	Cercis canade	nsis		Sapling	Fa	NOU	14.	Aspleniu	m plat	yneuron		Herb	Facu
7.	Cercis canade	nsis		Shrub	Fa	ecu.	15.	Polygon	anto vin	pinianum		Herb	Fac
8.	Quercus albe			Shrub	Fi	ecu	16.	Geum sp	b.			Herb	-
Perc	ent of Dominan	t Species That ar	e OBL, FAC	W, or FAC:	5/15 = 3	33.3%							
<u></u>	de a la ma												
_	drology d Observations:			Vetland Hydr									
	pth to Free Wate		(in.)		ndated				Drift Li			ed Root C	
Dep	pth to Saturated		(in.)	Sat		n Upper Xeposits			Nater	Marks ge Patterns		Stained L	
Dep Dep	pth to Saturated	Soil:	(in.)	Sat	urated in				Nater	Marks			
Dep Dep Rem	pth to Saturated	Soil:	(in.)	Sat	urated in Siment D				Nater	Marks		Stained L	
Dep Dep Rem Soil	pth to Saturated narks: No hydroli i <b>/s</b>	Soll:	(in.)	Sat	urated in Siment D				Nater	Marks	Water	Stained L	eaves
Dep Dep Rem Soil Prof	pth to Saturated harks: No hydrol ifs Unit:	Soll:	(in.)	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks	Water	Stained L	No
Dep Dep Rem Soil Prof	pth to Saturated harks: No hydrol ifs Unit: Ne Description:	Soil:	(in.)	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks ge Patterns	Water: Yes	Stained L/	No
Der Der Rem Soil Prof	pth to Saturated harks: No hydrol (/s Unit: file Description: epth (Inches)	Soil:	(in.) ient. (Munsell M	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks ge Patterns	Water: Yes	Stained L/	No re fragments
Der Der Rem Soil Prof	harks: No hydrol ifs Unit: III Description: epth (Inches) 0-7	Soil:	(in.) ient. (Munsell M	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks ge Patterns	Water: Yes	Stained Li Textu paam, rock	No re fragments
Der Der Rem Soil Prof	harks: No hydrol ifs Unit: III Description: epth (Inches) 0-7	Soil:	(in.) ient. (Munsell M	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks ge Patterns	Water: Yes	Stained Li Textu paam, rock	No re fragments
Rem Soil Prot	harks: No hydrol ifs Unit: III Description: epth (Inches) 0-7	Soil:	(in.) ient. (Munsell M	Sat Sec	urated in Siment D class:	Deposits			Nater Draina	Marks ge Patterns	Water: Yes	Stained Li Textu paam, rock	No re fragments
Rem Soil Prot	narks: No hydrol i/s Unit: No hydrol i/s Unit: No hydrol i/s Unit: 10-7 stopper @ 7 ric Soil Indicato	Soil:	(in.) ient. (Munsell M	Sat Sec	class: Mottle C	Deposits	Munsell		Nater Draina	Marks ge Patterns Listed hydric soil? ttle Abundance (%)	Yes silt k	Textu Dam, rock	No re fragments
Rem Soil Prot	narks: No hydrol i/s Unit: No hydrol i/s Unit: No hydrol i/s Unit: 10-7 stopper @ 7 ric Soil Indicato	Soil: ogy indicators pres Matrix Color 101	(in.) ient. (Munsell M	Sat Sec	urated in fiment D class: Mottle C	Colors (N	Munsell		Mater	Marks ge Patterns Listed hydric soil? ttle Abundance (%) Aquic Mo	Water : Yes silt k	Stained L Textu pam, rock rock	No re fragments
Rem Soil Prot	ht to Saturated harks: No hydrol ils Unit: the Description: epth (Inches) 0-7 stopper @ 7 ric Soil Indicato Gleyed or Low	Soil: ogy indicators pres Matrix Color 101	(in.) ient. (Munsell M	Sat Sec	class: Mottle C	Colors (N Epipedo Organic (	Munsell m cont. Su	Moist)	Mater Draina Mo	Marks ge Patterns Listed hydric soil? ttle Abundance (%) ttle Abundance (%) Goils Aquic Mo	Vater : Yes silt k isture Re Condition	Stained L Textu pam, rock rock	No re fragments
Deg Deg Soil Soil De 1 Hyd	narks: No hydroli i/s Unit: Ne Description: epth (Inches) 0-7 stopper @ 7 ric Soil Indicato Gleyed or Low Sulfidic Odor Concretions	Soil: ogy indicators pres Matrix Color 101	(Munsell M	Sat Sec	class: Mottle C	Colors (N Epipedo Organic (	Munsell m cont. Su	Moist)	Mater Draina Mo	Marks ge Patterns Listed hydric soil? ttle Abundance (%) ttle Abundance (%) Goils Aquic Mo	Vater : Yes silt k isture Re Condition	Stained Lo Textu barn, rock rock egime ons	No re fragments
Rem Soil Prof	narks: No hydroli i/s Unit: Ne Description: epth (Inches) 0-7 stopper @ 7 ric Soil Indicato Gleyed or Low Sulfidic Odor Concretions	Soil: ogy indicators pres Matrix Color 101 101 101 101 101 101 101 10	(Munsell M	Sat Sec	class: Mottle C	Colors (N Epipedo Organic (	Munsell m cont. Su	Moist)	Mater Draina Mo	Marks ge Patterns Listed hydric soil? ttle Abundance (%) ttle Abundance (%) Goils Aquic Mo	Vater : Yes silt k isture Re Condition	Stained Lo Textu barn, rock rock egime ons	No re fragments
Rem Soil Prot De N Soil Prot De N Hydr	pth to Saturated : harks: No hydroli is Unit: the Description: epth (Inches) 0-7 stopper @ 7 ric Soil Indicato Gleyed or Low Suffdic Odor Concretions harks: No hydric and Determin rophytic Vegetati	Soil: ogy indicators pres Matrix Color 101 101 101 101 101 101 101 10	(Munsell M	Sat Sec	class: diment D class: Histic Histic Organ	Colors (N Epipedo Drganic ( ilo Streal	Munsell m Cont. Su king in S this San	Moist) rf. Layer Si andy Solls	Mater Draina Mk	Marks ge Patterns Listed hydric soil? ttle Abundance (%) ttle Abundance (%) colsAquic Mo	Vater : Yes silt k isture Re Condition	Stained L Textu bam, rock rock egime ons Remarks)	No re fragments
Rem Soil Soil Hydr Ketfa	pth to Saturated : harks: No hydroli ils Unit: the Description: epth (Inches) 0-7 stopper @ 7 ric Soil Indicato Gieyed or Low Suffdic Odor Suffdic Odor Concretions harks: No hydric and Determin	Soil: ogy indicators pres Matrix Color 107 107 107 107 107 107 107 107	(Munsell M (Munsell M	Sat Sec Sec 	elass: Mottle C Histic Histic Organ	Epipedo Organic ( ic Streal	Munsell an Cont. Su king in S this San oes area	Moist) rf. Layer Si andy Solls	Mater Draina Mo andy S t With USPV	Marks ge Patterns Listed hydric soil? ttle Abundance (%) ttle Abundance (%) colls Aquic Mo colls Aquic Mo colls Colle Cher (Ex n a USACE Welland? VS wetland definition?	Vater : Yes silt k isture Re Condition plain in 1	Stained L Textu pam, rock rock egime ons Remarks)	No re fragments

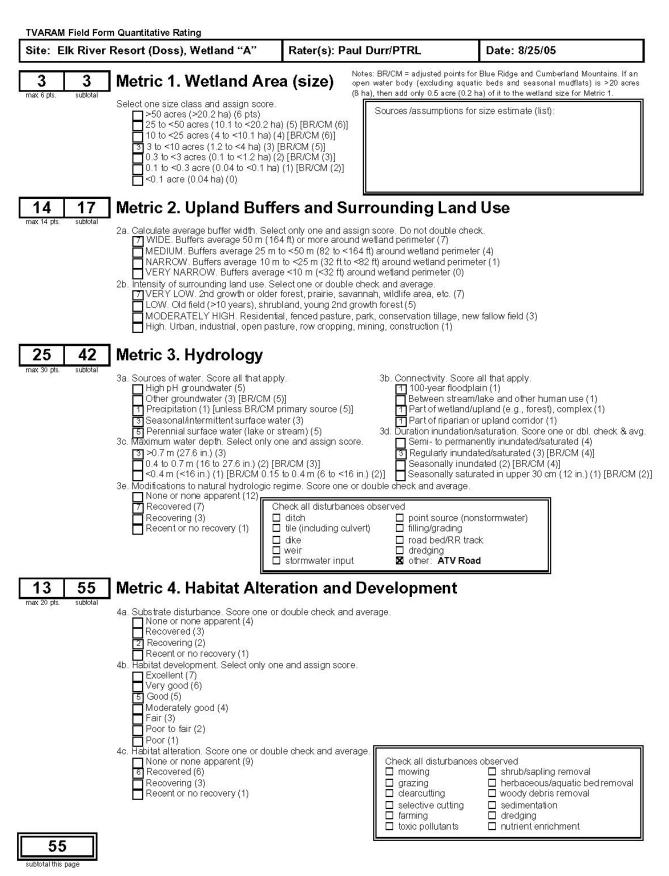
# TVARAM Field Form Quantitative Rating

1

ite: Elk River Resort (Doss), Wetland "B"	Rater(s): Paul Durr/PTRL	Date: 8/25/05
53 doctal previous page		
0 53 Metric 5. Special W	etlands	
"If the documented raw score for M	tric 5 is 30 points or higher, the site is automatical	y considered a Category 3 wetland.
documentation for each selection (; Bog. ten, wet prairie (10); acids Aason: tureet (wet). Alor ad, upi Sensitive geologic feature such Vernal pool (5); isstated, perche Istand wetland i=0; 1 acre (0.04 h Braided channel or floodplainher Gross morph, adspt, in >5 trees Ecological community with globs Known occurrence state/federal Pase higher rank where mixed Superior/enhanced habitatuae	values apply in row, score row as single feature w hotos, checklists, maps, resource specialist concu- nitic veg., morey substate >10 sq.m. sphagrum or other rad) indi. >0.25 scre (0.1 he); old grawth (10); mature >10 e spirighees, sink, loaingfunderground steam, case, wa t, or slope welland (4); headwater wetland [1st order pare i) in teaervoir, mer, or personal water >6 th (2 m) deep (1) are depressions (floodplain post, slough, exbox, meands +10 in (25 cm) dbh butters, matthurkhatud, sitted, she rank (Naturellierve); G1*(10), G2*(1); G3*(3) (*use higher treatered/endargered species (10); other rare species is writ or qualified [sociude records which are only "Nistoric" ingutory songbind/waterfowl (5); in-reserveir buttonbuch ( (0.4 ha) AND EITHER >60% cover of imasives DR nom	monoiii, data sources, references, etc). moss (5); muck, erganic sol layer (3) in. (45 cm) dbh (5) (exclude pine plantation) entail, mok outersputiff (8) mial or above( (3) ) rr staer, etc.) (3) (ber roots/tip-up, or pineumatophones (3) r rank where mised rank or qualifier( ith global rank (31*(10), 02*(5), 03*(3) ] (), other followidtile management/designation
an 20 ph. automati	munities, Interspersion, Mi	
Ga. Wetland vegetation communitie Score all present using 0 to 3 scale	0 = Absent or <0.1 ha (0.25 acre) co	ntiguous acre
Aquatic bed	[For BR/CM <0.04 ha (0.1 acre)]	
T Emorgont		mall part of wetland's vegetation and is a significant part but is of low quality
Forest	2 = Present and either comprises a	significant part of wetland's vegetation an
Mudflats Deen water <20 acres (8 ha	is of moderate quality, or comprise 3 = Present and comprises a signific	ses a small part and is of high quality ant part or more of welland's vegetation
Moss/lichen. Other	and is of high quality	en e per con mane se meneral à regionnement
6b. Horizontal (plan view) intersper	ion. Narrative Description of Vegetation	Quality
Select only one.	low = Low species diversity &/or don	ninance of nonnative or disturbance toler
High (5) Moderately high (4) [BRUCM	(5) mod = Native species are dominant o	concept of the uncertation office of
Moderate (3)(BR/CM (5)]	nonnative &/or disturbance tok	erant native species can also be present,
Moderately low (2) [BR/CM   Low (1) [BR/CM (2)]	<li>and species diversity moderal w/o presence of rare, threaten</li>	e to moderately high, but generally
None (0)		cies with normative sp &/or disturbance
-18-17-18-18-18-18-18-18-18-18-18-18-18-18-18-		tually absent, and high sp diversity and o I rate, threatened, or endangered specie
6c. Coverage of invasive plants.		A rate, or organized, or or doi uprior specie
Add or deduct points for coverage. Extensive >75% cover (-5)	Mudiflat and Open Water Class Qua 0 = Absent <0.1 ha (0.25 acres) For	DDF M c0.04 ha /0.1 acroit
3 Moderate 25-75% cover (-3		tes) [BR/CM 0.04 to <0.2 ha
Sparse 5-25% cover (-1) Nearly absent <5% cover (0	(0.1 to 0.5 acre)]	acres) [BR/CM 0.2 to <02 ha (0.5 to 5 acr
Absent (1)	3 = High 4 ha (9.9 acres) or more (B	
6d. Microtopography. Score all present using 0 to 3 scale		g Degree of Interspersion
Vegetated hummocks/tusso Coarse woody debris >15 c Standing dead >25 cm (10 i	n (6 in.)	0000
Amphibian breeding pools	Nome Low Low	Moderale Moderate Hig
	Microtopography Cover Scale	
	0 = Absent 1 = Present in very small amounts or	if more common of maninal quality
	2 = Present in moderate amounts, b	
	amounts of highest quality 3 = Present in moderate or greater a	mounts and of highest quality
	2 - Franciski strakter in de de state	CONTRACTOR OF A DESCRIPTION OF A DESCRIP
61 GRAND TOTAL (m	ax 100 pts)	

Last revised 2005-04-29

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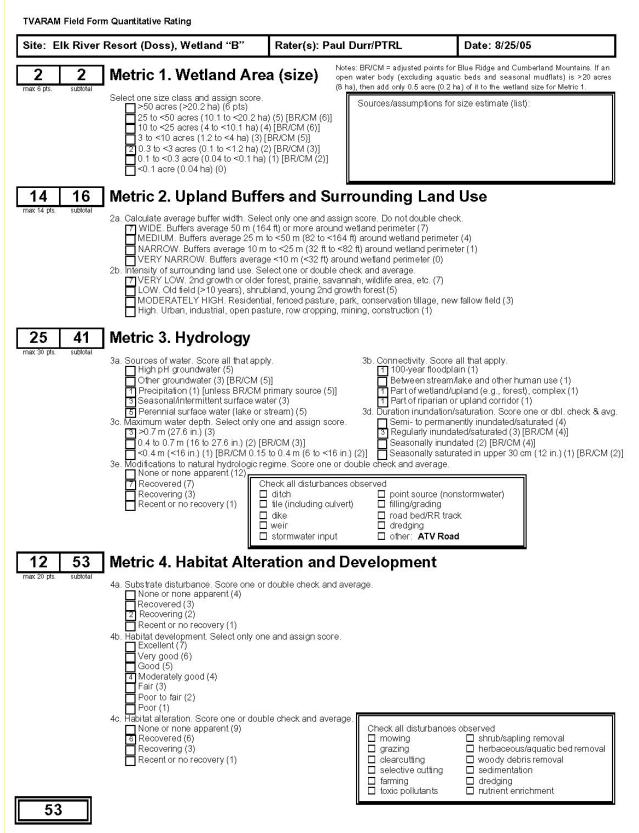


#### TVARAM Field Form Quantitative Rating

ite: Elk River Resort (Doss), Wetland "A"	Rater(s): Paul Durn/PTRL	Date: 8/25/05
55 And previous page	2011 19-	
0 55 Metric 5. Special We	tlands	
	c 5 is 30 points or higher, the site is automati	cally considered a Category 3 weffand.
documentation for each selection (pho Bog, ten, wet prame (10); acidoptili Aasoc, farrest (wet), fklor adj, upland Semittive geologic feature such as a Vernal pool (5); isolated, perched, o Island wetland >0,1 acre (0,04 hal) Braided channel or floodplain/tertas Gross morph, adapt, in >5 trees >1 Ecological community with global na Known occurrence state/freterial the [*use higher rank where mixed rand Superiorien/hanced habitative: mig Cat, 1 (very tow quality) : <1 acre (0	alues apply in row, score row as single featur stos, checklists, maps, resource specialist cor- ic veg., missiv substrate >10 sq.m. sphagnum or of j.ed. >0.25 acre (0.1 help; ckl growth (10); mature springheep, sink, losingtunderground stream, sawe, or slope wetland (4); headwater wetland [1st order p in reservoir, river, or perennial water >6 ft (2 m) dee or depressions (floodplain pool, slough, cabow, mer 0 in. (25 cm) dth; buttness, multihunkristool, silled, ank (NatureServe): G1*(10), G2*(5), G3*(3) [*use hi extendetendar-gened species (15); other nam spece k or qualiter] [seclude records which are only "hest patory songlitchwaterbard (5); in-reservoir buttnebul 1.4 ha) AND EITHER >80% cover of invasives OR in .4 ha) AND EITHER >80% cover of invasives OR in	hourrence, data sources, references, etc). her mea (5): motik, arganic sol layer (3) +18 in (45 on) obh (5) (exclude pine plantation) wetertall, rock outcropiolif (5) erennial or above) (3) p (5) ander sous (40; (3) shallow roots/lip-up, or preumatophones (3) gher rank where mixed rank or qualifier] es with global rank G1*(10), G2*(5), G3*(3) sto[3] sh (4): other fet/wildlife management/designation (3)
5 60 Metric 6. Plant Comn	nunities, Interspersion,	Microtopography
Ga. Wetland vogetation communities. Score all present using 0 to 3 scale. Aquatic bod 2 Emergent 3 Shrub 2 Forest Mudflats Open water <20 acres (8 ha) Moss/lichen. Other	2 = Present and either comprise is of moderate quality, or com	) configuous acre
6b. Horizontal (plan view) interspension Select only one. High (5) Moderately high (4) [BR/CM (5) Moderately low (2) [BR/CM (5)] Moderately low (2) [BR/CM (3)] Low (1) [BR/CM (2)] None (0)	n. Narrative Description of Vegeta low = Low species diversity &/or native species mod = Native species mod = Native species nonnative &/or disturbance and species diversity mod web presence of nare, thesi high = A predominance of native tolerant native sp absent of	dominance of nonnative or disturbance toleran nt component of the vegetation, although tolerant native species can also be present, inte to moderately high, but generally dened or endangered species species with nonnative sp &/or disturbance r virtually absent, and high sp diversity and offi
6c. Coverage of invasive plants. Add or deduct points for coverage. Extensive >75% cover (-3) Moderate 25-75% cover (-1) Nearly absent <5% cover (0) Absent (1)	Mudflat and Open Water Glass ( 0 = Absent <0.1 ha (0.25 acres))           1 = Low 0.1 ho <1 ha (0.25 to 2.5 (0.1 to 0.5 acres))	For BR/CM <0.04 ha (0.1 acre) acres) [BR/CM 0.04 to <0.2 ha 9.9 acres) [BR/CM 0.2 to <02 ha (0.5 to 5 acre)
6d. Microtopography. Score all present using 0 to 3 scale. Vegetated hummocka/tussocks Coarse woody debris >15 cm ( Standing dead >25 cm (10 in ) Amphibian breeding pools	ăh O O O	ating Degree of Interspersion
	Microtopography Cover Scale 9 = Absent 1 = Present in viry small amount 2 = Present in moderate amount amounts of highest quality	a or if more common of marginal quality s, but not of highest quality or in small

Refer to the most recent ORAM Score Calibration Report for the scoring treategories between weiged Lategories at the following address: http://www.epu.itate.uit.uw/ita/401401.tom/

Last revised 2005-04-29



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