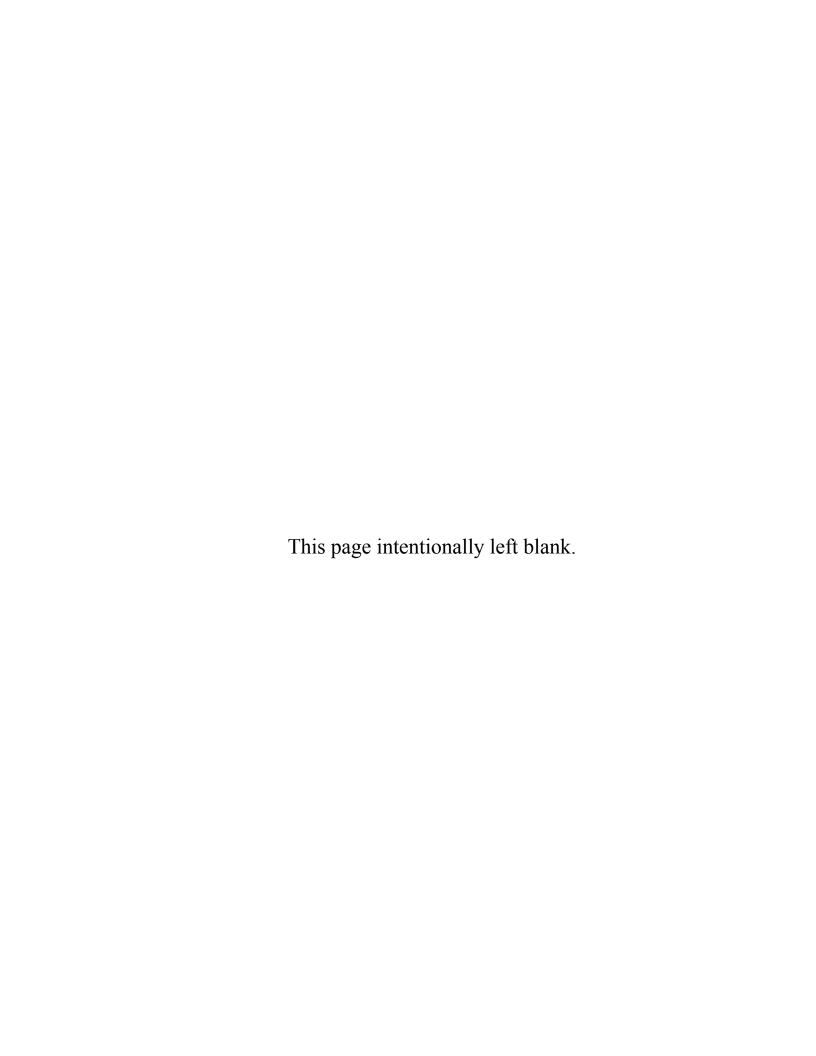
APPENDIX K

WETLAND HABITAT QUALITY ASSESSMENT DATA SHEETS FOR THE PROPOSED LIBERTY FUELS MINE



WETLAND HABITAT QUALITY ASSESSMENT DATA SHEETS

Prepared for:

NORTH AMERICAN COAL CORPORATION P.O. BOX 399 JOURDANTON, TEXAS 78026

Prepared by:

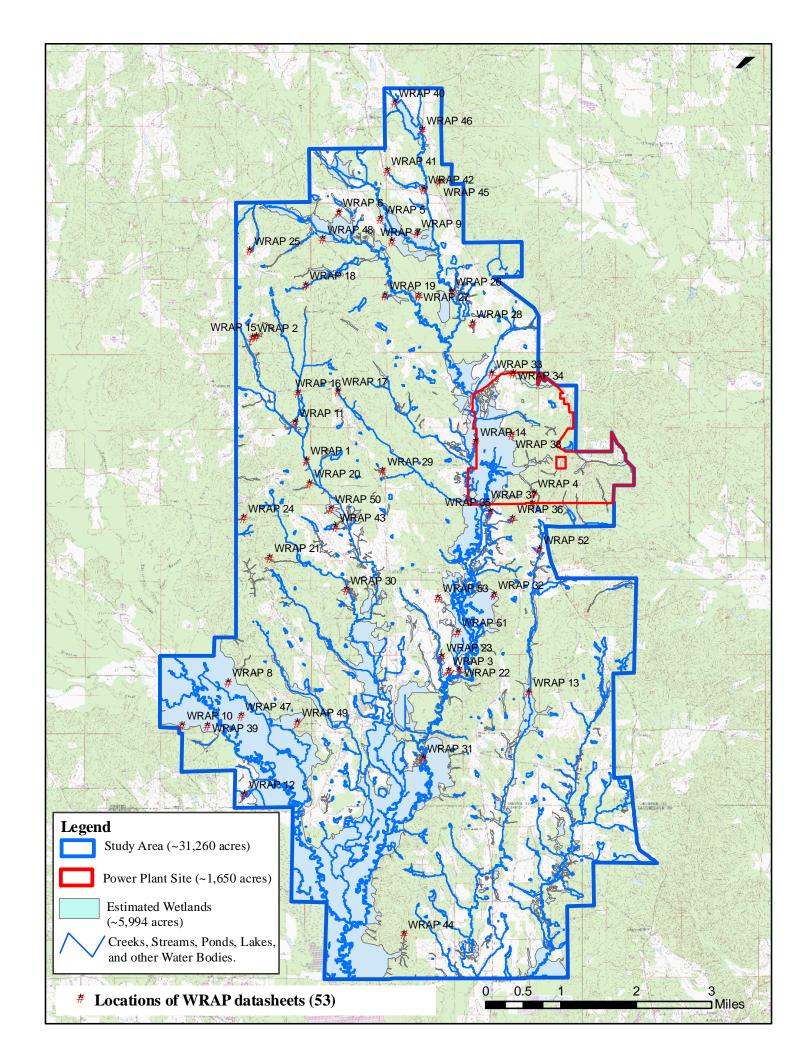
BARRY A. VITTOR & ASSOCIATES, INC. 8060 COTTAGE HILL ROAD MOBILE, ALABAMA 36695 Barry A. Vittor & Associates, Inc. conducted wetland surveys of the study area between the months of June and October, 2008. Vittor & Associates biologists documented the quality of wetland habitat at 53 individual locations within the study area. Due to the limited access to private lands during wetland surveys, the location of WRAP points were arbitrarily selected in the field and do not represent a true random sample.

The quality of each wetland habitat was evaluated using the Wetland Rapid Assessment Procedure (WRAP). The WRAP is a rating index that was developed by the South Florida Water Management District to assist in the regulatory evaluation of mitigation sites. In 2007, the Mobile, Alabama District Corps of Engineers (COE) began using the WRAP to evaluate the habitat quality of jurisdictional wetlands as defined by the 1987 Corps of Engineers Wetland Delineation Manual. The objectives of the WRAP are: 1. to establish an accurate, consistent, and timely regulatory tool; 2. to track trends over time (land use vs. wetland impacts); and 3. to offer guidance for environmental site plan development.

When determining wetland quality using the WRAP methodology the following 6 variables are assessed: Wildlife Utilization, Wetland Overstory/Shrub Canopy, Wetland Vegetative Ground Cover, Adjacent Upland Support/Wetland Buffer, Field Indicators of Wetland Hydrology, and Water Quality Input and Treatment Systems. For each wetland evaluated a score between 0 and 3 is assigned to each of the 6 parameters. A score of 3 indicates the evaluated parameter meets all the criteria required for a system to be classified as 100% functional, and a score of 0 represents no functionality. The evaluator has the option to score each parameter in half (0.5) increments; half increments are utilized on the point scale from 0.5 through 2.5. This allows the evaluator to assess the value of the system more accurately. After assigning a value to each of the 6 parameters the sum of all scores is then divided by 18 (the maximum combined score) to obtain a final rating, which is expressed numerically by a number between 0 and 1. A final rating score of 1 indicates that a wetland is functioning at 100% of its capacity; whereas, a final score of 0 indicates a wetland has no functional value. The Mobile District COE uses the final WRAP score to determine overall quality of a wetland. For the purpose of assessing ratios for mitigation banking and mitigating wetland impacts the Mobile District COE uses the following range of WRAP scores to describe overall quality of a wetland: high quality (0.75-1), medium quality (0.50-0.74), and low quality (0-0.49). Calculations of wetland quality were derived in the office after fieldwork was completed.

BVA categorized each of the 53 evaluated wetlands as one of the following vegetation/land use types: planted pine (PP), hardwood forest (H), pine-hardwood forest (PH), hardwood-pine forest (HP), bottomland forest (BF), shrub land (S), and fields (F). Wetlands that were classified as vegetation types PP, H, PH, HP, and BF are forested wetlands. Wetlands that possess vegetative cover dominated by herbaceous plant species were classified as fields (pastures, hay fields, "deer plots", or any area cleared of forest cover and maintained in an herbaceous state), and scrub-shrub wetlands were designated as shrub land under the vegetation/land use types. The most common forested wetlands evaluated by BVA were Planted Pine and Bottomland Forest. Wetlands were frequently documented in fields during the survey due to the common occurrence of maintained pastureland in floodplains. Only two shrub land wetlands were evaluated during the WRAP surveys. Shrub land wetlands are uncommon inside the study area.

Wrap locations are depicted in the attached study area wetland map, and data sheets are attached.



		Wetland Rapid Assessment Procedure Check one Existing Conditions Proposed Conditions (WRAP)							WRA	AP #1
	☐ Existing (Conditions	Proposed Con-	ditions (WR	AP)					
Application Number		Project Name orth American	Date n Coal 06/23	3/08	Evaluator Matt Stowe			etland Type ottomland Fo	rest	
Land Use Forest Manager	nent	FL	LUCCS Code Description	<u></u>		7			\neg	
Wildlife Utilization (WU)			Wetland Canop				etland Ground	Cover (GC)	
	at Support/Buffer X (% of area)	=Sub Tota	ıls	Field Hydrolog	gy (HYD)		<u> </u>	'Q Input & Trea	atment (WQ)*	ł
>300° 1 average, consisting of >75% nuisance species	100	1	TOTAL 1] /						ı
	Land use C		Category (LU) (Score) X	(% of area)	=Sub Totals	Pretreatmen		Category (PT) (Score) X	(% of area)	=Sub Totals
	Planted P		1.5	100%	1.5	Undevelor Pine Plant	ped	1.5	100	1.5
WRAP Score				(LU) TOTAL	1.5				PT TOTAL	1.5
0.58										
Wildlife Utilization (\)	WU) 2	Evidence of	of wildlife util	ization by larg	ge mammals. 🛭	Adequate up	and food	sources and	habitat.	
Wetland Canopy (O/S	3) 2.5	*healthy ca *no exotic	of natural recranopy species present 10% invasive	ent	osition.					
Wetland Ground Cov	er (GC) 1.5	<20% vego		cover with <1	10% exotic spec	cies. Siltatio	n occurrir	ng in the we	tland. Canop	у
Habitat Support/Buffe	er 1.0	* >300' Bu * Connecte	uffer with > 75 ed to offsite co	5% nuisance s orridor	species					
Field Hydrology (HY	D) 2	Hydroperi evidence o		nough to supp	oort a viable we	tland. Plant	s appear to	be healthy	. Some areas	s exhibited
WQ Input & Treatme	nt (WQ) 1.5		e Plantation. leveloped Pine	e Plantation.						

		Wetland Rapid Assessment Procedure						WRAP	#2	
		☐ Check one onditions ☐ Pr	oposed Cond	litions (WR	AP)					
Application Number		roject Name rth American Co	Date oal 06/24.	/08	Evaluator Matt Stowe			etland Type ardwood-Pine	Forest	
Land Use		FLUC	CS Code				_		7	
Forest Manager	nent		Description	:						
Wildlife Utilization (WU)			Wetland Canop			<u>w</u>	etland Ground C	over (GC)	
Habita Buffer type (Score)	at Support/Buffer K (% of area)	=Sub Totals	[Field Hydrolog			W	Q Input & Treat	ment (WQ)*	
>300' 1.0 average,	100	1.0] "		<u> </u>					
consisting of >75%			TOTAL							
nuisance species.			1.0							
operios.		Land use Cate	pory (LII)			Г	Pretreatment	Category (PT)	1	
	Land use Ca Pine Planta	tegory (Score		(% of area) 100%	=Sub Totals	Pretreatme	nt Category Plantation	(Score) X	(% of area) 100	=Sub Totals
	1 IIIO 1 Idalla	ition	1.5	10070	1.5	Old Tille	- Tamanon	1,3	100	

WRAP Score				(LU) TOTAL	1.5				PT TOTAL	1.5
0.33										
Wildlife Utilization (\)		Minimal avid	man of will	ination by wi	difo Watlan	d	.4	: 1 1 (1	-1-11-3 34	
		Minimal evide habitat or food		ization by wi	idilie. Wetian	d newly plan	itea with P	inus taeaa (1	овтопу). тм	ınımaı
Wetland Canopy (O/S	<u> </u>									
wettand Canopy (O/S		- Less than 25								
		Canopy provSoil subsider			ted the canony	/ species				
Wetland Ground Cove		<25% undesir	able specie	s compositio	n, no recorded	exotic speci	es. Siltatio	on occurring	around edge	es of
		wetlands.	•	•		1			J	
Habitat Support/Buffe										
Habitat Support/Bulle		>300' but don	ninated by	>75% nuisan	ce species (Pir	nus taeda). (Connected	to offsite cor	ridor.	
Field Hydrology (HY	D)									
		High levels of wetland.	soil subsid	lence occur a	t the wetland b	boundary. H	ydroperiod	adequate to	support vial	ble
WQ Input & Treatme	nt (WQ)							 		
		LU - Monocu PT - Undevelo								

	Wetland Rapid Assessment Procedure							WRAP	#3	
	☐ Existing (Conditions		•						
Application Number		Project Nam orth Ameri		26/08	Evaluator Matt Stowe			etland Type anted Pine		
Land Use			FLUCCS Code							
Forest Manager	nent									
Wildlife Utilization (WU)			Wetland Canopy			ī-	etland Ground	Cover (GC)	
1.5				1.5	5		1.0	0		
Habita Buffer type (Score)	at Support/Buffer X (% of area)		'otals	Field Hydrology			₩ 1.9	Q Input & Trea	atment (WQ)*	
>300', 1.0 consisting	100	1.	0							
of >75% nuisance species.			TOTAL	-						
Species.			1.0							
	Land use C	Land us	se Category (LU) (Score) X	(% of area)	=Sub Totals	Pretreatment		Category (PT) (Score) X		=Sub Totals
	Natural Undevelo		2.5	40%	1	Natural	* *	2.5	40	1.0
	Pine Plan	* +	1.5	60%	0.9	Undevelope Pine Planta		1.5	60	0.6
WRAP Score				(LU) TOTAL	1.9			<u> </u>	PT TOTAL	1.9
0.49				(BO) TOTAL	1.9				TI TOTAL [1.9
Wildlife Utilization (V	WU) 1.5									
			and visual obser eer and songbird							y white-
							J <u>I</u>	,,,,,,,		
Wetland Canopy (O/S	1.5									
			6 undesirable co otics present	ver						:
			nal evidence of	recruitment of 1	native species					
Wetland Ground Cov	er (GC) 1.0	 - ~50 % r	ındesirable cove	er Coversligh	tly impacted l	hy humans Fi	requent h	uman activi	ty (recreation	1)
		20 70 0	madbhabha do r	Jr. Cover bright	iij iiipaotoa t	oy namana. 11	equent n	annun uoti vi	ty (recreation	.,.
Habitat Support/Buffe	er 1.0		,	,						_
		>300' bi	uffer; however,	buffer consists	of >75% nui	sance species ((Pinus tae	<i>da</i>). Conn	ected to offsit	te wildlife
		comidoi	•							
Field Hydrology (HY	D) 2.0									
			d hydrology is a	dequate, but di	tches are pres	ent and advers	sely affect	t hydrology	. Little evide	ence of soil
		subside	ace.							
										<u> </u>
WQ Input & Treatme	nt (WQ) 1.9]								
)% Monoculture)% Natural Und			ral undevelope	ed			

	ľ	WETLAND RAPID ASSESSMENT PROCEDURE				WRAP Location			
	☐ Proposed Conditions ☐ Current Conditions	(144D A D)		·	WRAP 4				
		(WRAP)							
Application Number	Project Name	Date	Evaluator		Wetland Type				
	North American Coal	7/9/2008	D.K.		Planted Pine				
Land Use	Description			,	Wetland Acrea	ge			
				[
Middle Hillington (MII)		Wotland Conony (C	\/e\	,	Wetland Groun	nd Cover			
Wildlife Utilization (WU)	٦	Wetland Canopy (C	"3) "	Г	1	lu Covei			
	-		_	L					
Habitat Supp		Field Hydrology (H)	(D)	, . Г	WQ Input & Tro	eatment *			
Buffer Type (Score) X >30<300'	(% of area)= Sub Totals	2	<i>」 </i>	* The value o	1.75 of WQ is obtained	by adding the			
& consisting			/	TOTAL sco	res of Land use (Category and			
of >75% nuisance sp.	To	otal	/	Pretreatme	nt category then	dividing by 2			
nuisance sp.		/							
Land use Ca	ategory (LU)		/	Pretreatme	nt Category (P	Γ)			
LU Category (Score) X					(% of area)=	Sub Totals			
Planted Pine 1.			Planted Pine	1.5	75 25	1.125 0.625			
Nat Undevelop 2.	5 25 0.625		Nat Undevelop	2.5	25	0.023			
	LU Total 1.75				PT Total	1.75			
WRAP Score	7								
0.49	_								
Field Notes:									
Wildlife Utilization (WU)		ans and rentiles Adequ	ate adiacent unla	ind food sor	rces Minimal	human			
intervention. Adequate co	· · · · · · · · · · · · · · · · · · ·	ano ana ropinos. Paoqu	are adjacem apre		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
•									
Wetland Canopy (O/S)									
~50% undesirable species	j.								
Wetland Ground Cover				·					
	Chinese privet present in the u	nderstory, cover signifi	cantly impacted	by humans.					
		,							
Habitat Support/Buffer		.1 .	11 66 7	. 1	20 11 1				
Opland buffer has been re	ecently clear-cut and provides litt	tie 100d or cover. Wetia	ing butter is con	nected to of	1-site corridors	i.			
Field Hydrology (HYD)						····			
Adequate hydroperiod. Pl	ants healthy. Berms present in p	laces. Erosion evident a	at the edge of cle	arcuts.					
WO Input 9 Transment	- _T					<u> </u>			
WQ Input & Treatment	l best be described as a mix between	een natural undevelone	d land and silvic	ultural prac	tices. Pre-treat	ment of			
_	atural undeveloped lands and run			andrai piao		LLOIN UI			
	•								

		WETLAND RAPID ASSESSMENT PROCEDURE			WRAP Location			
	☐ Check One ☐ Proposed Conditions ☐ Current Conditions				WRAP 5			
		(WRAP)		1				
Application Number	Project Name	Date	Evaluator		Wetland Type			
	North American Coal	7/10/2008	D.K.		Bottomland Fo	orest		
Land Use	Description			l	Wetland Acrea	ige		
_								
Wildlife Utilization (WU)		Wetland Canopy (C	<u>)/S</u>)		Wetland Grou	nd Cover		
2		2			2			
Habitat Sup	port Buffer	Field Hydrology (H	YD)		WQ Input & Tr	reatment *		
	(% of area)= Sub Totals	2] /_		2.25			
>30<300', ~50 1 undesirable	1.5 100 1.5		//		of WQ is obtained ores of Land use			
species	To	otal			ent category then			
		1.5	/					
			1					
	Category (LU)				ent Category (P			
	((% of area)= Sub Totals 1.5 50 0.75		PT Category Berms	(Score) 2.5	(% of area)=	Sub Totals		
	2.5 50 1.25		Natural	2.5		1.25		
Undeveloped			Undeveloped					
WRAP Score	LU Total 2.00				PT Total	2.5		
0.65	7							
	⊣							
Field Notes: Wildlife Utilization (WU)	- 							
	——————————————————————————————————————	ans and reptiles. Adequ	ate adiacent upl	and food so	urces. Modera	te human		
intervention. Adequate co	· · · · · · · · · · · · · · · · · · ·		5			:		
Wetland Canopy (O/S)				_				
<25% Undesirable cover	Evidence of natural recruitment	. Healthy canopy with i	no sign of diseas	se. Few sna	gs.			
Wetland Ground Cover								
	 es. Cover impacted by recent clea	ar-cut.						
•	•							
Habitat Support/Buffer			S		-1-1-11			
Upland buffers consist of	f forested hardwoods and planted	i pine, ~50% of the bull	er consists of u	ndesirable i	obiony pine.			
Field Hydrology (HYD)								
	Plants healthy. Berms present in p	laces. Erosion evident	at the edges of v	vetlands.				
<u> </u>					· · · -			
WQ Input & Treatment	 n best be described as ongoing sil	luioultural anarotions T	Pra_trantmant of	water ic c =	niv hetween un	developed		
_	orest and berms that minimize eros	_	10-meannem 01	water 18 a li	ny oftwari (ii)	ac voiopeu		
Description in the control to	100 Mile Collins white minimize of O.	~~~****						
I .								

a Proposed Conditions a Current Conditions	WRAP 6
(WRAP)	
	Netland Type Planted Pine
Land Use Description	Netland Acreage
Wildlife Utilization (WU) Wetland Canopy (O/S) 1	Netland Ground Cover
	WQ Input & Treatment *
Suffer Type (Score) X (% of area)= Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub Totals Sub T	1.38 f WQ is obtained by adding the es of Land use Category and nt category then dividing by 2
LU Category (Score) X (% of area)= Sub Totals Planted Pine 1.5 75 1.125 Improved 1 25 0.25	nt Category (PT) (% of area)= Sub Totals 75 1.125 25 0.25 PT Total 1.38
Field Notes: Wildlife Utilization (WU) Utilized by mammals, birds, macroinvertebrates, amphibians and reptiles. Adequate adjacent upland food sou intervention. Adequate cover and habitat.	rces. Minimal human
Wetland Canopy (O/S)	
Wetland Ground Cover	
Habitat Support/Buffer Upland buffers consist of improved pasture and planted pine.	
Field Hydrology (HYD) Adequate hydroperiod. Plants healthy. Berms present in places. Erosion evident at the edges of wetlands.	
WQ Input & Treatment Surrounding land use can best be described as a mix between improved pasture and silvicultural practices. Promix between grass swales and berms that minimize erosion.	e-treatment of water is a

	WETLAND RAPID ASS	SESSMENT PROC	EDURE	WRAP Location			
	□ Check One □ Proposed Conditions □ Current Conditions			WRAP 7			
		(WRAP)					
Application Number	Project Name	Date	Evaluator	Wetland Type			
	North American Coal	7/10/2008	D.K.	Bottomland Forest			
Land Use	Description			Wetland Acreage			
ARIJUS I WILLIAM AND IN		Wetland Canany (0(6)	Motland Cround Cover			
Wildlife Utilization (WU) 2.5	一	Wetland Canopy (Wetland Ground Cover 3			
		<u> </u>					
	upport Buffer	Field Hydrology (H	IYD)	WQ Input & Treatment *			
Buffer Type (Score) >300'	X (% of area)= Sub Totals 2.5 75 1.88	2.5	<i>□ /Γ⁻,</i>	The value of WQ is obtained by adding the			
>300' w/>75%	1 25 0.25		/	TOTAL scores of Land use Category and			
nuisance species		otal 2.13	/	Pretreatment category then dividing by 2			
<u> </u>		/	/ /				
Land use	Category (LU)		/ /	Pretreatment Category (PT)			
	X (% of area)= Sub Totals			(Score) X (% of area)= Sub Totals			
Planted Pine Natural Undev	1.5 25 0.375 2.5 75 1.88		Planted Pine Natural Undev	1.5 25 0.375 2.5 75 1.88			
Ivaturar Officev	2.3 /3 1.86		Natural Ondev	2.5 13 1.66			
WDAD Coore	LU Total 2.26			PT Total 2.26			
WRAP Score	\neg						
Field Notes: Wildlife Utilization (WU)							
	irds, macroinvertebrates, amphibi	ians and reptiles. Adequ	uate adjacent upla	nd food sources. Minimal human			
intervention. Adequate	cover and habitat.						
(0.10)							
Wetland Canopy (O/S)	with no exotics. Strong evidence of	of notural recruitment	Healthy canony w	ith no sign of disease Few snags			
1076 mvasive canopy	with no exoties. Strong evidence (or natural recruitment.	ricanny canopy w	in no sign of disease. I ew shags.			
W-H1010							
Wetland Ground Cover	 cies with no exotics. Good habitat,	minimal disturbance to	o ground cover	•			
1070 Ondosmaolo spec	nos with no oxotios. Good naoitat,	, imminar distarbance i	o ground cover.				
Habitat Support/Buffer							
Upland buffers consist	of forested hardwoods and planted	d pine.					
Field Hydrology (HYD)							
Exhibits natural hydrop	period. Plants healthy. Berms preso	ent in some places. No	subsidence.				
WQ Input & Treatment				-			
	an best be described as a natural u	indeveloped land and ir	nfrequent silvicult	ural practices. Pre-treatment of water			
	veloped land and forested swales.	=	•	•			

	WETLAND RAPID AS a Check One Proposed Conditions a Current Condition	ıs	EDURE	WRAP 8
Application Number	Project Name North American Coal	(WRAP) Date 7/21/2008	Evaluator D.K.	Wetland Type Planted Pine
Land Use	Description			Wetland Acreage
Wildlife Utilization (WU)]	Wetland Canopy (O/S)	Wetland Ground Cover
Habitat Supp Buffer Type (Score) X >300' & >75% nuisance Species	(% of area)= Sub Totals 1 100 1	Field Hydrology (H	HYD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land use Ca LU Category (Score) X Pine 1. Plantation WRAP Score	(% of area)= Sub Totals		PT Category Undeveloped Planted Pine	Pretreatment Category (PT) (Score)
0.47 Field Notes: Wildlife Utilization (WU) Utilized by small and larg to the wetland.	e mammals, and a small numb	er of songbirds. Cover i	is adequate, but po	por upland food sources exist adjacent
Wetland Canopy (O/S) >50% Undesirable species	s exist in the pine dominated ca	anopy. There are hydrol	logy problems ass	sociated with the rowed pine trees.
Wetland Ground Cover ~50% Undesirable species	s in the ground cover compone	ent. Maintained as a pine	e plantation, limit	ed diversity of ground cover species.
Habitat Support/Buffer >300' buffer, but has a >7	5% nuisance species composit	ion (pine plantation).		
Field Hydrology (HYD) Hydroperiod adequate, bu		h the planted pine trees	has an adverse af	fect on hydrology.
WQ Input & Treatment (LU) - Surrounding land	use is primarily planted pine m	onoculture. (PT) - Und	leveloped planted	pine.

	WETLAND RAPID ASS Greek One Proposed Conditions Greent Conditions		EDURE	WRAP Location WRAP 9			
		(WRAP)		ı			
Application Number	Project Name North American Coal	Date 7/25/2008	Evaluator D.K.	Wetland Type Bottomland Forest			
Land Use	Description			Wetland Acreage			
Wildlife Utilization (WU)	- <u></u> -	Wetland Canopy (0	O/S)	Wetland Ground Cover			
Habitat Supp Buffer Type (Score) X >300' 2	(% of area)= Sub Totals	Field Hydrology (H	- IYD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2			
Land use Cat LU Category (Score) X Nat Undevelop 2.5 WRAP Score 0.72	(% of area)= Sub Totals		PT Category Nat Undevelop	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 2.5 100 2.5 PT Total 2.5			
Field Notes: Wildlife Utilization (WU) Utilized by small and large intervention is minimal.	mammals, songbirds and rept	iles. Cover and adjacen	at upland food so	urces are adequate and human			
Wetland Canopy (O/S) <10% Invasive canopy spe habitat.	cies are present. The canopy is	s healthy and there is st	rong evidence of	natural recruitment. Canopy provides			
Wetland Ground Cover <25% Undesirable species	composition in the herbaceous	s layer. Cover is slightly	y impacted by hu	man activities.			
Habitat Support/Buffer >300' buffer on average. T	There is a <10% exotic species	component in the adjac	ent land. Site is c	connected to wildlife corridors.			
Field Hydrology (HYD) Hydroperiod adequate, but	t swales and adjacent roads ma	y have an adverse affec	et on hydrology.				
WQ Input & Treatment (LU) - Natural Undevelope	ded Land (PT) - Natural Undev	reloped Land	_				

		D RAPID ASS Check One Solutions	ESSMENT PROCE (WRAP)	DURE		WRAP Loc WRAP 10	ation
Application Number	Project Name North Americ	an Coal	Date 7/22/2008	Evaluator D.K.		Wetland Type Planted Pine	
Land Use	[Description				Wetland Acrea	age
Wildlife Utilization (WU) 1.5	l		Wetland Canopy (O/	rs)]	Wetland Grou	nd Cover
Buffer Type (Score) X >300' 2	(% of area)=	Sub Totals 2 To	Field Hydrology (HY 2 otal 2		TOTAL sco	WQ Input & T 1.5 of WQ is obtaine ores of Land use ent category there	d by adding the Category and
Land use Cat LU Category (Score) X	egory (LU) (% of area)=	Sub Totals		PT Category		ent Category (F (% of area)=	•
Pine Plantation 1.5		1.5		Pine Plantation			1.5
WRAP Score	LU Total	1.50				PT Total	1.5
0.50 Field Notes: Wildlife Utilization (WU) Utilized by small and large	mammals. No	sign of reptiles of	or amphibians were obs	erved. Limited	adjacent up	land food sour	ce.
Wetland Canopy (O/S) >50% Undesirable species	composition. N	Minimal sign of r	ecruitment, intensively	maintained as p	oine monoc	ulture.	
Wetland Ground Cover ~50% Undesirable species.	Routinely ma	naged as pine mo	onoculture, low species	diversity.		-	,
Habitat Support/Buffer >300' buffer on average. C	ontains some o	lesirable species.	Site is connected to wil	dlife corridors.	-		
Field Hydrology (HYD) Hydroperiod adequate, pla	nts appear heal	thy and disease f	ree. Some subsidence v	vas observed.			
WQ Input & Treatment (LU) - Pine Plantation (PT) - Undevelop	ed Pine Plantatio	n				

	WETLAND RAPID ASSE	Proposed Conditions G Current Conditions				ation
		(WRAP)				
Application Number	Project Name North American Coal	Date 7/23/2008	Evaluator D.K.		Wetland Type Planted Pine	
Land Use	Description				Wetland Acrea	ige
Wildlife Utilization (WU)]	Wetland Canopy (O)/S)		Wetland Grou	nd Cover
Buffer Type (Score) X >30<300' 1.5	(% of area)= Sub Totals	Field Hydrology (H) 2 otal 1.5		TOTAL sco	WQ Input & Tr 1.5 of WQ is obtained ores of Land use ent category then	d by adding the Category and
Land use Ca LU Category (Score) X Pine Plantation 1.5 WRAP Score	(% of area)= Sub Totals		PT Category Pine Plantation	(Score) X	ent Category (P (% of area)= 100 100 PT Total	
	e mammals, aquatic fishes, amph	nibians, reptiles. Limite	ed upland food s	ource.		
Wetland Canopy (O/S) >50% Undesirable species	s composition. Limited sign of re-	cruitment was observe	d. Intensively m	aintained a	s pine monocu	lture.
Wetland Ground Cover ~50% Undesirable cover.	Routinely managed as pine mono	oculture, low species d	iversity and bion	mass.		
Habitat Support/Buffer <30>300' buffer on averag	ge. Provides cover, limited food s	source.				
Field Hydrology (HYD) Hydroperiod adequate, pla	annts appear healthy and disease fi	ree. Soil subsidence ob	oserved, adverse	ly affecting	hydrology.	
WQ Input & Treatment (LU) - Pine Plantation (P	T) - Undeveloped Pine Plantation	n				

	G Check One					ation
	□ Proposed Conditions □ Current Conditions	(WRAP)				
Application Number	Project Name North American Coal	Date 6/12/2008	Evaluator David		Wetland Type Bottomland F	orest
Land Use	Description		Knowles		Wetland Acrea	age
Wildlife Utilization (WU)]	Wetland Canopy (C	D/S)		Wetland Grou	nd Cover
Buffer Type (Score) X >30<300' 1.5	(% of area)= Sub Totals 5 100 1.5	Field Hydrology (H ^N 2	YD)	TOTAL so	WQ Input & To 1.5 of WQ is obtaine cores of Land use ment category there	d by adding the Category and
Land use Ca LU Category (Score) X Livestock 1 Pasture 1	ategory (LU) (% of area)= Sub Totals 1 100 1 LU Total 1.00		PT Category Wet detention grass swales	(Score)	ent Category (F X (% of area)= 2 PT Total	
human intervention. Adeque	nals, birds, macroinvertebrates, a quate protective cover.					
Wetland Ground Cover <10% invasive species. Co	over significantly impacted by li	ivestock.				
Habitat Support/Buffer Upland buffer provides litt	itle cover. Wetland buffer does p	provide adequate cover.	. Portions of wet	land are co	onnected to off-	site corridor.
Field Hydrology (HYD) Wetland hydroperiod adec	quate but has swales, ponds and	reduced drainage.				
	stem is directly effected by lives ponds before entering the Okatib		ponds. A natura	l wetland o	drain was previ	ously altered

	WETLAND RAPID ASSI	WRAP Location WRAP 13			
	Proposed Conditions	WKAI IJ			
		(WRAP)		\A 1.7	_
Application Number	Project Name North American Coal	Date 6/24/2008	Evaluator D.K. and	Wetland T	
Land Use	Description		D.N	Wetland A	Acreage
]				
Wildlife Utilization (WU)	7	Wetland Canopy (C	D/S)	Wetland (Ground Cover
2.5	J			<u></u>	
Habitat Supp Buffer Type (Score) X		Field Hydrology (H	YD) 7 /	WQ Input	& Treatment *
>300' average \ 2.5	5 50 1.25		_ //	* The value of WQ is ob TOTAL scores of Land	
undesirable species.		otal 2	/	Pretreatment category	
L. Marie On	4	/	/	Pretreatment Catego	.n. /DT\
Land use Ca LU Category (Score) X	- · · ·		/ PT Category	(Score) X (% of are	-
Planted Pine 1 Nat Undevelop 2	5 50 0.75		Planted Pine Nat Undevelop	1.5	50 0.75 50 1.25
Trat Olidevelop 2	50 1.23		Tut Ondovolop	2.3	30
	LU Total 2.00			l l PT Tota	1 2
WRAP Score					
0.72]				
Field Notes: Wildlife Utilization (WU)	<u> </u>				
Abundant sign of mamma	ls, birds, macroinvertebrates, am			nt upland food source	es. Minimal
human intervention. Adeq	uate cover and habitat within we	etland and adjacent up	and buffer.		
Wetland Canopy (O/S)					
<10% invasive cover. God	od habitat, strong evidence of nat	tural recruitment. Heal	Ithy canopy with	no sign of disease.	
Wetland Ground Cover					
	hinese privet present in the under	rstory, cover slightly i	mpacted by hum	ans.	
Habitat Support/Buffer	5004 51 55		lant anasias(lahl	allerning) Unland hu	ffor provides good
	average, 50% of buffer consists of source. Wetland buffer is connec				mer provides good
Field Hydrology (HYD) Adequate hydroperiod, Si		ced some rutting in pla	ces and a signific	cant amount of ditchi	ng has taken place
and affected hydrology.	Alleana Presente mane Present				
WQ Input & Treatment					
Surrounding land use can water is mostly natural ur	best be described as a mix betwoodeveloped lands.	een natural undevelop	ed land and silvi	cultural practices. Pre	e-treatment of

	WETLAND RAPID ASSE		WRAP Location		
	Proposed Conditions		WKAI 14		
		(WRAP)			
Application Number	Project Name	Date	Evaluator		Wetland Type
	North American Coal	6/24/2008	D.K. and		Bottomland Forest
Land Use	Description		D.N.		Wetland Acreage
	7				
	<u></u>			-	
Wildlife Utilization (WU)	٦	Wetland Canopy (C	D/S) 		Wetland Ground Cover 2.5
2.75	_	3			2.3
Habitat Sup	port Buffer	Field Hydrology (H	<u>YD</u>)		WQ Input & Treatment *
Buffer Type (Score) X		2.5		>	2.25
>300' average \ 2. >300' w/>75%	5 50 1.25 1 50 0.5		//		of WQ is obtained by adding the cores of Land use Category and
exotic species.	To				nent category then dividing by 2
		1.75	/		
Land use Ca	ntogony (LLI)		/	Dretreatm	ent Category (PT)
LU Category (Score) X			/ PT Category		X (% of area)= Sub Totals
Planted Pine 1.			Planted Pine	1.5	5 50 0.75
Nat Undevelop	3 50 1.5		Nat Undevelop	3	3 50 1.5
	 /				
	LU Total 2.25			•	PT Total 2.25
WRAP Score	_				
0.82	_				
Field Notes:					
Wildlife Utilization (WU) Abundant mammals birds		s and reptiles. Adunda	unt adiacent unla	nd food so	urces. Negligible human
1	over and habitat within wetland ar	•		1004 20	
Wetland Canopy (O/S)					
<10% invasive cover. Go	od habitat, strong evidence of nat	ural recruitment. Heal	thy canopy with	no sign of	disease.
Wetland Ground Cover					
<10% invasive species. C	hinese privet present in the under	rstory, cover slightly in	mpacted by hum	ans.	
Habitat Support/Buffer	- p				
	l ood cover and adequate food sour	rce. Wetland buffer is	connected to off	-site corrid	lors and supports large
1 1 1	average, 50% of buffer contains				
Field Hydrology (HYD)				1 1	
	nts, wetland exhibits a natural hyd are found throughout the Chickasa			oroduced so	ome rutting in places and a
Sman number of ditenes a	ne tound infoughout the emekase	ампау Стеск пооцра	111.		
WQ Input & Treatment					
_	best be described as a mix between	en natural undevelope	ed land and silvi	cultural pra	ictices. Pre-treatment of
water is mostly natural un	ndeveloped lands.				

			Netland F	Rapid Asse	essment Pr	rocedure			WR.	AP 15
	☐ Check one ☐ Existing Conditions ☐ Proposed Conditions (WRAP)									
Application Number		Project Name orth American	Date	07/08	Evaluator Everett/Stowe	=		etland Type ardwood-Pine	Forest	
Land Use		FL	UCCS Code	on:		_ _			7	
Wildlife Utilization (WU)			Wetland Canop	oy (O/S)		w	etland Ground	Cover (GC)	
1.5				2	2		2.	5		
Habit Buffer type (Score	at Support/Buffer e) (% of area)		ls	Field Hydrolog			₩ 1.	Q Input & Trea	tment (WQ)*	
>300' 1 average,	100	1								I
consisting of >75%			TOTAL							
nuisance species			1	1 /						
	1	Land use (Category (LU)	』		Г	retreatment	Category (PT)	7	
	Land use C Pine Plan	Category (S	core) X 1.5	(% of area)	=Sub Totals	Pretreatmen Undevelop	t Category	(Score) X	(% of area)	=Sub Totals
						Plantation				
WRAP Score				(LU) TOTAL	1.5			1	PT TOTAL	1.5
0.61										
Wildlife Utilization (WU) 1.5			small mammal	s; medium and	l small reptile	ss			
			upland forag upland shelte							
Western I Communication	1) 2									
Wetland Canopy (O/S	5) 2			sparse canopy	,					
		- Adequate	e roosting e species pres	sent						
W.d. 10	(00) 0.5		adfall or snag							
Wetland Ground Cov	er (GC) 2.5		c species obs							
·			isance specie wetland veg	es present getation in area	1					
Habitat Support/Buffe	er 1			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					-	
THE SUPPOSE OF THE SU		- 2 yr – 3 y	yr old planted	l loblolly pine	plantations wh	ich occupy 10	00% of th	e upland but	ffer	
Field Hydrology (HY	D) 2.5									
		- System is	s still able to	maintain hydro	operiod					
WQ Input & Treatme	nt (WQ 1.5									
				lolly pine plant undeveloped l		antation				

- Pretreatment = 50% wet detention & 50% rangeland

- Pretreatment = 100% loblolly pine plantation

	Wetland Rapid Assessment Procedure									WR.	AP 19		
		Existing Co	☐ Check one onditions ☐ Proposed Conditions (WRAP)										
Application Number	er		oject Name th Americ		Date 10/08	/08	Evaluator Everett/Stow	/e			Vetland Type ottomland Fo	rest	
Lan	d Use			FLUCCS C	Code Description	<u>.</u>	-	_		Г			
Wildlife Utilization			<u></u>		F	Wetland Cano	1				Vetland Ground	Cover (GC)	
2	2.5				L		2			2	.0		
		pport/Buffer			ſï	Field Hydrolog					VQ Input & Trea	ntment (WQ)*	1
	(Score) X	(% of area)	=Sub T		Į		3				.5		
>300' average,	1	100	1										
consisting of >75%				=	OT AT								
nuisance					OTAL								
species													
		Land use		ise Categor	y (LU)	(0/ of auga)	=Sub Totals	1	Dratrootma	Pretreatment ent Category	(Score) X	(% of area)	=Sub Totals
		Category		(Score) X		(% of area)							
		Pine Plant	ation	1.5		100%	1.5		Undev. P	ine Planta.	1.5	100	1.5
			-					Ė					
							 	-					
WD AD Comm						(LID TOTAL	1.5					PT TOTAL	1.5
WRAP Score		7				(LU) TOTAL	1.5					PI IOIAL	1.3
Wildlife Utilizat	tion (WU)						luding aquatic	life					
			-Abunda -Abunda										
			7 KOUNGU		ng m ou	мору							
Wetland Canopy	y (O/S)	2					-						
						ture but has p	potential y with ≈ 25%	of un	derstors	contains	exotic specie		
			-507001	canopy	is matur	c and nearing	y With 1-2570	or un	derstory	Contains	DAGGE SPECIE		
777 1 1 0	10 (10) 0			-								
Wetland Ground	d Cover (C		≈ 30% C	overage	with no	exotics							
Habitat Support	/Buffer	1.0											
			>300' ave	erage, con	sisting o	f >75% nuisar	nce species						
Field Hydrology	y (HYD)	3	 .										
7			Hydrolo	gy is una	altered.								
WQ Input & Tr	eatment (WQ 1.5				.=							
my input & II	camiont (LU – Pir										
			PT - Un	develop	ed Plant	ed Pine							

			☐ Che		land R	apid Asse	ssment Pr	ocedure			WR	AP 21
		☐ Existing (osed Conc	ditions (WR	AP)					
Application Number	er		Project Na orth Ame	ame erican Coa	Date 10/08	3/08	Evaluator Everett/Stowe	<u>.</u>		etland Type ardwood-Pin	e Forest	
Land	d Use			FLUCCS	-1			_			_	
THE THE THE	(IIII)			<u> </u>	Description	. ,	(0/0)					
Wildlife Utilization 2	2.5					Wetland Cano			<u>w</u>	etland Ground 5	Cover (GC)	
	(Score)	Support/Buffer (% of area)		ıb Totals		Field Hydrolog		7	W 1.	Q Input & Tre 5	atment (WQ)*]
>30<300',	X 1	100%	1	1]							J.
undesirable species composition					TOTAL	7						
Composition			Lar	nd use Categ		<u> </u>		Г	Pretreatment	Category (PT)	7	
		Land use C		(Score)		(% of area)	=Sub Totals		ent Category	(Score) X	(% of area)	=Sub Totals
		Pine Plant	ation		1.5	100%	1.5	Undevelo Pine Plar		1.5	100%	1.5
											P. T. C. T. L.	
WRAP Score						(LU) TOTAL	1.5				PT TOTAL	1.5
Wildlife Utilizat	ion (W	J) 2.5										
			-Negli	gible evi		forage human disturb yr old planted						
Wetland Canopy	/ (O/S)	2.5										
				re canopy uate roos	y sting and s	shelter						
Wetland Ground	l Cover	(GC) 2.5	<25%	Undesira	able speci	es present						
Habitat Support	/Buffer	1	>30<3	00'Buffe	r consists	s of >75% und	lesirable speci	es composit	ion			
Field Hydrology	(HYD)	3.0	Non al	ltered hy	drology							
WQ Input & Tre	eatment	(WQ) 1.5		oine plan undevelo		plantation			-			

- W.Q. Pretreatment = Natural Undeveloped Land

		Wetland Rapid Assessment Procedure ☐ Check one ☐ Existing Conditions ☐ Proposed Conditions (WRAP)									WR	AP 24		
Application Num	ober			Project Na orth Ame	ame erican Co	Date 10/0	09/08	Evaluator Everett/Sto	owe	1		etland Type	1 Forest	
L	and Use				FLUCC	CS Code	on;			- 1			7	
Wildlife Utilizat							Wetland Ca		7	_		etland Ground	Cover (GC)	
<u>L</u>	2.5							2.5			2.	5		
Buffer type	Habitat (Score)		oort/Buffer (% of area)) =Sv	ıb Totals		Field Hydro	logy (HYD) 2.5	7	7	W 1.	'Q Input & Trea	itment (WQ)*	1
>30 <300'	1	\Box	80%		0.8]	L							ii .
>300', consisting of	1		20%	+-	0.2									
>75%						TOTAL								
nuisance species						1.0	7 /							
L -F-1-1-1-					·						! 		_	
			Land use	Lan	d use Cate (Score)	egory (LU) X	(% of area)	=Sub			Pretreatment nt Category	Category (PT) (Score) X	(% of area)	=Sub Totals
		ſ	Category					Totals	_					
		}	Pine Plan	tation		1.5	100%	1.5	+	Pine Plan	tation	1.5	100%	1.5
									1					
		-			<u> </u>				4					
		t							1					
WRAP Score			1				(LU) TOTA	L 1.5		-	_		PT TOTAL	1.5
0.69														
Wildlife Utiliz	ation (W	<u> </u>	2.5											
Whalle Othiz	ation (vv	0)		- Evide	ence of t	utilization	ı by large ma	mmals, aquat	ic m	acro-inver	tebrates re	ntiles amnt	ihians and h	virde wae
				obser	ved.						cooracos, re	pures, umpn	nomino ana o	nus was
				-Abunc	lant she	Iter, forag	ge, and roosti	ng						
Wetland Cano	у (O/S)		2.5					<u></u>			<u> </u>			
						an disturb species	oance							
				~23701	.11745176	species								
Wetland Groun	d Cover	(GC) 2.5											
				Wetlan	d has a	desirable	diversity of	vegetative gro	ound	cover.				
				No exo	tics obs	erved								
						·								
Habitat Suppor	t/Buffer		1.0	900/ \	201 -201	04.2004.	2004	C> 77.50/ '						
				0070/3)U \3U(J; 20% >.	'300', consistin	g of >75% nui	sance	species				
Field Hydrolog	y (HYD))	2.5											
	<u>~</u>			Exhibit	s natura	ıl hydrope	eriod.							
WQ Input & Tr	eatment	(WC										-		
						ine Planta	ation Pine Plantatio	n						

WQ Input & Treatment (WQ) 1.5

- Land use = Pine Plantation

- W.Q. Pretreatment = undeveloped clear cut

- W.Q. Pretreatment = 50% grass swales, 50% cattle pasture(cattle feces in wetland)

	WETLAND RAPID AS	SESSMENT PROC	EDURE	WRAP Location				
	☐ Check One ☐ Proposed Conditions ☐ Current Condition	□ Check One □ Proposed Conditions □ Current Conditions						
		(WRAP)						
Application Number	Project Name	Date	Evaluator	Wetland Type				
	North American Coal	10/9/2008	D.K. and	Field				
l and the	Description		J.E.	Wetland Acreage				
Land Use	Description			vveiland Acreage				
·								
Wildlife Utilization (WU)	_	Wetland Canopy	(O/S)	Wetland Ground Cover				
1.5		1.5		1.5				
Habitat S	upport Buffer	Field Hydrology (I	HYD)	WQ Input & Treatment *				
	X (% of area)= Sub Totals	2		1				
>300' w/ >75%	1 100 1		_ //	* The value of WQ is obtained by adding the				
nuisace species		Total	/	TOTAL scores of Land use Category and Pretreatment category then dividing by 2				
		1	/	Troubaution outogory their arraing 27 2				
		/	<i>'</i>					
	Category (LU)		/	Pretreatment Category (PT)				
LU Category (Score)			PT Category	(Score) X (% of area)= Sub Totals				
Improved Pasture	1 100 1		Grass swales	1 100 1				
1 dature								
	LU Total 1.00			PT Total 1				
WRAP Score	_							
0.47								
Field Notes:								
Wildlife Utilization (WU)		1 579 ' C	1	4444414				
1	nd amphibians utilize the wetland and food source availability.	a. There is frequent num	ian disturbance to	the wetland and surrounding land.				
Limited cover and upia	nd 100d source availability.							
Wetland Canopy (O/S)								
	opy species are present. Immatur	e canopy, has potential.						
W 10 - 10 10			-					
Wetland Ground Cover	cies composition in the herbaceon	us laver Cover is impa	eted by human act	ivities Maintained as pasture				
~23% Officestrable spec	sies composition in the herbaceo	us layer. Cover is impac	acd by numan act	ivides. Maintained as pasture.				
Habitat Support/Buffer								
>300' buffer on average	e. Buffer provides limited cover	and adequate food source	ce.					
Field Hydrology (HYD)		dan tha naad muudaa	thuangh tha matla	ad advangaly affaat hydrology				
Hydroperiod adequate,	, but swales and a culvert placed	under the road running	inrough the wellar	id adversely affect hydrology.				
WQ Input & Treatment								
	re (PT) - Grass swales							

	WETLAND RAPID ASS a Check One D Proposed Conditions D Current Conditions		EDURE	WRAP Location WRAP 31
Application Number	Project Name North American Coal	Date 10/9/2008	Evaluator D.K. and J.E.	Wetland Type Bottomland Forest
Land Use	Description		J.E.	Wetland Acreage
Wildlife Utilization (WU) 2.5]	Wetland Canopy (O/S)	Wetland Ground Cover
Habitat Supp Buffer Type (Score) X >300' w/ >75% nuisance sp.	(% of area)= Sub Totals	Field Hydrology (H	IYD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Pine 1.5 Plantation WRAP Score 0.61 Field Notes:	(% of area)= Sub Totals		PT Category Undeveloped Pine Plantation	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 1.5 100 1.5 PT Total 1.5
Wildlife Utilization (WU) Deer, turkey, reptiles and a corridor.] amphibians utilize the wetland.	. Adequate upland food	source and cove	er present. Connected to wildlife
Wetland Canopy (O/S) <25% Undesirable canopy	species are present. Canopy p	rovides habitat. Eviden	ce of native recru	uitment. Healthy canopy with few snags.
Wetland Ground Cover <25% Undesirable species through the wetland swale.	-	s layer. Cover is slightl	y impacted by hu	uman activities, a maintained road cuts
Habitat Support/Buffer >300' buffer on average was corridors.	/>75% nuisance species. Buff	er provides adequate co	over and food sou	urce. Portions connected to off-site
Field Hydrology (HYD) Hydroperiod adequate, but	t rutted in areas near roads. Lit	tle evidence of subside	nce.	
WQ Input & Treatment (LU) - Pine Plantation (P)] Γ) - Undeveloped Pine Plantati	ion		

	WETLAND RAPID ASS	ESSMENT PROC	EDURE	WRAP Location WRAP 32
	□ Proposed Conditions □ Current Conditions	Proposed Conditions		
		(WRAP)		
Application Number	Project Name	Date	Evaluator	Wetland Type
	North American Coal	10/10/2008	D.K. and	Field
Land Use	Description		J.E.	Wetland Acreage
			2 (0)	
Wildlife Utilization (WU)	٦	Wetland Canopy (6)/S) 	Wetland Ground Cover 2
1.3		1	i	
Habitat Supp	ort Buffer	Field Hydrology (H	YD)	WQ Input & Treatment *
Buffer Type (Score) X	(% of area)= Sub Totals	1.5	<i>」 </i> /┌─	* The value of WQ is obtained by adding the
>300', >75% nuisance specie	1 50 0.5		//	TOTAL scores of Land use Category and
Natural	<u> </u>	tal	/	Pretreatment category then dividing by 2
Undeveloped 2.5	5 50 1.25	1.75	/ /	
Land use Ca	stegory (LLI)		/	Pretreatment Category (PT)
LU Category (Score) X	• • • •		PT Category	(Score) X (% of area)= Sub Totals
Livestock	(/o o · a · o a o · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · a · o · o		Livestock	
Pasture 0.5	5 50 0.25		Pasture	0.5 50 0.25
Natural Undeveloped 2.5	5 50 1.25		Natural Undeveloped	2.5 50 1.25
Ondeveloped 2.3	LU Total 1.50		Ondeveloped	PT Total 1.5
WRAP Score	1.50			. , , , , , , , , , , , , , , , , , , ,
0.51	1			
Field Notes:	₫			
Wildlife Utilization (WU)				
Utilized by deer, songbirds	s, reptiles and amphibians. Limit	ted adjacent upland fo	od source. Area	is used as livestock pasture, cows were
present in the wetland at the	ne time of survey.			
Wetland Canopy (O/S)	J	ainahla anaaisa in san	immatuus h	ut has notantial. Environmental imposts
in place, dead trees were o		estrable species in can	opy; immature o	ut has potential. Environmental impacts
in place, dead frees were o	osorved in the wettand.			
Wetland Ground Cover	T			
	l cover; routinely managed as we	t pasture for livestock	grazing.	
Habitat Support/Buffer		Di	. 2001 11 /	1 1 1 11 1
50% has buffer of >300', b	out has >75% nuisance species.	the remaining 50% is	>300' and is nati	iral undeveloped land
Field Hydrology (HYD)				
	ly affected hydrology. Dead tree	s were observed in the	e wetland.	
-				
WQ Input & Treatment		T)	500/3T :	und TTu dansala und 3
(LU) - 50% Livestock Pas	sture, 50% Nat. Undeveloped (P	1) - 50%Livestock Pa	sture, 50% Natu	rai Undeveloped
i				

	WETLAND RAPID AS		EDURE	WRAP Location WRAP 33
Application Number	Project Name North American Coal	Date 10/10/2008	Evaluator D.K. and	Wetland Type Planted Pine
Land Use	Description		J.E.	Wetland Acreage
Wildlife Utilization (WU)]	Wetland Canopy (O/S)	Wetland Ground Cover
Buffer Type (Score) X >300' with predominantly nuisance species	(% of area)= Sub Totals	Field Hydrology (H	IYD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land use Ca LU Category (Score) X Planted Pine 1.5	(% of area)= Sub Totals		PT Category Planted Pine	Pretreatment Category (PT) (Score) X (% of area) = Sub Totals 1.5 100 1.5
0.42 Field Notes: Wildlife Utilization (WU) Minimal evidence of wildl Wetland Canopy (O/S)	life, not adequate for songbirds	s. Sparse upland food so	ource. Abuts well	i travelled paved road.
	s composition. 100% dominate	d by rowed, planted lob	ololly pine. Negli	gible habitat support.
Wetland Ground Cover >75% Undesirable species	s composition. Cover highly in	npacted, mostly nuisanc	e species.	
Habitat Support/Buffer >300', but has >75% nuisa	nnce species.	,,,, , , , , , , , , , , , , , , , , ,		
Field Hydrology (HYD) Wetland hydrology adequ roads. Plants show no sign		dence occurs in areas ar	nd hydrololgy is	adveresely affected by paved and dirt
WQ Input & Treatment (LU) - Planted loblolly pin	ne (PT) - Undeveloped Pine P	lantation.		

	WETLAND RAPID ASSE	SSMENT PROCE	DURE	WRAP Location
	Check One Proposed Conditions			WRAP 34
		(WRAP)		
Application Number	Project Name	Date	Evaluator	Wetland Type
	North American Coal	10/7/2008	D.K. and	Hardwood-Pine Forest
Land Use	Description		J.E.	Wetland Acreage
Wildlife Utilization (WU)		Wetland Canopy (O	/S)	Wetland Ground Cover
2		2.5	<u> </u>	2
Habitat Comm	and Duffer	Field I hadrolowy /ID	— (D)	WQ Input & Treatment *
Habitat Suppo Buffer Type (Score) X		Field Hydrology (H)	j)	1.13
>300', but has 1	50 0.5		_ //	* The value of WQ is obtained by adding the
>75% nuisance			/ /	TOTAL scores of Land use Category and
species	Tot	tal	/	Pretreatment category then dividing by 2
No Buffer 0	50 0	0.5	/	
			/	
Land use Cat	egory (LU)		- 1	Pretreatment Category (PT)
LU Category (Score) X	(% of area)= Sub Totals		PT Category	(Score) X (% of area)= Sub Totals
Imp. Pasture 1			Grass swales	1 75 0.75
LV Highway 1	25 0.25			
Planted Pine 1.5	25 0.38		Undeveloped	
			Planted Pine	1.5 25 0.38
	LU Total 1.13			PT Total 1.13
WRAP Score				
0.56				
Field Notes:	•			
Field Notes: Wildlife Utilization (WU)	1			
	mammala There is frequent him	man diaturbanaa ta wil	Idlifa dua ta tha	proximity of Liberty Rd. Cover and
	the road and adjacent pasture.	man disturbance to wi	idine due to the	proximity of Liberty Rd. Cover and
100d sources are minied by	the road and adjacent pasture.			
Wotland Canany (O/S)	1			
Wetland Canopy (O/S)		T1:-	c : ,	-t -f tii Ci-
		There is strong eviden	ce of recruitmen	nt of native canopy species. Canopy is
healthy and shows no sign	of disease or stress.			
Wotland Cround Cover	1			
Wetland Ground Cover		.:1	the emerica	
	-	on subsidence; noweve	er the species co	emposition is ideal for the mature
hardwood/pine wetland in	which it is located.			
Habitat Support/Buffer	<u> </u>			
-		pecies. The remaining	; 50% has no bu	ffer due to Liberty road bordering the
entire north side of the wet	land.			
Field Hydrology (HYD)				
Adequate hydrology, but d	itched and impounded by Libert	y Rd.		
WQ Input & Treatment				
(LU) - 50%Improved Pastu	ire, 25%Low Volume Highway,	25% Planted Pine (PT	C) - 75%Grass s	wales only, 25% Planted Pine

	WETLAND RAPID AS a Check One Proposed Conditions a Current Condition		EDURE	WRAP Location WRAP 35
Application Number	Project Name North American Coal	Date 10/7/2008	Evaluator D.K. and J.E.	Wetland Type Field
Land Use	Description		J.174	Wetland Acreage
Wildlife Utilization (WU)]	Wetland Canopy (C)/S)	Wetland Ground Cover
Buffer Type (Score) X >300', but has 1 >75% nuisance species	ort Buffer (% of area)= Sub Totals 100 1	Field Hydrology (H) 2 Total	YD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land use Cat LU Category (Score) X Improved 1 Pasture WRAP Score 0.44			PT Category Grass swales only	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 1 100 1 PT Total 1
Field Notes: Wildlife Utilization (WU) Site provides adequate here	baceous forage, but little cov	er and adjacent upland foo	od source curren	itly exists.
Wetland Canopy (O/S) Wetland has an immature of	anopy and is kept as pasture	c. There is minimal sign of	f recruitment of	native canopy species.
Wetland Ground Cover ~50% Undesirable species	composition. Routinely man	naged as improved pasture	·.	
Habitat Support/Buffer >300' buffer, but is comprise	sed of >75% non-invasive no	uisance species.		
Field Hydrology (HYD) Adequate hydrology, but ac	djacent to roads and ditching	<u>.</u>		
WQ Input & Treatment (LU) - Improved Pasture (I	PT) - Grass swales only.			

	WETLAND RAPID ASSESSMENT PROCEDURE			WRAP Location
	Proposed Conditions	(14/0 4 0)		WRAP 36
		(WRAP)		
Application Number	Project Name North American Coal	Date 10/7/2008	Evaluator D.K. and	Wetland Type Pine-Hardwood Forest
Land Use	Description	•	J.E.	Wetland Acreage
Wildlife Utilization (WU)	٦	Wetland Canopy (0	O/S)	Wetland Ground Cover
	_			
Buffer Type (Score) X >300' 2. >30<300'	(% of area)= Sub Totals	Field Hydrology (H	YD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land use Ca LU Category (Score) X Forested Rangeland	ategory (LU) (% of area)= Sub Totals 1 100 1		PT Category Forested Rangeland	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 1 100 1
WRAP Score 0.61 Field Notes: Wildlife Utilization (WU) Utilized by small and larg support large mammals.	LU Total 1.00	gbirds. There is adequ	nate food and cov	PT Total 1
Wetland Canopy (O/S) <25% Undesirable species	s, wetland canopy provides habita	at. Recruitment of nat	ive species was e	vident at the time of the survey.
Wetland Ground Cover <25% Undesirable species road.	s in herbaceous layer. Cover is sl	ightly impacted by los	ss of sediment in	o the wetland from an adjacent dirt
Habitat Support/Buffer 25% of the buffer is <30>	300' on average, and the remaining	ng 75% is >300' on av	verage.	······································
Field Hydrology (HYD) Wetland hydrology is ade subsidence.	quate; however, is impounded by	y a man-made pond an	nd is bordered by	a dirt road. There is evidence of soil
WQ Input & Treatment (LU) - Forested Rangelan	d (PT) - Forested Rangeland.			

	WETLAND RAPID ASSESSMENT PROCEDURE Discharge Conditions Discharge Condi			WRAP Location WRAP 37
		(WRAP)_	-	J
Application Number	Project Name North American Coal	Date 10/7/2008	Evaluator D.K. and	Wetland Type Pine-Hardwood Forest
Land Use	Description		J.E.	Wetland Acreage
Wildlife Utilization (WU)]	Wetland Canopy (O/S)	Wetland Ground Cover
Habitat Supp Buffer Type (Score) X >300' 2.3	(% of area)= Sub Totals 5 100 2.5	Field Hydrology (H	HYD)	* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land use Ca LU Category (Score) X Natural 2.3 Undeveloped WRAP Score	(% of area)= Sub Totals		PT Category Natural Undeveloped	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 2.5 100 2.5 PT Total 2.50
Field Notes: Wildlife Utilization (WU)		bians and songbirds. T	There is adequate	food and cover in the surrounding
Wetland Ground Cover	s, wetland canopy provides habi			evident at the time of the survey.
Habitat Support/Buffer >300' buffer , with predon	ninantly desirable species.			
Field Hydrology (HYD) Wetland hydrology is ade	quate. The plants are healthy an	d show no sign of wat	er stress. There i	s little evidence of soil subsidence.
WQ Input & Treatment (LU) - Natural Undevelop	ed (PT) - Natural Undeveloped		<u>-</u>	

Application Number Project Name Date Evaluator We North American Coal 10/7/2008 D.K. and H.H. Land Use Description Wetland Canopy (O/S) Wetland Canopy (O/S)	etland Acreage
North American Coal 10/7/2008 D.K. and H.H. Land Use Description Wetland Canopy (O/S) Wetland Canopy (O/S)	etland Acreage
Wetland Canopy (O/S) Wetland Canopy (O/S)	
	tland Ground Cover
1.5	1
Buffer Type (Score) X (% of area)= Sub Totals >300' 2.5 50 0.63 TOTAL scores	2 Input & Treatment * 2 VQ is obtained by adding the of Land use Category and category then dividing by 2
nuisance spec 1 50 0.75 1.38	
Nat Und. 2.5 50 1.25 Planted Pine 1.5 50 0.75 LU Total 2.00 WRAP Score 0.55 Field Notes: Wildlife Utilization (WU) Utilized by small and large mammals, and songbirds. There is an adequate upland food source in the surroundin	of area)= Sub Totals 50 0.75 50 1.25 Total 2.00
large mammals. Wetland Canopy (O/S) Portions of the wetland were recently clear-cut and maintained as a hunting food plot in the floodplain of Chicken	asawhay Creek.
Wetland Ground Cover Comprised mostly of non-native herbaceous species. Highly invasive tropical soda-apple was observed in the cl	eared area.
Habitat Support/Buffer 50% of the wetland has a >300' buffer, with predominantly desirable species. 50% of the buffer is >300' but has (Pine Plantation & Non-Native Herbaceous Species).	s >75% nuisance species
Field Hydrology (HYD) Wetland hydrology is adequate. The plants are healthy and show no sign of water stress. Swales and logging rut	s are in place.
WQ Input & Treatment (LU) - 50% Natural Undeveloped, 50% Pine Plantation (PT) - 50% Natural Undeveloped, 50% Undeveloped Pl	lanted Pine.

WETLAND RAPID ASSE	SSMENT PROCE	DURE		WRAP Loc	ation
□ Check One □ Proposed Conditions □ Current Conditions				WRAP 39	
	(WRAP)				
Application Number - Duringt Name	Dete	Cualmatas		Motland Tuna	
Application Number Project Name North American Coal	Date 10/8/2008	Evaluator D.K. and		Wetland Type Planted Pine	
Inorui American Coar	10/8/2008	H.H.	!	1 lanted 1 life	
Land Use Description				Wetland Acrea	age
			•		
Wildlife Utilization (WU)	Wetland Canopy (O/	/S) ¬	ı	Wetland Grou	nd Cover
1.5	11			1.5	
Habitat Support Buffer	Field Hydrology (HY	(D)		WQ Input & T	reatment *
Buffer Type (Score) X (% of area)= Sub Totals	2	Ī /—	>	1.5	
>300' w/ 75% 1 100 1		_ //		of WQ is obtaine	
nuisance species Tot	al.	/		res of Land use ent category ther	
	1 /	/	Pretieatin	ent category ther	i dividing by 2
		/			
Land use Category (LU)		/	Pretreatme	nt Category (F	PT)
LU Category (Score) X (% of area)= Sub Totals		PT Category	(Score) X	(% of area)=	Sub Totals
Planted 1.5 100 1.5 Pine		Planted	1.5	100	1.5
Fille		Pine	1.3	100	1,3
LU Total 1.50				PT Total	1.50
WRAP Score					
0.47					
Field Notes:					
Wildlife Utilization (WU) Utilized by small and large mammals; no evidence of utilization	otion by conchirds rer	tiles The avail	able unland	food source is	limited and
somewhat sparse. Human intervention is evident through many					s minece and
The state of the s		- 20. p. p. p. co. c			
Wetland Canopy (O/S)					
>50% Undesirable species content. Canopy is dominated by			y was obse	rved to have d	esirable
native wetland species, showing future potential if timber ha	arvest operations cease	ed.			
W # 10					
Wetland Ground Cover Comprised mostly of herbaceous species indicative of disturbance of the control of the co	rhad sites				
Comprised mostry of nervaceous species indicative of distu-	ibca sites.				
Habitat Support/Buffer	 -				
>300' on average, consisting of >75% nuisance loblolly pine	e. Buffer is connected	with contiguou	s off-site co	rridors and pr	ovides cover.
First Hadrage (AND)					
Field Hydrology (HYD) Wetland hydrology is adequate. The plants are healthy and	ahow no gian of water	strace Cavalas	and logging	rute ore in nle	100
wenand hydrology is adequate. The plants are healthy and	silow ito sign of water	suess. Swales	and logging	ruis are in pia	icc.
WQ Input & Treatment					
(LU) - Planted Pine (PT) - Planted Pine.					

	WETLAND RAPID ASS	SESSMENT PROC	EDURE		WRAP Loca	ation
	□ Check One □ Proposed Conditions □ Current Conditions		İ		WRAP 40	
		(WRAP)		-		
Application Number	Project Name	Date	Evaluator		Wetland Type	
Application Number	North American Coal	10/8/2008	D.K. and		Bottomland Fo	orest
		10.0.200	н.н.			
Land Use	Description				Wetland Acrea	age
					_	
Wildlife Utilization (WU)		Wetland Canopy (0	7/\$)		Wetland Group	nd Cover
1.5	٦	2	<u></u>		1.5	100101
	_	<u> </u>	<u>.</u> l			
Habitat Sup		Field Hydrology (H	YD)	_	WQ Input & Tr	reatment *
Buffer Type (Score) X		2	<i>」 /┌</i> ─	* The value	1.25 of WQ is obtained	d by adding the
>300' NB	1 50 0.5 0 25 0		//		or vvQ is obtained ores of Land use	
	1 25 0.25 T		/		ent category then	
		0.75	/			
	4.10		/	D	1 O . I (D	· \
	ategory (LU)		DT Cotogogy		ent Category (P	
LU Category (Score) X Planted 1	(% of area)= Sub Totals .5		PT Category Grass swales	(Score) /	(% of area)= 50	0.5
pine						
Improved	1 50 0.5		Planted pine	1.5	50	0.75
pasture	LU Total 1.25				PT Total	1.25
WRAP Score	1.25				i i iotai [1.23
0.50	7					
Field Notes:	_					
Wildlife Utilization (WU)						· · ·
-	ge mammals, reptiles, amphibian	_	erbrates and fishe	s. Frequen	t human disturb	cance is
created by the paved road	. There is a marginal upland foo	d source.				
Wetland Canopy (O/S)						
	 s present. Native recruitment is	evident and the canony	provides good h	abitat No.s	sign of disease	in canopy
trees.	b probone. I tall to reoral anione is	ovident and are canopy	provideo good n	aonan 110 i	71B11 01 4104402	in currepy
Wetland Ground Cover						
<25% Undesirable specie	s. Chinese privet has been estable	lished due to human in	pacts to the wetl	and ground	l cover.	
Habitat Support/Buffer						
	—I rth provides no buffer. To the ea	st and south the buffer	is >300' on avera	ige vegetate	ed with predom	ninantly
-	stern edge of the wetland has a <			0 0	•	•
Field Hydrology (HYD)			-			
	equate. The plants are healthy an	d show no sign of wate	er stress; howeve	r, culverts a	and soil subside	ence
negatively impact the we	nana.					
WQ Input & Treatment				•··		
	 , 50% Improved (PT) - 50% Pla	nted Pine, 50% Grass S	Swales			
	- , ,					

	WETLAND RAPID ASS	SESSMENT PROCI	EDURE	WRAP Location
	D Check One D Proposed Conditions D Current Conditions			WRAP 41
		(WRAP)		
A 11 (f A)	5	.		NA 41 1 T
Application Number	Project Name	Date	Evaluator D.K. and	Wetland Type Hardwood-Pine Forest
	North American Coal	10/8/2008	H.H.	Hardwood-Pine Forest
Land Use	Description		11.11.	Wetland Acreage
]			
Wildlife Utilization (WU)	-	Wetland Canopy (C	<u>)/S)</u>	Wetland Ground Cover
2		2		1.5
Habitat Cum	ant Buffor	Field Hudrology (H)	VD)	WQ Input & Treatment *
Habitat Supp		Field Hydrology (H)	<u> </u>	2.4
	(% of area)= Sub Totals		_ / _	* The value of WQ is obtained by adding the
>30<300' 1.5			/	TOTAL scores of Land use Category and
	T	otal		Pretreatment category then dividing by 2
		1.75	/	
	410		/	Dustra de la Calaca de (DT)
Land use Ca				Pretreatment Category (PT)
LU Category (Score) X Natural 2.			PT Category Grass swales	(Score) X (% of area)= Sub Totals 1 0.25 0.5
undeveloped	5 0.75 1.5		Grass swares	0.23
Improved	1 0.25 0.5		Natural	2.5 0.75 1.9
pasture	/		undeveloped	DT T 1 1
WRAP Score	LU Total 2.40			PT Total 2.40
0.65	7			
-	<u></u>			
Field Notes: Wildlife Utilization (WU)	<u> </u>			
	→ e mammals rentiles and amphi	hians Minimal human	disturbance and	a marginal upland food source was
observed.	o mammad, reputed, and ampin	orano. mananan manan	diotal outlies and	a marginar apraira 100a boaree was
Wetland Canopy (O/S)				
<25% Undesirable species	s present. Native recruitment is	evident and the canopy	provides good h	abitat. No sign of disease in canopy
trees.				
Wetland Ground Cover				
<25% Undestrable species	s. Cover slightly impacted by hu	imans.		
Habitat Support/Buffer	1			
	ist, <30>300' to the west(adjace	nt to road).		
	, (3	,		
Field Hydrology (HYD)				
Wetland hydrology is ade	quate. Soil subsidence was obse	rved in the wetland.		
MO land 9 To the ord				
WQ Input & Treatment	 sture, 75% Natural Undeveloped	(DT) 750/ Not Hada	weloned 250/ C	raes Curalas
(LO) - 2370 Improved Pas	siaro, 7370 inaturar Ondevelopec	1 (1 1) = 13/0 Nat. Office	7 volupcu, 25 /6 Gi	Lass Dyraios
L				

	WETLAND RAPID ASSE	ESSMENT PROCE	DURE		WRAP Loca	ation
o o	Proposed Conditions Current Conditions	(IAID A D)			WKAP 42	
L		(WRAP)				
	Project Name	Date	Evaluator		Wetland Type	
	North American Coal	10/8/2008	D.K. and		Field	
Land Use	Description		н.н.		Wetland Acrea	age
				[
Mildlife Litilization (MLI)		Wetland Canopy (O/	·C)		Wetland Grou	nd Cover
Wildlife Utilization (WU)		0) 1		0.5	na Cover
				•		
Habitat Suppor		Field Hydrology (HY	D) 7 .	、 i	WQ Input & Tr	eatment *
Buffer Type (Score) X ((% of area)= Sub Totals 50 0	1	<i>」 </i>	* The value	1.75 of WQ is obtained	d by adding the
>300' 2	50 1	4-1		TOTAL sco	res of Land use	Category and
	To	tai	/	Pretreatme	ent category then	dividing by 2
			/			
Land use Cate			,		nt Category (P	•
LU Category (Score) X (Natural 2.5	(% of area)≔ Sub Totals 50 1.25			(Score) X	(% of area)=	
undeveloped	30 1.23		Grass swales	1	0.5	0.5
Improved 1	50 0.5		Natural	2.5	0.5	1.25
pasture	LU Total 1.75		undeveloped		PT Total	1.75
WRAP Score	1.75				i i i i i i i i i i i i i i i i i i i	1.75
0.29						
Field Notes:						
Wildlife Utilization (WU)	a the westlands however the hel	hitat ia waru na ar far aa	nahinda and tha		ran and a limite	ad realand
food source.	e the wetland; however, the hal	onat is very poor for so	ngonus and me	ire is no cov	er and a minic	ea upiana
Wetland Canopy (O/S)						
No canopy present, mechani-	cally cleared and maintained.					
Wetland Ground Cover						
Juncus effusus is the only pr	evalent native wetland species	observed in the wetland	d.			
Habitat Support/Buffer						
	and pasture) 50% Natural Und	leveloped				
Field Hydrology (HYD)						
	north of the wetland, severly in	mpacting hydrology.				
•	•	1 0 7 07				
MO lawy a T		-				
WQ Input & Treatment (LLI) = 50% Improved Pastur	re, 50% Natural Undeveloped (PT) - 50% Nat Under	eloned 50% G	ragg Swales		
(25) 3070 Improvod i datui	, 2070 Patatar Ondovolopou ((11) 5070 Hat. Onder	010p0u, 5070 ()	. was swares		

	WETLAND RAPID ASS	SESSMENT PROC	EDURE	WRAP Location
	Proposed Conditions			WRAP 43
		(WRAP)		
Application Number	Project Name North American Coal	Date 10/9/2008	Evaluator D.K. and	Wetland Type Field
Land Use	Description		H.H.	Wetland Acreage
				<u> </u>
Wildlife Utilization (WU)		Wetland Canopy ((O/S)	Wetland Ground Cover
Habitat Sur	oport Buffer	Field Hydrology (H		WQ Input & Treatment *
Buffer Type (Score) X	(% of area)= Sub Totals 0.5 100 0.5	1.5		* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2
Land upo C	Patagony (LLI)			Protroctment Cotogory (PT)
LU Category (Score) X	Category (LU) ((% of area)= Sub Totals		,	Pretreatment Category (PT) (Score) X (% of area)= Sub Totals 1 100 1
Improved pasture	1 100 1			
pasture	LU Total 1.00			PT Total 1.00
WRAP Score	_			
0.28 Field Notes:		W 48 100		
Wildlife Utilization (WU) Herbaceous weedy cover	is the only food available to wile	dlife. Upland food sou	irce is very sparse.	. The pasture is used for livestock
grazing, cattle were obse		•		
Wetland Canopy (O/S)	T			
No canopy present, main	tained as wet pasture.			
Wetland Ground Cover				
	eedy herbaceous species dominat	te the ground cover, in	cluding some non	-native species.
Habitat Support/Buffer				
Pasture, >300' but has >7	75% non-invasive nuisance specie	es.		
Field Hydrology (HYD)				
A wetland swale drains a	a cattle pond, hydrology is advers	sely affected.		
WQ Input & Treatment				· · · · · · · · · · · · · · · · · · ·
	 Pasture (PT) - 100% Grass Swale	S		

	WETLAND RAPID AS	EDURE	WRAP Location WRAP 44			
	Proposed Conditions	s (WRAP)		WKAP 44		
Application Number	Project Name North American Coal Description	Date 10/9/2008	Evaluator D.K. and H.H.	Wetland Type Pine-Hardwood Forest Wetland Acreage		
Wildlife Utilization (WU)		Wetland Canopy ((O/S)	Wetland Ground Cover 2.5		
	(% of area)= Sub Totals 2.5 100 2.5	Field Hydrology (Fig. 3) Fotal 2.5	* Th	WQ Input & Treatment * 2.28 The value of WQ is obtained by adding the otal scores of Land use Category and retreatment category then dividing by 2		
LU Category (Score) X Natural 2 Undeveloped	Category (LU) C. (% of area)= Sub Totals 2.5 75 1.9 L.5 25 0.38 LU Total 2.28		1	treatment Category (PT) ore) X (% of area)= Sub Totals 2.5 75 1.9 1 25 0.38 PT Total 2.28		
Field Notes: Wildlife Utilization (WU) Utilized by small and lar human invervention was		nt upland food source a	and available cover are	e abundant for wildlife. Minimal		
Wetland Canopy (O/S) <25% Undesirable specie	es, canopy provides habitat and	shows no sign of stress	or disease.			
Wetland Ground Cover <10% Undesirable speci-	es, no disturbance to the ground	cover.				
Habitat Support/Buffer >300' in width. Connecte	ed to wildlife corridor, and is ad	jacent to the Okatibbee	Wildlife Managemen	t Area.		
Field Hydrology (HYD) Wetland has healthy, not	n-stressed plants and exhibits a r	natural hydroperiod. No	o soil subsidence was o	observed.		
WQ Input & Treatment (LU) - 75% Natural Und	eveloped, 25% Planted Pine (P)	Γ) - 75% Natural Undev	veloped, 25% Planted	Pine		

	WETLAND RAPID ASS	WRAP Location								
	□ Check One □ Proposed Conditions □ Current Conditions	WR	AP 45							
		(WRAP)								
Application Number	Project Name	Date	Evaluator	We	tland Type					
	North American Coal	10/9/2008	D.K. and		ttomland Forest					
Land Use	Description		Н.Н.	\ <u>\</u>	tland Acreage					
Land OSC					tiana Acreage					
Wildlife Utilization (WU)	Wildlife Utilization (WU) 2.5 Wetland Canopy (O/S) Wetland 2									
2.3	_				2.5					
Habitat Supp		Field Hydrology (F	HYD)	WC	Input & Treatm	ent *				
Buffer Type (Score) X	(% of area)= Sub Totals 5 100 2.5	2.5	<i>ᆜ</i> /┌─	* The value of W	2.5 /Q is obtained by a	idding the				
			//	TOTAL scores	of Land use Categ	ory and				
	To	2.5	/	Pretreatment of	category then divid	ing by 2				
<u></u>			1							
Land use Ca				Pretreatment C						
LU Category (Score) X Natural 2.:			PT Category Natural	(Score) X (%	of area)= Sub	Totals 2.5				
Undeveloped	7 100 2.3		Undevelop		100	2.3				
	LU Total 2.50			l <u> </u>	Total	2.50				
WRAP Score										
0.81]									
Field Notes:										
Wildlife Utilization (WU)		t unland food source s	and available cove	er are abundant	for wildlife Mi	nimal				
human invervention was o		t upianu 100u source a	and available cove	a are abundant	101 WHUIIIC. IVII	iiiiiiai				
Wetland Canopy (O/S)			1.							
<25% Undesirable species	s, canopy provides habitat and sh	nows no sign of stress	or disease.							
Wetland Ground Cover		G 1 1 1								
<10% Undesirable species	s, no disturbance to the ground co	over. Good species di	iversity was obser	ved.						
Habitat Support/Buffer										
>300' in width. Connected	l to wildlife corridors, and provid	des food and cover to	wildlife.							
Field Hydrology (HYD)	<u> </u>									
Wetland has healthy, non-	stressed plants and exhibits a na	tural hydroperiod. So	il subsidence was	observed.						
WQ Input & Treatment	T									
	コ eveloped (PT) - 100% Natural U	Indeveloped								
1										

	WETLAND RAPID ASSE	WRAP Location WRAP 46				
	Proposed Conditions	(WRAP)		Wall to		
Annication Number	Drain et Mayer	,	Evoluator	Matland Type		
Application Number	Project Name North American Coal	Date 10/9/2008	Evaluator D.K. and	Wetland Type Bottomland Forest		
Land Use	Description		Н.Н.	Wetland Acreage		
	<u> </u>					
Wildlife Utilization (WU) 2.5	1	Wetland Canopy (C)/S)	Wetland Ground Cover 2.5		
>30<300' 1	(% of area)= Sub Totals 0.75	Field Hydrology (H	- YD) -	WQ Input & Treatment * 1.38 * The value of WQ is obtained by adding the		
>300' 2.5	25 0.63 To	1.38		TOTAL scores of Land use Category and Pretreatment category then dividing by 2		
Land use Ca			/	Pretreatment Category (PT)		
LU Category (Score) X Improved 1 pasture Natural			PT Category Improved pasture Natural	(Score) X (% of area)= Sub Totals 1 75 0.75 - - -		
undevelope 2.5	5 25 0.63 LU Total 1.38		undevelop	2.5 25 0.63 PT Total 1.38		
0.71 Field Notes:]			11 Total 1130		
	e mammals, songbirds, fishes, an imal human invervention was ob		. Adjacent uplan	d food source and available cover are		
Wetland Canopy (O/S)						
<25% Undesirable species	, canopy provides habitat and sh	ows no sign of stress	or disease.			
Wetland Ground Cover <25% Undesirable species	, no disturbance to the ground co	over. Good species div	versity was obser	rved.		
Habitat Support/Buffer 50% is >300' in width, 50%	% is >30<300' with >75% undesi	irable species.	· · · · · · · · · · · · · · · · · · ·			
Field Hydrology (HYD) Ponded area acts as a natur	ral sediment catch, no human co	ntrolled elevation.				
WQ Input & Treatment (LU) - 25% Natural Under	veloped, 75% Improved Pasture	(PT) - 25% Natural U	ndeveloped, 75%	6 Improved Pasture		

	Wetland Rapid Assessment Procedure ☐ Check one ☐ Existing Conditions ☐ Proposed Conditions (WRAP)											AP 48
Application Nu	mber		roject Nam rth Ameri		Date 1 7/25		Evaluator J. Everett			Wetland Type Shrubland		
	Land Use		F	FLUCCS	S Code		U. Bruide	<u> </u>				
Pin	e Plantation		Ĺ		Description	on:						
Wildlife Utiliza	ntion (WU)					Wetland Cano	py (O/S)			Wetland Ground	Cover (GC)	
	1.0					С	0.5			1.0		
	Habitat Sup	ort/Buffer				Field Hydrolo	gy (HYD)		_	WQ Input & Trea	ntment (WQ)*	_
Buffer type		(% of area)	=Sub T	'otals			2.5			1.5		
>300', comprised	1	100	 									
of >75%			+									
nuisance species.					TOTAL	= 1						
эрсогоз.					1							
			Land u	se Catego			0.1.00 - 1	[nt Category (PT)		0.1 m . 1
		Land use Ca Pine Planta		(Score)	<u>x</u> 1.5	(% of area) 100%	=Sub Totals	Grass sw	ent Category vales	(Score) X 1.5	(% of area) 100	=Sub Totals
	-							-				
	-											
WRAP Score	L					(LU) TOTAL	1.5				PT TOTAL	1.5
0.4	12					(EO) TOTAL	1.5				TTTOTAL	
		i										
Wildlife Utili	ization (WU)				ium sized		tilize the wetla	nd. Frequen	t human d	isturbance oc	curs due to t	he routine
Wetland Can	opy (O/S)).5										
			- subjec	t to rece	ent clear-	-cutting						
Watten d Cas	ound Cosses (C)	3) 1		_								
weiland Gro	und Cover (G0	<u>/) 1 </u>	- Appro - Recen			indesirable sp	ecies					•
Habitat Supp	ort/Buffer	1										
			>300' a	verage	buffer, c	onsisting of >	75% nuisance	species(lob)	lolly pine)			
Field Hydrol	ogy (HYD)	2.5	Wetland the wet		its natura	al hydroperiod	l. Plants are he	althy, and th	ere is littl	e evidence of	soil subside	nce into
WQ Input &	Treatment (W	Q) 1.5										
					ging ope t – grass							

	Wetland Rapid Assessment Procedure											WRAP	50
		☐ Existing (posed Con	nditions (WR	AP)						
Application Nu	Application Number Project Name Date Evaluator Wetland Type North American Coal 06/02/08 J. Everett Field												
I	Land Use		·	FLUCO	CS Code								
	Pasture				Description	on:							
Wildlife Utiliza	otion (WU) 0.5					Wetland Canop				w 2.	etland Ground	Cover (GC)	
Buffer type	Habitat (Score) X	: Support/Buffer (% of area)	=Sub	Totals		Field Hydrolog	i i				Q Input & Trea	atment (WQ)*	1
>300'	1	100		1]		<u> </u>				<u> </u>		ı
average width, but			_		<u> </u>								
consisting of >75%					TOTAL	٦ .							
nuisance					1.0								
species						<u> </u>			_			_	
		Land use C		use Categ (Score)		(% of area)	=Sub Totals			Pretreatment nt Category	Category (PT) (Score) X	(% of area)	=Sub Totals
		Improved			1	100%	1		Grass Sw		1	100	1
								ŀ				-	
								ŀ					
WRAP Score	20					(LU) TOTAL	1.0					PT TOTAL	1.0
0.3													
Wildlife Utili	ization (W	/U) 0.5	Very n	ninimal	wildlife u	ntilization. On	ly small roder	nts ((squirrels)	and birds	(red-winged	l black bird)	observed.
Wetland Can	opy (O/S)	0											
			No wet	tland ca	nopy or s	hrubbery.							
Wetland Grou	und Cove	r (GC) 2.5											
			Less the		nuisance	or exotic plai	nt species. La	rge	number o	f obligate	wetland spe	cies. Wetlan	d is grazed
Habitat Supp	ort/Buffer	1.0	Greate	r than 3	00 ft aver	age width, but	huffer is imp	rov	ed nasture	e land Ve	ry little fore	et areas to n	ovide food
			or habi	tat for a	nimals. C	Connected to o	ffsite corridor			o ranta.	y mulo loro	st trous to pr	.0vid0 100d
Field Hydrold	ogy (HYI)) 2.0		id hydro s ditche:		lequate, althou	ngh conditions	s po	ossibly inte	erfering wi	th or influer	ncing the hyd	lroperiod
WQ Input &	Treatmen	t (WQ) 1.0		Improve swales o	ed Pasture only.								

	Wetland Rapid Assessment Procedure Check one Existing Conditions Proposed Conditions (WRAP)									51
Application Number		Project Name	Date		Evaluator			and Type		
	······································	orth America		08	J. Everett		Shri	ıb Land		
Land Use		F	Description	n;]	
Wildlife Utilization (WU	D)			Wetland Canop			Wet1	and Ground Co	over (GC)	
	at Support/Buffer ore) (% of are	a) =Sub		Field Hydrolog	y (HYD)		Į <u> </u>	Input & Treatn	nent (WQ)*	
>300' average width, but	1 100	Totals								
consisting of >75 nuisance species			TOTAL	1 /						
		Land (LU)	ise Category			Pre	etreatment Ca	itegory (PT)		
	Land use Pine Pla		(Score) X 1.5	(% of area)	=Sub Totals	Pretreatment O		(Score) X 1.5	(% of area)	=Sub Totals 1.5
WRAP Score				(LU) TOTAL	1.5				PT TOTAL	1.5
0.61									_	
Wildlife Utilization (WU) 2.0	No eviden Adequate	of small and la ace of aquatic l amount of roo sturbance appe	life. esting and fora	ge.					
Wetland Canopy (O/S	S) 2.5	>10% exc	mature provio tic species rec sity is less tha	orded.	source for roo	sting and nesti	ng.			
Wetland Ground Cov	er (GC) 2.0	Few snags	s or den trees.							
		Ground co	over is sparse,	but cover is co	omprised of <	25% undesirabl	le species.	Covers is s	lightly impa	acted by
Habitat Support/Buff	er 1.0		onnected to w			and consists of	90% Pini	us taeda (Lo	oblolly pine).
Field Hydrology (HY	(D) 2.0	No ditche	pear to be healt s or swales. dence/siltation	•	exhibit stress	associated with	h an unnat	ural hydrop	eriod.	
WQ Input & Treatme	ent (WQ) 1.5	LU - Row	Planted Pines	s – 100%	PT - Ro	w Planted Pine	s – 100%			

	Wetland Rapid Assessment Procedure WRAP 52										52
	☐ Check one ☐ Existing Conditions ☐ Proposed Conditions (WRAP)										
Application N	umber		Project Na orth Ame		03/08	Evaluator J. Everett	\neg		etland Type eld		
	Land Use	1,		FLUCCS Code			, <u>_</u>				
	Forested			Descripti	ion;						
Wildlife Utiliz	zation (WU)			· · · · · · · · · · · · · · · · · · ·	Wetland Cano	py (O/S)		w	etland Ground	Cover (GC)	
	2.5					2.0		2.			
	Habitat	Support/Buffer			Field Hydrolo	gy (HYD)	_		Q Input & Trea	ntment (WQ)*	_
Buffer type	(Score) X	(% of area)		Totals	2	2.5		2			
<300' >300	2	.50		0.5							
				TOTAL							
				1.5							
•			Land	use Category (LU)	_			Pretreatment	Category (PT)	٦	
		Land use C	ategory	(Score) X 2.5	(% of area) 50%	=Sub Totals	Pretreatmen	nt Category	(Score) X	(% of area)	=Sub Totals
		Pine Plan		1.5	50%	.75	Pine Plant Nat Under		1.5 2.5	50 50	.75 1.25
WRAP Score					(LU) TOTAL	2				PT TOTAL	2
0	.69										
WELLE IN	1:	II) 2.5									
Wildlife Uti	nzation (w	U) 2.5	Eviden	ice of large mam	mals, reptiles,	and fish. Adec	quate food so	ource, habi	tat and roos	ting. Macro-	1
				brates and small						Ū	
Wetland Ca	nony (O/S)	2.0				-					
West and Ca	пору (оло)	2.0		nd canopy health		idence of stress	ed trees. Fev	w den tree:	s and snags	present. Exc	otic species
			presen	t in small numbe	ers.						
Wetland Gr	ound Cover	(GC) 2.0	Watlan	nd annund carron	ia daginahla w	th >100/ /250/	um doginah la				
				nd ground cover species present.		IIII ~ 1076 ~2376	undestrable	species.			
Habitat Sup	port/Buffer	1.5									
				300' next to sma							
			throug	300' connected t hout.	to offsite conf	uoi wiiii abuilda	ant upianu na	iditat and .	iood source	Exoues sea	nerea
Field Hydro	logy (HYD)) 2.5	Wetlar	nd hydrology add	equately supp	orts wetland fun	ction Silteti	on/dieturk	ance eviden	t but overall	l impact
			minim		equatory suppl	,, w wonana ran	onon, omati	om amutai D	ance eviden	i, oui ovoidi	ппрасі
WQ Input &	t Treatment	(WQ) 2	LU				PT				
				latural undevelo Indeveloped Pin		1.5			Pine Planta		

	Wetland Rapid Assessment Procedure Check one Existing Conditions Proposed Conditions (WRAP)										
Application N	l Jumber		Project Name orth American	Date	<u> </u>	Evaluator J. Everett		We	etland Type		
	Land Use		FLŲ	CCS Code				<u></u>			
P	ine Plantatio	n		Description	on:						
Wildlife Utili	zation (WU))			Wetland Canop	oy (O/S)		W	etland Ground (Cover (GC)	
	1.0				0.	.5		2.5			
Buffer type	Habita	t Support/Buffer (% of area)	=Sub Totals	_	Field Hydrolog			₩ 1.:	Q Input & Trea	tment (WQ)*	
>300' average	1	100	1								
width, but consisting				TOTAL							
of >75%		-		TOTAL 1	1 /						
nuisance species								1			
		_Land use C		tegory (LU) re) X	(% of area)	=Sub Totals	Pretreatmen		Category (PT) (Score) X	(% of area)	=Sub Totals
		Pine Plan	tation	1.5	100%	1.5	Undevelor Pine Plant		1.5	100	1.5
							7 1110				
WRAP Score					(LU) TOTAL	1.5				PT TOTAL	1.5
0),39				(,	1.0					1.5
L menuio mo	111 /**	urn 10									
Wildlife Ut	ilization (V	VU) 1.0	Minimal ev young row			on, little habita	t for birds, m	nammals, a	nd reptiles,	uplands con	sists of
Wetland Ca	mony (O/S) 0.5		-							
11 Chang ou	шору (оль	<u>, 0.5 j</u>				young 6 feet to					of
			grasses. Su	bject to rece	ent clear cuttin	g with little evi	idence of nat	tive canopy	regeneration	on.	
W-d10	1.0	(00) 0.5				-					
Wetland Gr	ouna Cove	er (GC) 2.5	Less than 1)% nuisance	e species, no re	ecorded exotics	ground cov	er impacte	d from pine	planting (sl	nade.
			bedding).		1 ,		, 0		1	1 80	,
			_								
Habitat Sup	port/Buffe	<u>l</u> .	>300′ unlar	ds surround	ing wetland a	nd consists of r	ow planted n	vines Wetl	ands further	down stream	m are
			naturally fo	rested and c		fsite corridor.					
			source for v	mante.							
Field Hydro	ology (HYI	0) 0.5									_
						iblishment of n Has allowed er				ng/rows have	e altered
			r	_ , , ,	, i			1	_		
WO Input &	& Treatmen	nt (WQ) 1.5									
- C - F /		,	100% plant	ed pine plan	tation in buffe	r zone.					
						d surface flow	characteristic	cs.			į