

Jim Giattina /R4/USEPA/US
05/18/2009 07:09 PM

To "Stan Meiburg" <meiburg.stan@epa.gov>, "Tom Welborn"
<welborn.tom@epa.gov>, "Palmer Hough"
<Hough.Palmer@epamail.epa.gov>, "Jennifer Derby"

cc

bcc

Subject Fw: Proposal to Modify Alternative L for further Avoidance

History:  This message has been replied to and forwarded.

fyi...

Sent by EPA Wireless E-Mail Services

----- Original Message -----

From: GHOUSE

Sent: 05/18/2009 04:36 PM AST

To: jefferson.ryscavage@usace.army.mil; brooke.lamson@usace.army.mil;
william.t.walker@usace.army.mil; Jim Giattina; Philip Mancusi-Ungaro

Subject: Proposal to Modify Alternative L for further Avoidance

Colonel Jefferson M. Ryscavage
District Engineer
Wilmington District
U.S. Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Mr. Jim Giattina
Director
Water Protection Division
U. S. Environmental Protection Agency
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Re: PCS Phosphate Company, Inc.
Mine Continuation Permit

Dear Col. Ryscavage and Mr. Giattina:

Attached is a complete Proposal with graphics to further modify
Alternative L to meet the requests of the ASA and the EPA for further
avoidance:

(See attached file: EPA-ASA Avoidance Description.DOC) (See attached
file: NCPC_Bon_S33 Mod Alt L Conservation Esegment and Deed Restriction
(2).pdf) (See attached file: NCPC_BON_S33 MOD ALT L BIOTIC COM
051309.pdf)

George W. House

Brooks, Pierce, McLendon, Humphrey & Leonard
Attorneys and Counsellors at Law
P.O. Box 26000
Greensboro, N.C. 27420
Direct Dial: 336-271-3114
Direct Fax: 336-232-9114

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PROPOSED ADDITIONAL AVOIDANCE TO RESPOND TO EPA AND ASA CONCERNS

Summary of Avoidance (in addition to Modified Alt L)

1. Total additional avoidance 90 acres
2. Total additional linear feet of stream avoided 2,855 LF
 - Including: NCPC..... 1,675 LF
 - Bonnerton.....1,180 LF
3. Total additional mining reserves lost. 104 acres
(0.52 years and 2.58 million tons of phosphate rock concentrate)
4. Permanent conservation easement around Drinkwater Creek and PNA streams Jacks, Jacobs and Tooley Creeks from 100 yards upstream from their mouths on South Creek to the Modified Alternative L Boundary and Porter Creek from 100 yards upstream from its mouth on Durham Creek to the Modified Alternative L Boundary.
 - Total preserved by conservation easement (streams and 100-foot offset described in Specific Areas #4). 500 acres
 - Total linear feet of stream preserved by conservation easement.. 57,316 LF
5. Permanent mining restriction around Cypress Run from its mouth on South Creek to the Modified Alternative L Boundary.
 - Total preserved by mining restriction (streams and 100-foot offset described in Specific Areas # 5) 48 acres
 - Total linear feet of stream preserved by mining restriction 9,659 LF
6. Avoidance of high value PNA headwaters areas in NCPC and Bonnerton.

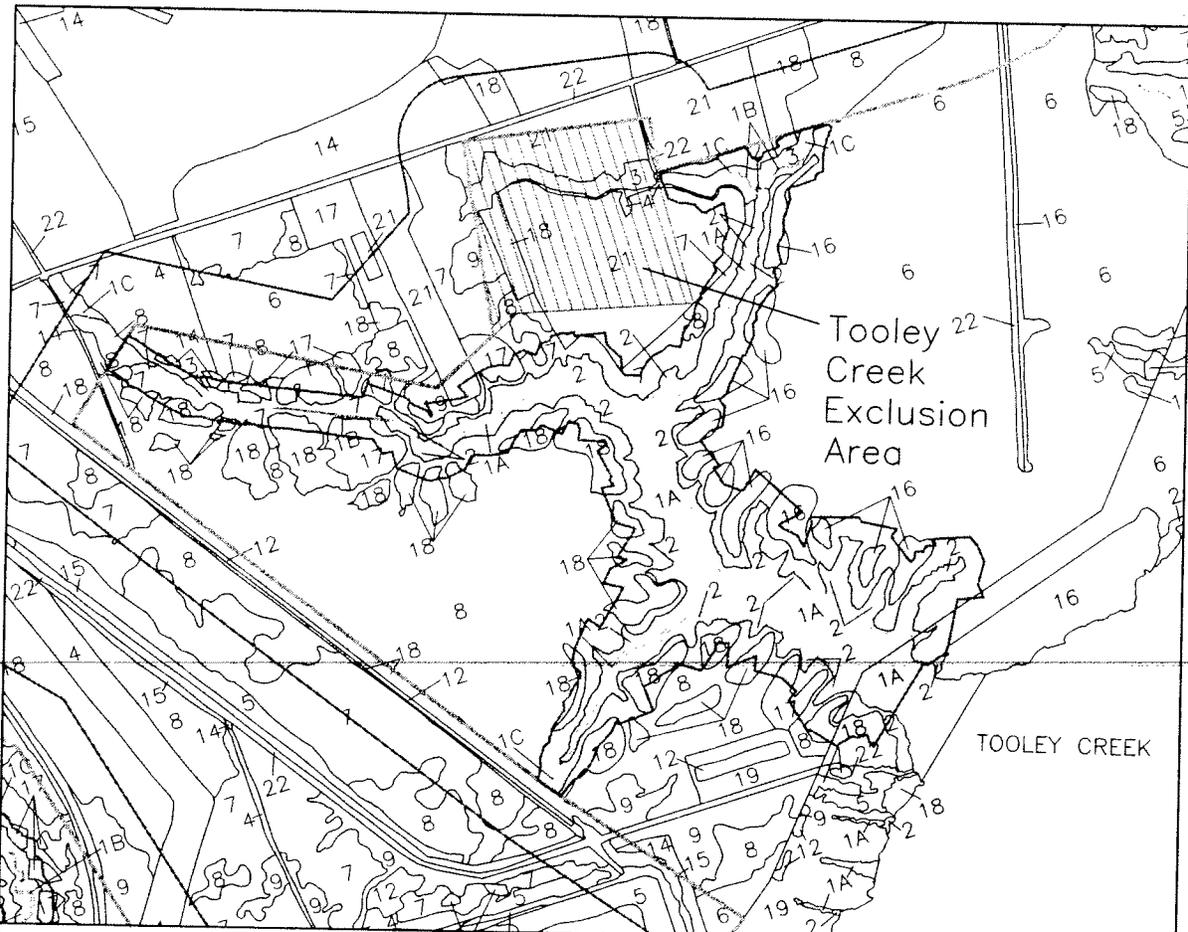
Specific Areas

1. The attached mine plans provide for the avoidance of an additional 81.7 acres north of Highway 33:
 - a. 6.0 acres on the NCPC Tract at the headwaters of Jacobs Creek (ASA, EPA & modified NMFS exclusion area 1):
 - i. 0.56 acre of bottomland hardwood forest
 - ii. 1.28 acres of shrub-scrub assemblage
 - iii. 1.82 acres of hardwood forest

- iv. 0.09 acre of pine forest
 - v. 0.04 acre of pond
 - vi. 0.19 acre of stream
 - vii. 830 linear feet of stream
 - viii. 2.00 acres of associated uplands
- b. 14.1 acres on the NCPC Tract at the headwaters of Jacks Creek (ASA & EPA exclusion area):
- i. 0.51 acre of bottomland hardwood forest
 - ii. 1.79 acres of herbaceous assemblage
 - iii. 1.42 acres of shrub scrub assemblage
 - iv. 0.63 acre of mixed pine/hardwood forest
 - v. 0.02 acre of pine forest
 - vi. 0.26 acre of pond
 - vii. 0.02 acre of stream
 - viii. 353 linear feet of stream
 - ix. 9.46 acres of associated uplands
- c. 6.7 acres on the NCPC Tract at the headwaters of Drinkwater Creek (EPA & NMFS exclusion area 2):
- i. 3.87 acres of hardwood forest
 - ii. 1.06 acres of pine forest
 - iii. 0.32 acre of pond
 - iv. 0.04 acre of stream
 - v. 492 linear feet of stream
 - vi. 1.36 acres of associated uplands
- d. 21.2 acres on the NCPC Tract at the headwaters of Tooley Creek (EPA & NMFS exclusion area 5):
- i. 2.33 acres of bottomland hardwood forest
 - ii. 0.40 acre of herbaceous assemblage
 - iii. 0.48 acre of hardwood forest
 - iv. 0.54 acre of mixed pine/hardwood forest
 - v. 0.54 acre of pine forest
 - vi. 16.9 acres of associated uplands
- e. 33.8 acres on the Bonnerton Tract along Porter Creek (ASA, EPA & NMFS exclusion areas 3 and 6 and associated connector):
- i. 2.68 acres of bottomland hardwood forest
 - ii. 9.04 acres of hardwood forest
 - iii. 3.22 acres mixed pine/hardwood forest
 - iv. 1.33 acres of pine forest
 - v. 0.14 acre of stream
 - vi. 1,180 linear feet of stream

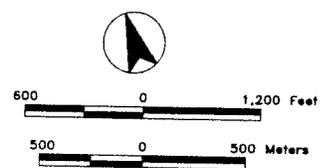
- vii. 17.38 acres of associated uplands
 - viii. In addition to the water quality protective functions of the wetlands, the combination of NMFS exclusion areas 3 and 6 and a connector between them provides for a significant expansion of watershed draining to Porter Creek.
2. The attached mine plans provide for the avoidance of an additional 7.9 acres South of Highway 33 near Cypress Run shown as Cypress Run Creek exclusion area:
 - a. 6.61 acres of hardwood forest
 - b. 1.29 acres of associated uplands
 3. To accomplish avoidance of the areas identified in paragraphs 1 and 2, PCS will be prevented from mining 104 acres (2.58 million tons of phosphate rock concentrate) currently available in Modified Alternative L.
 4. PCS will further agree to place a conservation easement permanently preserving the following streams on the NCPC and Bonnerton Tracts beginning 100 yards upstream of their mouths running to the Modified Alternative L Boundary (see attached maps) in their current natural state. This restriction will provide a 100 foot buffer from the back edge of the brackish marsh, or from the bank of the stream where no marsh exists, on either side of each of the following streams:
 - a. Jacks Creek 50 acres and 7,467 LF
 - b. Jacobs Creek 78 acres and 9,349 LF
 - c. Tooley Creek 81 acres and 8,953 LF
 - d. Drinkwater Creek 63 acres and 7,939 LF
 - e. Porter Creek 228 acres and 23,608 LF (subject to the limited, temporary surface impacts related to carrying out and supporting mining activities on the Bonnerton Tract and the inability to place restrictions on non-owned properties)
 5. PCS will further agree to place a mining restriction on Cypress Run preventing mining of Cypress Run from its mouth running to the Modified Alternative L Boundary (see attached map). This restriction will provided a 100 foot buffer from the bank of the stream on either side of Cypress Run. This will permanently protect 48 acres and 9,659 LF from mining activities (subject to the inability to place restrictions on non-owned properties).
 6. The offer above is conditioned upon the COE appropriately revising mitigation requirements for the wetlands and streams avoided.

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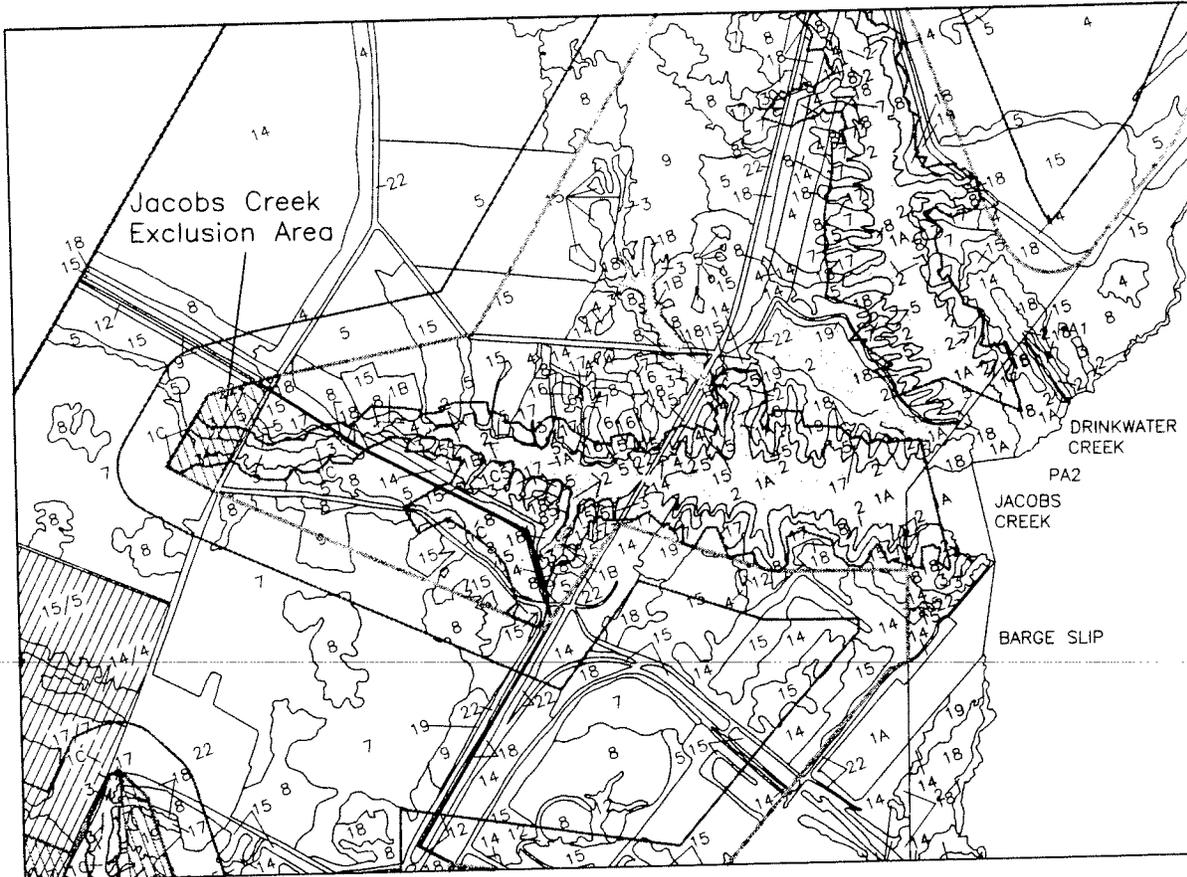


LEGEND		ACRES
	NCPC BASE PROJECT AREA	3,608
	MODIFIED ALT L - NCPC PROPOSED IMPACT BOUNDARY 05/13/09	2,109
	MODIFIED ALT L - NCPC PROPOSED IMPACT BOUNDARY 05/13/09 - EXCAVATION LIMITS	1,264
	RECOVERED CONCENTRATE = 34,878,000 TONS *	
	EXCLUSION AREAS	21.19
	CREEKS/OPEN WATER	
	PUBLIC TRUST AREAS	0.0 LF 0.0
	PERENNIAL STREAM	0.0 LF 0.0
	INTERMITTENT STREAM	0.0 LF 0.0
	2 WETLAND BRACKISH MARSH COMPLEX	0.0
	3 WETLAND BOTTOMLAND HARDWOOD FOREST	2.33
	4 WETLAND HERBACEOUS ASSEMBLAGE	0.40
	5 WETLAND SHRUB - SCRUB ASSEMBLAGE	0.0
	6 WETLAND PINE PLANTATION	0.0
	7 WETLAND HARDWOOD FOREST	0.48
	8 WETLAND MIXED PINE - HARDWOOD FOREST	0.54
	9 WETLAND PINE FOREST	0.54
	10 WETLAND POCOSIN - BAY FOREST	0.0
	11 WETLAND SAND RIDGE FOREST	0.0
	12 POND	0.0
	13 WETLAND MAINTAINED AREA	0.0
	14 UPLAND HERBACEOUS ASSEMBLAGE	0.0
	15 UPLAND SHRUB - SCRUB ASSEMBLAGE	0.0
	16 UPLAND PINE PLANTATION	0.0
	17 UPLAND HARDWOOD FOREST	0.0
	18 UPLAND MIXED PINE - HARDWOOD FOREST	1.30
	19 UPLAND PINE FOREST	0.0
	20 UPLAND SAND RIDGE FOREST	0.0
	21 UPLAND AGRICULTURAL LAND	15.44
	22 UPLAND NON - VEGETATED/MAINTAINED AREA	0.16
	47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)	0.0
	WATERS OF THE US AREAS	4.29
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)	4.29
	UPLAND AREAS	16.90
	CONSERVATION EASEMENT - TOOLEY CREEK (81 ACRES)	
	CREEKS/OPEN WATER	
	PUBLIC TRUST AREAS	6,541 LF
	PERENNIAL STREAM	918 LF
	INTERMITTENT STREAM	1,494 LF

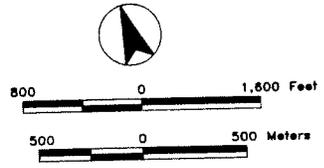
* PROVIDED BY PCS PHOSPHATE 05/13/09



Conservation Easement - Tooley Creek Modified Alternative L - NCPC	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17498224/ncpc_modaltl_051309_Contour_Eam(NCPC BC 051200)
Approved by: JPS 5-13-09	Revision:

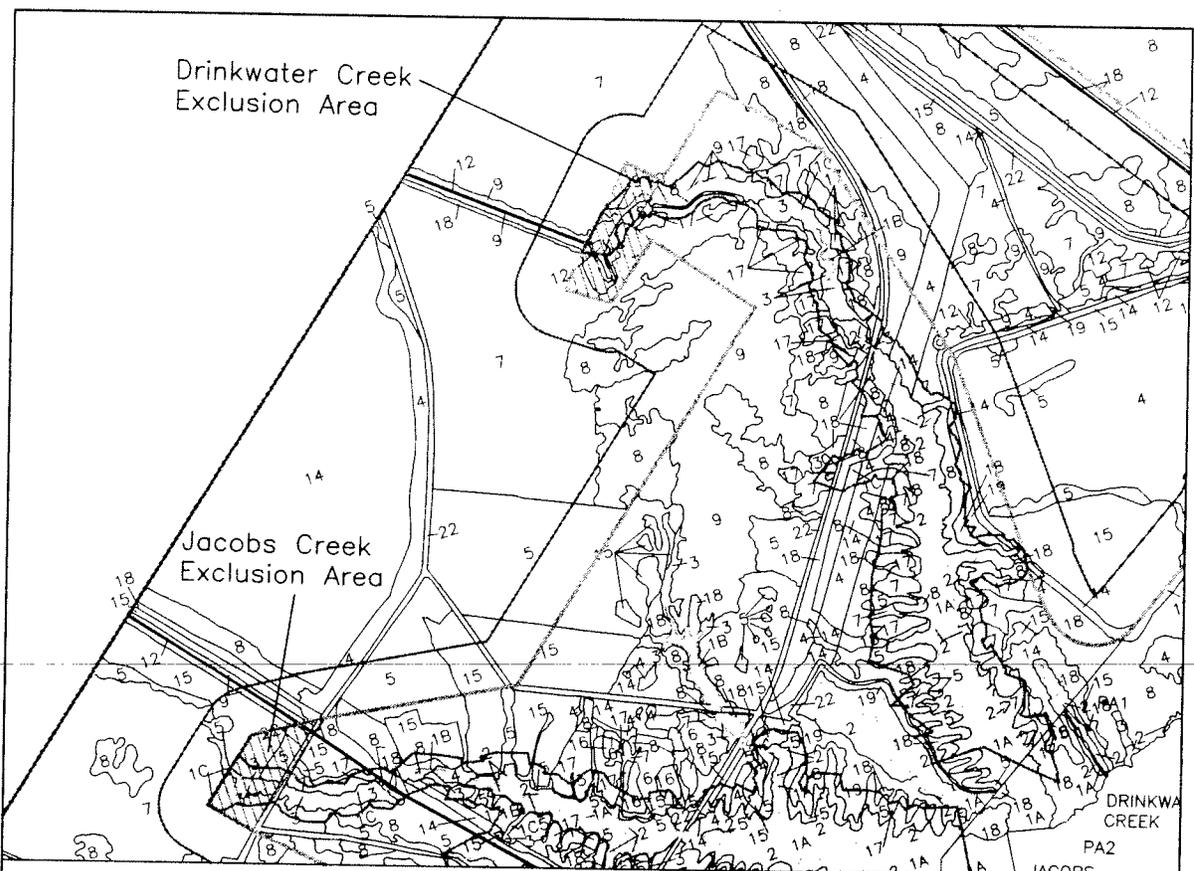


LEGEND		ACRES
NCPC BASE PROJECT AREA		3,608
MODIFIED ALT L - NCPC PROPOSED		2,109
IMPACT BOUNDARY 05/13/09		
MODIFIED ALT L - NCPC PROPOSED IMPACT BOUNDARY 05/13/09 - EXCAVATION LIMITS		1,264
RECOVERED CONCENTRATE = 34,878,000 TONS *		
EXCLUSION AREAS (5.98 ACRES)		
CREEKS/OPEN WATER		
1	PUBLIC TRUST AREAS	0.0 LF 0.0
	1E PERENNIAL STREAM	0.0 LF 0.0
	INTERMITTENT STREAM	830 LF 0.19
2	WETLAND BRACKISH MARSH COMPLEX	0.0
3	WETLAND BOTTOMLAND HARDWOOD FOREST	0.56
4	WETLAND HERBACEOUS ASSEMBLAGE	0.0
5	WETLAND SHRUB - SCRUB ASSEMBLAGE	1.28
6	WETLAND PINE PLANTATION	0.0
7	WETLAND HARDWOOD FOREST	1.82
8	WETLAND MIXED PINE - HARDWOOD FOREST	0.0
9	WETLAND PINE FOREST	0.09
10	WETLAND POCOSIN - BAY FOREST	0.0
11	WETLAND SAND RIDGE FOREST	0.0
12	POND	0.04
13	WETLAND MAINTAINED AREA	0.0
14	UPLAND HERBACEOUS ASSEMBLAGE	0.0
15	UPLAND SHRUB - SCRUB ASSEMBLAGE	1.64
16	UPLAND PINE PLANTATION	0.0
17	UPLAND HARDWOOD FOREST	0.0
18	UPLAND MIXED PINE - HARDWOOD FOREST	0.01
19	UPLAND PINE FOREST	0.0
20	UPLAND SAND RIDGE FOREST	0.0
21	UPLAND AGRICULTURAL LAND	0.0
22	UPLAND NON - VEGETATED/MAINTAINED AREA	0.35
47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)		0.0
WATERS OF THE US AREAS		3.98
WETLAND AREAS (WITHOUT PONDS AND CREEKS)		3.75
UPLAND AREAS		2.00
CONSERVATION EASEMENT - JACOBS CREEK (78 ACRES)		
CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	5,194 LF
	PERENNIAL STREAM	565 LF
	INTERMITTENT STREAM	3,590 LF



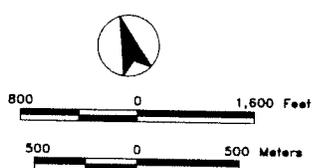
Conservation Easement - Jacobs Creek Modified Alternative L - NCPC	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458224/ncpc_modaltl_051309_ Conserv_Easmt(NCPC) 051200
Approved by: JPS 5-13-09	Revision: 051200

* PROVIDED BY PCS PHOSPHATE 05/13/09

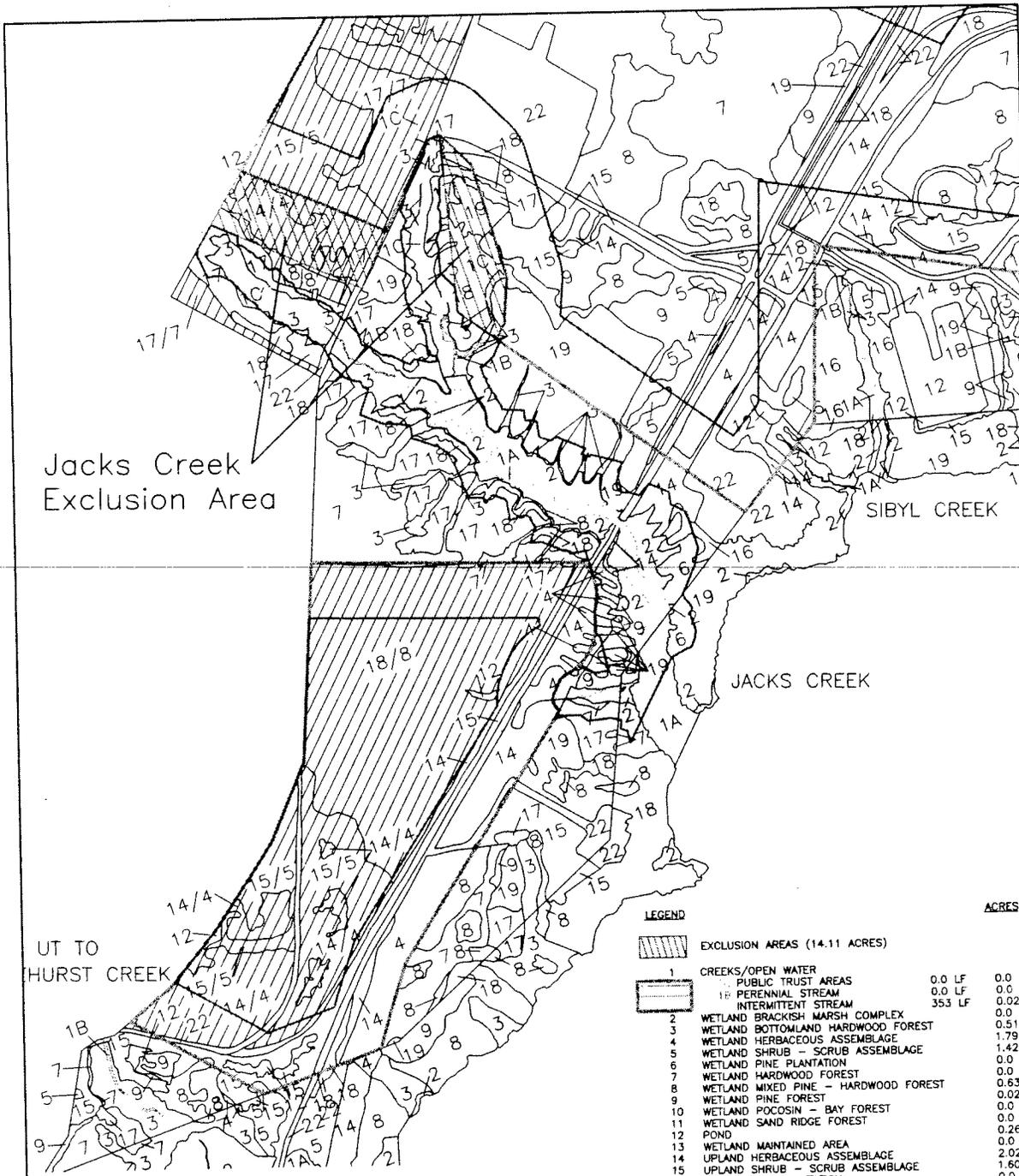


LEGEND		ACRES	
NPCP BASE PROJECT AREA		3,608	
MODIFIED ALT L - NPCP PROPOSED		2,109	
IMPACT BOUNDARY 05/13/09			
MODIFIED ALT L - NPCP PROPOSED IMPACT		1,264	
BOUNDARY 05/13/09 - EXCAVATION LIMITS			
RECOVERED CONCENTRATE = 34,878,000 TONS *			
EXCLUSION AREAS (6.65 ACRES)			
1	CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	0.0 LF	0.0
	PERENNIAL STREAM	0.0 LF	0.0
	INTERMITTENT STREAM	492 LF	0.04
2	WETLAND BRACKISH MARSH COMPLEX		0.0
3	WETLAND BOTTOMLAND HARDWOOD FOREST		0.0
4	WETLAND HERBACEOUS ASSEMBLAGE		0.0
5	WETLAND SHRUB - SCRUB ASSEMBLAGE		0.0
6	WETLAND PINE PLANTATION		0.0
7	WETLAND HARDWOOD FOREST		3.87
8	WETLAND MIXED PINE - HARDWOOD FOREST		0.0
9	WETLAND PINE FOREST		1.06
10	WETLAND POCOSIN - BAY FOREST		0.0
11	WETLAND SAND RIDGE FOREST		0.0
12	POND		0.32
13	WETLAND MAINTAINED AREA		0.0
14	UPLAND HERBACEOUS ASSEMBLAGE		0.0
15	UPLAND SHRUB - SCRUB ASSEMBLAGE		0.0
16	UPLAND PINE PLANTATION		0.0
17	UPLAND HARDWOOD FOREST		0.0
18	UPLAND MIXED PINE - HARDWOOD FOREST		1.36
19	UPLAND PINE FOREST		0.0
20	UPLAND SAND RIDGE FOREST		0.0
21	UPLAND AGRICULTURAL LAND		0.0
22	UPLAND NON - VEGETATED/MAINTAINED AREA		0.0
47% WETLAND AREAS		0.0	
(UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)			
WATERS OF THE US AREAS		5.29	
WETLAND AREAS (WITHOUT PONDS AND CREEKS)		4.93	
UPLAND AREAS		1.36	
CONSERVATION EASEMENT - DRINKWATER CREEK (63 ACRES)			
CREEKS/OPEN WATER			
	PUBLIC TRUST AREAS	5,318 LF	
	PERENNIAL STREAM	508 LF	
	INTERMITTENT STREAM	2,113 LF	

* PROVIDED BY PCS PHOSPHATE 05/13/09



Conservation Easement - Drinkwater Creek Modified Alternative L - NPCP	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/Mapa_ModAltL_051309_Conser_Easmt(NCPC BC 051208)
Approved by:	Revision: JPS 5-13-09



Jacks Creek
Exclusion Area

SIBYL CREEK

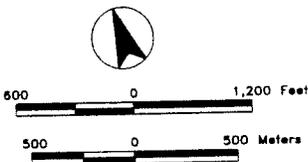
JACKS CREEK

UT TO
HURST CREEK

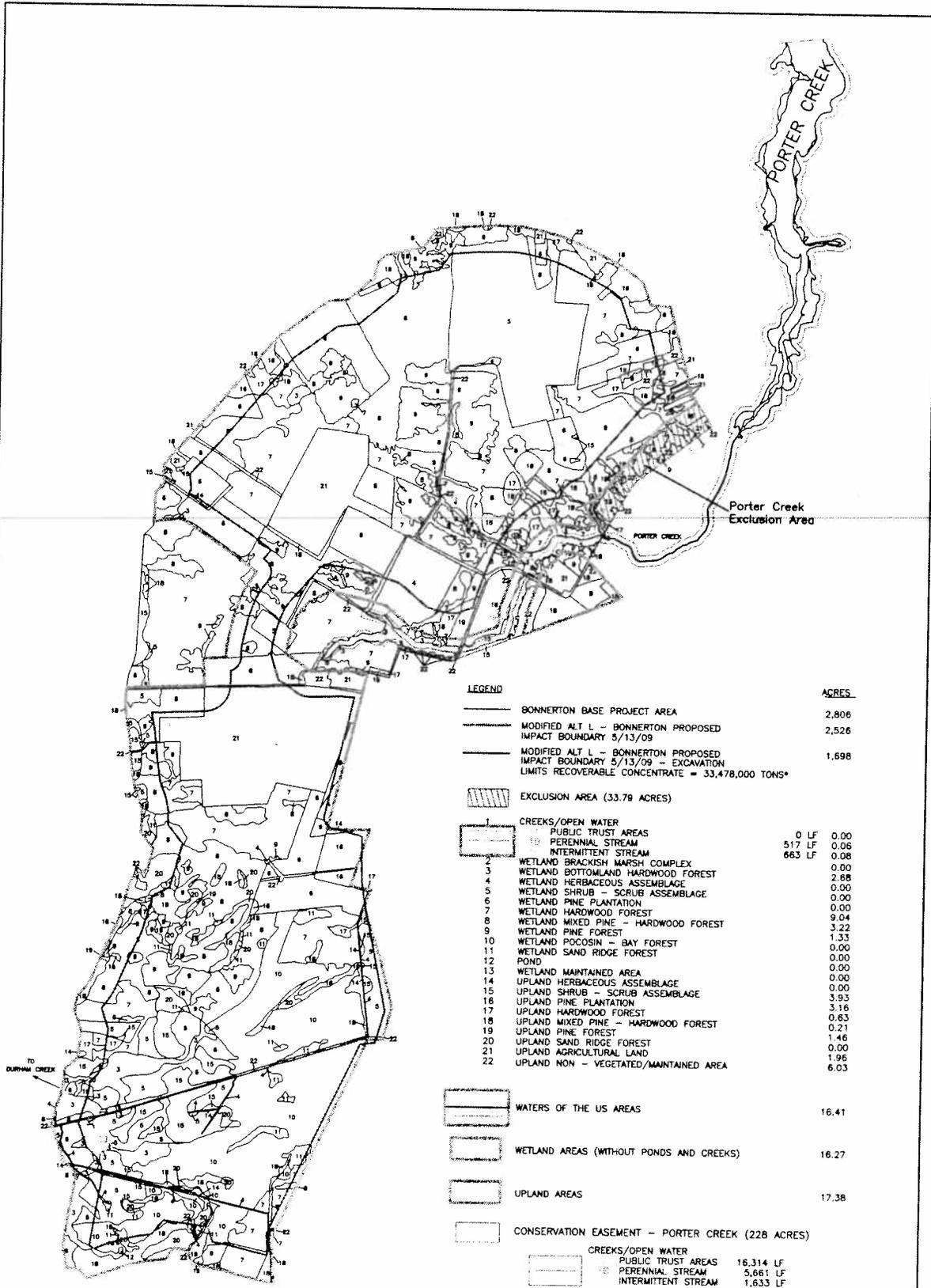
LEGEND	ACRES
NCPC BASE PROJECT AREA	3,608
MODIFIED ALT L - NCPC PROPOSED	2,109
IMPACT BOUNDARY 05/13/09	
MODIFIED ALT L - NCPC PROPOSED IMPACT	1,264
BOUNDARY 05/13/09 - EXCAVATION LIMITS	
RECOVERED CONCENTRATE = 34,878,000 TONS *	
CONSERVATION EASEMENT - JACKS CREEK (50 ACRES)	
CREEKS/OPEN WATER	3,902 LF
PUBLIC TRUST AREAS	1,197 LF
PERENNIAL STREAM	2,368 LF
INTERMITTENT STREAM	

* PROVIDED BY PCS PHOSPHATE 05/13/09

LEGEND	ACRES
EXCLUSION AREAS (14.11 ACRES)	
1 CREEKS/OPEN WATER	
PUBLIC TRUST AREAS	0.0 LF 0.0
PERENNIAL STREAM	0.0 LF 0.0
INTERMITTENT STREAM	353 LF 0.02
2 WETLAND BRACKISH MARSH COMPLEX	0.0
3 WETLAND BOTTOMLAND HARDWOOD FOREST	0.51
4 WETLAND HERBACEOUS ASSEMBLAGE	1.79
5 WETLAND SHRUB - SCRUB ASSEMBLAGE	1.42
6 WETLAND PINE PLANTATION	0.0
7 WETLAND HARDWOOD FOREST	0.0
8 WETLAND MIXED PINE - HARDWOOD FOREST	0.63
9 WETLAND PINE FOREST	0.02
10 WETLAND POCOSIN - BAY FOREST	0.0
11 WETLAND SAND RIDGE FOREST	0.0
12 POND	0.26
13 WETLAND MAINTAINED AREA	0.0
14 UPLAND HERBACEOUS ASSEMBLAGE	2.02
15 UPLAND SHRUB - SCRUB ASSEMBLAGE	1.60
16 UPLAND PINE PLANTATION	0.0
17 UPLAND HARDWOOD FOREST	0.79
18 UPLAND MIXED PINE - HARDWOOD FOREST	2.95
19 UPLAND PINE FOREST	1.83
20 UPLAND SAND RIDGE FOREST	0.0
21 UPLAND AGRICULTURAL LAND	0.0
22 UPLAND NON - VEGETATED/MAINTAINED AREA	0.26
47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)	3.35
WATERS OF THE US AREAS	4.65
WETLAND AREAS (WITHOUT PONDS AND CREEKS)	4.37
UPLAND AREAS	9.46



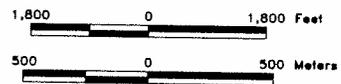
Conservation Easement - Jacks Creek Modified Alternative L - NCPC	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17486224/ Ncpc_ModAltL_051309... Conser_Easmt(NCPCBC 051208)
Approved by: JPS 5-13-09	Revision:



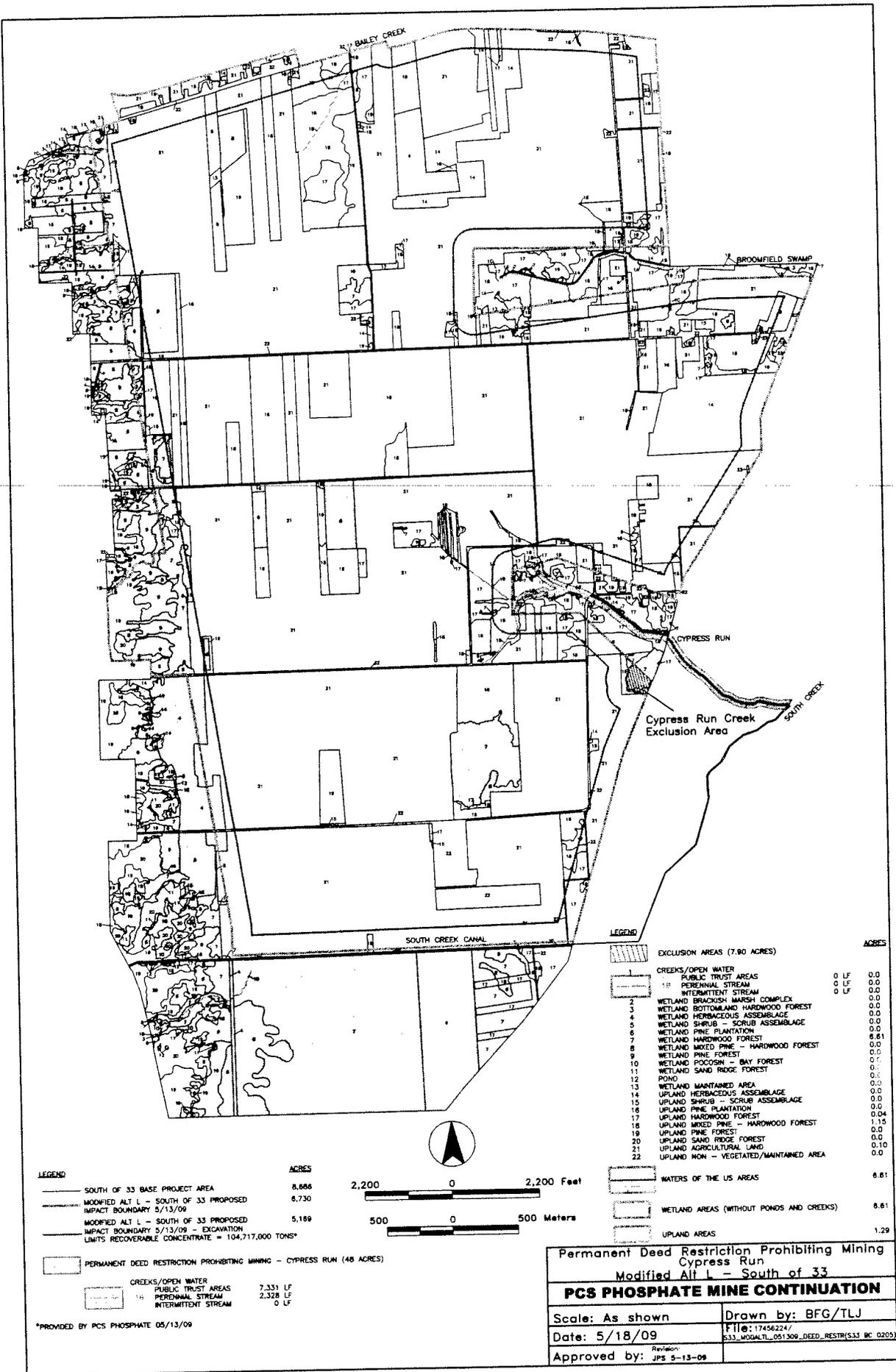
LEGEND

	ACRES
BONNERTON BASE PROJECT AREA	2,806
MODIFIED ALT L - BONNERTON PROPOSED IMPACT BOUNDARY 5/13/09	2,526
MODIFIED ALT L - BONNERTON PROPOSED IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 33,478,000 TONS*	1,698
EXCLUSION AREA (33.78 ACRES)	
CREEKS/OPEN WATER	
PUBLIC TRUST AREAS	0 LF 0.00
PERENNIAL STREAM	517 LF 0.06
INTERMITTENT STREAM	663 LF 0.08
WETLAND BRACKISH MARSH COMPLEX	0.00
WETLAND BOTTOMLAND HARDWOOD FOREST	2.88
WETLAND HERBACEOUS ASSEMBLAGE	0.00
WETLAND SHRUB - SCRUB ASSEMBLAGE	0.00
WETLAND PINE PLANTATION	0.00
WETLAND HARDWOOD FOREST	9.04
WETLAND MIXED PINE - HARDWOOD FOREST	3.22
WETLAND PINE FOREST	1.33
WETLAND POCOSIN - BAY FOREST	0.00
WETLAND SAND RIDGE FOREST	0.00
POND	0.00
WETLAND MAINTAINED AREA	0.00
UPLAND HERBACEOUS ASSEMBLAGE	0.00
UPLAND SHRUB - SCRUB ASSEMBLAGE	3.93
UPLAND PINE PLANTATION	3.16
UPLAND HARDWOOD FOREST	0.83
UPLAND MIXED PINE - HARDWOOD FOREST	0.21
UPLAND PINE FOREST	1.46
UPLAND SAND RIDGE FOREST	0.00
UPLAND AGRICULTURAL LAND	1.96
UPLAND NON - VEGETATED/MAINTAINED AREA	6.03
WATERS OF THE US AREAS	16.41
WETLAND AREAS (WITHOUT PONDS AND CREEKS)	16.27
UPLAND AREAS	17.38
CONSERVATION EASEMENT - PORTER CREEK (228 ACRES)	
CREEKS/OPEN WATER	
PUBLIC TRUST AREAS	16,314 LF
PERENNIAL STREAM	5,661 LF
INTERMITTENT STREAM	1,633 LF

*PROVIDED BY PCS PHOSPHATE 5/13/09
NOTE: BOUNDARY AS SHOWN INCLUDES OCM/CAMA AVOIDANCE



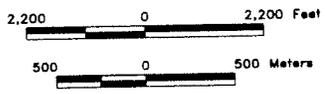
Conservation Easement - Porter Creek Modified Alt L - Bonnerton	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG
Date: 5/18/09	File: 17458224/Bon_ModAltL_051309_Conser_Easmt(BON_BC_030206)
Approved by: JPS 5-13-08	Revision: Conser_Easmt(BON_BC_030206)



LEGEND	ACRES
SOUTH OF 33 BASE PROJECT AREA	8,666
MODIFIED ALT L - SOUTH OF 33 PROPOSED	6,730
IMPACT BOUNDARY 5/13/09	
MODIFIED ALT L - SOUTH OF 33 PROPOSED	5,189
IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 104,717,000 TONS*	

PERMANENT DEED RESTRICTION PROHIBITING MINING - CYPRESS RUN (48 ACRES)	
CREEKS/OPEN WATER	2,331 LF
PUBLIC TRUST AREAS	2,328 LF
PERENNIAL STREAM	0 LF
INTERMITTENT STREAM	0 LF

*PROVIDED BY PCS PHOSPHATE 05/13/09

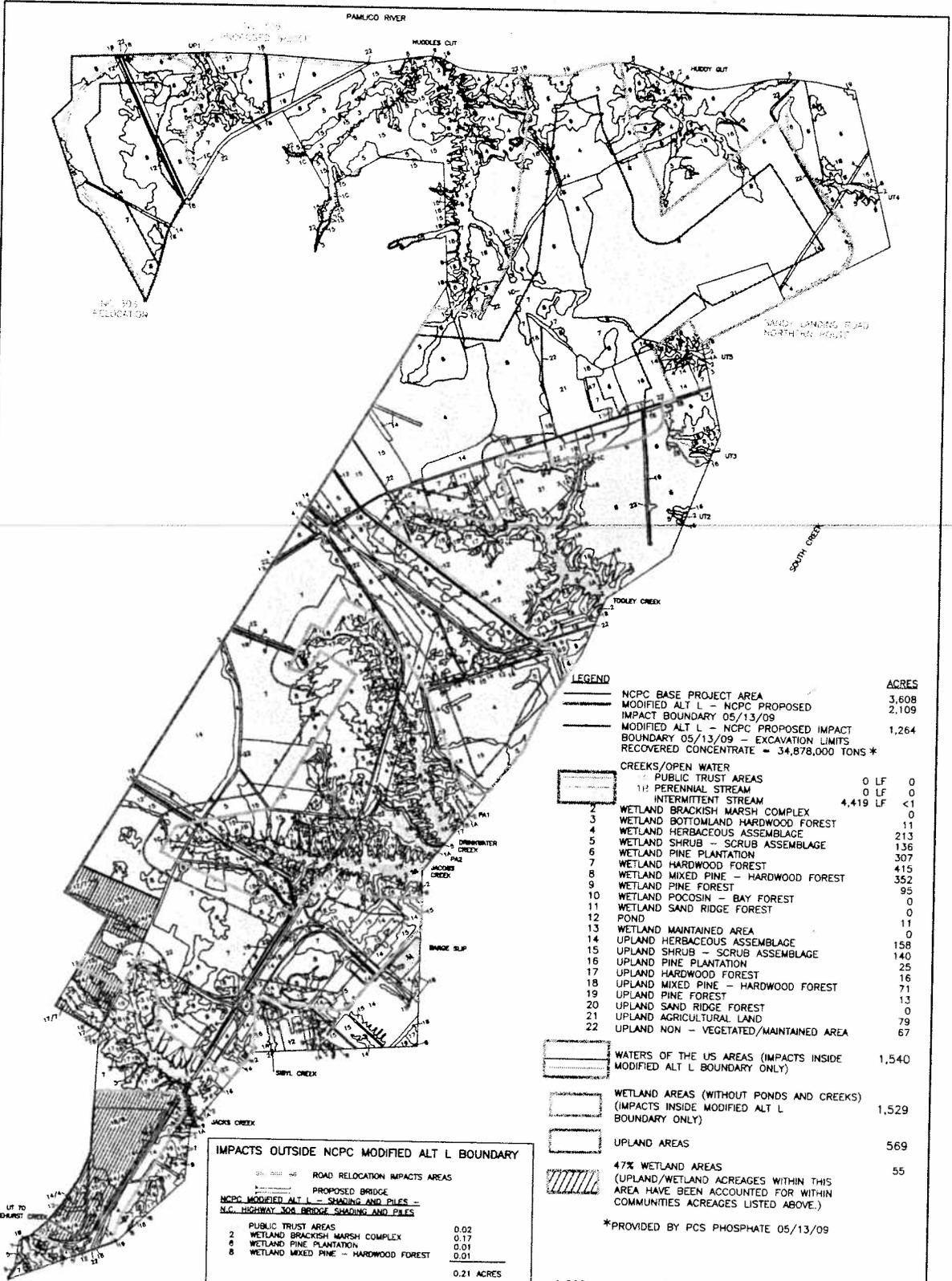


LEGEND	ACRES
EXCLUSION AREAS (7.80 ACRES)	
CREEKS/OPEN WATER	0 LF 0.0
PUBLIC TRUST AREAS	0 LF 0.0
PERENNIAL STREAM	0 LF 0.0
INTERMITTENT STREAM	0 LF 0.0
WETLAND BRACKISH MARSH COMPLEX	0.0
WETLAND BOTTOMLAND HARDWOOD FOREST	0.0
WETLAND HERBACEOUS ASSEMBLAGE	0.0
WETLAND SHRUB - SCRUB ASSEMBLAGE	0.0
WETLAND PINE PLANTATION	0.0
WETLAND HARDWOOD FOREST	6.61
WETLAND MIXED PINE - HARDWOOD FOREST	0.0
WETLAND PINE FOREST	0.0
WETLAND POCCOON - BAY FOREST	0.0
WETLAND SAND RIDGE FOREST	0.0
POND	0.0
WETLAND MAINTAINED AREA	0.0
WETLAND HERBACEOUS ASSEMBLAGE	0.0
WETLAND SHRUB - SCRUB ASSEMBLAGE	0.0
UPLAND PINE PLANTATION	0.0
UPLAND HARDWOOD FOREST	0.04
UPLAND MIXED PINE - HARDWOOD FOREST	1.15
UPLAND PINE FOREST	0.0
UPLAND SAND RIDGE FOREST	0.0
UPLAND AGRICULTURAL LAND	0.10
UPLAND NON - VEGETATED/MAINTAINED AREA	0.0
WATERS OF THE US AREAS	6.61
WETLAND AREAS (WITHOUT PONDS AND CREEKS)	6.61
UPLAND AREAS	1.29

Permanent Deed Restriction Prohibiting Mining
Cypress Run
Modified Alt L - South of 33

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/ 533-MODALT-051309_DEED_RESTRI33 BC 02020
Approved by: JPS 5-15-09	Revision:



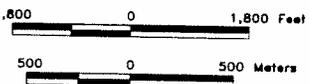
LEGEND

NCPC BASE PROJECT AREA	ACRES
MODIFIED ALT L - NCPC PROPOSED	3,608
IMPACT BOUNDARY 05/13/09	2,109
MODIFIED ALT L - NCPC PROPOSED IMPACT BOUNDARY 05/13/09 - EXCAVATION LIMITS	1,264
RECOVERED CONCENTRATE = 34,878,000 TONS *	

CREEKS/OPEN WATER		
Public Trust Areas	0 LF	0
Intermittent Stream	0 LF	0
Perennial Stream	4,419 LF	<1
2 Wetland Brackish Marsh Complex		11
3 Wetland Bottomland Hardwood Forest		213
4 Wetland Herbaceous Assemblage		136
5 Wetland Shrub - Scrub Assemblage		307
6 Wetland Pine Plantation		415
7 Wetland Hardwood Forest		352
8 Wetland Mixed Pine - Hardwood Forest		95
9 Wetland Pine Forest		0
10 Wetland Pocosin - Bay Forest		0
11 Wetland Sand Ridge Forest		11
12 Pond		0
13 Wetland Maintained Area		158
14 Upland Herbaceous Assemblage		140
15 Upland Shrub - Scrub Assemblage		25
16 Upland Pine Plantation		16
17 Upland Hardwood Forest		71
18 Upland Mixed Pine - Hardwood Forest		13
19 Upland Pine Forest		0
20 Upland Sand Ridge Forest		79
21 Upland Agricultural Land		67
22 Upland Non - Vegetated/Maintained Area		

Waters of the US Areas (Impacts Inside Modified ALT L Boundary Only)	1,540
Wetland Areas (Without Ponds and Creeks) (Impacts Inside Modified ALT L Boundary Only)	1,529
Upland Areas	569
47% Wetland Areas (Upland/Wetland Acreages Within This Area Have Been Accounted For Within Communities Acreages Listed Above.)	55

*PROVIDED BY PCS PHOSPHATE 05/13/09



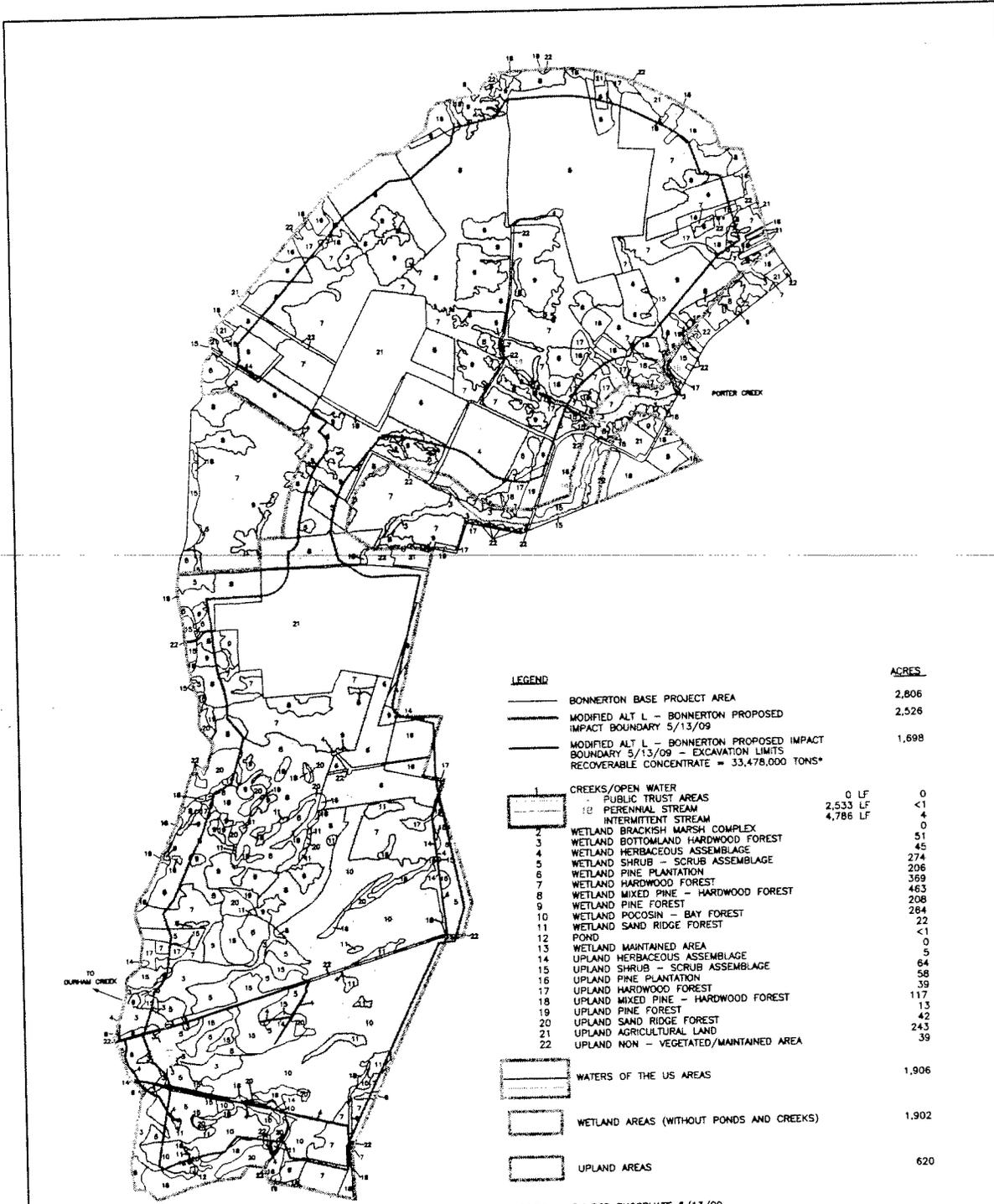
IMPACTS OUTSIDE NCPC MODIFIED ALT L BOUNDARY

ROAD RELOCATION IMPACTS AREAS	
PROPOSED BRIDGE	
NCPC MODIFIED ALT L - SHADING AND PILES -	
N.C. HIGHWAY 308 BRIDGE SHADING AND PILES	
Public Trust Areas	0.02
2 Wetland Brackish Marsh Complex	0.17
6 Wetland Pine Plantation	0.01
8 Wetland Mixed Pine - Hardwood Forest	0.01
	0.21 ACRES
NCPC MODIFIED ALT L - N.C. HIGHWAY 308	
4 Wetland Herbaceous Assemblage	0.03
6 Wetland Pine Plantation	1.47
8 Wetland Mixed Pine - Hardwood Forest	2.80
15 Upland Shrub - Scrub Assemblage	0.01
19 Upland Mixed Pine - Hardwood Forest	0.04
21 Upland Agricultural Land	3.31
22 Upland Non - Vegetated/Maintained Area	0.13
	7.79 ACRES
NCPC MODIFIED ALT L - SANDY LANDING ROAD	
6 Wetland Pine Plantation	0.45
8 Wetland Mixed Pine - Hardwood Forest	0.02
16 Upland Pine Plantation	1.09
22 Upland Non - Vegetated/Maintained Area	0.04
	1.60 ACRES

Biotic Communities
Modified Alternative L - NCPC

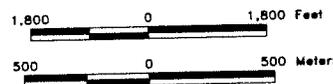
PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 05/18/09	File: 17456224/
Approved by: JPS 5-13-09	Revision: Ncpc_ModAlt_051309(NCPC BC 051209)@office

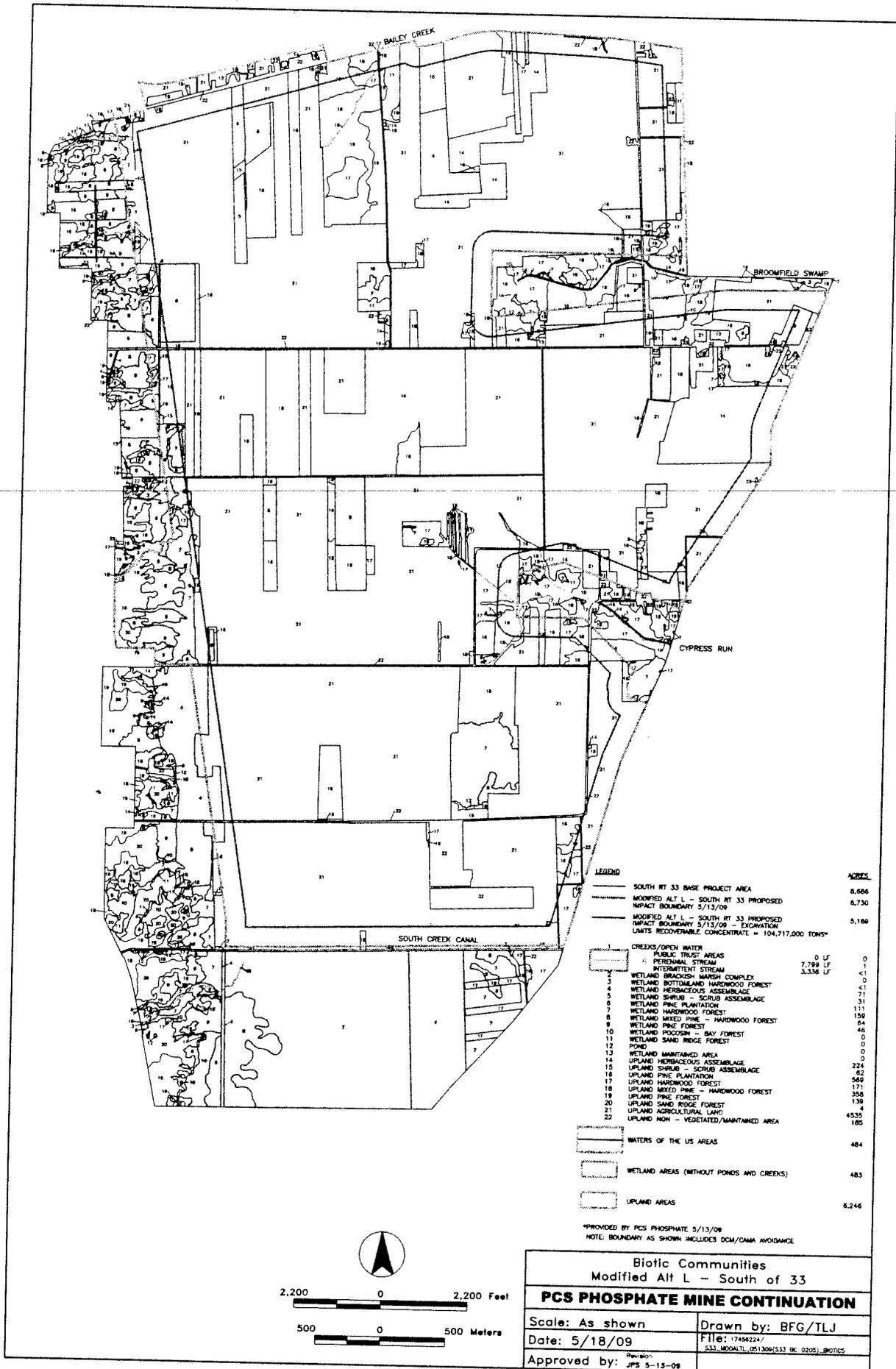


LEGEND		ACRES	
BONNERON BASE PROJECT AREA			2,806
MODIFIED ALT L - BONNERON PROPOSED IMPACT BOUNDARY 5/13/09			2,526
MODIFIED ALT L - BONNERON PROPOSED IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 33,478,000 TONS*			1,698
CREEKS/OPEN WATER			
1	PUBLIC TRUST AREAS	0 LF	0
10	PERENNIAL STREAM	2,533 LF	<1
	INTERMITTENT STREAM	4,786 LF	4
2	WETLAND BRACKISH MARSH COMPLEX		51
3	WETLAND BOTTOMLAND HARDWOOD FOREST		45
4	WETLAND HERBACEOUS ASSEMBLAGE		206
5	WETLAND SHRUB - SCRUB ASSEMBLAGE		359
6	WETLAND PINE PLANTATION		463
7	WETLAND HARDWOOD FOREST		208
8	WETLAND MIXED PINE - HARDWOOD FOREST		284
9	WETLAND PINE FOREST		22
10	WETLAND POCOSIN - BAY FOREST		<1
11	WETLAND SAND RIDGE FOREST		0
12	POND		5
13	WETLAND MAINTAINED AREA		64
14	UPLAND HERBACEOUS ASSEMBLAGE		58
15	UPLAND SHRUB - SCRUB ASSEMBLAGE		39
16	UPLAND PINE PLANTATION		117
17	UPLAND HARDWOOD FOREST		13
18	UPLAND MIXED PINE - HARDWOOD FOREST		42
19	UPLAND PINE FOREST		243
20	UPLAND SAND RIDGE FOREST		39
21	UPLAND AGRICULTURAL LAND		1,906
22	UPLAND NON - VEGETATED/MAINTAINED AREA		1,902
WATERS OF THE US AREAS			620
WETLAND AREAS (WITHOUT PONDS AND CREEKS)			
UPLAND AREAS			

*PROVIDED BY PCS PHOSPHATE 5/13/09
 NOTE: BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE

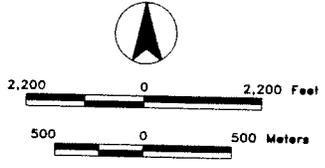


Biotic Communities Modified Alternative L - Bonneron	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458224/ BON_MODALTL_051309(BON DC 030208)_BIOTICS
Approved by: JPS 5-15-09	Revision: JPS 5-15-09



LEGEND		ACRES
[Symbol]	SOUTH RT 33 BASE PROJECT AREA	8,566
[Symbol]	MODIFIED ALT L - SOUTH RT 33 PROPOSED IMPACT BOUNDARY 5/13/09	6,730
[Symbol]	MODIFIED ALT L - SOUTH RT 33 PROPOSED IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 104,717,000 TONS*	5,160
[Symbol]	CREEKS/OPEN WATER	
[Symbol]	PUBLIC TRUST AREAS	0 LF
[Symbol]	PERMANENT STREAM	7,799 LF
[Symbol]	INTERMITTENT STREAM	3,336 LF
[Symbol]	1 WETLAND BRACKISH MARSH COMPLEX	0
[Symbol]	2 WETLAND BOTTLENECK HARDWOOD FOREST	41
[Symbol]	3 WETLAND HERBACEOUS ASSEMBLAGE	71
[Symbol]	4 WETLAND SHRUB - SCRUB ASSEMBLAGE	31
[Symbol]	5 WETLAND PINE PLANTATION	111
[Symbol]	6 WETLAND HARDWOOD FOREST	159
[Symbol]	7 WETLAND MIXED PINE - HARDWOOD FOREST	64
[Symbol]	8 WETLAND PINE FOREST	46
[Symbol]	9 WETLAND POCCOON - BAY FOREST	0
[Symbol]	10 WETLAND SAND RIDGE FOREST	0
[Symbol]	11 POND	0
[Symbol]	12 WETLAND MAINTAINED AREA	0
[Symbol]	13 UPLAND HERBACEOUS ASSEMBLAGE	224
[Symbol]	14 UPLAND SHRUB - SCRUB ASSEMBLAGE	82
[Symbol]	15 UPLAND PINE PLANTATION	569
[Symbol]	16 UPLAND HARDWOOD FOREST	171
[Symbol]	17 UPLAND MIXED PINE - HARDWOOD FOREST	358
[Symbol]	18 UPLAND PINE FOREST	139
[Symbol]	19 UPLAND SAND RIDGE FOREST	4
[Symbol]	20 UPLAND AGRICULTURAL LAND	4535
[Symbol]	21 UPLAND NON - VEGETATED/MAINTAINED AREA	165
[Symbol]	WATERS OF THE US AREAS	484
[Symbol]	WETLAND AREAS (WITHOUT PONDS AND CREEKS)	483
[Symbol]	UPLAND AREAS	8,246

*PROVIDED BY PCS PHOSPHATE 5/13/09
 NOTE: BOUNDARY AS SHOWN INCLUDES DCM/CMAA AVOIDANCE



Biotic Communities Modified Alt L - South of 33	
PCS PHOSPHATE MINE CONTINUATION	
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 1748224/
Approved by: JPS 5-13-09	Revision: 533_M02A1L_051306(G33 BC 0205)_BOTICS