"Jolly, Samuel K SAW"
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06/04/2009 06:02 PM

To Stan Meiburg/R4/USEPA/US@EPA

cc Rebecca Fox/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, "Welborn.Tom@epamail.epa.gov"

bcc

Subject Revised conditions and graphics

History: This message has been forwarded.

Attached find the corrected permit conditions and graphics, provided to PCS this afternoon to be used in place <<conditions and graphics6_4_09.pdf>> of the the version included in the proffered permit.

Ken Jolly
Chief, Regulatory Division
Wilmington District

SPECIAL CONDITION
Action ID No. 200110096

MINING

A) This permit authorizes mining and mine related impacts as described fully in the FEIS within the boundary depicted in the attached maps labeled "Modified Alt L – NCPC " dated May 28, 2009 and "Modified Alt L – Bonnerton " and "Modified Alt L – South of 33", as presented May 18, 2009. All work authorized by this permit must be performed in strict compliance with these attached plans, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.

B) Within 1 year of the issuance date of this permit, the Permittee shall demarcate the outer limits of disturbance on the NCPC tract by establishing a cleared line at least 10 feet wide and not to exceed 40 feet wide along the Impact Boundary as identified in the attached map labeled "Modified Alt L – NCPC " as presented May 28, 2009. Additionally, the Permittee shall, within 1 year of the issuance of this permit work with the Corps to identify locations and establish permanent monuments identified with GPS coordinates to further demarcate this boundary on the NCPC Tract. No less than 1 year prior to relocating any mine related activity to the Bonnerton or S33 Tracts, the Permittee shall undertake identical actions within these tracts utilizing the information provided on the "Modified Alt L – Bonnerton" and "Modified Alt L – South of 33", as presented May 18, 2009, respectively. This will facilitate compliance monitoring by establishing long-term reference points.

C) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

D) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

E) Figure 2 of the Record of Decision (ROD) included and incorporated here by reference depicts approximate timing of the requirement for major pre- mining, land manipulation and clearing impacts and is incorporated here by reference. Table 3 of the ROD included and incorporated here by reference lists those impacts and the years in which they will occur. These yearly figures are estimates. Actual timing and area may be in part determined by several factors including but not limited to site and equipment constraints, weather, and economics. However, to ensure that temporal

losses are minimized to the extent practicable, the Permittee shall not undertake major land-clearing and/or land manipulating activities within any area sooner than 1 year prior to the dates indicated on this figure. For example, major land clearing and manipulation activities within the block labeled 2012-2013 may not begin any sooner than January 1, 2011.

RECLAMATION

F) The Permittee shall undertake full reclamation of all areas mined under this authorization as described in Section 4.3 of the EIS. This includes reestablishment of varied topography and drainage ways. Figure 3 of the ROD included and incorporated here by reference indicates the required completion date for the capping and successful vegetation of mine reclamation areas. To demonstrate adherence to this schedule, the Permittee shall submit to the Corps an annual summary detailing all reclamation efforts complete within the previous year and indicating the degree of completeness of each reclamation area. Any deviation from the reclamation schedule will be addressed in these reports and the report shall include an explanation for the deviation and proposed remedial action.

G) The Permittee shall cap all mined areas that are reclaimed with the gypsum-clay blend process materials. The goal of the cap will be a minimum 3-foot thick cap of overburden material (similar to background soils from the region) over 100% of the blend areas. Minimal acceptable performance standards in achieving this cap are as follows: 70% of the total surface area with a minimum of 3-foot cap; 25% of the total surface area with a minimum of 2-foot cap; 5% of the total surface area unspecified.

H) Following successful completion of the capping requirements within each reclamation area, the Permittee shall submit an as-built report including final topographical surveys for the reclamation areas. This report shall contain final cap depth and coverage information. This report shall further include an explanation of site development that will minimize erosion, eliminate contaminant transportation from the clay/gypsum blend through any waterway or drainage area, and facilitate the development of a mature vegetated riparian buffer. Finally, this report shall include information on surface water retention within the reclamation area and flows within and from the reclamation area.

I) To minimize temporal impacts and accelerate the return of watershed functions within the reclamation areas, the Permittee shall to the extent appropriate and practicable apply an average of 1-foot of topsoil cover to the reclaimed areas utilizing the topsoil removed prior to site mining. This topsoil addition should be concentrated within and around areas of surface water flow and/or retention.

J) To the extent appropriate and practicable, upland portions of the reclamation area shall be replanted, in longleaf pine *(Pinus palustris)* and wetland areas shall be replanted in bald cypress *(Taxodium distichum)* and/or Atlantic white cedar *(Chamaecyparis thyoides)* if Atlantic white cedar is shown to do well on the

reclamation sites. It is suggested that the Permittee work with the Corps, the USFWS and any other interested parties to determine growth and survivability of these and other species utilizing areas currently being reclaimed under the previous permit action.

K) Within 2 years of the issuance of this permit, the Permittee shall work with the Corps and NCDWQ to develop a plan to monitor the quality of water discharged from the reclamation areas into the surrounding watersheds. The Permittee shall seek input from all appropriate and interested agencies including but not limited to EPA, USFWS, NFMS, NCWRC, NCDMF, NCDCM and NCDLR in developing this monitoring plan. This plan shall include monitoring of radionuclides, total and dissolved phosphorus, nitrate nitrogen, ammonia nitrogen, particulate nitrogen, dissolved Kjeldahl nitrogen, and dissolved and particulate organic carbon. Data collected will be used to manage water within the reclamation areas to optimize both the amount and quality of those waters being released. It is suggested that the applicant initiate pilot studies in the areas currently being reclaimed.

MITIGATION

L) Compensatory mitigation identified in the document entitled "Compensatory Section 404/401 Mitigation Plan: Comprehensive Approach" as presented in Appendix I of the FEIS shall be accomplished pursuant to that Plan and/or any subsequent Corps approved modification or amendment. Construction and monitoring of each site shall be conducted according to each site-specific mitigation plan and the schedule presented in Table 3 of the ROD included and incorporated here by reference.

M) Within one year of the issuance of this permit, the Permittee shall cause to be recorded, a preservation mechanism acceptable to the Corps for the permanent protection of the area identified for preservation in the "South Creek Corridor" plan.

N) Table 3 of the ROD lists the impacts as they would occur during 2-year timeframes and is included by reference in Condition "E" above. By November 1st of the year preceding the permitted impact, the Permittee shall submit to the Corps and NCDWQ, a mitigation ledger demonstrating that all mitigation work is complete as described in the mitigation plan and pursuant to the identified timetable. This ledger will be used to determine whether sufficient mitigation is available for impacts occurring over the next 2-year timeframe. For Example, by November 1st 2009, the Permittee shall submit a ledger demonstrating that sufficient mitigation for impacts occurring during the 2010 – 2011 timeframe (526.56 ac) is completed. Should the ledger indicate that insufficient mitigation exists to compensate for the next 2-year timeframe, the Permittee shall work with the Corps to develop a strategy to ensure that the mitigation requirement is satisfactorily met prior to those impacts occurring.

O) The Permittee shall submit yearly monitoring reports for each mitigation site. Monitoring reports will be submitted by the dates specified within each site-specific mitigation plan. Monitoring will continue until such time as the Corps deems the mitigation site successful and confirms in writing that monitoring may be discontinued.

P) Once compensatory mitigation sites have been deemed successful and the Corps has agreed in writing that monitoring may cease, the Permittee shall, within one year of the date of that correspondence, cause to be recorded an acceptable preservation mechanism ensuring the permanent protection of all mitigation sites.

MONITORING

Q) As required by the State Water Quality Certification, the Permittee shall work with the Corps and the N.C. Division of Water Quality to establish a monitoring plan for groundwater in and around mine and reclamation areas. At a minimum, this plan shall include sufficient monitoring within and surrounding the reclamation areas to ensure that heavy metal/toxic pollutants including cadmium and radionuclides are not entering the groundwater. The monitoring plan shall also include nitrate nitrogen, sulfate, chloride, total phoshorus, sodium, TDS, and pH. It is suggested that this monitoring commence with monthly samples until such time as the NCDWQ and the Corps in consultation with all interested and appropriate agencies determines sufficient baseline information exists. After such time, samples will be collected and analyzed every 3 months until blend material is introduced to the reclamation area. Following introduction of the blend material to the reclamation site, monthly sampling will recommence until such time as the NCDWQ and the Corps in consultation with all interested and appropriate agencies determines another sampling timeframe is appropriate. Yearly results of this monitoring shall be reported to the Corps and NCDWQ no later than January 31 of the year following data collection. The permittee and/or the Corps will make these reports available in whole or in summary to any interested party. If increases in the levels of any sampled substance are observed for more than 1 sampling occurrence in any given year, or for more than 1 year, the permittee shall include in the yearly report, a plan for mitigating the effect or satisfactory justification as to why no action is necessary. If the Corps, in consultation with other agencies, including but not limited to NCDWQ, NCDLR and EPA, determines that the current reclamation practices are causing an unacceptable adverse impact to groundwater, the DE may modify, suspend or revoke the permit.

R) Prior to introducing the gypsum/clay blend in the reclamation of any mined area covered by this permit, the Permittee shall submit to the Corps and NCDWQ a remediation strategy in anticipation of the possibility of heavy

metal or radionuclide contamination of groundwater or surface tributaries that drain or are adjacent to mined areas. That strategy will be made available for public review.

S) In concert with the monitoring requirements contained in the Water Quality Certification, the Permittee shall develop a Plan of Study to address the effects of the reduction in headwater wetlands on the utilization of Porters Creek, Tooley Creek, Jacobs Creek, Drinkwater Creek, and Jacks Creek as nursery areas by resident fish and appropriate invertebrate species. This plan shall be submitted to the Corps and NCDWQ for approval within 1 year of the issuance of this permit. At a minimum, the plan shall address the following issues:

1) Has mining altered the amount or timing of water flows within the creeks? Data collection may include:
   i) Continuous water level recorders to measure flow
   ii) Rain gauges to measure local water input
   iii) Groundwater wells to measure input to the creeks
   iv) Semi-continuous salinity monitoring
   v) Periodic DO monitoring (continuously monitored for several days at strategic times of year)

2) Has mining altered the geomorphic or vegetative character of the creeks? Data collection may include:
   i) Annual aerial photography to determine creek position, length, width, sinuosity
   ii) Annual cross sectional surveys of each creek at established locations
   iii) Annual sediment characterization
   iv) Annual vegetation surveys along creeks
   v) Spring and fall sediment surface chlorophylls or organic content in vegetation zone.
   vi) Spring and fall location of flocculation zones with each creek.

3) Has mining altered the forage base of the creeks? Data collection may include:
   i) Spring and fall benthic cores to sample macroinfauna.
   ii) Spring and fall benthic grabs focused upon bivalves, such as *Rangia* sp.
   iii) Periodic sampling for pelagic species such as grass shrimp, blue crabs, and small forage fish. Sampling gears would be chosen to reflect ontogenetic shifts in creek usage.

4) Has mining altered the use of the creeks by managed fish? Data collection may include periodic sampling for species managed under the Magnuson-Stevens Fishery Conservation Management Act. Sampling would occur

during appropriate times of year and gears would be chosen to reflect ontogenetic shifts in creek usage.

5) Has mining increased contaminate levels within creek sediments to levels that could impact fish or invertebrates? Data collection may include annual sediment and water column sampling for metals, including cadmium, mercury, silver, copper, and arsenic. If elevated levels are detected, the availability and uptake by appropriate aquatic species (e.g., *Rangia* sp., blue crabs) should measured using appropriate bioassay techniques.

6) Has mining altered overall water quality within creeks? Water quality parameters analyzed will include: Salinity, Temperature, Dissolved Oxygen, pH, Secchi depth, Turbidity, Chlorophyll a, Dissolved orthophosphate phosphorus, Total dissolved phosphorus, Particulate phosphorus, Nitrate nitrogen, Ammonia nitrogen, particulate nitrogen, and Dissolved Kjeldahl nitrogen.

T) Monitoring under the Plan of Study referenced in condition "S" above shall commence immediately upon the Plan's approval by the Corps and NCDWQ. Monitoring shall continue for 10 years following the completion of all reclamation work within the headwaters of the subject creeks unless the Corps, in consultation with the appropriate resource agencies agrees that monitoring can be discontinued.

REPORTING AND ADAPTIVE MANAGEMENT

U) The Permittee shall within 6 months of the issuance date of this permit, work with the Corps and NCDWQ to establish an independent multidisciplinary panel of researchers qualified in the subject matter to be examined (Science Panel). In identifying potential participants for this Panel, the Permittee shall seek input from all interested and appropriate resource agencies including but not limited to EPA, NMFS, USFWS, NCWRC, NCDMF, and the appropriate permitting agencies including NCDCM, NCDLR. The panel shall be comprised of between 2 and 5 members. The members of this panel shall be given opportunity to provide input and recommendations on the monitoring required by conditions "K" and "S" above including research design, reference site selection, sampling stations, schedules, and methods; laboratory methods; data management and analysis; and quality control and quality assurance. Any input supplied by members of this panel will be presented to the Corps and NCDWQ and will be incorporated as appropriate into the preparation of the Plan of Study referenced in condition "S". Members of this panel will also be given the opportunity to oversee all research conducted toward fulfillment of conditions "K" and "S".

V) The Permittee shall be responsible for fully implementing the approved Plan of Study referenced in conditions "S", "T" and "U" above. Annual summaries of all data collected in compliance with conditions "K" and "S" shall be presented to the Corps, NCDWQ and all members of the Science Panel on or before May 1 of the year following collection. The Permittee and/or the Corps will make these reports available in whole or in summary to any interested party.

W) The Permittee shall coordinate and facilitate an annual meeting of the Science Panel, the Corps, NCDWQ, and all other interested state and federal agencies including but not limited to EPA, NMFS, USFWS, NCWRC, NCDMF, NCDCM, NCDLR. This meeting shall occur no later than July 30 of each year. The purpose of this meeting will be to allow the members of the Science Panel to provide input to the agencies on any observed trends in parameters measured and general discussions on whether direct and indirect impacts from mining and benefits from the compensatory mitigation appear to be in accordance with expectations at the time of permitting. Members of the Science Panel shall also be given the opportunity to provide any recommendations for management or further study. The proceedings of this meeting including data summaries, reports, presentations and any conclusions of the group will be made available in whole or in summary to any interested party. The Corps will fully consider all information presented by the Science Panel as well as comments from state and federal agencies and all other parties supplying input to determine if corrective actions or permit modifications are needed. If substantive changes to the mine plan, compensatory mitigation plan or monitoring plan are made, the Corps will announce such change by Public Notice and allow for public comment.

X) At appropriate intervals to be decided by the Corps after input from the Science Panel (eg. 3 to 5 years) beginning from the date of permit issuance, members of the panel shall be given the opportunity to review the monitoring methods, sampling locations, parameters analyzed, and other elements of monitoring protocol to determine if modifications to the plan are appropriate. All data reviewed by the panel shall be made available to the public.

MISCELLANEOUS

Y) The Permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

Z) The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A

copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

AA) The Permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

BB) The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to an acceptable condition.

CC) Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the Permittee's discovery of the violation.

DD) Wetland Avoidance/Minimization Areas: The Permittee shall avoid the remaining 2,455 acres of waters of the United States within the 15,100 acre project area. These natural wetland areas were avoided as part of the permit application review process and therefore will not be disturbed by any dredging, filling, mechanized land clearing, agricultural activities, or other construction work whatsoever. The Corps reserves the right to deny review of any requests for future impacts to these natural wetland areas.

EE) The Permittee shall not begin work authorized by this permit until 10 days following the date I provide the record of decision to EPA. I expect to provide the ROD to EPA on June 4, 2009; however, the Permittee shall verify that date prior to beginning work.

FF) Within one year of the date of this permit, the Permittee shall cause to be recorded a conservation instrument acceptable to the Corps for the permanent preservation of the areas identified as conservation easements on maps entitled "Conservation Easement – Tooley Creek Modified Alternative L – NCPC; " "Conservation Easement – Jacobs Creek Modified Alternative L – NCPC;" "Conservation Easement – Drinkwater Creek Modified Alternative L – NCPC and "Conservation Easement – Porter Creek Modified Alt L – Bonnerton" all dated May 18, 2009 and the map entitled "Conservation Easement – Jacks Creek Modified Alternative L – NCPC;" dated May 28,

2009. In addition the Permittee shall place a permanent mining restriction over the area shown in the map entitled "Permanent Deed Restriction Prohibiting Mining Cypress Run Modified Alt L- South of 33" dated May 18, 2009. The referenced maps are attached hereto.

Alternative	Total Area	Waters of the US	Stream	% Total Area	% Total Waters of the US	% Total Stream
Single Tract Alternatives						
Base (NCPC)	3,608	2,549	55,528			
AP (NCPC only)	3,412	2,408	38,558	95	94	69
Base (S33 only)	8,686	1,701	43,209			
S33AP (S33 only)	7,743	1,130	33,486	89	66	77
Holistic Alternatives						
Base (holistic)	15,100	6,380	115,843			
EAPA/B	13,961	5,668	89,150	92	89	77
SJAA/B	12,892	5,030	2,508	85	79	2
Alt. M	12,572	4,592	36,999	83	72	32
Alt. L (mod)	11,343	3,927	22,435	75	62	19
SCRA/B	10,659	3,506	14,360	71	55	12
DL1B	9,033	2,285	13,845	60	36	12
No Action	5,745	0	0	38	0	0

Table 1. Comparison of impacts for each alternative. Impacts associated with single tract alternatives are compared only to the base area within that single tract. Impacts associated with holistic alternatives are compared to the total base area of the three tracts combined.

Site	Wetland (acres)			Stream (linear feet)		
	Restoration	Enhancement	Preservation	Restoration	Enhancement	Preservation
Bay city	565.0	0.0	119.0	3000.0		
Hell Swamp	885.0	46.0	41.0	19783.0		
Gum Run	27.0	0.0	0.0			
Parker Farm	245.0	162.0	196.0			3960
SC Corridor			1143.0			26736
P Lands	2075.0	381.0	135.0			
U Lands	608.0		117.0			
Upper Back Creek	116.0	38.0	18.0	7066.0		1149.0
Rutman	3342.0	129.0	701.0	8793.0	7994.0	
Sage Gut	105.0		2.0	5401		1006
totals	**7968.0**	**756.0**	**2472.0**	**44043.0**	**7994.0**	**32851.0**

Table 2. Wetland and stream mitigation by site and type.

By year	Impact	Site Complete	Available Credits*	Acre Credit Balance		Impact**	Available Credits***	Linear Feet Credit Balance
	Acres		Acres	Available - Impacted		Linear Feet	Linear Feet	Available - Impacted
2009	312.39	Gum Run, Parker Farm, Bay City, Upper Back Creek	576.5	264.08		4544	11087.8	7115.8
2010	506.56	Sage Gut, Hell Swamp	1666.0	1403.53		148	30794.8	37762.6
2011		Rutman	828.1	2231.63			11990.6	49753.2
2012	304.81		0.0	1917.82		1108.5		48910.2
2013		P Lands, U Lands	1493.7	3411.52				48910.2
2014	303.53		0.0	3087.99		4677		45104.2
2015			0.0	3087.99				45104.2
2016	203.58		0.0	2884.41		1358		43746.2
2017			0.0	2884.41				43746.2
2018	458.74			2425.67		10620.5		34562.2
2019				2425.67				34562.2
2020	528.79			1896.88		0		34562.2
2021				1896.88				34562.2
2022	592.38			1304.50		0		34562.2
2023				1304.50				34562.2
2024	476.17			828.33		11974.5		24467.2
2025				828.33				24467.2
2026	30.34			797.99		3862.5		21892.2
2027				797.99				21892.2
2028	45.19			752.80		763.5		21383.2
2029				752.80				21383.2
2030	2.1			750.70		0		21383.2
2031				750.70				21383.2
2032	0			750.70		0		21383.2
2033				750.70				21383.2
2034	5.86			744.84		0		21383.2
2035				744.84				21383.2
2036	15.76			729.08		1239		20557.2
2037				729.08				20557.2
2038	31.42			697.66		4366.5		17646.2
2039				697.66				17646.2
2040	26.39			671.27		0		17646.2
2041				671.27				17646.2
2042	75.11			596.16		832.5		17091.2
2043				596.16				17091.2
2044	6.61			589.55		0		17091.2
2045				589.55				17091.2
2046	2.06			587.49		0		17091.2
2047				587.49				17091.2
2048	0			587.49		0		17091.2

Table 3. Mitigation completion date and impat dates

* an acre credit of wetland is comprised of 2:1 restoration, 3:1 enhancement or 8-10:1 preservation

** This column reflects total mitigation linear feet needed after adjustments to stream quality

(1:1 for poor, 2:1 for Fair and 3:1 for excelent)

*** A linear foot credit is comprised of 1:1 restoration, 2.5:1 enhancement or 5:1 preservation

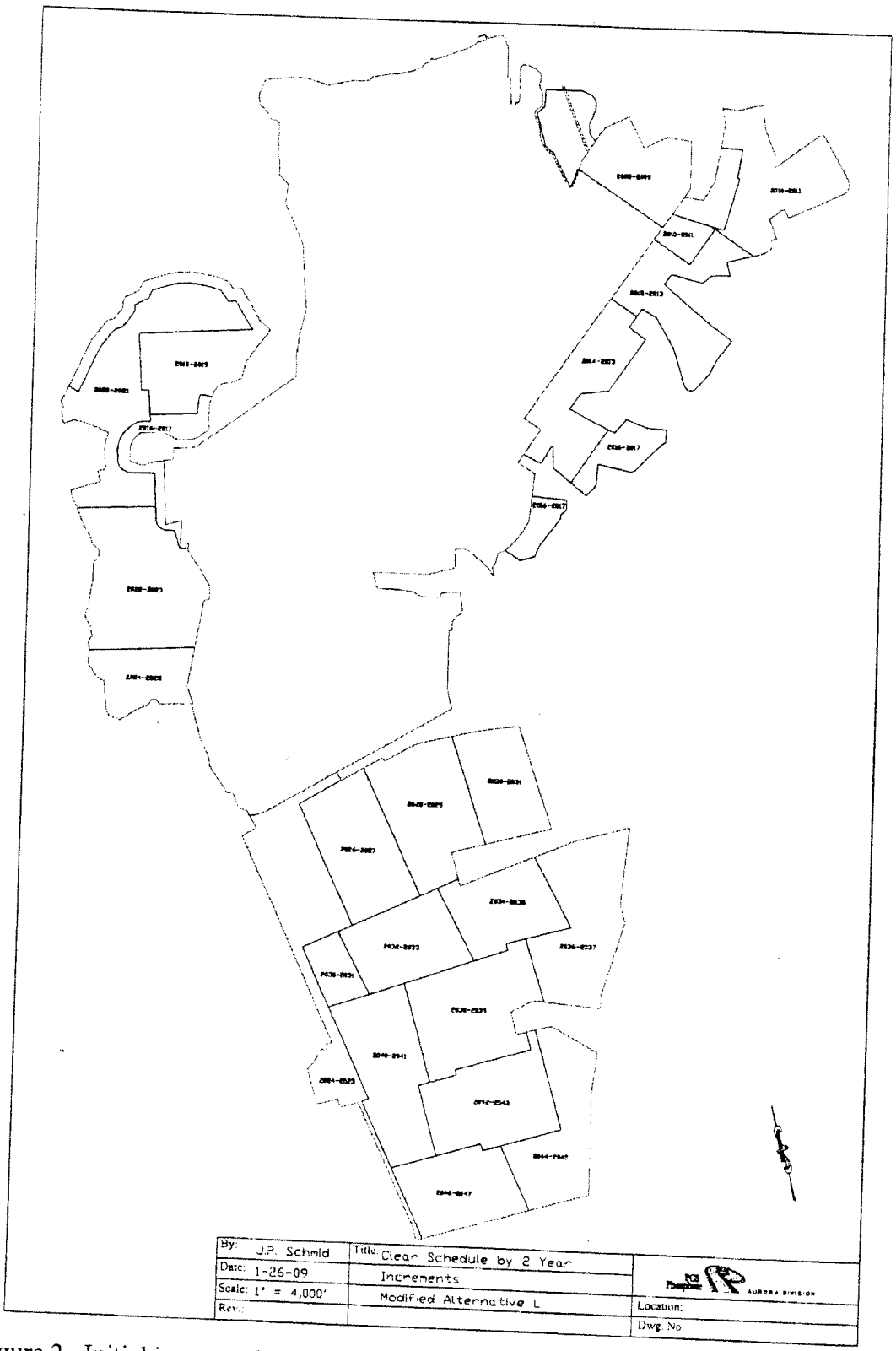


Figure 2. Initial impact schedule. This reflects dates when mechanized land clearing will be necessary in order to prepare for mine advance.

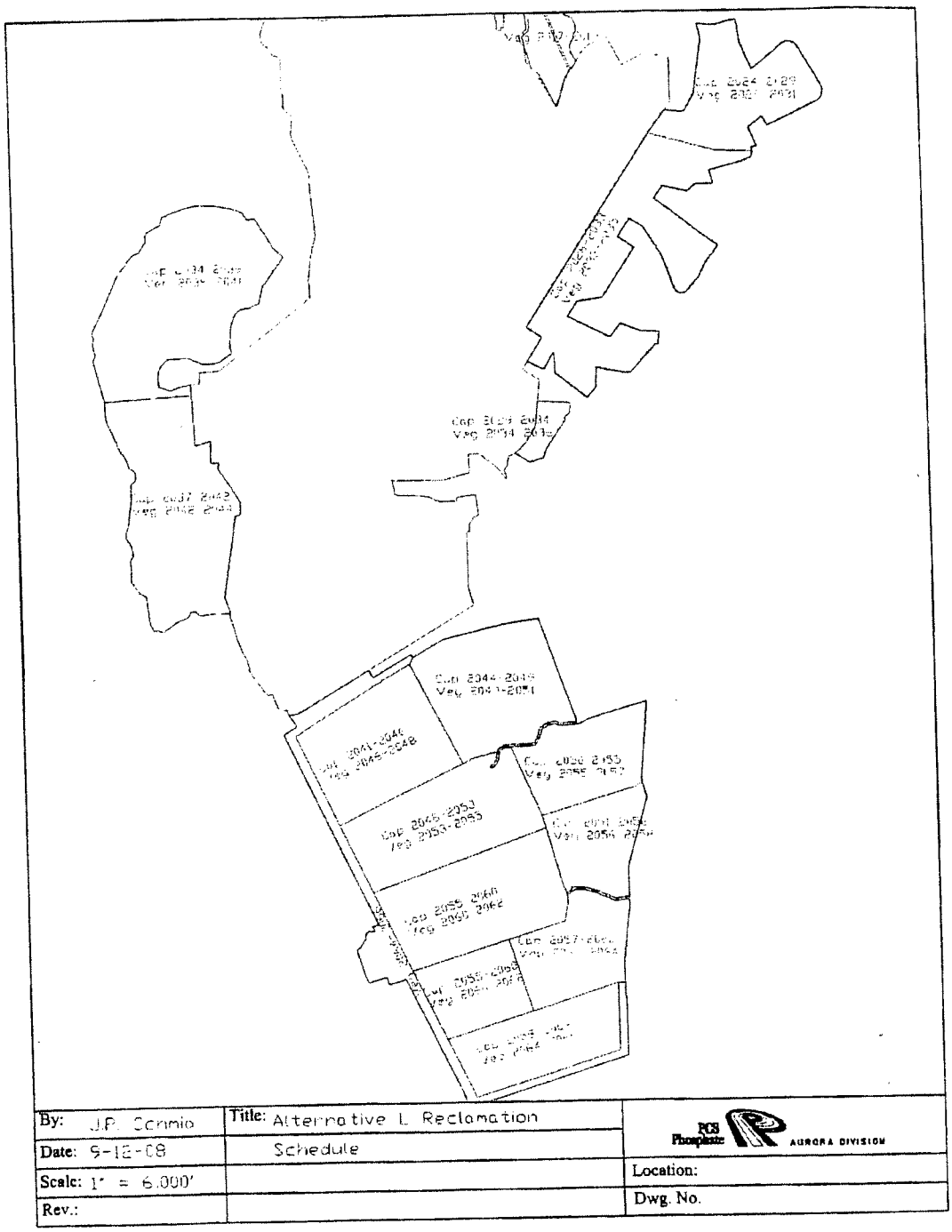
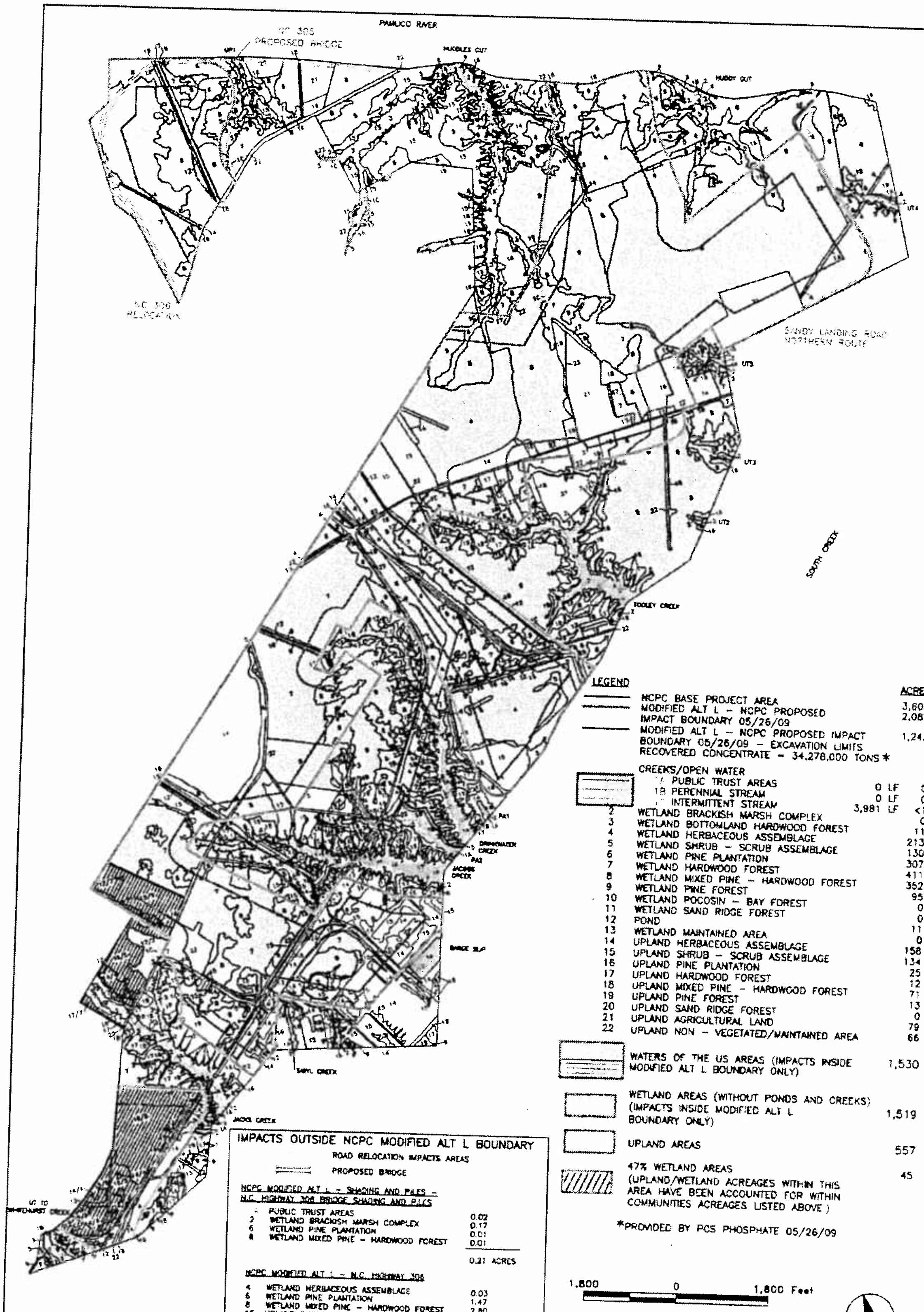


Figure 3. Depicts projected timeframes for completion of reclamation activities.



LEGEND

		ACRES
	NCPC BASE PROJECT AREA	3,608
	MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09	2,087
	MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS RECOVERED CONCENTRATE – 34,278,000 TONS *	1,243
	CREEKS/OPEN WATER	
1A	PUBLIC TRUST AREAS 0 LF	0
1B	PERENNIAL STREAM 0 LF	0
1C	INTERMITTENT STREAM 3,981 LF	<1
2	WETLAND BRACKISH MARSH COMPLEX	0
3	WETLAND BOTTOMLAND HARDWOOD FOREST	11
4	WETLAND HERBACEOUS ASSEMBLAGE	213
5	WETLAND SHRUB – SCRUB ASSEMBLAGE	130
6	WETLAND PINE PLANTATION	307
7	WETLAND HARDWOOD FOREST	411
8	WETLAND MIXED PINE – HARDWOOD FOREST	352
9	WETLAND PINE FOREST	95
10	WETLAND POCOSIN – BAY FOREST	0
11	WETLAND SAND RIDGE FOREST	0
12	POND	11
13	WETLAND MAINTAINED AREA	0
14	UPLAND HERBACEOUS ASSEMBLAGE	158
15	UPLAND SHRUB – SCRUB ASSEMBLAGE	134
16	UPLAND PINE PLANTATION	25
17	UPLAND HARDWOOD FOREST	12
18	UPLAND MIXED PINE – HARDWOOD FOREST	71
19	UPLAND PINE FOREST	13
20	UPLAND SAND RIDGE FOREST	0
21	UPLAND AGRICULTURAL LAND	79
22	UPLAND NON – VEGETATED/MAINTAINED AREA	66
	WATERS OF THE US AREAS (IMPACTS INSIDE MODIFIED ALT L BOUNDARY ONLY)	1,530
	WETLAND AREAS (WITHOUT PONDS AND CREEKS) (IMPACTS INSIDE MODIFIED ALT L BOUNDARY ONLY)	1,519
	UPLAND AREAS	557
	47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE)	45

*PROVIDED BY PCS PHOSPHATE 05/26/09

IMPACTS OUTSIDE NCPC MODIFIED ALT L BOUNDARY

ROAD RELOCATION IMPACTS AREAS

PROPOSED BRIDGE

NCPC MODIFIED ALT L – SHADING AND PILES – N.C. HIGHWAY 306 BRIDGE SHADING AND PILES

1A	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 306

4	WETLAND HERBACEOUS ASSEMBLAGE	0.03
6	WETLAND PINE PLANTATION	1.47
8	WETLAND MIXED PINE – HARDWOOD FOREST	2.80
15	UPLAND SHRUB – SHRUB ASSEMBLAGE	0.01
18	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 – N.C. HIGHWAY 306

1B PERENNIAL STREAM(CANAL)RELOCATION 220 L.F. (0.18 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

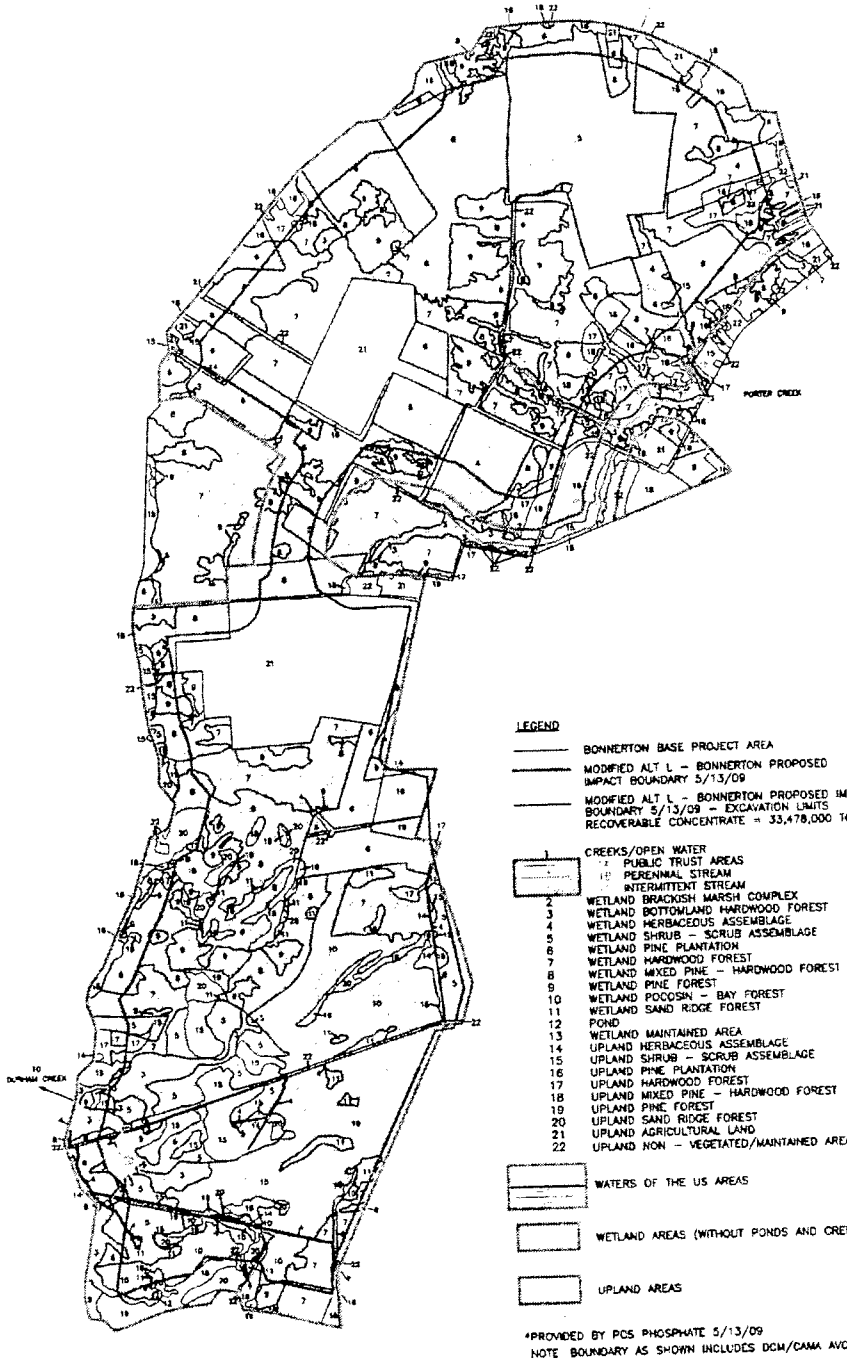
1,800 0 1,800 Feet

500 0 500 Meters

Biotic Communities
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 05/28/09	File: 17438224/ NCPC_ModAlt_052609(NCPC BC 051209)B.etlcs
Approved by: Revision JPS 5-26-09	



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
1	CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	0 LF	0
	PERENNIAL STREAM	2,533 LF	<1
	INTERMITTENT STREAM	4,786 LF	4
2	WETLAND BRACKISH MARSH COMPLEX		0
3	WETLAND BOTTOMLAND HARDWOOD FOREST		51
4	WETLAND HERBACEOUS ASSEMBLAGE		45
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		274
6	WETLAND PINE PLANTATION		206
7	WETLAND HARDWOOD FOREST		369
8	WETLAND MIXED PINE – HARDWOOD FOREST		463
9	WETLAND PINE FOREST		208
10	WETLAND POCOSIN – BAY FOREST		264
11	WETLAND SAND RIDGE FOREST		22
12	POND		<1
13	WETLAND MAINTAINED AREA		0
14	UPLAND HERBACEOUS ASSEMBLAGE		5
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		64
16	UPLAND PINE PLANTATION		58
17	UPLAND HARDWOOD FOREST		39
18	UPLAND MIXED PINE – HARDWOOD FOREST		117
19	UPLAND PINE FOREST		13
20	UPLAND SAND RIDGE FOREST		42
21	UPLAND AGRICULTURAL LAND		243
22	UPLAND NON – VEGETATED/MAINTAINED AREA		39
	WATERS OF THE US AREAS		1,906
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)		1,902
	UPLAND AREAS		620

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

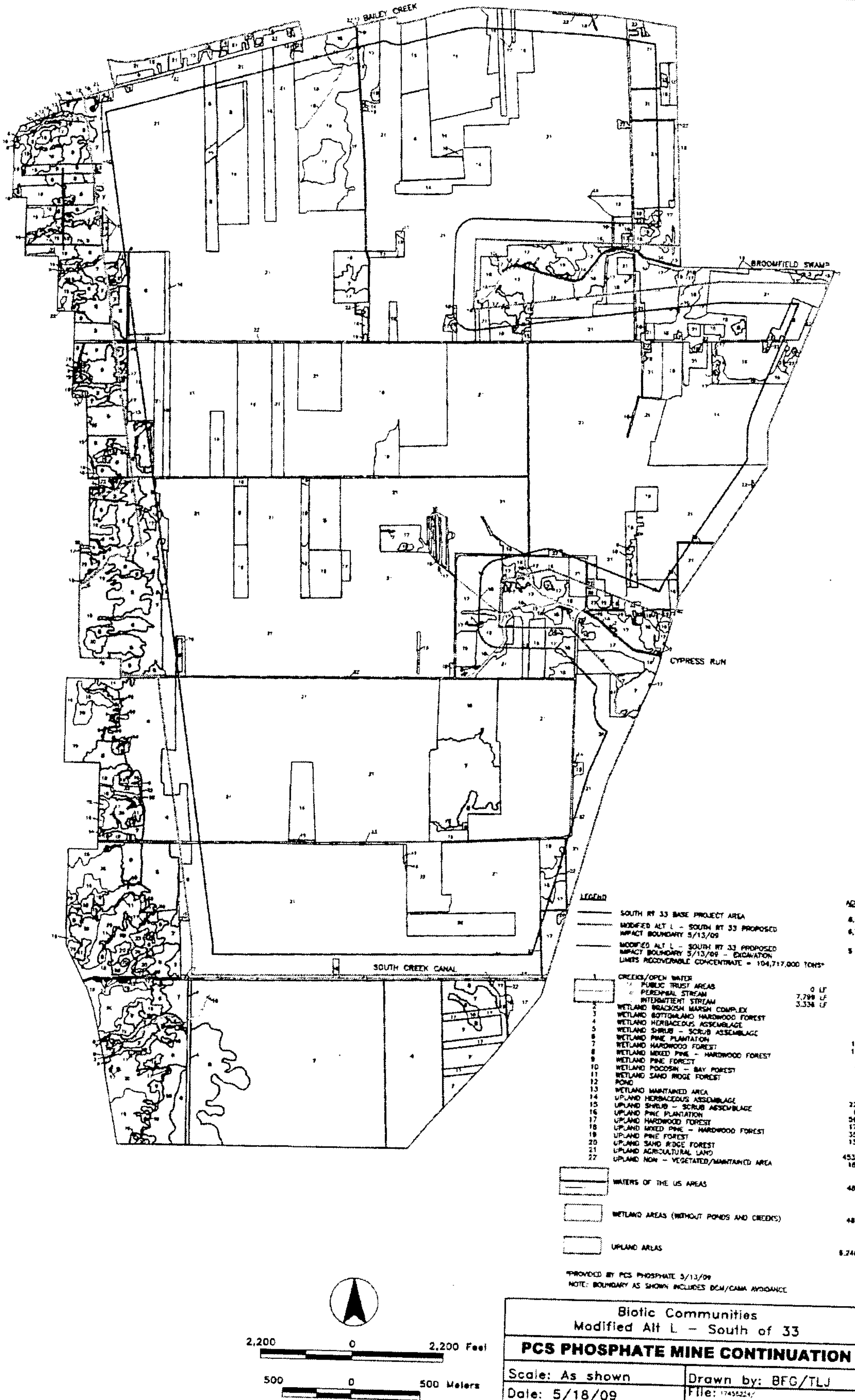
1,800 0 1,800 Feet

500 0 500 Meters

Biotic Communities
Modified Alternative L – Bonnerton

PCS PHOSPHATE MINE CONTINUATION

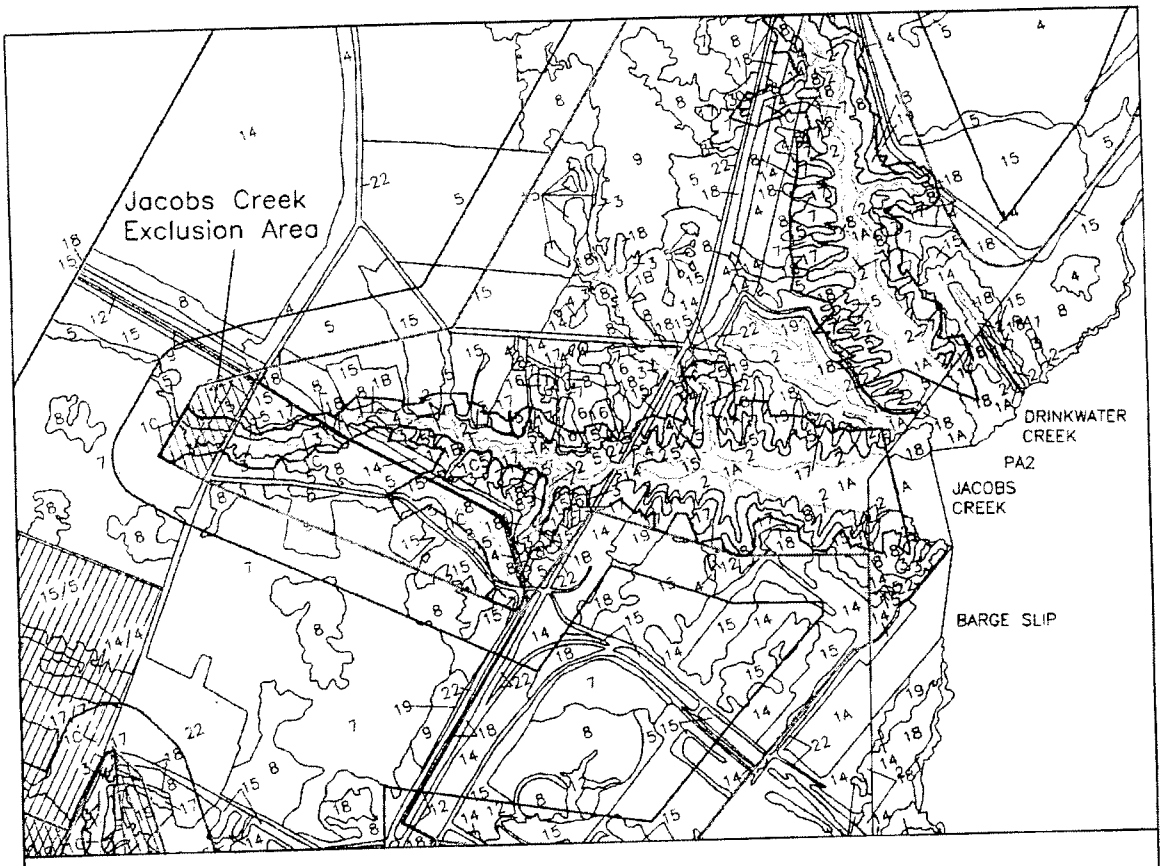
Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458224/ BON_MODALTL_051509(BON BC 020206)_BIOTICS
Approved by: JPS 5-13-09	



Biotic Communities
Modified Alt L – South of 33

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/ S33_MODAL_T_051309(S33 BC 0205) BIOTICS
Approved by: Revised JPS 5-13-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *		1,264
	EXCLUSION AREAS (5.98 ACRES)		
1	CREEKS/OPEN WATER		
	1a PUBLIC TRUST AREAS	0.0 LF	0.0
	1B 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		
	1a PUBLIC TRUST AREAS		5,194 LF
	1B PERENNIAL STREAM		565 LF
	INTERMITTENT STREAM		3,590 LF

* PROVIDED BY PCS PHOSPHATE 05/13/09

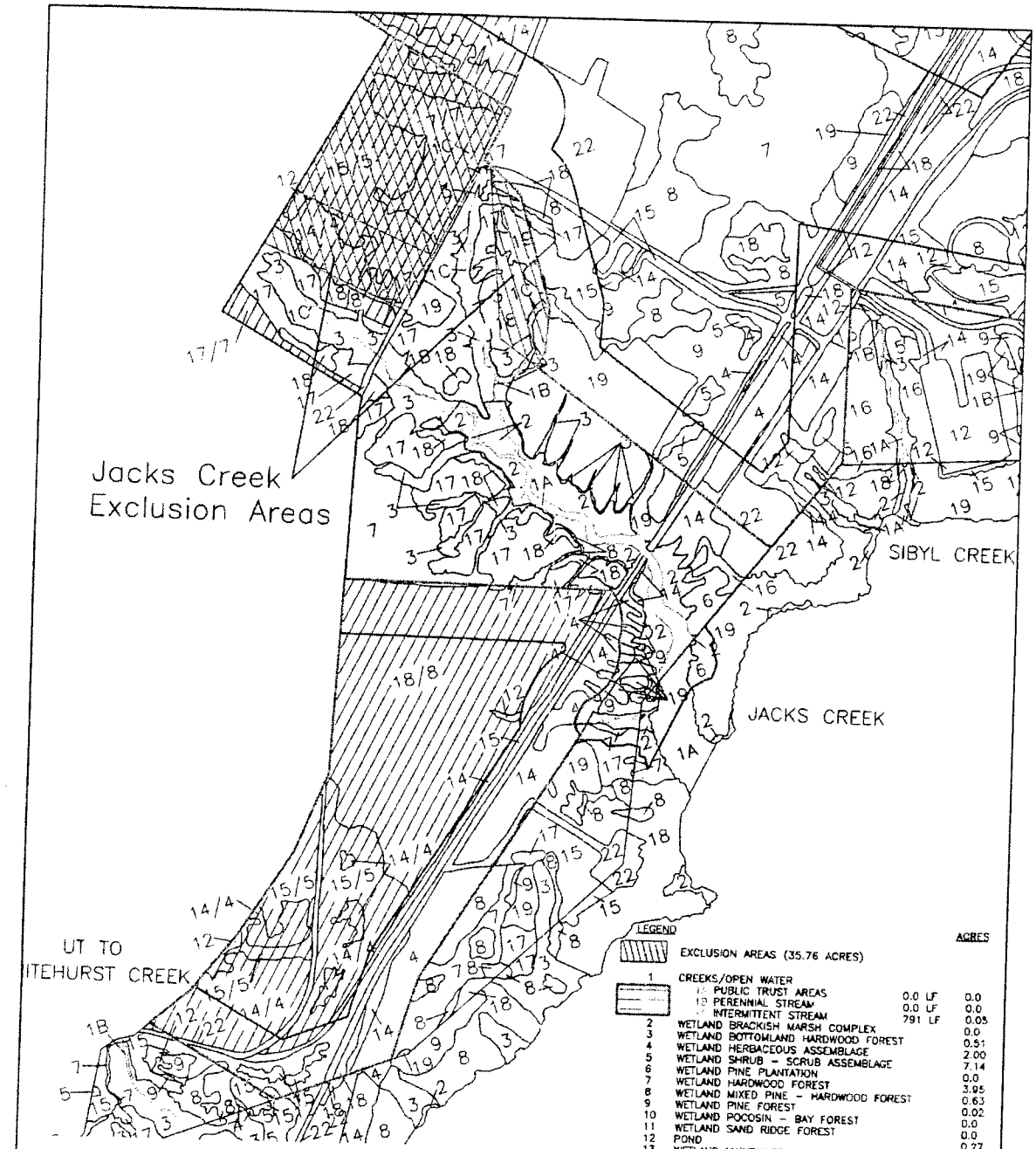
800 0 1,600 Feet

500 0 500 Meters

Conservation Easement – Jacobs Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458324/Ncpc_ModAltL_051309_Conserv_Easmt(NCPC BC 061206)
Approved by: Revision JPS 5-13-09	



LEGEND

	ACRES
NCPC BASE PROJECT AREA	3,608
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09	2,087
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS RECOVERED CONCENTRATE = 34,278,000 TONS *	1,243

CONSERVATION EASEMENT – JACKS CREEK (131.73 ACRES)

CREEKS/OPEN WATER

PUBLIC TRUST AREAS	3,902 LF
PERENNIAL STREAM	1,197 LF
INTERMITTENT STREAM	3,159 LF

* PROVIDED BY PCS PHOSPHATE 05/26/09

600 0 1,200 Feet

500 0 500 Meters

LEGEND

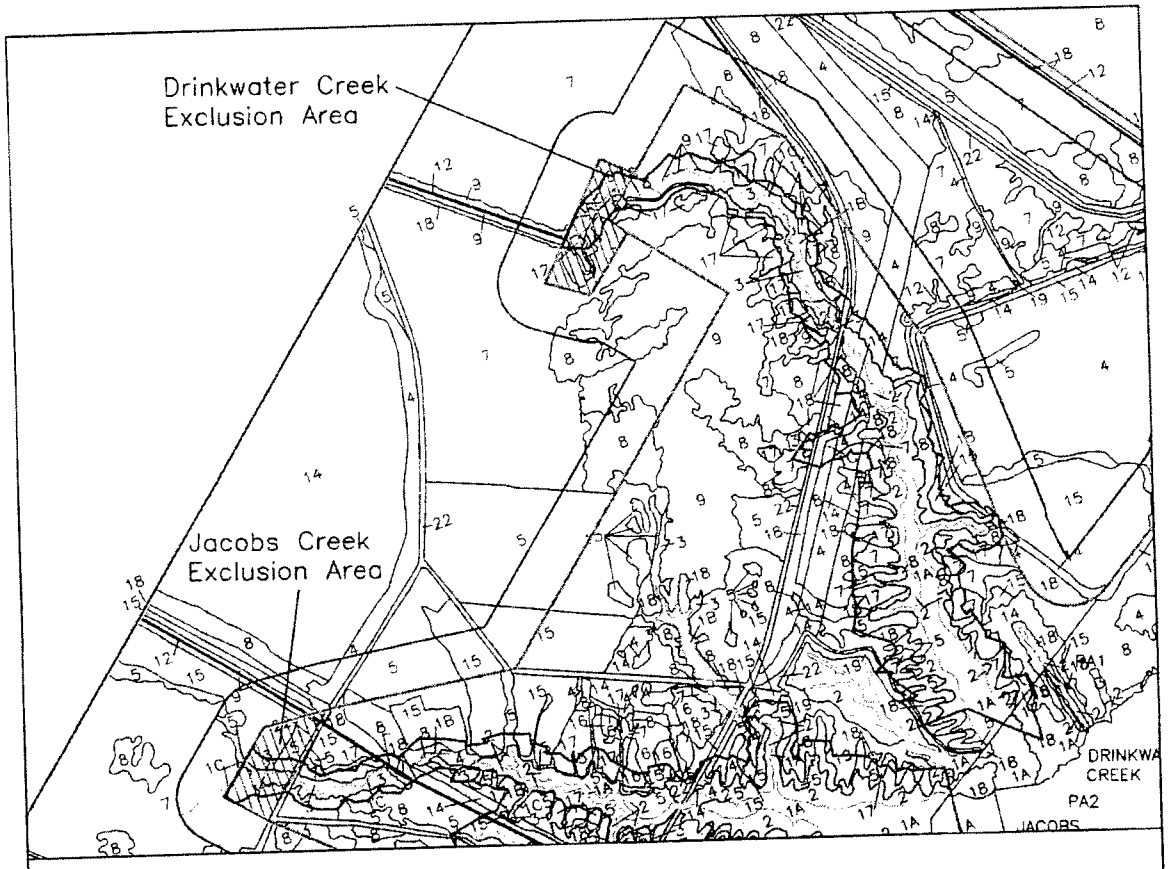
EXCLUSION AREAS (35.76 ACRES)

			ACRES
1	CREEKS/OPEN WATER		
	11 PUBLIC TRUST AREAS	0.0 LF	0.0
	13 PERENNIAL STREAM	0.0 LF	0.0
	17 INTERMITTENT STREAM	791 LF	0.05
2	WETLAND BRACKISH MARSH COMPLEX		0.0
3	WETLAND BOTTOMLAND HARDWOOD FOREST		0.51
4	WETLAND HERBACEOUS ASSEMBLAGE		2.00
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		7.14
6	WETLAND PINE PLANTATION		0.0
7	WETLAND HARDWOOD FOREST		3.95
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		0.27
13	WETLAND MAINTAINED AREA		0.0
14	UPLAND HERBACEOUS ASSEMBLAGE		2.27
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		6.05
16	UPLAND PINE PLANTATION		0.0
17	UPLAND HARDWOOD FOREST		5.24
18	UPLAND MIXED PINE – HARDWOOD FOREST		2.96
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		0.84
	47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)		13.23
	WATERS OF THE US AREAS		14.57
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)		14.25
	UPLAND AREAS		21.19

Conservation Easement – Jacks Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/28/09	File: 17438224/Hope_MacAM_052809_Conser_Easmt(NCPCBC 051206)
Approved by: Revision: JPS 5-26-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *		1,264
	EXCLUSION AREAS (6.65 ACRES)		
1	CREEKS/OPEN WATER		
	A PUBLIC TRUST AREAS	0.0 LF	0.0
	B PERENNIAL STREAM	0.0 LF	0.0
	C 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 (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)		0.0
	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		
	A PUBLIC TRUST AREAS	5,318 LF	
	B PERENNIAL STREAM	508 LF	
	C INTERMITTENT STREAM	2,113 LF	

* PROVIDED BY PCS PHOSPHATE 05/13/09

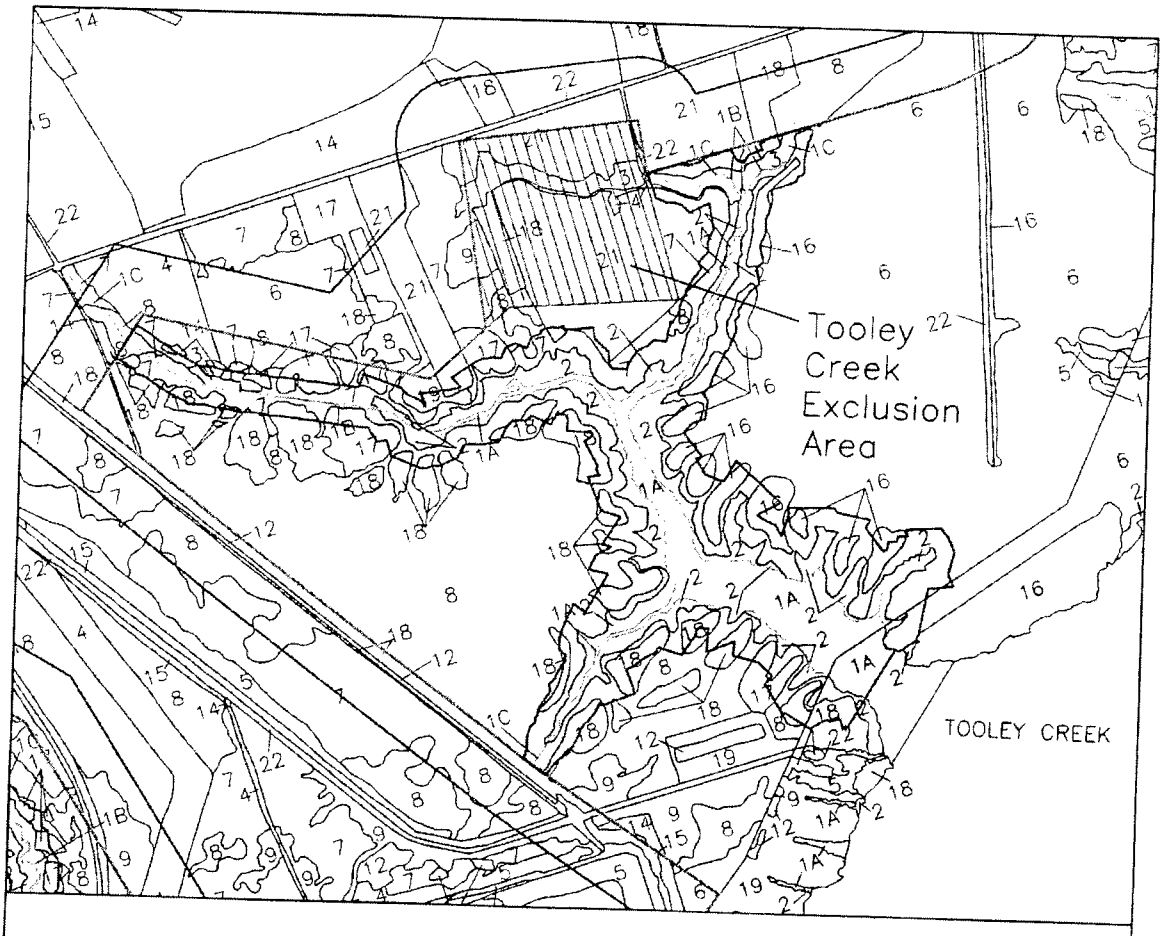
800 0 1,600 Feet

500 0 500 Meters

Conservation Easement – Drinkwater Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17454224/ncpc_ModAltL_051309_Conser_Easmt(NCPC_BC_051208)
Approved by: Revision JPS 5-13-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *		1,264
	EXCLUSION AREAS		21.19
1	CREEKS/OPEN WATER		
1A	PUBLIC TRUST AREAS	0.0 LF	0.0
1B	PERENNIAL STREAM	0.0 LF	0.0
1C	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		818 LF
	INTERMITTENT STREAM		1,494 LF

* PROVIDED BY PCS PHOSPHATE 05/13/09

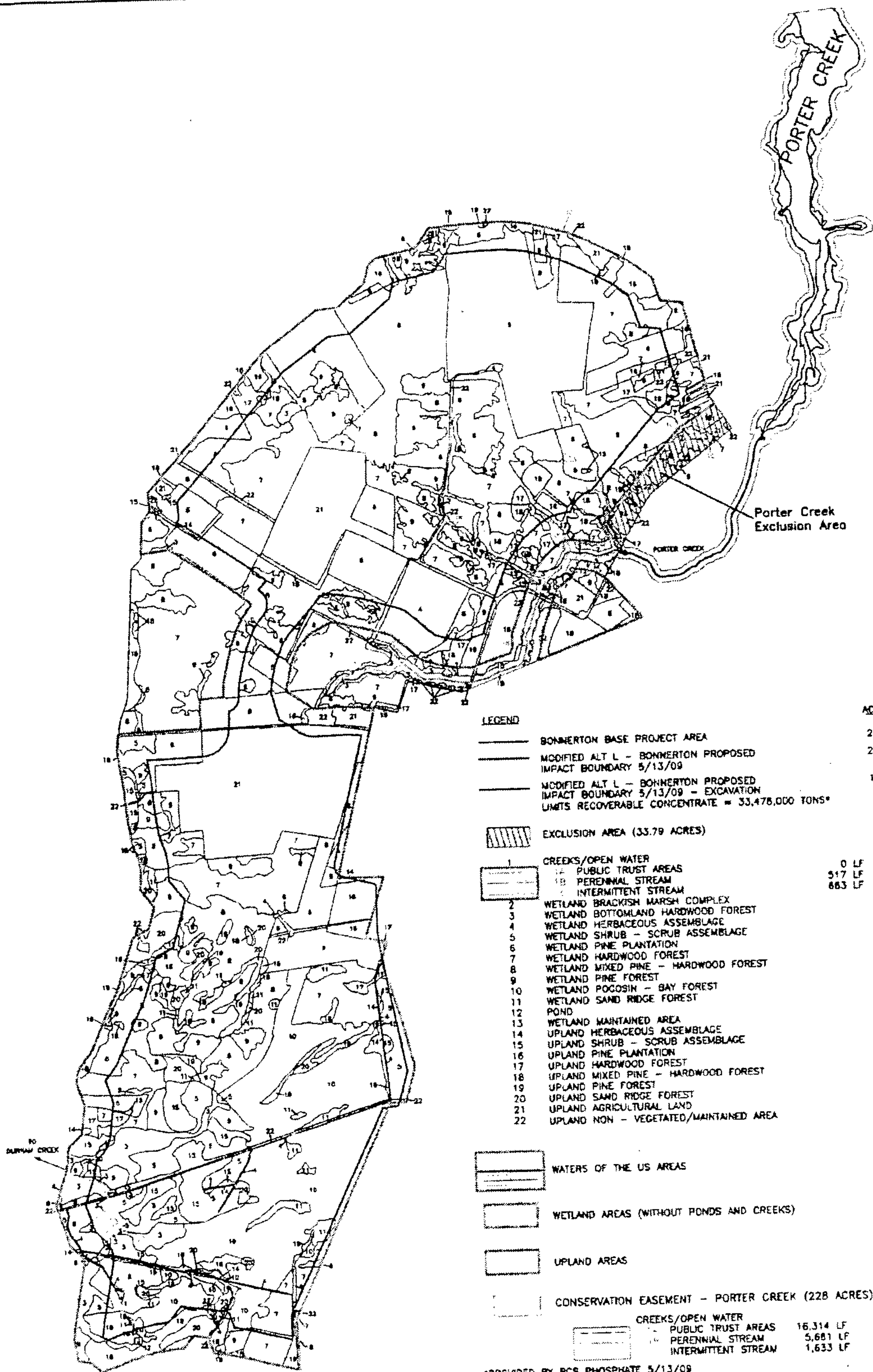
600 0 1,200 Feet

500 0 500 Meters

Conservation Easement – Tooley Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/Ncpc_ModAPL_051309_Conser_Easmt(NCPC BC 051206)
Approved by: Revision JPS 5.13.09	



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 (33.79 ACRES)		
1	CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	0 LF	0.00
	PERENNIAL STREAM	517 LF	0.06
	INTERMITTENT STREAM	883 LF	0.08
2	WETLAND BRACKISH MARSH COMPLEX		0.00
3	WETLAND BOTTOMLAND HARDWOOD FOREST		2.68
4	WETLAND HERBACEOUS ASSEMBLAGE		0.00
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		0.00
6	WETLAND PINE PLANTATION		0.00
7	WETLAND HARDWOOD FOREST		9.04
8	WETLAND MIXED PINE – HARDWOOD FOREST		3.22
9	WETLAND PINE FOREST		1.33
10	WETLAND POCOSIN – BAY FOREST		0.00
11	WETLAND SAND RIDGE FOREST		0.00
12	POND		0.00
13	WETLAND MAINTAINED AREA		0.00
14	UPLAND HERBACEOUS ASSEMBLAGE		0.00
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		3.93
16	UPLAND PINE PLANTATION		3.16
17	UPLAND HARDWOOD FOREST		0.63
18	UPLAND MIXED PINE – HARDWOOD FOREST		0.21
19	UPLAND PINE FOREST		1.46
20	UPLAND SAND RIDGE FOREST		0.00
21	UPLAND AGRICULTURAL LAND		1.96
22	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	5,681 LF	
	INTERMITTENT STREAM	1,633 LF	

*PROVIDED BY PCS PHOSPHATE 5/13/09

NOTE. BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE

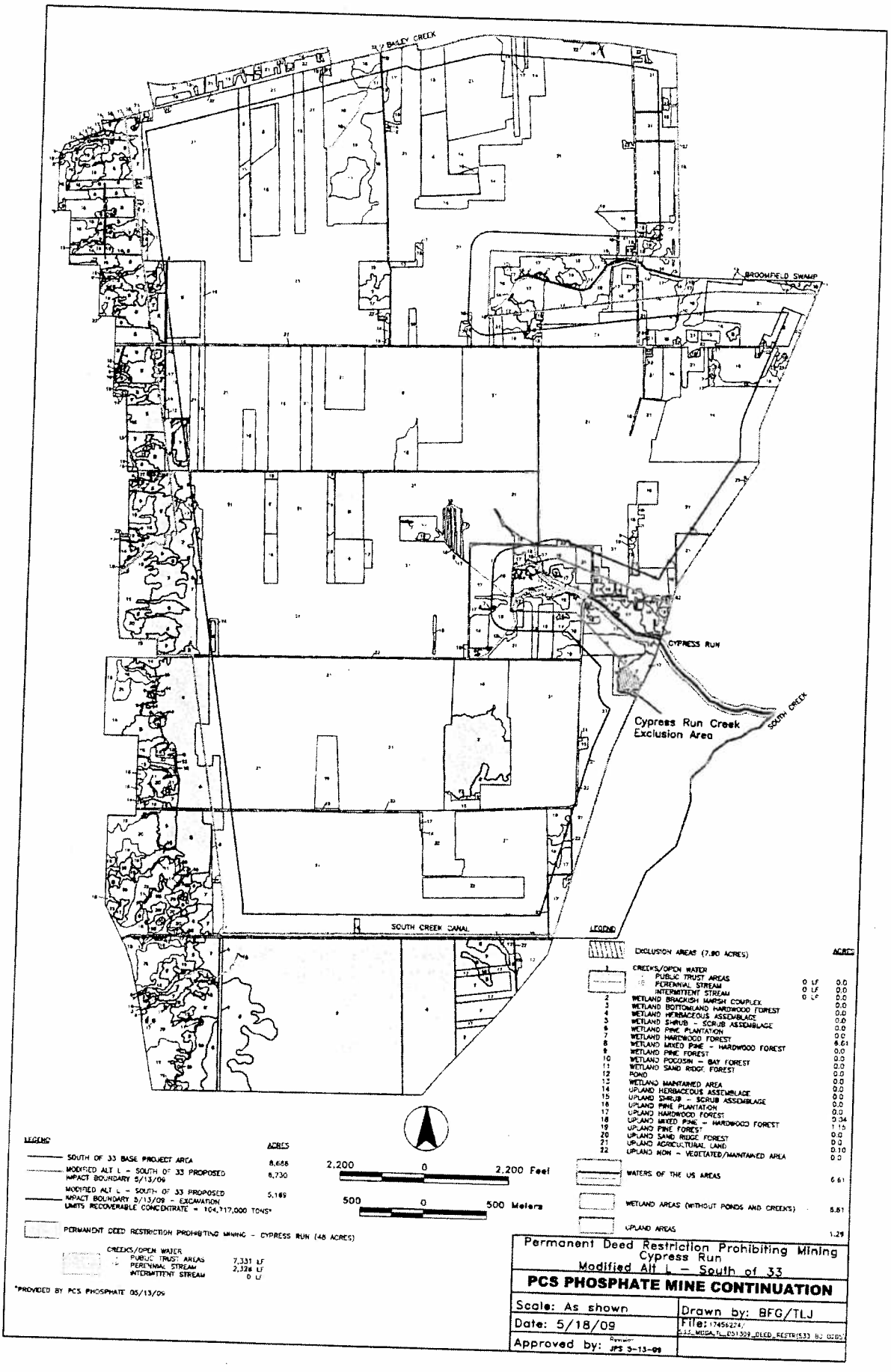
1,800 0 1,800 Feet

500 0 500 Meters

Conservation Easement – Porter Creek
Modified Alt L – Bonnerton

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG
Date: 5/18/09	File: 7456224/Bon_ModAlt_051309_Conser_Esmt(PCH_BC 030226)
Approved by: Revision JPS 5-13-09	



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/CAD_MODEL_T_051309_DEED_RESTR(533 BU 0205)
Approved by: JPS 5-13-09	

Stan Meiburg /R4/USEPA/US
06/04/2009 06:15 PM

To Philip Mancusi-Ungaro/R4/USEPA/US@EPA, gordon.scott@epa.gov
cc
bcc
Subject Fw: Revised conditions and graphics

FYI. A good catch by Palmer.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

---- Forwarded by Stan Meiburg/R4/USEPA/US on 06/04/2009 06:15 PM ----

"Jolly, Samuel K SAW" <Samuel.K.Jolly@usace.army.mil>
06/04/2009 06:02 PM

To Stan Meiburg/R4/USEPA/US@EPA
cc Rebecca Fox/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, "Welborn.Tom@epamail.epa.gov" <'Welborn.Tom@epamail.epa.gov'>, Palmer Hough/DC/USEPA/US@EPA, "Moyer, Jennifer A HQ02" <Jennifer.A.Moyer@usace.army.mil>, "Gaffney-Smith, Margaret E" <Meg.E.Gaffney-Smith@usace.army.mil>, "Smith, Chip R HQDA" <SmithCR@HQDA.Army.Mil>, "Ryscavage, Jefferson COL SAW" <Jefferson.Ryscavage@us.army.mil>, "Walker, William T SAW" <William.T.Walker@usace.army.mil>, "Lekson, David M SAW" <David.M.Lekson@usace.army.mil>, "Lamson, Brooke SAW" <Brooke.Lamson@usace.army.mil>
Subject Revised conditions and graphics

Attached find the corrected permit conditions and graphics, provided to PCS this afternoon to be used in place <<conditions and graphics6_4_09.pdf>> of the the version included in the proffered permit.

Ken Jolly
Chief, Regulatory Division
Wilmington District

conditions and graphics6_4_09.pdf

SPECIAL CONDITION
Action ID No. 200110096

MINING

A) This permit authorizes mining and mine related impacts as described fully in the FEIS within the boundary depicted in the attached maps labeled "Modified Alt L – NCPC " dated May 28, 2009 and "Modified Alt L – Bonnerton " and "Modified Alt L – South of 33", as presented May 18, 2009. All work authorized by this permit must be performed in strict compliance with these attached plans, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.

B) Within 1 year of the issuance date of this permit, the Permittee shall demarcate the outer limits of disturbance on the NCPC tract by establishing a cleared line at least 10 feet wide and not to exceed 40 feet wide along the Impact Boundary as identified in the attached map labeled "Modified Alt L – NCPC " as presented May 28, 2009. Additionally, the Permittee shall, within 1 year of the issuance of this permit work with the Corps to identify locations and establish permanent monuments identified with GPS coordinates to further demarcate this boundary on the NCPC Tract. No less than 1 year prior to relocating any mine related activity to the Bonnerton or S33 Tracts, the Permittee shall undertake identical actions within these tracts utilizing the information provided on the "Modified Alt L – Bonnerton" and "Modified Alt L – South of 33", as presented May 18, 2009, respectively. This will facilitate compliance monitoring by establishing long-term reference points.

C) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

D) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

E) Figure 2 of the Record of Decision (ROD) included and incorporated here by reference depicts approximate timing of the requirement for major pre- mining, land manipulation and clearing impacts and is incorporated here by reference. Table 3 of the ROD included and incorporated here by reference lists those impacts and the years in which they will occur. These yearly figures are estimates. Actual timing and area may be in part determined by several factors including but not limited to site and equipment constraints, weather, and economics. However, to ensure that temporal

losses are minimized to the extent practicable, the Permittee shall not undertake major land-clearing and/or land manipulating activities within any area sooner than 1 year prior to the dates indicated on this figure. For example, major land clearing and manipulation activities within the block labeled 2012-2013 may not begin any sooner than January 1, 2011.

RECLAMATION

F) The Permittee shall undertake full reclamation of all areas mined under this authorization as described in Section 4.3 of the EIS. This includes reestablishment of varied topography and drainage ways. Figure 3 of the ROD included and incorporated here by reference indicates the required completion date for the capping and successful vegetation of mine reclamation areas. To demonstrate adherence to this schedule, the Permittee shall submit to the Corps an annual summary detailing all reclamation efforts complete within the previous year and indicating the degree of completeness of each reclamation area. Any deviation from the reclamation schedule will be addressed in these reports and the report shall include an explanation for the deviation and proposed remedial action.

G) The Permittee shall cap all mined areas that are reclaimed with the gypsum-clay blend process materials. The goal of the cap will be a minimum 3-foot thick cap of overburden material (similar to background soils from the region) over 100% of the blend areas. Minimal acceptable performance standards in achieving this cap are as follows: 70% of the total surface area with a minimum of 3-foot cap; 25% of the total surface area with a minimum of 2-foot cap; 5% of the total surface area unspecified.

H) Following successful completion of the capping requirements within each reclamation area, the Permittee shall submit an as-built report including final topographical surveys for the reclamation areas. This report shall contain final cap depth and coverage information. This report shall further include an explanation of site development that will minimize erosion, eliminate contaminant transportation from the clay/gypsum blend through any waterway or drainage area, and facilitate the development of a mature vegetated riparian buffer. Finally, this report shall include information on surface water retention within the reclamation area and flows within and from the reclamation area.

I) To minimize temporal impacts and accelerate the return of watershed functions within the reclamation areas, the Permittee shall to the extent appropriate and practicable apply an average of 1-foot of topsoil cover to the reclaimed areas utilizing the topsoil removed prior to site mining. This topsoil addition should be concentrated within and around areas of surface water flow and/or retention.

J) To the extent appropriate and practicable, upland portions of the reclamation area shall be replanted, in longleaf pine (*Pinus palustris)* and wetland areas shall be replanted in bald cypress *(Taxodium distichum)* and/or Atlantic white cedar *(Chamaecyparis thyoides)* if Atlantic white cedar is shown to do well on the

reclamation sites. It is suggested that the Permittee work with the Corps, the USFWS and any other interested parties to determine growth and survivability of these and other species utilizing areas currently being reclaimed under the previous permit action.

K) Within 2 years of the issuance of this permit, the Permittee shall work with the Corps and NCDWQ to develop a plan to monitor the quality of water discharged from the reclamation areas into the surrounding watersheds. The Permittee shall seek input from all appropriate and interested agencies including but not limited to EPA, USFWS, NFMS, NCWRC, NCDMF, NCDCM and NCDLR in developing this monitoring plan. This plan shall include monitoring of radionuclides, total and dissolved phosphorus, nitrate nitrogen, ammonia nitrogen, particulate nitrogen, dissolved Kjeldahl nitrogen, and dissolved and particulate organic carbon. Data collected will be used to manage water within the reclamation areas to optimize both the amount and quality of those waters being released. It is suggested that the applicant initiate pilot studies in the areas currently being reclaimed.

MITIGATION

L) Compensatory mitigation identified in the document entitled "Compensatory Section 404/401 Mitigation Plan: Comprehensive Approach" as presented in Appendix I of the FEIS shall be accomplished pursuant to that Plan and/or any subsequent Corps approved modification or amendment. Construction and monitoring of each site shall be conducted according to each site-specific mitigation plan and the schedule presented in Table 3 of the ROD included and incorporated here by reference.

M) Within one year of the issuance of this permit, the Permittee shall cause to be recorded, a preservation mechanism acceptable to the Corps for the permanent protection of the area identified for preservation in the "South Creek Corridor" plan.

N) Table 3 of the ROD lists the impacts as they would occur during 2-year timeframes and is included by reference in Condition "E" above. By November 1st of the year preceding the permitted impact, the Permittee shall submit to the Corps and NCDWQ, a mitigation ledger demonstrating that all mitigation work is complete as described in the mitigation plan and pursuant to the identified timetable. This ledger will be used to determine whether sufficient mitigation is available for impacts occurring over the next 2-year timeframe. For Example, by November 1st 2009, the Permittee shall submit a ledger demonstrating that sufficient mitigation for impacts occurring during the 2010 – 2011 timeframe (526.56 ac) is completed. Should the ledger indicate that insufficient mitigation exists to compensate for the next 2-year timeframe, the Permittee shall work with the Corps to develop a strategy to ensure that the mitigation requirement is satisfactorily met prior to those impacts occurring.

O) The Permittee shall submit yearly monitoring reports for each mitigation site. Monitoring reports will be submitted by the dates specified within each site-specific mitigation plan. Monitoring will continue until such time as the Corps deems the mitigation site successful and confirms in writing that monitoring may be discontinued.

P) Once compensatory mitigation sites have been deemed successful and the Corps has agreed in writing that monitoring may cease, the Permittee shall, within one year of the date of that correspondence, cause to be recorded an acceptable preservation mechanism ensuring the permanent protection of all mitigation sites.

MONITORING

Q) As required by the State Water Quality Certification, the Permittee shall work with the Corps and the N.C. Division of Water Quality to establish a monitoring plan for groundwater in and around mine and reclamation areas. At a minimum, this plan shall include sufficient monitoring within and surrounding the reclamation areas to ensure that heavy metal/toxic pollutants including cadmium and radionuclides are not entering the groundwater. The monitoring plan shall also include nitrate nitrogen, sulfate, chloride, total phoshorus, sodium, TDS, and pH. It is suggested that this monitoring commence with monthly samples until such time as the NCDWQ and the Corps in consultation with all interested and appropriate agencies determines sufficient baseline information exists. After such time, samples will be collected and analyzed every 3 months until blend material is introduced to the reclamation area. Following introduction of the blend material to the reclamation site, monthly sampling will recommence until such time as the NCDWQ and the Corps in consultation with all interested and appropriate agencies determines another sampling timeframe is appropriate. Yearly results of this monitoring shall be reported to the Corps and NCDWQ no later than January 31 of the year following data collection. The permittee and/or the Corps will make these reports available in whole or in summary to any interested party. If increases in the levels of any sampled substance are observed for more than 1 sampling occurrence in any given year, or for more than 1 year, the permittee shall include in the yearly report, a plan for mitigating the effect or satisfactory justification as to why no action is necessary. If the Corps, in consultation with other agencies, including but not limited to NCDWQ, NCDLR and EPA, determines that the current reclamation practices are causing an unacceptable adverse impact to groundwater, the DE may modify, suspend or revoke the permit.

R) Prior to introducing the gypsum/clay blend in the reclamation of any mined area covered by this permit, the Permittee shall submit to the Corps and NCDWQ a remediation strategy in anticipation of the possibility of heavy

metal or radionuclide contamination of groundwater or surface tributaries that drain or are adjacent to mined areas. That strategy will be made available for public review.

S) In concert with the monitoring requirements contained in the Water Quality Certification, the Permittee shall develop a Plan of Study to address the effects of the reduction in headwater wetlands on the utilization of Porters Creek, Tooley Creek, Jacobs Creek, Drinkwater Creek, and Jacks Creek as nursery areas by resident fish and appropriate invertebrate species. This plan shall be submitted to the Corps and NCDWQ for approval within 1 year of the issuance of this permit. At a minimum, the plan shall address the following issues:

1) Has mining altered the amount or timing of water flows within the creeks? Data collection may include:
   i) Continuous water level recorders to measure flow
   ii) Rain gauges to measure local water input
   iii) Groundwater wells to measure input to the creeks
   iv) Semi-continuous salinity monitoring
   v) Periodic DO monitoring (continuously monitored for several days at strategic times of year)

2) Has mining altered the geomorphic or vegetative character of the creeks? Data collection may include:
   i) Annual aerial photography to determine creek position, length, width, sinuosity
   ii) Annual cross sectional surveys of each creek at established locations
   iii) Annual sediment characterization
   iv) Annual vegetation surveys along creeks
   v) Spring and fall sediment surface chlorophylls or organic content in vegetation zone.
   vi) Spring and fall location of flocculation zones with each creek.

3) Has mining altered the forage base of the creeks? Data collection may include:
   i) Spring and fall benthic cores to sample macroinfauna.
   ii) Spring and fall benthic grabs focused upon bivalves, such as *Rangia* sp.
   iii) Periodic sampling for pelagic species such as grass shrimp, blue crabs, and small forage fish. Sampling gears would be chosen to reflect ontogenetic shifts in creek usage.

4) Has mining altered the use of the creeks by managed fish? Data collection may include periodic sampling for species managed under the Magnuson-Stevens Fishery Conservation Management Act. Sampling would occur

during appropriate times of year and gears would be chosen to reflect ontogenetic shifts in creek usage.

5) Has mining increased contaminate levels within creek sediments to levels that could impact fish or invertebrates? Data collection may include annual sediment and water column sampling for metals, including cadmium, mercury, silver, copper, and arsenic. If elevated levels are detected, the availability and uptake by appropriate aquatic species (e.g., *Rangia* sp., blue crabs) should measured using appropriate bioassay techniques.

6) Has mining altered overall water quality within creeks? Water quality parameters analyzed will include: Salinity, Temperature, Dissolved Oxygen, pH, Secchi depth, Turbidity, Chlorophyll a, Dissolved orthophosphate phosphorus, Total dissolved phosphorus, Particulate phosphorus, Nitrate nitrogen, Ammonia nitrogen, particulate nitrogen, and Dissolved Kjeldahl nitrogen.

T) Monitoring under the Plan of Study referenced in condition "S" above shall commence immediately upon the Plan's approval by the Corps and NCDWQ. Monitoring shall continue for 10 years following the completion of all reclamation work within the headwaters of the subject creeks unless the Corps, in consultation with the appropriate resource agencies agrees that monitoring can be discontinued.

REPORTING AND ADAPTIVE MANAGEMENT

U) The Permittee shall within 6 months of the issuance date of this permit, work with the Corps and NCDWQ to establish an independent multidisciplinary panel of researchers qualified in the subject matter to be examined (Science Panel). In identifying potential participants for this Panel, the Permittee shall seek input from all interested and appropriate resource agencies including but not limited to EPA, NMFS, USFWS, NCWRC, NCDMF, and the appropriate permitting agencies including NCDCM, NCDLR. The panel shall be comprised of between 2 and 5 members. The members of this panel shall be given opportunity to provide input and recommendations on the monitoring required by conditions "K" and "S" above including research design, reference site selection, sampling stations, schedules, and methods; laboratory methods; data management and analysis; and quality control and quality assurance. Any input supplied by members of this panel will be presented to the Corps and NCDWQ and will be incorporated as appropriate into the preparation of the Plan of Study referenced in condition "S". Members of this panel will also be given the opportunity to oversee all research conducted toward fulfillment of conditions "K" and "S".

V) The Permittee shall be responsible for fully implementing the approved Plan of Study referenced in conditions "S", "T" and "U" above. Annual summaries of all data collected in compliance with conditions "K" and "S" shall be presented to the Corps, NCDWQ and all members of the Science Panel on or before May 1 of the year following collection. The Permittee and/or the Corps will make these reports available in whole or in summary to any interested party.

W) The Permittee shall coordinate and facilitate an annual meeting of the Science Panel, the Corps, NCDWQ, and all other interested state and federal agencies including but not limited to EPA, NMFS, USFWS, NCWRC, NCDMF, NCDCM, NCDLR. This meeting shall occur no later than July 30 of each year. The purpose of this meeting will be to allow the members of the Science Panel to provide input to the agencies on any observed trends in parameters measured and general discussions on whether direct and indirect impacts from mining and benefits from the compensatory mitigation appear to be in accordance with expectations at the time of permitting. Members of the Science Panel shall also be given the opportunity to provide any recommendations for management or further study. The proceedings of this meeting including data summaries, reports, presentations and any conclusions of the group will be made available in whole or in summary to any interested party. The Corps will fully consider all information presented by the Science Panel as well as comments from state and federal agencies and all other parties supplying input to determine if corrective actions or permit modifications are needed. If substantive changes to the mine plan, compensatory mitigation plan or monitoring plan are made, the Corps will announce such change by Public Notice and allow for public comment.

X) At appropriate intervals to be decided by the Corps after input from the Science Panel (eg. 3 to 5 years) beginning from the date of permit issuance, members of the panel shall be given the opportunity to review the monitoring methods, sampling locations, parameters analyzed, and other elements of monitoring protocol to determine if modifications to the plan are appropriate. All data reviewed by the panel shall be made available to the public.

MISCELLANEOUS

Y) The Permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

Z) The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A

copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

AA) The Permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

BB) The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to an acceptable condition.

CC) Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the Permittee's discovery of the violation.

DD) Wetland Avoidance/Minimization Areas: The Permittee shall avoid the remaining 2,455 acres of waters of the United States within the 15,100 acre project area. These natural wetland areas were avoided as part of the permit application review process and therefore will not be disturbed by any dredging, filling, mechanized land clearing, agricultural activities, or other construction work whatsoever. The Corps reserves the right to deny review of any requests for future impacts to these natural wetland areas.

EE) The Permittee shall not begin work authorized by this permit until 10 days following the date I provide the record of decision to EPA. I expect to provide the ROD to EPA on June 4, 2009; however, the Permittee shall verify that date prior to beginning work.

FF) Within one year of the date of this permit, the Permittee shall cause to be recorded a conservation instrument acceptable to the Corps for the permanent preservation of the areas identified as conservation easements on maps entitled "Conservation Easement – Tooley Creek Modified Alternative L – NCPC; " "Conservation Easement – Jacobs Creek Modified Alternative L – NCPC;" "Conservation Easement – Drinkwater Creek Modified Alternative L – NCPC and "Conservation Easement – Porter Creek Modified Alt L – Bonnerton" all dated May 18, 2009 and the map entitled "Conservation Easement – Jacks Creek Modified Alternative L – NCPC;" dated May 28,

2009. In addition the Permittee shall place a permanent mining restriction over the area shown in the map entitled "Permanent Deed Restriction Prohibiting Mining Cypress Run Modified Alt L- South of 33" dated May 18, 2009. The referenced maps are attached hereto.

Alternative	Total Area	Waters of the US	Stream	% Total Area	% Total Waters of the US	% Total Stream
Single Tract Alternatives						
Base (NCPC)	3,608	2,549	55,528			
AP (NCPC only)	3,412	2,408	38,558	95	94	69
Base (S33 only)	8,686	1,701	43,209			
S33AP (S33 only)	7,743	1,130	33,486	89	66	77
Holistic Alternatives						
Base (holistic)	15,100	6,380	115,843			
EAPA/B	13,961	5,668	89,150	92	89	77
SJAA/B	12,892	5,030	2,508	85	79	2
Alt. M	12,572	4,592	36,999	83	72	32
Alt. L (mod)	11,343	3,927	22,435	75	62	19
SCRA/B	10,659	3,506	14,360	71	55	12
DL1B	9,033	2,285	13,845	60	36	12
No Action	5,745	0	0	38	0	0

Table 1. Comparison of impacts for each alternative. Impacts associated with single tract alternatives are compared only to the base area within that single tract. Impacts associated with holistic alternatives are compared to the total base area of the three tracts combined.

Site	Wetland (acres)			Stream (linear feet)		
	Restoration	Enhancement	Preservation	Restoration	Enhancement	Preservation
Bay city	565.0	0.0	119.0	3000.0		
Hell Swamp	885.0	46.0	41.0	19783.0		
Gum Run	27.0	0.0	0.0			
Parker Farm	245.0	162.0	196.0			3960
SC Corridor			1143.0			26736
P Lands	2075.0	381.0	135.0			
U Lands	608.0		117.0			
Upper Back Creek	116.0	38.0	18.0	7066.0		1149.0
Rutman	3342.0	129.0	701.0	8793.0	7994.0	
Sage Gut	105.0		2.0	5401		1006
totals	**7968.0**	**756.0**	**2472.0**	**44043.0**	**7994.0**	**32851.0**

Table 2. Wetland and stream mitigation by site and type.

By year	Impact	Site Complete	Available Credits*	Acre Credit Balance		Impact**	Available Credits***	Linear Feet Credit Balance
	Acres		Acres	Available - Impacted		Linear Feet	Linear Feet	Available - Impacted
2009	312.39	Gum Run, Parker Farm, Bay City, Upper Back Creek	576.5	264.08		4544	11087.8	7115.8
2010	506.56	Sage Gut. Hell Swamp	1666.0	1403.53		148	30794.8	37762.6
2011		Rutman	828.1	2231.63			11990.6	49753.2
2012	304.81		0.0	1917.82		1108.5		48910.2
2013		P Lands, U Lands	1493.7	3411.52				48910.2
2014	303.53		0.0	3087.99		4677		45104.2
2015			0.0	3087.99				45104.2
2016	203.58		0.0	2884.41		1358		43746.2
2017			0.0	2884.41				43746.2
2018	458.74			2425.67		10620.5		34562.2
2019				2425.67				34562.2
2020	528.79			1896.88		0		34562.2
2021				1896.88				34562.2
2022	592.38			1304.50		0		34562.2
2023				1304.50				34562.2
2024	476.17			828.33		11974.5		24467.2
2025				828.33				24467.2
2026	30.34			797.99		3862.5		21892.2
2027				797.99				21892.2
2028	45.19			752.80		763.5		21383.2
2029				752.80				21383.2
2030	2.1			750.70		0		21383.2
2031				750.70				21383.2
2032	0			750.70		0		21383.2
2033				750.70				21383.2
2034	5.86			744.84		0		21383.2
2035				744.84				21383.2
2036	15.76			729.08		1239		20557.2
2037				729.08				20557.2
2038	31.42			697.66		4366.5		17646.2
2039				697.66				17646.2
2040	26.39			671.27		0		17646.2
2041				671.27				17646.2
2042	75.11			596.16		832.5		17091.2
2043				596.16				17091.2
2044	6.61			589.55		0		17091.2
2045				589.55				17091.2
2046	2.06			587.49		0		17091.2
2047				587.49				17091.2
2048	0			587.49		0		17091.2

Table 3. Mitigation completion date and impat dates

* an acre credit of wetland is comprised of 2:1 restoration, 3:1 enhancement or 8-10:1 preservation

** This column reflects total mitigation linear feet needed after adjustments to stream quality

(1:1 for poor, 2:1 for Fair and 3:1 for excelent)

*** A linear foot credit is comprised of 1:1 restoration, 2.5:1 enhancement or 5:1 preservation

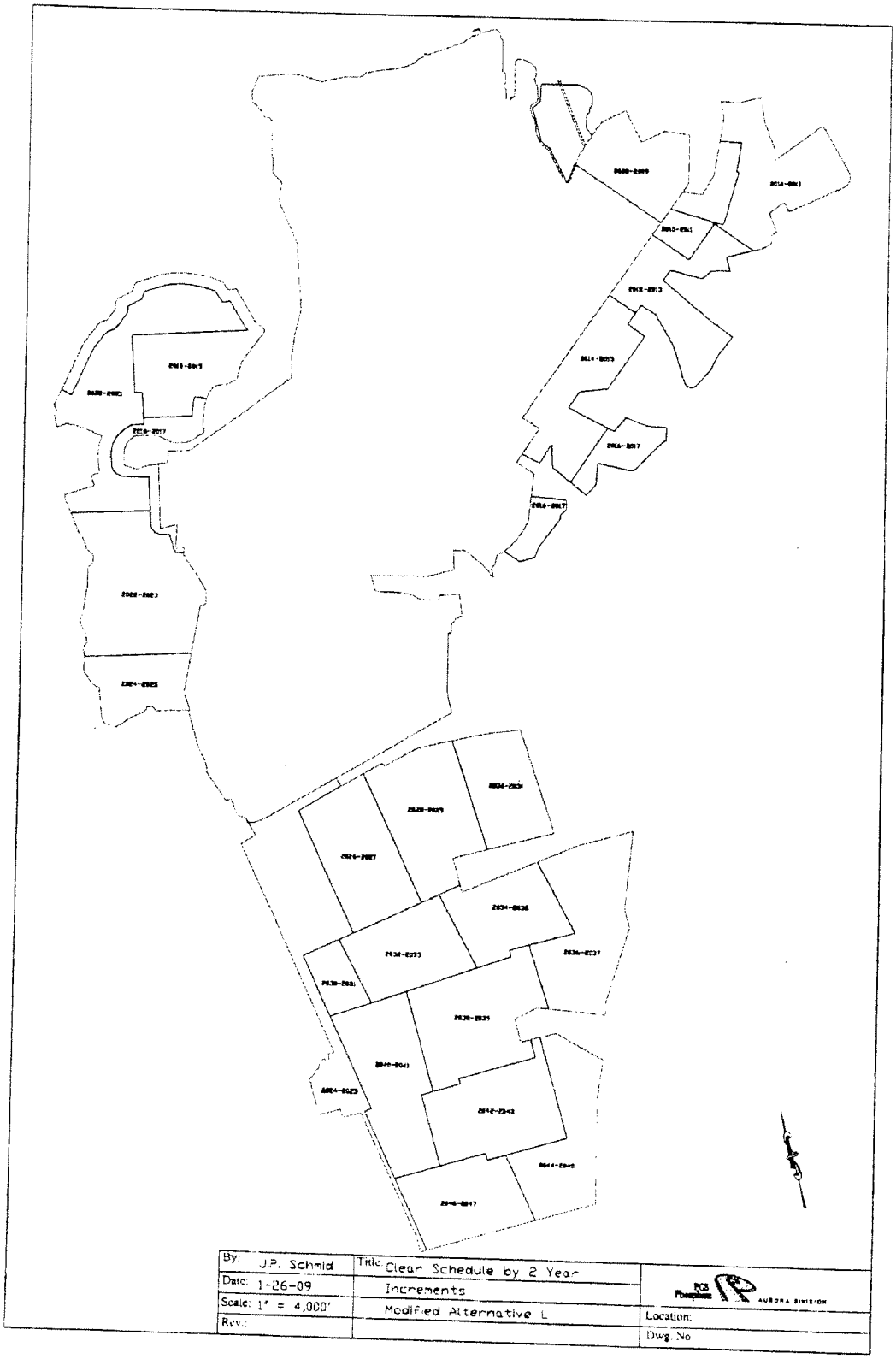


Figure 2. Initial impact schedule. This reflects dates when mechanized land clearing will be necessary in order to prepare for mine advance.

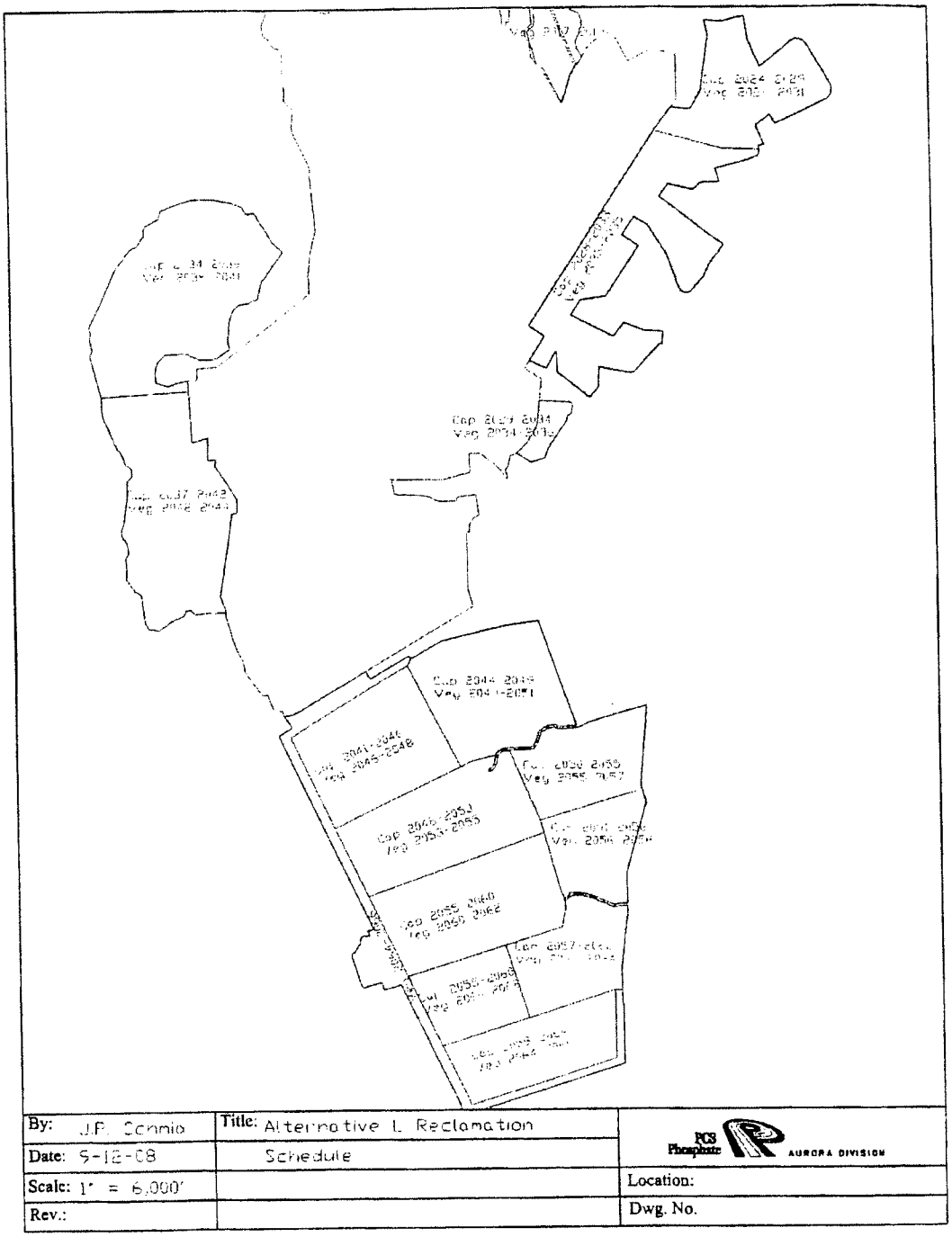
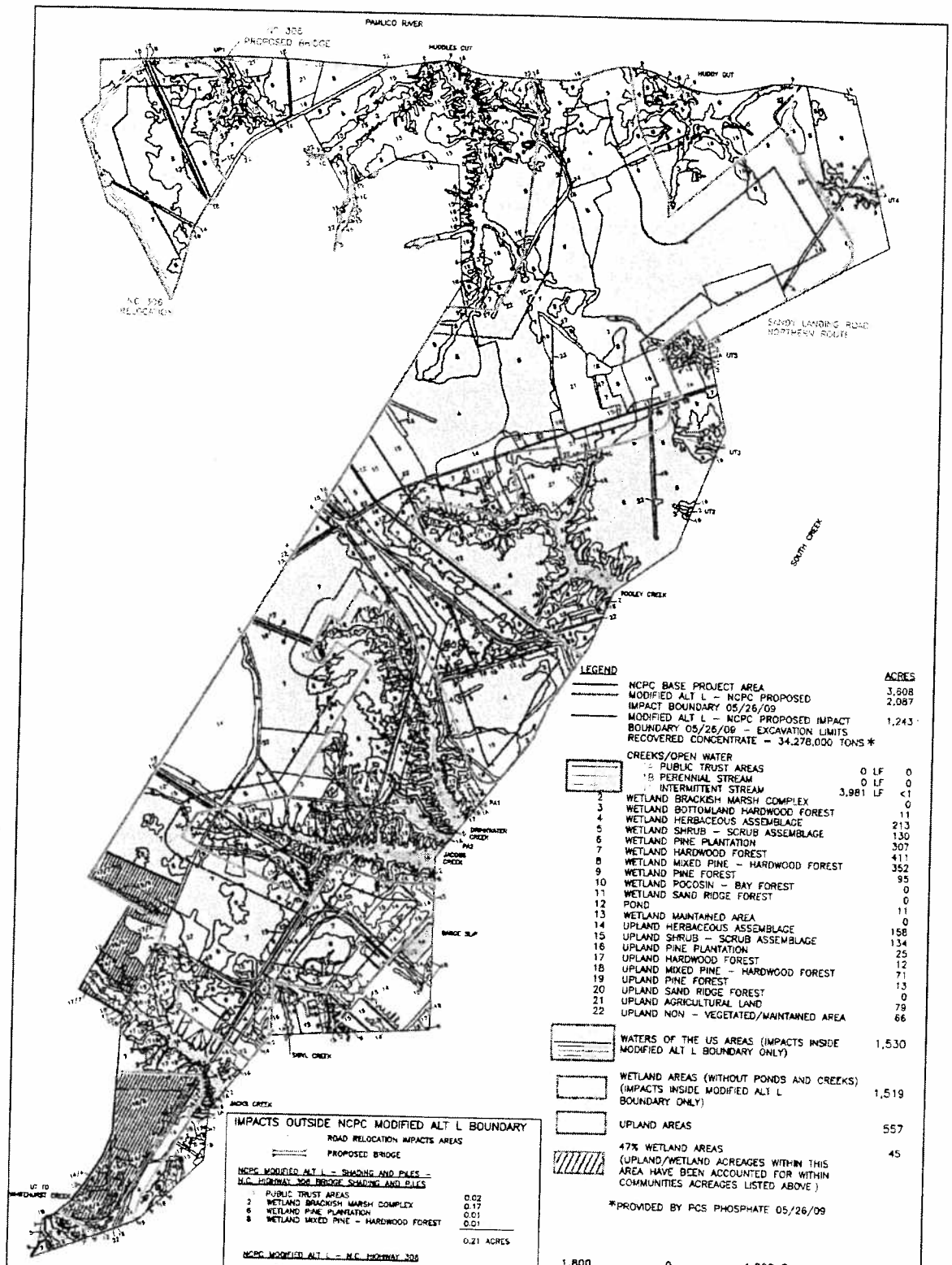


Figure 3. Depicts projected timeframes for completion of reclamation activities.



LEGEND

		ACRES
	NCPC BASE PROJECT AREA	3,608
	MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09	2,087
	MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS RECOVERED CONCENTRATE = 34,278,000 TONS *	1,243
	CREEKS/OPEN WATER	
	A. PUBLIC TRUST AREAS 0 LF	0
	B. PERENNIAL STREAM 0 LF	0
	C. INTERMITTENT STREAM 3,981 LF	<1
2	WETLAND BRACKISH MARSH COMPLEX	0
3	WETLAND BOTTOMLAND HARDWOOD FOREST	11
4	WETLAND HERBACEOUS ASSEMBLAGE	213
5	WETLAND SHRUB – SCRUB ASSEMBLAGE	130
6	WETLAND PINE PLANTATION	307
7	WETLAND HARDWOOD FOREST	411
8	WETLAND MIXED PINE – HARDWOOD FOREST	352
9	WETLAND PINE FOREST	95
10	WETLAND POCOSIN – BAY FOREST	0
11	WETLAND SAND RIDGE FOREST	0
12	POND	11
13	WETLAND MAINTAINED AREA	0
14	UPLAND HERBACEOUS ASSEMBLAGE	158
15	UPLAND SHRUB – SCRUB ASSEMBLAGE	134
16	UPLAND PINE PLANTATION	25
17	UPLAND HARDWOOD FOREST	12
18	UPLAND MIXED PINE – HARDWOOD FOREST	71
19	UPLAND PINE FOREST	13
20	UPLAND SAND RIDGE FOREST	0
21	UPLAND AGRICULTURAL LAND	79
22	UPLAND NON – VEGETATED/MAINTAINED AREA	66
	WATERS OF THE US AREAS (IMPACTS INSIDE MODIFIED ALT L BOUNDARY ONLY)	1,530
	WETLAND AREAS (WITHOUT PONDS AND CREEKS) (IMPACTS INSIDE MODIFIED ALT L BOUNDARY ONLY)	1,519
	UPLAND AREAS	557
	47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE)	45

*PROVIDED BY PCS PHOSPHATE 05/26/09

1,800 0 1,800 Feet

500 0 500 Meters

IMPACTS OUTSIDE NCPC MODIFIED ALT L BOUNDARY

ROAD RELOCATION IMPACTS AREAS

PROPOSED BRIDGE

NCPC MODIFIED ALT L – SHADING AND PILES – N.C. HIGHWAY 306 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 306

4	WETLAND HERBACEOUS ASSEMBLAGE	0.03
6	WETLAND PINE PLANTATION	1.47
8	WETLAND MIXED PINE – HARDWOOD FOREST	2.80
15	UPLAND SHRUB – SHRUB ASSEMBLAGE	0.01
18	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 – N.C. HIGHWAY 306

18 PERENNIAL STREAM(CANAL/RELOCATION 220 L.F. (0.18 ACRES)

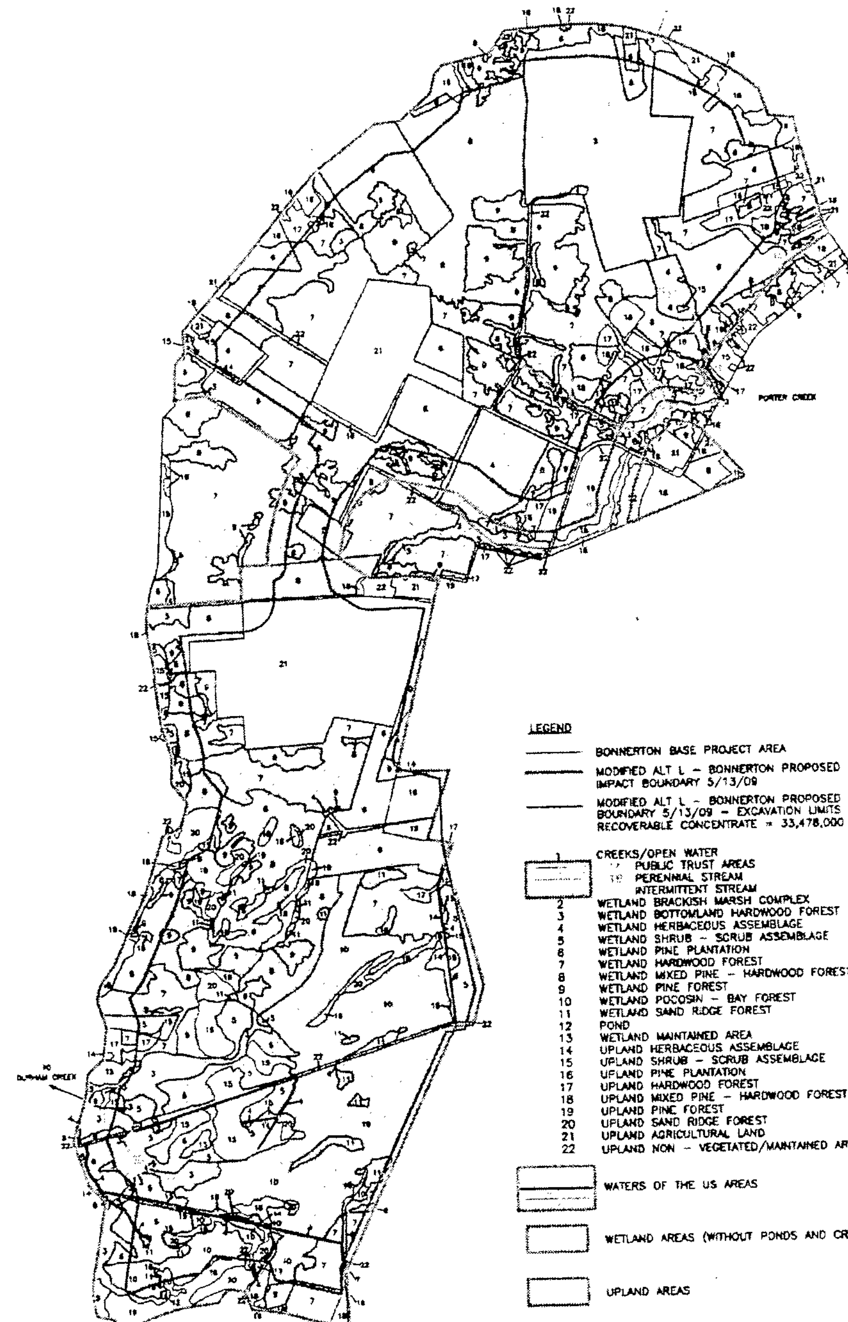
NCPC MODIFIED ALT L – SANDY LANDING ROAD

6	WETLAND PINE PLANTATION	0.45
8	WETLAND MIXED PINE – HARDWOOD FOREST	0.03
18	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: 05/28/09	File: 17456234/ NCPC_ModAltL_052609(NCPC_BC_051208).mxd
Approved by: JPS 5-26-09 Revisions	



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
1 CREEKS/OPEN WATER		
PUBLIC TRUST AREAS	0 LF	0
PERENNIAL STREAM	2,535 LF	<1
INTERMITTENT STREAM	4,786 LF	4
2 WETLAND BRACKISH MARSH COMPLEX		0
3 WETLAND BOTTOMLAND HARDWOOD FOREST		51
4 WETLAND HERBACEOUS ASSEMBLAGE		45
5 WETLAND SHRUB – SCRUB ASSEMBLAGE		274
6 WETLAND PINE PLANTATION		206
7 WETLAND HARDWOOD FOREST		369
8 WETLAND MIXED PINE – HARDWOOD FOREST		463
9 WETLAND PINE FOREST		208
10 WETLAND POCOSIN – BAY FOREST		284
11 WETLAND SAND RIDGE FOREST		22
12 POND		<1
13 WETLAND MAINTAINED AREA		0
14 UPLAND HERBACEOUS ASSEMBLAGE		5
15 UPLAND SHRUB – SCRUB ASSEMBLAGE		64
16 UPLAND PINE PLANTATION		58
17 UPLAND HARDWOOD FOREST		39
18 UPLAND MIXED PINE – HARDWOOD FOREST		117
19 UPLAND PINE FOREST		13
20 UPLAND SAND RIDGE FOREST		42
21 UPLAND AGRICULTURAL LAND		243
22 UPLAND NON – VEGETATED/MAINTAINED AREA		39
WATERS OF THE US AREAS		1,906
WETLAND AREAS (WITHOUT PONDS AND CREEKS)		1,902
UPLAND AREAS		620

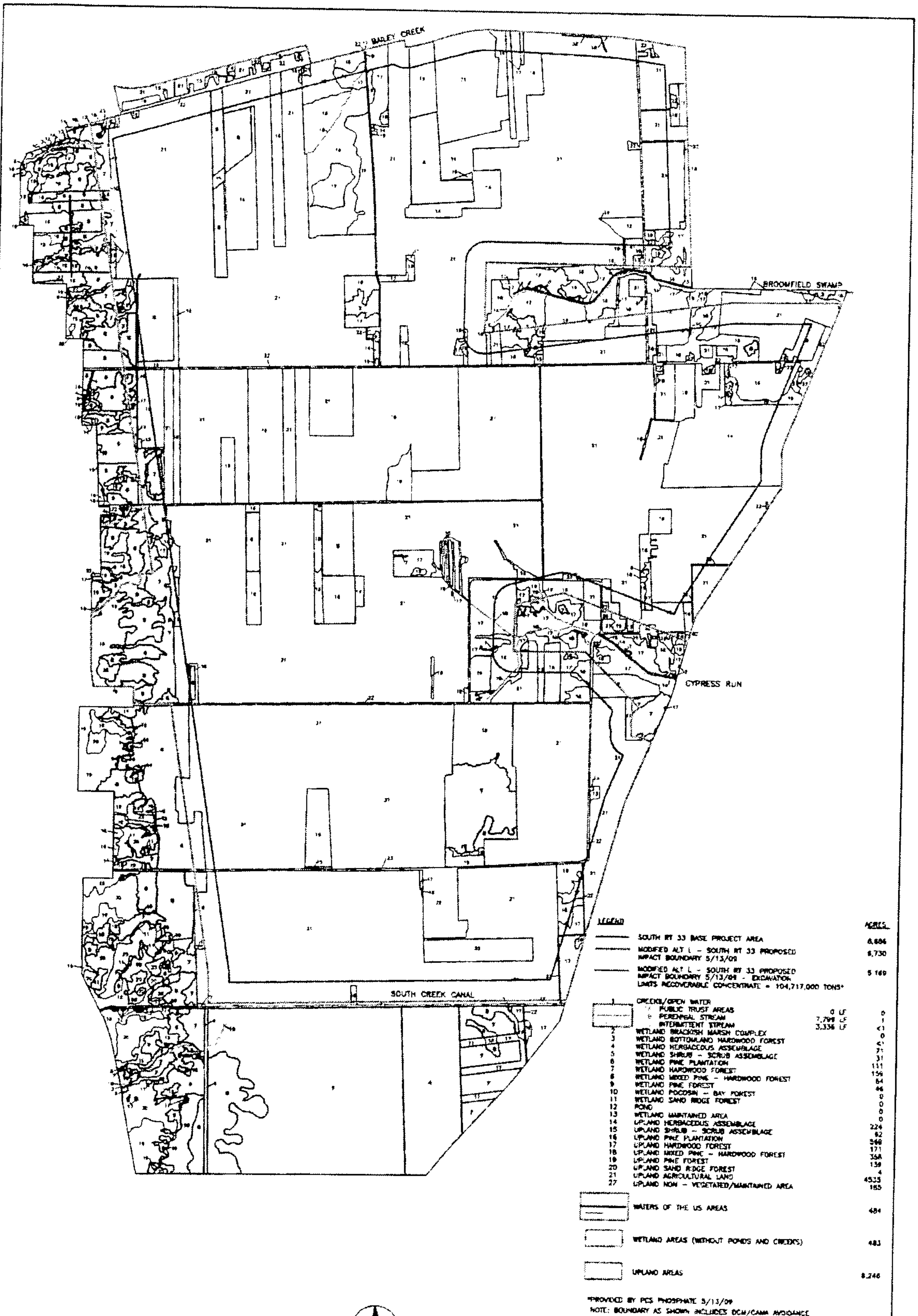
*PROVIDED BY PCS PHOSPHATE 5/13/09
NOTE BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE

1,800 0 1,800 Feet
500 0 500 Meters

Biotic Communities
Modified Alternative L – Bonnerton

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458224/ BCN_MODALTL_051309(BCN BC 030206)_BIOTCS
Approved by: Revision JPS 5-13-09	



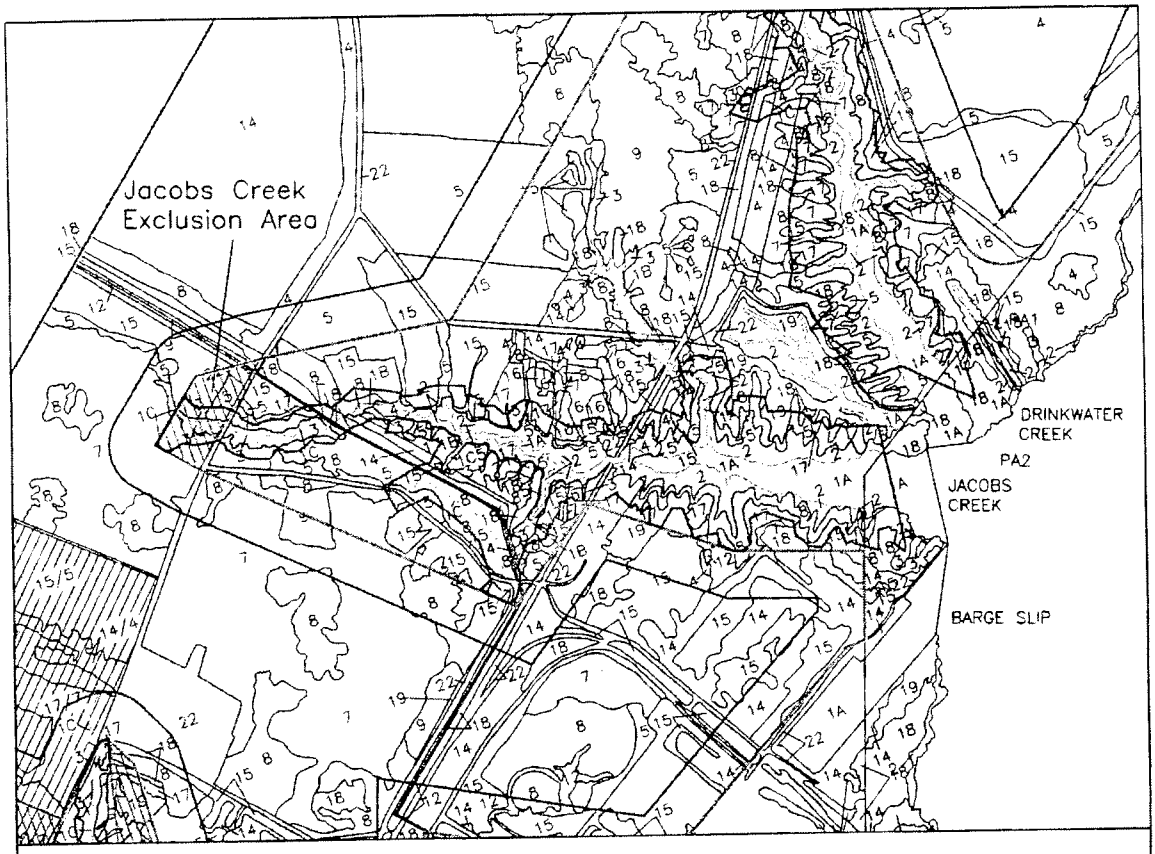
2,200 0 2,200 Feet

500 0 500 Meters

Biotic Communities
Modified Alt L - South of 33

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17455224/ 533_MODALTL_051309(B3C BC 0205) BIOTICS
Approved by: Revised JPS 5-13-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *	1,264
	EXCLUSION AREAS (5.98 ACRES)	
1	CREEKS/OPEN WATER	
	PUBLIC TRUST AREAS 0.0 LF	0.0
	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

* PROVIDED BY PCS PHOSPHATE 05/13/09

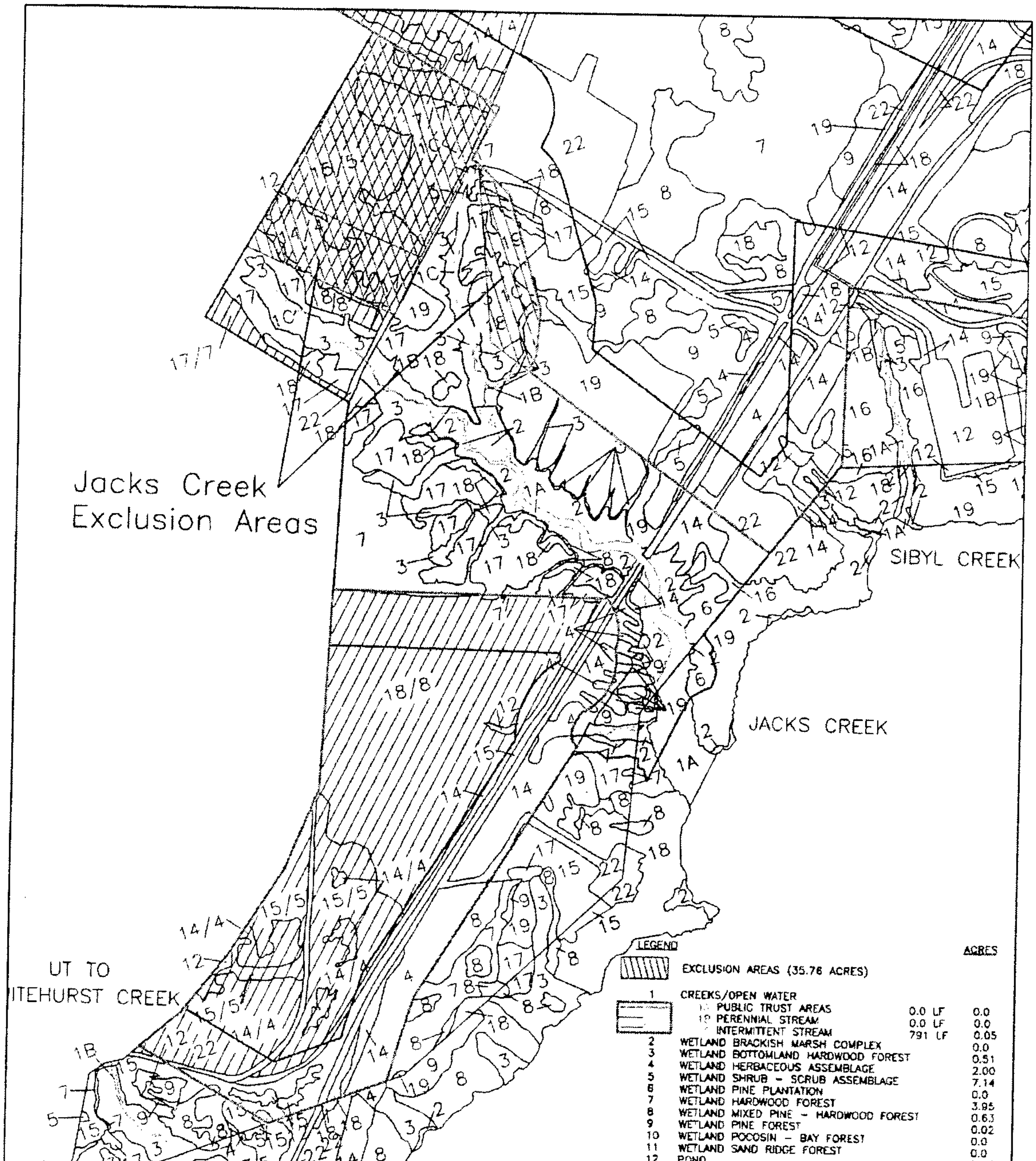
800 0 1,600 Feet

500 0 500 Meters

Conservation Easement – Jacobs Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/Mapc_ModAltL_051309_Conser_Esmt(NCPC 8C 051206)
Approved by: Revised JPS 5-13-09	



LEGEND

		ACRES
NCPC BASE PROJECT AREA		3,608
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09		2,087
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS RECOVERED CONCENTRATE = 34,278,000 TONS *		1,243

CONSERVATION EASEMENT – JACKS CREEK (131.73 ACRES)

CREEKS/OPEN WATER

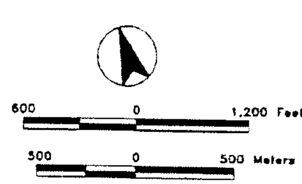
PUBLIC TRUST AREAS	3,902 LF
PERENNIAL STREAM	1,197 LF
INTERMITTENT STREAM	3,159 LF

* PROVIDED BY PCS PHOSPHATE 05/26/09

LEGEND

EXCLUSION AREAS (35.76 ACRES)

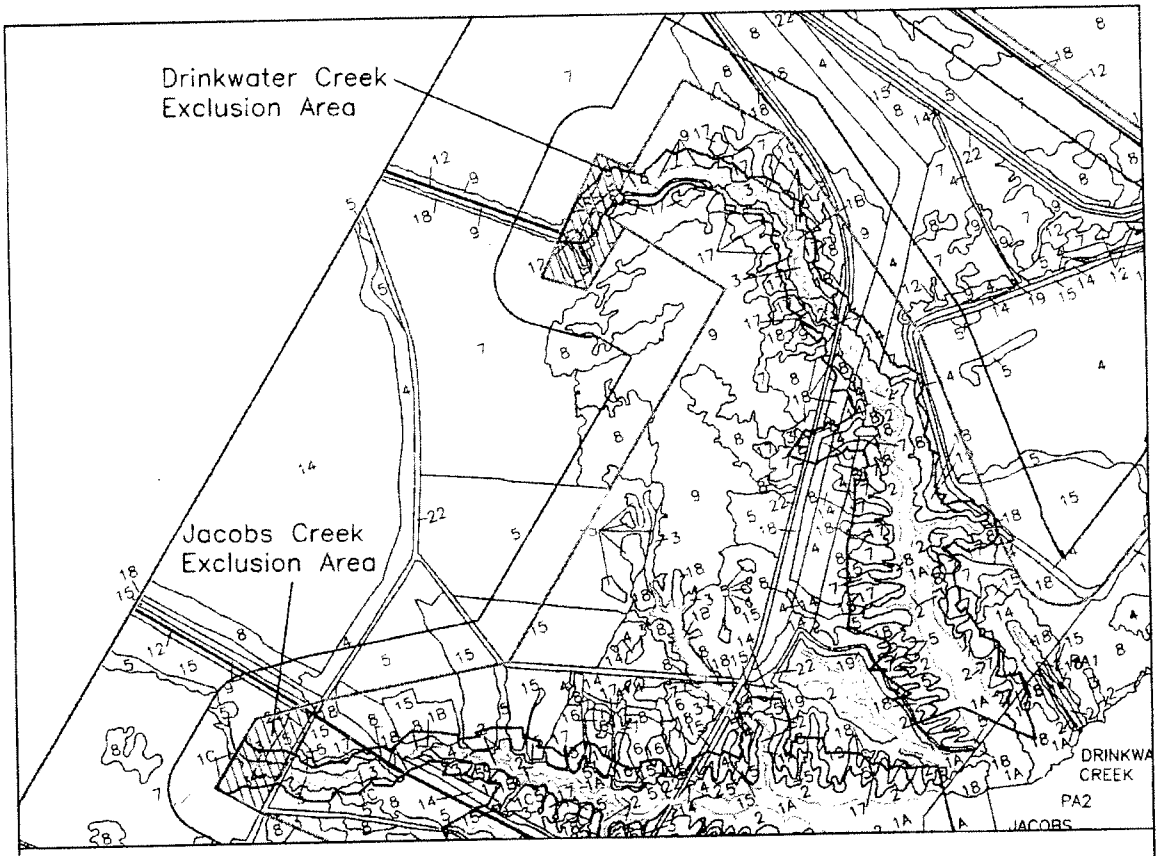
			ACRES
1	CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	0.0 LF	0.0
	PERENNIAL STREAM	0.0 LF	0.0
	INTERMITTENT STREAM	791 LF	0.05
2	WETLAND BRACKISH MARSH COMPLEX		0.0
3	WETLAND BOTTOMLAND HARDWOOD FOREST		0.51
4	WETLAND HERBACEOUS ASSEMBLAGE		2.00
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		7.14
6	WETLAND PINE PLANTATION		0.0
7	WETLAND HARDWOOD FOREST		3.95
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		0.27
13	WETLAND MAINTAINED AREA		0.0
14	UPLAND HERBACEOUS ASSEMBLAGE		2.27
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		8.05
16	UPLAND PINE PLANTATION		0.0
17	UPLAND HARDWOOD FOREST		5.24
18	UPLAND MIXED PINE – HARDWOOD FOREST		2.96
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		0.84
	47% WETLAND AREAS (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)		13.23
	WATERS OF THE US AREAS		14.57
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)		14.25
	UPLAND AREAS		21.19



Conservation Easement – Jacks Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/28/09	File: 17458224/ Ncpc_ModAltL_052609_Conser_Esmt(NCPCBC 051206)
Approved by: Revision: JPS 5-26-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *		1,264
	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 (UPLAND/WETLAND ACREAGES WITHIN THIS AREA HAVE BEEN ACCOUNTED FOR WITHIN COMMUNITIES ACREAGES LISTED ABOVE.)		0.0
	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

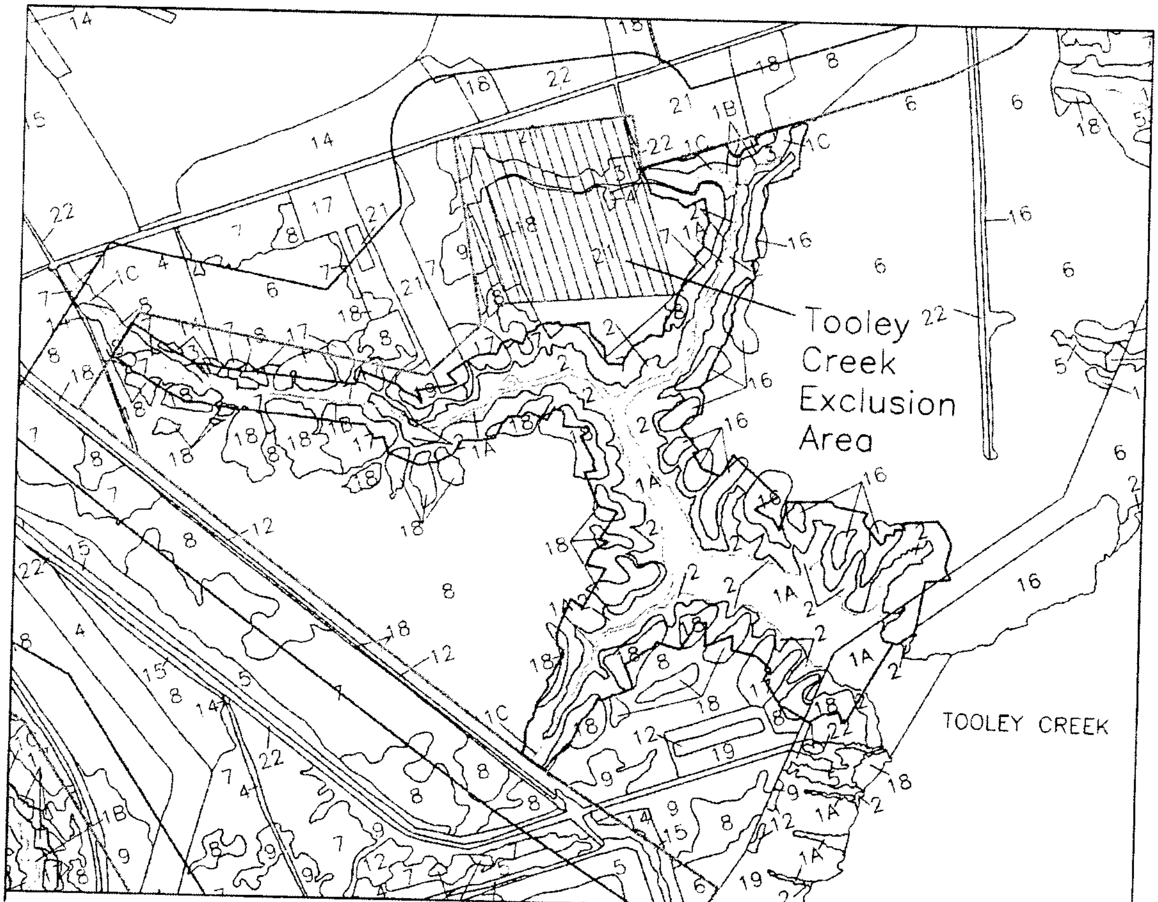
800 0 1,600 Feet

500 0 500 Meters

Conservation Easement – Drinkwater Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17458224/hcpc_ModAlt_051309_Conser_Ease(NCPC BC 051265)
Approved by: Revision JPS 5-13-09	



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 RECOVERED CONCENTRATE = 34,878,000 TONS *	1,264
	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

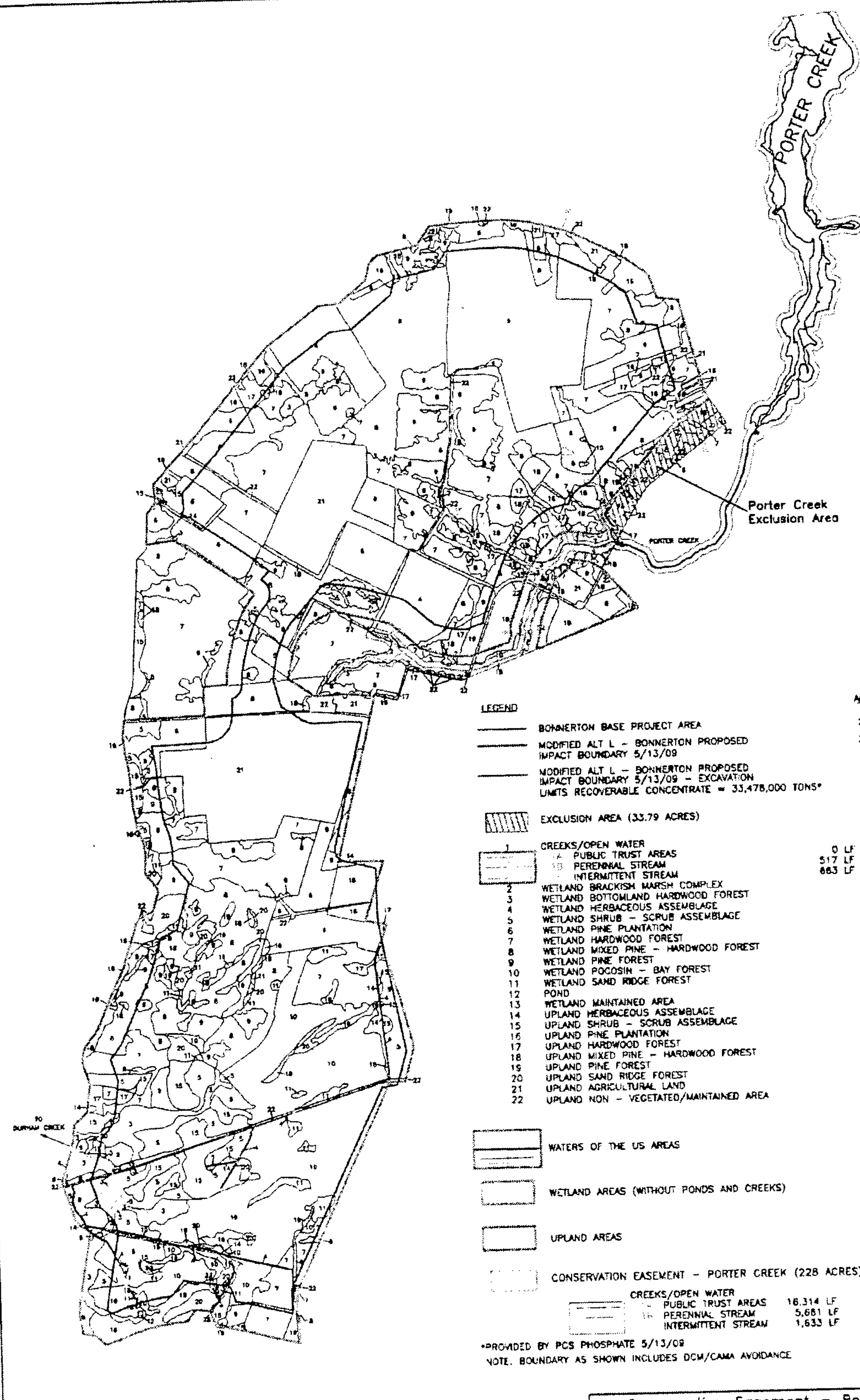
600 0 1,200 Feet

500 0 500 Meters

Conservation Easement – Tooley Creek
Modified Alternative L – NCPC

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 17456224/Ncpc_ModAltL_051309_Conser_Esmt(NCPC BC 051208)
Approved by: Revision JPS 5 13 09	



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 (33.79 ACRES)	

1	CREEKS/OPEN WATER		
1A	PUBLIC TRUST AREAS	0 LF	0.00
1B	PERENNIAL STREAM	517 LF	0.06
	INTERMITTENT STREAM	663 LF	0.08
2	WETLAND BRACKISH MARSH COMPLEX		0.00
3	WETLAND BOTTOMLAND HARDWOOD FOREST		2.68
4	WETLAND HERBACEOUS ASSEMBLAGE		0.00
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		0.00
6	WETLAND PINE PLANTATION		0.00
7	WETLAND HARDWOOD FOREST		9.04
8	WETLAND MIXED PINE – HARDWOOD FOREST		3.22
9	WETLAND PINE FOREST		1.33
10	WETLAND POCOSIN – BAY FOREST		0.00
11	WETLAND SAND RIDGE FOREST		0.00
12	POND		0.00
13	WETLAND MAINTAINED AREA		0.00
14	UPLAND HERBACEOUS ASSEMBLAGE		0.00
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		3.93
16	UPLAND PINE PLANTATION		3.16
17	UPLAND HARDWOOD FOREST		0.63
18	UPLAND MIXED PINE – HARDWOOD FOREST		0.21
19	UPLAND PINE FOREST		1.46
20	UPLAND SAND RIDGE FOREST		0.00
21	UPLAND AGRICULTURAL LAND		1.96
22	UPLAND NON – VEGETATED/MAINTAINED AREA		6.03

WATERS OF THE US AREAS	16.41
WETLAND AREAS (WITHOUT PONDS AND CREEKS)	18.27
UPLAND AREAS	17.38

CONSERVATION EASEMENT – PORTER CREEK (228 ACRES)

CREEKS/OPEN WATER	
1A PUBLIC TRUST AREAS	16,314 LF
1B PERENNIAL STREAM	5,681 LF
INTERMITTENT STREAM	1,633 LF

*PROVIDED BY PCS PHOSPHATE 5/13/09

NOTE. BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE

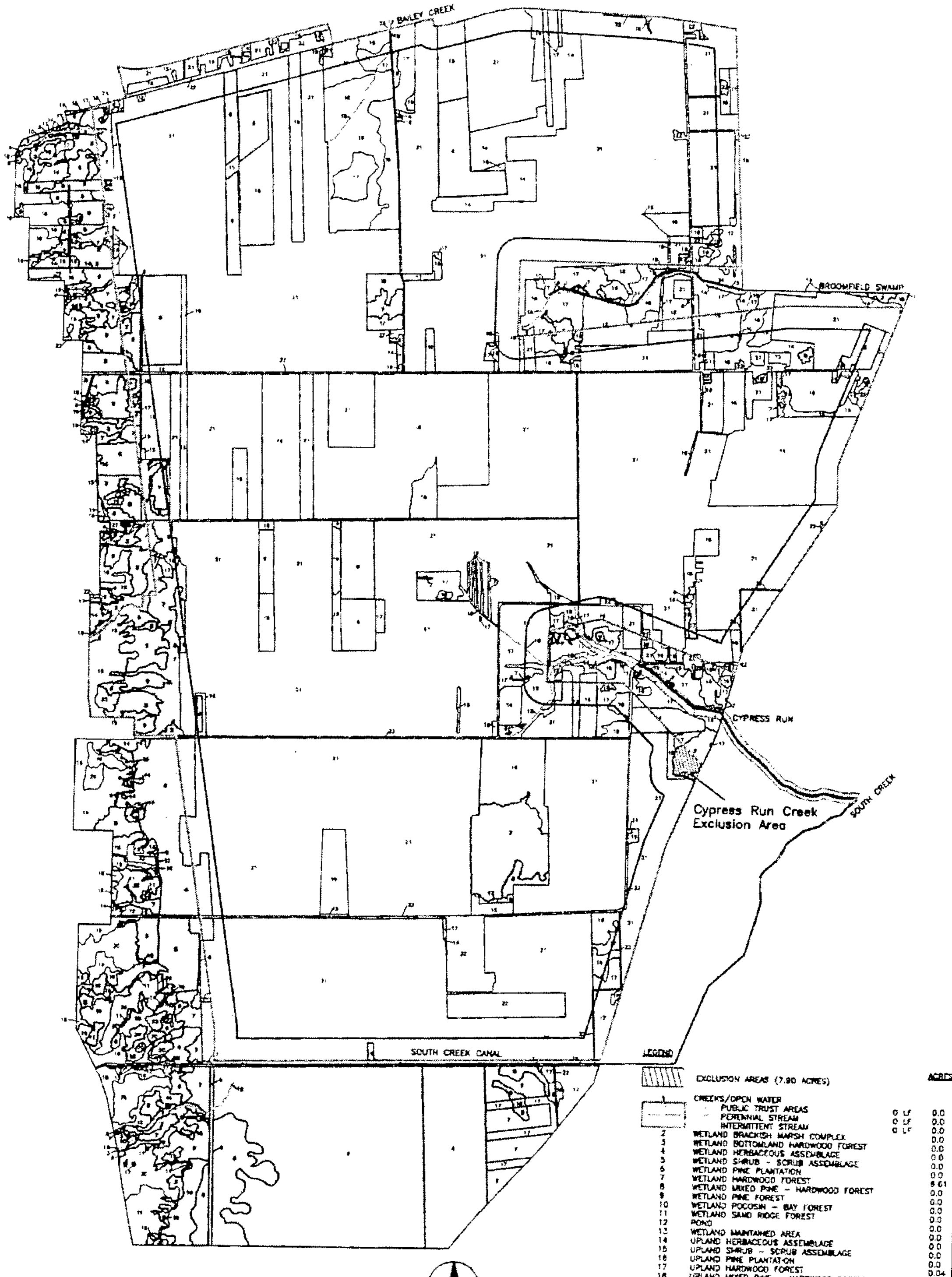
1,800 0 1,800 Feet

500 0 500 Meters

Conservation Easement – Porter Creek
Modified Alt L – Bonnerton

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG
Date: 5/18/09	File: 17456224/Bon_ModAlt_051309_Conser_Esmt(BON_BC_030206)
Approved by: Revision JPS 5-13-09	



LEGEND

	EXCLUSION AREAS (7.80 ACRES)		ACRES
1	CREEKS/OPEN WATER		
	PUBLIC TRUST AREAS	0 LF	0.0
	PERENNIAL STREAM	0 LF	0.0
	INTERMITTENT STREAM	0 LF	0.0
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		0.0
8	WETLAND MIXED PINE - HARDWOOD FOREST		8.61
9	WETLAND PINE FOREST		0.0
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		0.04
19	UPLAND PINE FOREST		1.15
20	UPLAND SAND RIDGE FOREST		0.0
21	UPLAND AGRICULTURAL LAND		0.0
22	UPLAND NON - VEGETATED/MAINTAINED AREA		0.10
			0.0
	WATERS OF THE US AREAS		8.61
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)		8.61
	UPLAND AREAS		1.29

LEGEND

	ACRES
SOUTH OF 33 BASE PROJECT AREA	8,686
MODIFIED ALT L - SOUTH OF 33 PROPOSED IMPACT BOUNDARY 5/13/09	6,730
MODIFIED ALT L - SOUTH OF 33 PROPOSED IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 104,717,000 TONS*	5,169

PERMANENT DEED RESTRICTION PROHIBITING MINING - CYPRESS RUN (46 ACRES)

CREEKS/OPEN WATER	
PUBLIC TRUST AREAS	7,331 LF
PERENNIAL STREAM	2,328 LF
INTERMITTENT STREAM	0 LF

*PROVIDED BY PCS PHOSPHATE 05/13/09

2,200 0 2,200 Feet

500 0 500 Meters

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/ S33_MODA_7L_051309_DEED_RESTR(S33_6C 0205
Approved by: Revision JPS 5-13-09	

"Walker, William T SAW" <William.T.Walker@usace.army.mil>
06/05/2009 11:55 AM

To Palmer Hough/DC/USEPA/US@EPA
cc "Lamson, Brooke SAW" <Brooke.Lamson@usace.army.mil>, "Lekson, David M SAW" <David.M.Lekson@usace.army.mil>, "Ryscavage, Jefferson
bcc
Subject RE: PCS ROD

Palmer,

As indicated in our 2/24/09 letter, discussions between the Corps, DWQ and the applicant had resulted in further minimizing impacts of Alternative L from 4,140 acres of Waters of the US to 3,972 acres of Water of the US. At that time total avoidance of waters of the US within the project area was 2,408 acres (1,696 acres further reduced from the EAP boundary, 168 acres further reduced from Alternative L as presented in the FEIS). Through its 401 certification NCDWQ required that all of the avoided area of the SNHA in Bonnerton be put in conservation easement (approximately 174 ac.) along with the area of the "mining corridor" once it is satisfactorily reclaimed. All of that 174 acres is wetland.

Through and after the elevation process, PCS agreed to avoid an additional approximately 111 acres including approximatley 51 acres of waters of the US. PCS further agreed to place conservation easements or deed restrictions on an additional 456 acres (630 acres total) in the watersheds of several creeks. The majority but not all of the acreage included in these additional easements was wetland. The proffered permit authorizes impacts to 3,927 acres of Water of the US (3,922 acres within the mining footprint and 5 acres associated with the NC 306 road relocation) including 3,909 acres of wetlands.

We have not broken out acreages of uplands vs. wetlands within these conservation easement areas since the goal of the minimization efforts was to further protect total watershed area and minimize secondary effects on downstream waters. Additionally, we have not broken out acreage inside vs. outside the actual project area boundary since again, minimization of future impacts to these same watersheds was the intent of the easements.

CZR can likely generate these numbers. If you would like us to make this request of them, please let me know. Also, if you have any further questions, feel free to give me a call.

Thanks
Tom Walker
(910) 251-4631

-----Original Message-----
From: Hough.Palmer@epamail.epa.gov [mailto:Hough.Palmer@epamail.epa.gov]
Sent: Thursday, June 04, 2009 3:49 PM
To: Walker, William T SAW
Cc: Lamson, Brooke SAW; Lekson, David M SAW; Ryscavage, Jefferson COL SAW; Moyer, Jennifer A HQ02; Giattina.Jim@epamail.epa.gov; Gaffney-Smith, Margaret E; Fox.Rebecca@epamail.epa.gov; Jolly, Samuel K SAW; Meiburg.Stan@epamail.epa.gov; Welborn.Tom@epamail.epa.gov; Messier.Dawn@epamail.epa.gov; Mancusi-Ungaro.Philip@epamail.epa.gov
Subject: RE: PCS ROD

Tom:

Thanks this is very helpful.

We have also been struggling with one other issue, namely how to accurately characterize just how much acreage on the project site is being preserved via conservation easement and how that compares to what was already preserved on the project site by the State 401 cert before the elevation started. We have not been able to find this data in the ROD. Here is what we have cobbled together based on BPJ. Is there any way to come up with a more definitive estimate of this? Again, we just want to make sure that we are on the same page with the Corps.

-- As of the 2-24-09 proposed permit approximately 174 out of 2333 acres of avoided wetlands were protected via conservation easement
-- As of the 6-3-09 proffered permit approximately 606 out of 2384 acres of avoided wetlands will be protected via conservation easement

Explanation for the 174: this number reflects the areas protected by the State 401 (SNHA on Bonnerton) according to the ROD.

Explanation for the 606: this number reflects the 174 acres already protected by the State's CWA Section 401 Water Quality Certification as well as the additional acreage PCS has offered to put under easement in response to EPA's elevation which includes approximately 354 acres on the NCPC Tract, 54 acres on the Bonnerton Tract, and 24 acres on the S33 Tract. The Bonnerton and S33 values are an estimate because the Applicant's June 2, 2009, offer includes 1) 228 acres of proposed easement protection along Porter Creek, but the majority of this proposed acreage is not on the Bonnerton Tract and 2) of the 48 acres of proposed easement protection along Cypress Run Creek (S33 Tract), only approximately half of this acreage is on the S33 Tract.

Thanks, Palmer

Palmer F. Hough
US Environmental Protection Agency
Wetlands Division
Room 7231, Mail Code 4502T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
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Cell: 202-657-3114
FAX: 202-566-1375
E-mail: hough.palmer@epa.gov

Street/Courier Address
USEPA
Palmer Hough
EPA West -- Room 7231-L
Mail Code 4502T
1301 Constitution Avenue, NW
Washington, DC 20460

From: "Walker, William T SAW" <William.T.Walker@usace.army.mil>

To: Palmer Hough/DC/USEPA/US@EPA, "Jolly, Samuel K SAW"

<Samuel.K.Jolly@usace.army.mil>

Cc: "Lamson, Brooke SAW" <Brooke.Lamson@usace.army.mil>, "Lekson, David M SAW" <David.M.Lekson@usace.army.mil>, "Ryscavage, Jefferson COL SAW" <Jefferson.Ryscavage@us.army.mil>, "Moyer, Jennifer A HQ02" <Jennifer.A.Moyer@usace.army.mil>, Jim Giattina/R4/USEPA/US@EPA, "Gaffney-Smith, Margaret E" <Meg.E.Gaffney-Smith@usace.army.mil>, Rebecca Fox/R4/USEPA/US@EPA, Stan Meiburg/R4/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA

Date: 06/04/2009 03:16 PM

Subject: RE: PCS ROD

Palmer,

Thanks, we have corrected the map date of the "Conservation Easement - Jacks Creek - Modified Alternative L _ NCPC" to 5/28/09 (see attached) and included the Cypress Run reference. The 22,435 linear feet of stream impact is correct and includes the most recent avoidance efforts. We will send the corrected conditions to everyone shortly.

Thanks
Tom

-----Original Message-----
From: Hough.Palmer@epamail.epa.gov [mailto:Hough.Palmer@epamail.epa.gov]

Sent: Thursday, June 04, 2009 1:29 PM
To: Jolly, Samuel K SAW
Cc: Lamson, Brooke SAW; Lekson, David M SAW; Ryscavage, Jefferson COL SAW; Moyer, Jennifer A HQ02; Giattina.Jim@epamail.epa.gov; Gaffney-Smith, Margaret E; Fox.Rebecca@epamail.epa.gov; Meiburg.Stan@epamail.epa.gov; Welborn.Tom@epamail.epa.gov; Walker, William T SAW
Subject: Re: PCS ROD

Ken:

Thanks for sharing this so quickly. We are reviewing the ROD and have a few quick questions to make sure we are on the same page.

1) Condition "DD" in the ROD and proffered permit appears to have omitted

reference to the conservation easement for Cypress Run promised by the company in its 6-2-09 proposal. Has this been included somewhere else?

2) Condition "DD" also refers to maps "all dated May 18, 2009". Didn't the company's 6-2-09 proposal increase the amount of acreage protected in the Jacks Creek watershed by 82 acres, necessitating an updated map for that creek?

3) Condition "DD" also noted that the conservation easement maps have been attached. However, we have not been able to locate them in the ROD package.

4) Also the ROD estimates total remaining stream impacts to be 22,435 linear feet which is consistent with the number EPA came up with based on the company's 6-2-09 proposal, however, the Corps' Press Release yesterday reported total remaining stream impacts at 22,082 linear feet.
Which is the correct number according to the Corps?

Thanks, Palmer

Palmer F. Hough
US Environmental Protection Agency
Wetlands Division
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1200 Pennsylvania Avenue, NW
Washington, DC 20460
Office: 202-566-1374
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FAX: 202-566-1375
E-mail: hough.palmer@epa.gov

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EPA West -- Room 7231-L
Mail Code 4502T
1301 Constitution Avenue, NW
Washington, DC 20460

From: "Jolly, Samuel K SAW" <Samuel.K.Jolly@usace.army.mil>

To: Stan Meiburg/R4/USEPA/US@EPA

Cc: Rebecca Fox/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, "Moyer, Jennifer A HQ02" <Jennifer.A.Moyer@usace.army.mil>, "Gaffney-Smith, Margaret E" <Meg.E.Gaffney-Smith@usace.army.mil>, "Smith, Chip R HQDA" <SmithCR@HQDA.Army.Mil>, "Ryscavage, Jefferson COL SAW"

<Jefferson.Ryscavage@us.army.mil>, "Walker, William T SAW"
<William.T.Walker@usace.army.mil>, "Lekson, David M SAW"
<David.M.Lekson@usace.army.mil>, "Lamson, Brooke SAW"
<Brooke.Lamson@usace.army.mil>

Date: 06/04/2009 10:53 AM

Subject: PCS ROD

<<PCS ROD.pdf>>
Mr. Meiburg,

Attached find a copy of the signed, proffered permit and ROD for PCS Phosphate. PCS has requested we remove condition "EE" which states no work authorized by the permit may begin until 10 days after the ROD is provided to EPA. We will not remove that condition unless you provide written concurrence with such an action.

Ken Jolly
Chief, Regulatory Division
Wilmington District
910-251-4630
[attachment "Proferred Permit.pdf" deleted by Palmer Hough/DC/USEPA/US]
[attachment "PCS ROD.pdf" deleted by Palmer Hough/DC/USEPA/US]

[attachment "EPA-ASA Modified Alt L 06-02-09 Exclusion Easement graphics.pdf" deleted by Palmer Hough/DC/USEPA/US]

William Schlesinger <schlesingerw @caryinstitute . org>
Sent by: Deb Fargione <fargioned@caryinstitute.org>

06/05/2009 03:59 PM

To Mike Shapiro/DC/USEPA/US@EPA

cc Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne

bcc

Subject

History: This message has been forwarded.

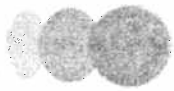
Dear Mr. Shapiro,

Attached please find my letter relative to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. Hard copies of these document will reach you shortly via U.S. Mail.

Sincerely,

Bill Schlesinger

****



Dr. William H. Schlesinger
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****

Cary Institute
of Ecosystem Studies

President
William H. Schlesinger

2 June 2009

Mr. Michael Shapiro
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water (4101M)
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Dear Mr. Shapiro:

Please accept these comments related to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. These comments focus specifically on the Entrix report "Potential Effects of Watershed Reduction on Tidal Creeks – An Assessment" and my concern with the use of this report to justify elimination of headwater streams and adjacent wetlands within the proposed mine expansion.

As a former Dean and professor at the Nicholas School of the Environment at Duke University, I have been aware for many years of the situation with PCS Phosphate's application to expand its mine. Even following the minor changes included in the Corps's record of decision, the current expansion would include mining in 11,343 acres over approximately 35 years and would destroy 3,927 acres of wetlands and 22,435 linear feet of streams, including the headwaters of 4 primary nursery areas. Because of these substantial impacts, EPA, USFWS, NMFS, the South Atlantic Fishery Management Council, NC Wildlife Resources Commission, NC Division of Marine Fisheries, and many environmental groups have raised concerns regarding the scope of the impacts and the expansion into environmentally sensitive areas during the permitting process.

These concerns regarding elimination of watersheds and headwater streams are well-founded; headwater streams, adjacent wetlands, and healthy watersheds are scientifically accepted as fundamental to healthy aquatic ecosystems. The scientific literature is replete with studies recognizing the importance of headwater streams and wetlands in maintaining aquatic ecosystem functions. Based on this scientific understanding of the importance of the very ecological systems PCS's expansion would impact, the mine plan as proposed would have long-term adverse impacts on the Pamlico River estuary.

It is my understanding that the Corps has relied extensively on the Entrix watershed reduction report to support the proposed drainage basin reduction (DBR) for those coastal streams within the project area. Entrix compared Jack's Creek (the most southern watershed in the proposed mine plan) with two "controls." In both cases, Entrix finds that current data from Jack's Creek

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does not differ significantly from that of the controls.

The basic premises of these comparisons are fundamentally flawed, rendering the Entrix study essentially useless for its stated purposes in two ways.

First, measurable changes between the current state of a watershed reduced by 51% as compared to the state of the same watershed when it was reduced by only 17% measured 26 years ago are in no way analogous to the changes that can be expected if the watershed is further reduced to only 16% of its original extent. Ecosystem functions have thresholds, and it is very likely that somewhere between the present state of the watershed and its state after reduction to 16%, thresholds will be crossed. Less likely, but nonetheless plausible, some threshold(s) may have been crossed when the basin was reduced by 17% before 26 years ago. Therefore, Jack's Creek 26 years ago cannot be used as a control for a study projecting the state of Jack's Creek after reduction by 84%. If we were to assume that there was a valid analogue here, then we would have to assume that further extrapolation from 16% to zero would be equally harmless, and that coastal streams are simply indentations in the coast, unaffected by inputs of freshwater, DO, and nutrients—a position I cannot imagine any ecologist taking.

Second, because we cannot isolate environmental factors beyond the scope of the Entrix study (e.g. non-DBR land-uses, water pollution – including that from atmospheric deposition, harvesting pressures), we have no way of knowing if other variables have differentially driven the two systems (Jack's Creek and Muddy Creek) toward similarity for the variables Entrix did choose. Similarity resulting from different causes is a common characteristic of disturbed systems. For example, many different kinds of disturbances can stimulate dominance by the same highly adaptable or invasive species. So, the present conditions of Muddy Creek and Jack's Creek are probably not similar to original conditions and may be similar to each other for reasons other than or in addition to DBR. Therefore Muddy Creek cannot reasonably be used as a control for Jack's Creek as modified by DBR over the decades.

Even if one accepted the flawed premises of the Entrix study design, the choice of variables results in severe limitations that prevent this report from overcoming the general understanding of the scientific community regarding the importance of these systems to continued viability of aquatic systems. The report first errs in omitting an age or size distribution for species sampled. Four of the creeks affected are designated primary nursery areas – waters identified by the State of North Carolina as providing essential habitat for juvenile finfish and shellfish – yet the report does not identify how this particularly vulnerable subset of the overall aquatic community has been affected by previous reductions. To demonstrate that the primary nursery functions of these areas will continue, the report must address the reproductive success of species in impacted streams and the development of juveniles in those streams. Otherwise, the report cannot ensure that species presence is not due to immigration by adult fish from elsewhere within the estuary.

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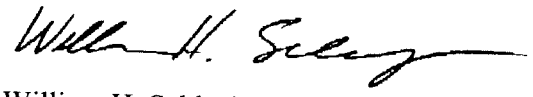
Finally, the water quality parameters are too limited to overcome the expectation that the substantial watershed alterations proposed will not affect water quality. Given the nature of PCS's mining process, water quality sampling should include analyses of dissolved phosphorus, sulfate, cadmium, and other trace metals and fluorine that may be concentrated through PCS's mining and ore beneficiation processes.

The Pamlico River is an integral part of the nationally renowned Albemarle-Pamlico Estuary. The decision made by the Army Corps of Engineers threatens to upset the balance of the system and will ensure long-term harm to the river. The impacts proposed – substantial elimination of headwater streams and riparian wetlands – go against basic scientific understanding regarding the protection of aquatic ecosystems. It is my understanding that the Corps has relied on the Entrix watershed reduction report to overcome this body of scientific knowledge and the unanimous objection to this project from resource agencies. For the reasons I describe above, this report is fundamentally flawed in both its conception and in its execution, and it does not merit the weight given to it in this important permitting decision. I therefore urge the EPA to exercise its full authority under the Clean Water Act to protect the headwater streams and riparian wetlands that are essential to the continued vitality of the Pamlico River.

Sincerely,



William H. Schlesinger
President

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WILLIAM H. SCHLESINGER
PRESIDENT

CARY INSTITUTE OF ECOSYSTEM STUDIES • MILLBROOK • NEW YORK

On 1 June 2007, William H. Schlesinger was named President of the Cary Institute of Ecosystem Studies, a private ecological research institute on the grounds of the Cary Arboretum in Millbrook, NY. He assumed this position after 27 years on the faculty of Duke University. Completing his A.B. at Dartmouth (1972), and Ph.D. at Cornell (1976), he moved to Duke in 1980, where he retired in spring 2007 as Dean of the Nicholas School of the Environment and Earth Sciences and as James B. Duke Professor of Biogeochemistry.

He is the author or coauthor of over 200 scientific papers on subjects of environmental chemistry and global change and the widely-adopted textbook Biogeochemistry: An analysis of global change (Academic Press, 2nd ed. 1997). He has published editorials and columns in the *Charlotte Observer, Chicago Tribute, Los Angeles Times, Philadelphia Inquirer,* and the Raleigh *News and Observer.*

Schlesinger was among the first to quantify the amount of carbon held in soil organic matter globally, providing subsequent estimates of the role of soils and human impacts on forests and soils in global climate change. He was elected a member of The National Academy of Sciences in 2003, and was President of the Ecological Society of America for 2003-2004. He is also a fellow in the American Academy of Arts and Sciences, the American Geophysical Union, and the Soil Science Society of America.

His past work has taken him to diverse habitats, ranging from Okefenokee Swamp in southern Georgia to the Mojave Desert of California, and three times as a Duke alumni tour guide to Antarctica. His research has been featured on NOVA, CNN, NPR, and on the pages of *Discover, National Geographic,* the *New York Times,* and *Scientific American.* Schlesinger has testified before U.S. House and Senate Committees on a variety of environmental issues, including preservation of desert habitats, global climate change and carbon sequestration.

Schlesinger currently serves on the Board of Trustees for the Doris Duke Charitable Foundation (New York) and the Southern Environmental Law Center (Charlottesville) and on the Board of Scientific Advisors for Terrapass LLC (San Francisco).

He and his wife, Lisa, live in Millbrook, where they enjoy birdwatching, gourmet cooking, and collecting southwestern art.

Geoff Gisler
<ggisler@selcnc.org>
06/05/2009 04:11 PM

To LisaP Jackson/DC/USEPA/US@EPA
cc Mike Shapiro/DC/USEPA/US@EPA, Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory
bcc
Subject PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

History: This message has been forwarded.

Administrator Jackson,

I write to bring to your attention a permit issued by the Wilmington District of the U.S. Army Corps of Engineers on Wednesday, June 3, authorizing the largest permitted wetland destruction in North Carolina history, totaling nearly 4,000 acres. The wetlands that would be destroyed by the approved strip mine are on the banks of the Pamlico River, a central part of the Albemarle-Pamlico Estuary. The wetlands surround and support tidal creeks that are primary fishery nursery areas and include one of the five best remaining examples of a globally rare wetland community type. In April, EPA Region IV elevated this permit decision to the U.S. Army Corps of Engineers Headquarters stating that the permit violated the Clean Water Act 404(b)(1) Guidelines and made specific recommendations to mend those violations. The permit issued Wednesday almost completely ignored those recommendations, avoiding only 44 additional acres of wetlands. On behalf of the Pamlico-Tar River Foundation, Environmental Defense Fund, Sierra Club, and North Carolina Coastal Federation, we respectfully request that EPA initiate veto proceedings under Section 404(c) of the Clean Water Act.

Sincerely,

Geoff Gisler
Staff Attorney
Southern Environmental Law Center
200 W. Franklin St. Suite 330
Chapel Hill, NC 27516
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Fax: (919) 929-9421
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Charlottesville, VA
Chapel Hill, NC
Atlanta, GA
Asheville, NC
Charleston, SC
Richmond, VA
Washington, DC

June 5, 2009

Honorable Lisa Jackson
Administrator
Environmental Protection Agency
Washington, DC

Re: EPA veto of PCS Phosphate Permit in North Carolina

Dear Administrator Jackson:

The Acting Regional Administrator of EPA Region IV has elevated to EPA Headquarters a proposed permit under Section 404 of the Clean Water Act that, if issued, would authorize the largest wetland destruction in the history of the permitting program in North Carolina. The wetlands that would be destroyed are adjacent to the Pamlico Sound estuary and provide critical functions in maintaining the water quality and fisheries in this estuary which has been designated by Congress and EPA as an estuary of national importance. We appreciate your commitment to protection of our nation's wetlands and the important economic and environmental values they provide. Last month, you wrote to Senator Boxer that "as we work to meet goals for wetlands protection nationwide, we need to identify opportunities to expand protection of wetlands and other aquatic resources that are especially vulnerable or critical to sustaining the health of [aquatic] systems." On behalf of the Environmental Defense Fund, Sierra Club, North Carolina Coastal Federation, and Pamlico Tar River Foundation, we respectfully request that you exercise your authority to veto the permit in order to protect the nation's waters and wetlands from significant degradation. EPA's veto would allow uninterrupted mining to continue for at least 29 years without unacceptable adverse impacts to wetlands, water quality, and fisheries.

On April 3, 2009, EPA determined that, unless specified actions are taken to avoid particularly critical wetlands, the permit the Corps of Engineers proposed to issue to PCS Phosphate would violate EPA's 404(b) Guidelines for wetland permits and result in "unacceptable adverse impacts to aquatic resources of national significance." Specifically, EPA concluded the proposed permit "would result in substantial and unacceptable impacts to waters of the United States, including wetlands, in the Albemarle Pamlico River estuary system." This violation of EPA's Guidelines would trigger EPA's duty to veto the permit under Section 404(c). EPA's letter to the Corps clearly identified the unacceptable adverse impacts that would occur if the permit issued and EPA equally clearly identified the actions required to avoid these impacts and prevent significant degradation of waters and wetlands.

On June 3, 2009, the Wilmington District of the Corps issued the permit, inadequately responding to all of EPA's requested actions to avoid significant degradation of waters and completely failing to respond to some. To avoid unacceptable adverse impacts:

- EPA requested no further drainage basin reductions of primary fishery nursery areas; the permit will allow substantial additional drainage basin reductions of all primary nursery areas.

- EPA requested avoidance of an additional 1,166 acres of wetlands to reduce impacts to acceptable levels; the permit only avoids an additional 44 acres.

- EPA requested complete avoidance of the identified rare wetlands of national ecological significance; the permit will allow destruction of these wetlands.

- EPA concluded that the proposed compensatory mitigation would not reduce impacts to an acceptable level; the permit includes no additional restoration of wetlands to compensate for impacts.

The proposed permit includes monitoring provisions to attempt to document water quality impacts of the mining. EPA's Guidelines require *prevention* of significant degradation of waters, not documentation of its occurrence. In sum, the Corps's proposed permit almost completely ignores EPA's concerns and specific requested actions to ensure the project will not result in unacceptable adverse impacts to the nation's waters and wetlands.

Since the Corps failed to respond to EPA's concerns and failed to incorporate the actions required to reduce these impacts to acceptable levels, EPA has a duty to veto the permit under Section 404(c).

Sincerely yours,

Derb S. Carter, Jr.
Senior Attorney
Director NC/SC Office

cc Environmental Defense Fund
Sierra Club
North Carolina Coastal Federation
Pamlico Tar River Foundation

Stan Meiburg /R4/USEPA/US
06/05/2009 05:31 PM

To Jefferson.Ryscavage@us.army.mil
cc giattina.jim@epa.gov
bcc gordon.scott@epa.gov
Subject

Jeff, since I don't think he cc'd you on this, just wanted to pass this on.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

---- Forwarded by Stan Meiburg/R4/USEPA/US on 06/05/2009 05:30 PM ----

William Schlesinger <schlesingerw @caryinstitute . org>
Sent by: Deb Fargione <fargioned@caryinstitute.org>

06/05/2009 03:59 PM

To Mike Shapiro/DC/USEPA/US@EPA
cc Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert Wood/DC/USEPA/US@EPA, Dawn Messier/DC/USEPA/US@EPA, Jennifer Derby/R4/USEPA/US@EPA, Rebecca Fox/R4/USEPA/US@EPA
Subject

Dear Mr. Shapiro,

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Sincerely,

Bill Schlesinger

****

Dr. William H. Schlesinger
President
Cary Institute of Ecosystem Studies
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Millbrook NY 12545

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Shapiro_Entrtx_2Jun09.pdf


Shortbio_WHS_2Jun09.DOC

Cary Institute
of Ecosystem Studies

President
William H. Schlesinger

2 June 2009

Mr. Michael Shapiro
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water (4101M)
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Dear Mr. Shapiro:

Please accept these comments related to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. These comments focus specifically on the Entrix report "Potential Effects of Watershed Reduction on Tidal Creeks – An Assessment" and my concern with the use of this report to justify elimination of headwater streams and adjacent wetlands within the proposed mine expansion.

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It is my understanding that the Corps has relied extensively on the Entrix watershed reduction report to support the proposed drainage basin reduction (DBR) for those coastal streams within the project area. Entrix compared Jack's Creek (the most southern watershed in the proposed mine plan) with two "controls." In both cases, Entrix finds that current data from Jack's Creek

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does not differ significantly from that of the controls.

The basic premises of these comparisons are fundamentally flawed, rendering the Entrix study essentially useless for its stated purposes in two ways.

First, measurable changes between the current state of a watershed reduced by 51% as compared to the state of the same watershed when it was reduced by only 17% measured 26 years ago are in no way analogous to the changes that can be expected if the watershed is further reduced to only 16% of its original extent. Ecosystem functions have thresholds, and it is very likely that somewhere between the present state of the watershed and its state after reduction to 16%, thresholds will be crossed. Less likely, but nonetheless plausible, some threshold(s) may have been crossed when the basin was reduced by 17% before 26 years ago. Therefore, Jack's Creek 26 years ago cannot be used as a control for a study projecting the state of Jack's Creek after reduction by 84%. If we were to assume that there was a valid analogue here, then we would have to assume that further extrapolation from 16% to zero would be equally harmless, and that coastal streams are simply indentations in the coast, unaffected by inputs of freshwater, DO, and nutrients—a position I cannot imagine any ecologist taking.

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within the system leading to imbalances that will ultimately affect higher trophic levels. This shortcoming is not ameliorated by the abundance data in figures 2-4b and 2-5b, since the report itself acknowledges the limitations of those data preclude statistical analysis.

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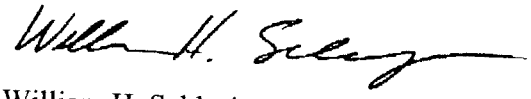
Sincerely,



William H. Schlesinger
President

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WILLIAM H. SCHLESINGER
PRESIDENT

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On 1 June 2007, William H. Schlesinger was named President of the Cary Institute of Ecosystem Studies, a private ecological research institute on the grounds of the Cary Arboretum in Millbrook, NY. He assumed this position after 27 years on the faculty of Duke University. Completing his A.B. at Dartmouth (1972), and Ph.D. at Cornell (1976), he moved to Duke in 1980, where he retired in spring 2007 as Dean of the Nicholas School of the Environment and Earth Sciences and as James B. Duke Professor of Biogeochemistry.

He is the author or coauthor of over 200 scientific papers on subjects of environmental chemistry and global change and the widely-adopted textbook Biogeochemistry: An analysis of global change (Academic Press, 2nd ed. 1997). He has published editorials and columns in the *Charlotte Observer, Chicago Tribute, Los Angeles Times, Philadelphia Inquirer,* and the Raleigh *News and Observer.*

Schlesinger was among the first to quantify the amount of carbon held in soil organic matter globally, providing subsequent estimates of the role of soils and human impacts on forests and soils in global climate change. He was elected a member of The National Academy of Sciences in 2003, and was President of the Ecological Society of America for 2003-2004. He is also a fellow in the American Academy of Arts and Sciences, the American Geophysical Union, and the Soil Science Society of America.

His past work has taken him to diverse habitats, ranging from Okefenokee Swamp in southern Georgia to the Mojave Desert of California, and three times as a Duke alumni tour guide to Antarctica. His research has been featured on NOVA, CNN, NPR, and on the pages of *Discover, National Geographic,* the *New York Times,* and *Scientific American.* Schlesinger has testified before U.S. House and Senate Committees on a variety of environmental issues, including preservation of desert habitats, global climate change and carbon sequestration.

Schlesinger currently serves on the Board of Trustees for the Doris Duke Charitable Foundation (New York) and the Southern Environmental Law Center (Charlottesville) and on the Board of Scientific Advisors for Terrapass LLC (San Francisco).

He and his wife, Lisa, live in Millbrook, where they enjoy birdwatching, gourmet cooking, and collecting southwestern art.

Stan Meiburg /R4/USEPA/US
06/05/2009 05:46 PM

To Jefferson.Ryscavage@us.army.mil, giattina.jim@epa.gov, Tom Welborn
cc
bcc sam_hamilton@fws.gov
Subject Fw: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Another incoming letter.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

----- Forwarded by Stan Meiburg/R4/USEPA/US on 06/05/2009 05:45 PM -----

Geoff Gisler
<ggisler@selcnc.org>
06/05/2009 04:11 PM

To LisaP Jackson/DC/USEPA/US@EPA
cc Mike Shapiro/DC/USEPA/US@EPA, Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert Wood/DC/USEPA/US@EPA, Dawn Messier/DC/USEPA/US@EPA, Jennifer Derby/R4/USEPA/US@EPA, Rebecca Fox/R4/USEPA/US@EPA, "Pete_Benjamin@fws.gov" <Pete_Benjamin@fws.gov>, "Mike_Wicker@fws.gov" <Mike_Wicker@fws.gov>, Derb Carter <derbc@selcnc.org>
Subject PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Administrator Jackson,

I write to bring to your attention a permit issued by the Wilmington District of the U.S. Army Corps of Engineers on Wednesday, June 3, authorizing the largest permitted wetland destruction in North Carolina history, totaling nearly 4,000 acres. The wetlands that would be destroyed by the approved strip mine are on the banks of the Pamlico River, a central part of the Albemarle-Pamlico Estuary. The wetlands surround and support tidal creeks that are primary fishery nursery areas and include one of the five best remaining examples of a globally

rare wetland community type. In April, EPA Region IV elevated this permit decision to the U.S. Army Corps of Engineers Headquarters stating that the permit violated the Clean Water Act 404(b)(1) Guidelines and made specific recommendations to mend those violations. The permit issued Wednesday almost completely ignored those recommendations, avoiding only 44 additional acres of wetlands. On behalf of the Pamlico-Tar River Foundation, Environmental Defense Fund, Sierra Club, and North Carolina Coastal Federation, we respectfully request that EPA initiate veto proceedings under Section 404(c) of the Clean Water Act.

Sincerely,

Geoff Gisler
Staff Attorney
Southern Environmental Law Center
200 W. Franklin St. Suite 330
Chapel Hill, NC 27516
Ph: (919) 967-1450
Fax: (919) 929-9421
www.southernenvironment.org

06-05-09 PCS Phosphate veto request.pdf

SOUTHERN ENVIRONMENTAL LAW CENTER

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200 WEST FRANKLIN STREET, SUITE 330
CHAPEL HILL, NC 27516-2559

Charlottesville, VA
Chapel Hill, NC
Atlanta, GA
Asheville, NC
Charleston, SC
Richmond, VA
Washington, DC

June 5, 2009

Honorable Lisa Jackson
Administrator
Environmental Protection Agency
Washington, DC

Re: EPA veto of PCS Phosphate Permit in North Carolina

Dear Administrator Jackson:

The Acting Regional Administrator of EPA Region IV has elevated to EPA Headquarters a proposed permit under Section 404 of the Clean Water Act that, if issued, would authorize the largest wetland destruction in the history of the permitting program in North Carolina. The wetlands that would be destroyed are adjacent to the Pamlico Sound estuary and provide critical functions in maintaining the water quality and fisheries in this estuary which has been designated by Congress and EPA as an estuary of national importance. We appreciate your commitment to protection of our nation's wetlands and the important economic and environmental values they provide. Last month, you wrote to Senator Boxer that "as we work to meet goals for wetlands protection nationwide, we need to identify opportunities to expand protection of wetlands and other aquatic resources that are especially vulnerable or critical to sustaining the health of [aquatic] systems." On behalf of the Environmental Defense Fund, Sierra Club, North Carolina Coastal Federation, and Pamlico Tar River Foundation, we respectfully request that you exercise your authority to veto the permit in order to protect the nation's waters and wetlands from significant degradation. EPA's veto would allow uninterrupted mining to continue for at least 29 years without unacceptable adverse impacts to wetlands, water quality, and fisheries.

On April 3, 2009, EPA determined that, unless specified actions are taken to avoid particularly critical wetlands, the permit the Corps of Engineers proposed to issue to PCS Phosphate would violate EPA's 404(b) Guidelines for wetland permits and result in "unacceptable adverse impacts to aquatic resources of national significance." Specifically, EPA concluded the proposed permit "would result in substantial and unacceptable impacts to waters of the United States, including wetlands, in the Albemarle Pamlico River estuary system." This violation of EPA's Guidelines would trigger EPA's duty to veto the permit under Section 404(c). EPA's letter to the Corps clearly identified the unacceptable adverse impacts that would occur if the permit issued and EPA equally clearly identified the actions required to avoid these impacts and prevent significant degradation of waters and wetlands.

On June 3, 2009, the Wilmington District of the Corps issued the permit, inadequately responding to all of EPA's requested actions to avoid significant degradation of waters and completely failing to respond to some. To avoid unacceptable adverse impacts:

- EPA requested no further drainage basin reductions of primary fishery nursery areas; the permit will allow substantial additional drainage basin reductions of all primary nursery areas.

- EPA requested avoidance of an additional 1,166 acres of wetlands to reduce impacts to acceptable levels; the permit only avoids an additional 44 acres.

- EPA requested complete avoidance of the identified rare wetlands of national ecological significance; the permit will allow destruction of these wetlands.

- EPA concluded that the proposed compensatory mitigation would not reduce impacts to an acceptable level; the permit includes no additional restoration of wetlands to compensate for impacts.

The proposed permit includes monitoring provisions to attempt to document water quality impacts of the mining. EPA's Guidelines require *prevention* of significant degradation of waters, not documentation of its occurrence. In sum, the Corps's proposed permit almost completely ignores EPA's concerns and specific requested actions to ensure the project will not result in unacceptable adverse impacts to the nation's waters and wetlands.

Since the Corps failed to respond to EPA's concerns and failed to incorporate the actions required to reduce these impacts to acceptable levels, EPA has a duty to veto the permit under Section 404(c).

Sincerely yours,

Derb S. Carter, Jr.
Senior Attorney
Director NC/SC Office

cc Environmental Defense Fund
Sierra Club
North Carolina Coastal Federation
Pamlico Tar River Foundation

Stan Meiburg /R4/USEPA/US
06/05/2009 05:47 PM

To sam_hamilton@fws.gov
cc
bcc
Subject PCS

Thought you'd find this interesting--noted that you weren't cc'd.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

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Fax: (404) 562-9961
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Email: meiburg.stan@epa.gov

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William Schlesinger <schlesingerw @caryinstitute . org>
Sent by: Deb Fargione <fargioned@caryinstitute.org>

06/05/2009 03:59 PM

To Mike Shapiro/DC/USEPA/US@EPA
cc Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert Wood/DC/USEPA/US@EPA, Dawn Messier/DC/USEPA/US@EPA, Jennifer Derby/R4/USEPA/US@EPA, Rebecca Fox/R4/USEPA/US@EPA
Subject

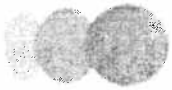
Dear Mr. Shapiro,

Attached please find my letter relative to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. Hard copies of these document will reach you shortly via U.S. Mail.

Sincerely,

Bill Schlesinger

****



Dr. William H. Schlesinger
President
Cary Institute of Ecosystem Studies
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Millbrook NY 12545

P 845-677-5343
F 845-677-5976
Email schlesingerw@caryinstitute.org
Web http://www.caryinstitute.org/people_sci_schlesinger.html

****


Shapiro_Entrix_2Jun09.pdf


Shortbio_WHS_2Jun09.DOC

Cary Institute
of Ecosystem Studies

President
William H. Schlesinger

2 June 2009

Mr. Michael Shapiro
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water (4101M)
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Dear Mr. Shapiro:

Please accept these comments related to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. These comments focus specifically on the Entrix report "Potential Effects of Watershed Reduction on Tidal Creeks – An Assessment" and my concern with the use of this report to justify elimination of headwater streams and adjacent wetlands within the proposed mine expansion.

As a former Dean and professor at the Nicholas School of the Environment at Duke University, I have been aware for many years of the situation with PCS Phosphate's application to expand its mine. Even following the minor changes included in the Corps's record of decision, the current expansion would include mining in 11,343 acres over approximately 35 years and would destroy 3,927 acres of wetlands and 22,435 linear feet of streams, including the headwaters of 4 primary nursery areas. Because of these substantial impacts, EPA, USFWS, NMFS, the South Atlantic Fishery Management Council, NC Wildlife Resources Commission, NC Division of Marine Fisheries, and many environmental groups have raised concerns regarding the scope of the impacts and the expansion into environmentally sensitive areas during the permitting process.

These concerns regarding elimination of watersheds and headwater streams are well-founded; headwater streams, adjacent wetlands, and healthy watersheds are scientifically accepted as fundamental to healthy aquatic ecosystems. The scientific literature is replete with studies recognizing the importance of headwater streams and wetlands in maintaining aquatic ecosystem functions. Based on this scientific understanding of the importance of the very ecological systems PCS's expansion would impact, the mine plan as proposed would have long-term adverse impacts on the Pamlico River estuary.

It is my understanding that the Corps has relied extensively on the Entrix watershed reduction report to support the proposed drainage basin reduction (DBR) for those coastal streams within the project area. Entrix compared Jack's Creek (the most southern watershed in the proposed mine plan) with two "controls." In both cases, Entrix finds that current data from Jack's Creek

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does not differ significantly from that of the controls.

The basic premises of these comparisons are fundamentally flawed, rendering the Entrix study essentially useless for its stated purposes in two ways.

First, measurable changes between the current state of a watershed reduced by 51% as compared to the state of the same watershed when it was reduced by only 17% measured 26 years ago are in no way analogous to the changes that can be expected if the watershed is further reduced to only 16% of its original extent. Ecosystem functions have thresholds, and it is very likely that somewhere between the present state of the watershed and its state after reduction to 16%, thresholds will be crossed. Less likely, but nonetheless plausible, some threshold(s) may have been crossed when the basin was reduced by 17% before 26 years ago. Therefore, Jack's Creek 26 years ago cannot be used as a control for a study projecting the state of Jack's Creek after reduction by 84%. If we were to assume that there was a valid analogue here, then we would have to assume that further extrapolation from 16% to zero would be equally harmless, and that coastal streams are simply indentations in the coast, unaffected by inputs of freshwater, DO, and nutrients—a position I cannot imagine any ecologist taking.

Second, because we cannot isolate environmental factors beyond the scope of the Entrix study (e.g. non-DBR land-uses, water pollution – including that from atmospheric deposition, harvesting pressures), we have no way of knowing if other variables have differentially driven the two systems (Jack's Creek and Muddy Creek) toward similarity for the variables Entrix did choose. Similarity resulting from different causes is a common characteristic of disturbed systems. For example, many different kinds of disturbances can stimulate dominance by the same highly adaptable or invasive species. So, the present conditions of Muddy Creek and Jack's Creek are probably not similar to original conditions and may be similar to each other for reasons other than or in addition to DBR. Therefore Muddy Creek cannot reasonably be used as a control for Jack's Creek as modified by DBR over the decades.

Even if one accepted the flawed premises of the Entrix study design, the choice of variables results in severe limitations that prevent this report from overcoming the general understanding of the scientific community regarding the importance of these systems to continued viability of aquatic systems. The report first errs in omitting an age or size distribution for species sampled. Four of the creeks affected are designated primary nursery areas – waters identified by the State of North Carolina as providing essential habitat for juvenile finfish and shellfish – yet the report does not identify how this particularly vulnerable subset of the overall aquatic community has been affected by previous reductions. To demonstrate that the primary nursery functions of these areas will continue, the report must address the reproductive success of species in impacted streams and the development of juveniles in those streams. Otherwise, the report cannot ensure that species presence is not due to immigration by adult fish from elsewhere within the estuary.

The report's benthic sampling also presents an incomplete picture. Although it confirms that certain species are present, it does not include appropriate abundance data. Therefore, the report cannot provide a basis for concluding that the stream system has not been affected because species that are present, but at significantly reduced levels, may not perform the same function

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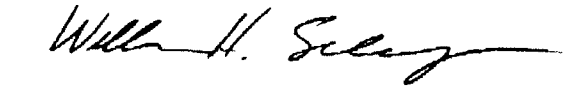
within the system leading to imbalances that will ultimately affect higher trophic levels. This shortcoming is not ameliorated by the abundance data in figures 2-4b and 2-5b, since the report itself acknowledges the limitations of those data preclude statistical analysis.

Finally, the water quality parameters are too limited to overcome the expectation that the substantial watershed alterations proposed will not affect water quality. Given the nature of PCS's mining process, water quality sampling should include analyses of dissolved phosphorus, sulfate, cadmium, and other trace metals and fluorine that may be concentrated through PCS's mining and ore beneficiation processes.

The Pamlico River is an integral part of the nationally renowned Albemarle-Pamlico Estuary. The decision made by the Army Corps of Engineers threatens to upset the balance of the system and will ensure long-term harm to the river. The impacts proposed – substantial elimination of headwater streams and riparian wetlands – go against basic scientific understanding regarding the protection of aquatic ecosystems. It is my understanding that the Corps has relied on the Entrix watershed reduction report to overcome this body of scientific knowledge and the unanimous objection to this project from resource agencies. For the reasons I describe above, this report is fundamentally flawed in both its conception and in its execution, and it does not merit the weight given to it in this important permitting decision. I therefore urge the EPA to exercise its full authority under the Clean Water Act to protect the headwater streams and riparian wetlands that are essential to the continued vitality of the Pamlico River.

Sincerely,



William H. Schlesinger
President

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WILLIAM H. SCHLESINGER
PRESIDENT

CARY INSTITUTE OF ECOSYSTEM STUDIES • MILLBROOK • NEW YORK

On 1 June 2007, William H. Schlesinger was named President of the Cary Institute of Ecosystem Studies, a private ecological research institute on the grounds of the Cary Arboretum in Millbrook, NY. He assumed this position after 27 years on the faculty of Duke University. Completing his A.B. at Dartmouth (1972), and Ph.D. at Cornell (1976), he moved to Duke in 1980, where he retired in spring 2007 as Dean of the Nicholas School of the Environment and Earth Sciences and as James B. Duke Professor of Biogeochemistry.

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"Ryscavage, Jefferson COL SAW" <Jefferson.Ryscavage@us.army.mil>
06/05/2009 10:45 PM

To Stan Meiburg/R4/USEPA/US@EPA
cc Jim Giattina/R4/USEPA/US@EPA
bcc
Subject RE:

Sir,
Thanks for passing on. Have a good weekend.

v/r,
Jeff

Jefferson M. Ryscavage
Colonel, Corps of Engineers
Commander, Wilmington District
910-251-4501
http://www.saw.usace.army.mil/

-----Original Message-----
From: Meiburg.Stan@epamail.epa.gov [mailto:Meiburg.Stan@epamail.epa.gov]
Sent: Friday, June 05, 2009 5:32 PM
To: Ryscavage, Jefferson COL SAW
Cc: giattina.jim@epa.gov
Subject:

Jeff, since I don't think he cc'd you on this, just wanted to pass this on.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

----- Forwarded by Stan Meiburg/R4/USEPA/US on 06/05/2009 05:30 PM -----

William Schlesinger <schlesingerw@caryinstitute.org>
Sent by: Deb Fargione <fargioned@caryinstitute.org>

06/05/2009 03:59 PM

To Mike Shapiro/DC/USEPA/US@EPA
cc Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert

Wood/DC/USEPA/US@EPA, Dawn
Messier/DC/USEPA/US@EPA, Jennifer
Derby/R4/USEPA/US@EPA, Rebecca
Fox/R4/USEPA/US@EPA

Subject

Dear Mr. Shapiro,

Attached please find my letter relative to the U.S. Army Corps of Engineers' Record of Decision authorizing PCS Phosphate Inc. to expand its surface mine adjacent to the Pamlico River estuary in North Carolina and EPA's consideration of whether to act under its authority in 404(c) of the Clean Water Act to require avoidance of sensitive environmental areas. Hard copies of these document will reach you shortly via U.S. Mail.

Sincerely,

Bill Schlesinger

****
(Embedded image moved to file: pic25903.jpg)Cary_Institute_logo (2).jpg

Dr. William H. Schlesinger
President
Cary Institute of Ecosystem Studies
PO Box AB; 2801 Sharon Turnpike
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****
(See attached file: Shapiro_Entrix_2Jun09.pdf)(See attached file: Shortbio_WHS_2Jun09.DOC)

"Ryscavage , Jefferson COL SAW" <Jefferson .Ryscavage @us.army.mil>
06/05/2009 10:54 PM

To Stan Meiburg/R4/USEPA/US@EPA
cc
bcc
Subject RE: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

History: This message has been replied to.

Sir,
Thanks again. While I have your ear, I would like to let you know that Jim has been wonderful to deal with. While our discussions have sometimes not been easy ones, he has always bent over backwards to keep our communications open and frank. I appreciate his being a part of the process and his willingness to continue to share info.

Have a great weekend!

v/r,
Jeff

Jefferson M. Ryscavage
Colonel, Corps of Engineers
Commander, Wilmington District
910-251-4501
http://www.saw.usace.army.mil/

-----Original Message-----
From: Meiburg.Stan@epamail.epa.gov [mailto:Meiburg.Stan@epamail.epa.gov]
Sent: Friday, June 05, 2009 5:46 PM
To: Ryscavage, Jefferson COL SAW; giattina.jim@epa.gov; Welborn.Tom@epamail.epa.gov
Subject: Fw: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Another incoming letter.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

----- Forwarded by Stan Meiburg/R4/USEPA/US on 06/05/2009 05:45 PM -----

Geoff Gisler <ggisler@selcnc.org>

To

"Ryscavage, Jefferson COL SAW" <Jefferson.Ryscavage@us.army.mil>
06/07/2009 08:41 PM

To Stan Meiburg/R4/USEPA/US@EPA
cc
bcc
Subject Re: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Thanks, I look forward to working with you, your team and Jim again. We always have the beach here in Wilmington, let us know if you are in-town!

Vr,
Jeff

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Meiburg.Stan@epamail.epa.gov <Meiburg.Stan@epamail.epa.gov>
To: Ryscavage, Jefferson COL SAW
Cc: Gen. Todd Semonite <todd.semonite@us.army.mil>
Sent: Sat Jun 06 22:22:00 2009
Subject: Re: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

That's great feedback, Jeff--thank you! He has said the same about you. As hard as this case has been, we really admire your professionalism and collegiality. We look forward to working together with you on matters that are perhaps a little more fun!

Stan
A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA. 30303

Office: (404) 562-8357
Fax: (404) 562-9961
Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

Sent using Blackberry

----- Original Message -----
From: "Ryscavage, Jefferson COL SAW" [Jefferson.Ryscavage@us.army.mil]
Sent: 06/05/2009 10:54 PM AST
To: Stan Meiburg
Subject: RE: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Sir,

06/05/2009 04:11 PM

LisaP Jackson/DC/USEPA/US@EPA

cc

Mike Shapiro/DC/USEPA/US@EPA, Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert Wood/DC/USEPA/US@EPA, Dawn Messier/DC/USEPA/US@EPA, Jennifer Derby/R4/USEPA/US@EPA, Rebecca Fox/R4/USEPA/US@EPA, "Pete_Benjamin@fws.gov" <Pete_Benjamin@fws.gov>, "Mike_Wicker@fws.gov" <Mike_Wicker@fws.gov>, Derb Carter <derbc@selcnc.org>

Subject

PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Administrator Jackson,

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44 additional acres of wetlands. On behalf of the Pamlico-Tar River Foundation, Environmental Defense Fund, Sierra Club, and North Carolina Coastal Federation, we respectfully request that EPA initiate veto proceedings under Section 404(c) of the Clean Water Act.

Sincerely,

Geoff Gisler
Staff Attorney
Southern Environmental Law Center
200 W. Franklin St. Suite 330
Chapel Hill, NC 27516
Ph: (919) 967-1450

Fax: (919) 929-9421
www.southernenvironment.org

(See attached file: 06-05-09 PCS Phosphate veto request.pdf)

Thanks again. While I have your ear, I would like to let you know that Jim has been wonderful to deal with. While our discussions have sometimes not been easy ones, he has always bent over backwards to keep our communications open and frank. I appreciate his being a part of the process and his willingness to continue to share info.

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Jeff

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Commander, Wilmington District
910-251-4501
http://www.saw.usace.army.mil/

-----Original Message-----
From: Meiburg.Stan@epamail.epa.gov [mailto:Meiburg.Stan@epamail.epa.gov]
Sent: Friday, June 05, 2009 5:46 PM
To: Ryscavage, Jefferson COL SAW; giattina.jim@epa.gov; Welborn.Tom@epamail.epa.gov
Subject: Fw: PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Another incoming letter.

Stan

A. Stanley Meiburg
Acting Regional Administrator
EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Office: (404) 562-8357
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Cell: (404) 435-4234
Email: meiburg.stan@epa.gov

----- Forwarded by Stan Meiburg/R4/USEPA/US on 06/05/2009 05:45 PM -----

Geoff Gisler <ggisler@selcnc.org>	To	LisaP Jackson/DC/USEPA/US@EPA
06/05/2009 04:11 PM	cc	Mike Shapiro/DC/USEPA/US@EPA, Stan Meiburg/R4/USEPA/US@EPA, Jim Giattina/R4/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Suzanne

Schwartz/DC/USEPA/US@EPA, Palmer Hough/DC/USEPA/US@EPA, Tom Welborn/R4/USEPA/US@EPA, David Evans/DC/USEPA/US@EPA, Robert Wood/DC/USEPA/US@EPA, Dawn Messier/DC/USEPA/US@EPA, Jennifer Derby/R4/USEPA/US@EPA, Rebecca Fox/R4/USEPA/US@EPA, "Pete_Benjamin@fws.gov" <Pete_Benjamin@fws.gov>, "Mike_Wicker@fws.gov" <Mike_Wicker@fws.gov>, Derb Carter <derbc@selcnc.org>

Subject

PCS Phosphate - Largest destruction of wetlands in NC under Clean Water Act

Administrator Jackson,

I write to bring to your attention a permit issued by the Wilmington District of the U.S. Army Corps of Engineers on Wednesday, June 3, authorizing the largest permitted wetland destruction in North Carolina history, totaling nearly 4,000 acres. The wetlands that would be destroyed by the approved strip mine are on the banks of the Pamlico River, a central part of the Albemarle-Pamlico Estuary. The wetlands surround and support tidal creeks that are primary fishery nursery areas and include one of the five best remaining examples of a globally rare wetland community type. In April, EPA Region IV elevated this permit decision to the U.S. Army Corps of Engineers Headquarters stating that the permit violated the Clean Water Act 404(b)(1) Guidelines and made specific recommendations to mend those violations. The permit issued Wednesday almost completely ignored those recommendations, avoiding only
44 additional acres of wetlands. On behalf of the Pamlico-Tar River Foundation, Environmental Defense Fund, Sierra Club, and North Carolina Coastal Federation, we respectfully request that EPA initiate veto proceedings under Section 404(c) of the Clean Water Act.

Sincerely,

Geoff Gisler
Staff Attorney
Southern Environmental Law Center
200 W. Franklin St. Suite 330
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(See attached file: 06-05-09 PCS Phosphate veto request.pdf)