unit (HUC 03020105) immediately to the south of HUC 03020104. It should be noted that due to existing manmade drainage features in combination with topography, surface waters are routinely exchanged between these sub-basins.

Site-specific restoration plans have already been approved, or are under development for each mitigation property. Special conditions in the form of mitigation milestones are added to the permit to require the approval, and if necessary, authorization of each site-specific plan before PCS may move forward with mining beyond each milestone. PCS employed a team of biologists, stream ecologists, engineers, hydrogeologists, soils scientists, and compensatory mitigation practitioners to ensure that all aspects of project design are appropriately implemented. The work plans include components that are specific, measurable, attainable, reasonable, and trackable utilizing pertinent mitigation literature and guidance including Wilmington District's stream and wetland mitigation checklists. As-built reports will be generated for each site to verify compliance with construction standards and to provide baseline conditions for annual monitoring. Monitoring will be undertaken and detailed reports submitted on a yearly basis for a minimum of five years, or until success is documented, whichever is longer.

The mitigation sites are thoroughly described in Appendix I of the FEIS and Section 7 of the ROD. The detailed mitigation site plans for several of the sites (Bay City Farm, Upper Back Creek, Sage Gut and Rutman Creek) have been circulated to the Federal and state review agencies. All agencies and NGOs involved with the review team were given the opportunity to visit each site and provide comment, however, few participated. The Corps has subsequently approved site specific mitigation plans for the Bay City Farms, Upper Back Creek and Rutman sites. Construction on several of the sites has been completed (Parker Farm, Gum Run, Bay City Farm and Upper Back Creek) totaling approximately 950 acres of restoration and 200 acres of enhancement. Currently, PCS proposes to and is on schedule to have all sites constructed no later than 2015. Table 3 of the ROD depicts mitigation available and construction completion date.

PCS's current mitigation plan includes an approximately 10% overbuild on wetlands as a contingency in case adjustments are needed in the future. PCS proposes to fully construct and preserve all sites as described in Appendix I and subsequent Corps approved site specific mitigation plans. If all sites are 100% successful, the total plan will result in more wetland mitigation acreage than is necessary to compensate for the authorized impacts. Should this occur, a portion of Rutman Phase II and the entirety of Rutman Phase I will not be used as mitigation for this impact. This is more thoroughly discussed in Section 7 of the ROD.

Any permit issued for Modified Alternative L will be conditioned to require PCS to adhere to the mitigation construction timelines indicated in Table 2, and to periodically submit information demonstrating compliance with construction and monitoring timetables and achievement of success criteria. These reports will be submitted for review prior to pre-determined impact milestones, likely annually. These reports will be made available either in whole or in summary to any agency or member of the public so desiring. The information in these reports and any comments received on these reports will be used by the Corps to determine whether impacts schedules need be adjusted or halted.

Specific Comments

The purpose of this section is to address specific comments not addressed either in the FEIS, ROD or General Issues Section above.

a. Environmental Protection Agency (EPA)

C1. The Corps does not identify a NEPA "preferred alternative" or a LEDPA in the FEIS.

R1. Section 1.3 of the FEIS identifies Alternative L as the proposed action and applicant preferred alternative, as required by our regulations at 33 CFR Part 325, Appendix B 9.b.(5), which also states the Corps is neither an opponent nor proponent of the proposed action. The decision as to whether the preferred alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA) is made during the 404(b)(1) analysis phase of the permit decision, to allow for consideration of comments received on the FEIS. Both the LEDPA and environmentally preferred alternative are identified in this Record of Decision.

C2. EPA recommends the completion of a detailed mitigation plan for impacts to the S33 tract well in advance of any mining in this area.

R2. A detailed mitigation plan to offset impacts for the entirety of modified alternative L has been developed and provided to review team members including EPA. This detailed plan is described in Section 7 of the ROD. Any permit issued will include special conditions requiring such mitigation, with a timetable requiring sufficient compensatory mitigation for impacts to aquatic resources be constructed and approved prior to those impacts.

C3. EPA recommends that the economic reopener clause, or other suitable measures, remain an option for future adaptive management.

R3. Permit conditions will require PCS to periodically report information on impact progression, mitigation success, reclamation progression and environmental monitoring. This information will be made available in whole or in summary to any interested party and the Corps will accept comment on the information. As with any permit, the Corps reserves the right to modify, suspend or revoke any permit decision if appropriate.

C4. EPA stated that its primary concerns are with the "wetland and stream impacts to watersheds supporting the Albemarle Pamlico Estuary system over an extended timeframe, together with the cumulative impacts of ongoing mining."

R4. Based on these and similar comments, the Corps worked with PCS and NCDWQ to further minimize impacts associated with Alternative L. In March of 2009, the Corps notified EPA, pursuant to CWA Section 404(q) of our intention to issue a conditioned permit for a modified version of Alternative L that would have avoided 2,403 acres (38%) of the waters of the US within the project area. This modification included further avoidance of approximately 163 acres

of Waters of the US including an additional 3.79 acres of tidal palustrine forest identified as Essential Fish Habitat (EFH) at the headwater of Huddy Gut as well as additional avoidance within the headwaters of Tooley Creek. Further minimization was also achieved in the areas buffering Broomfield Swamp and Cypress Run in the S33 Tract and in the headwater area of Porter Creek in the Bonnerton Tract. EPA ultimately chose to request elevation of this decision to the Assistant Secretary of the Army for Civil Works (ASA-CW) pursuant to CWA Section 404(q). Following a site visit and thorough review by ASA-CW and USACE Headquarters personnel, the ASA-CW remanded the decision back to the Wilmington District Commander with instructions to work with PCS, EPA, USFWS and NMFS to identify any further impact minimization deemed practicable or otherwise agreed to by PCS. As a result of this effort, further minimization was identified and agreed to by the PCS. Modified Alternative L avoids direct impacts to 2,453 acres (38%) of the waters of the US within the project area including all of the 49 acres of Public Trust Waters and 87 acres of brackish marsh within the project area as well as 142 acres (70%) of the bottomland hardwood forest. While this activity will result in the long-term alteration and, in some cases, permanent loss of wetland and upland wildlife habitat within the mined footprint, the avoidance and minimization efforts incorporated into Alternative L will result in the maintenance of upland and wetland wildlife corridors along the Pamlico River, South Creek, Durham Creek and their tributaries. The compensatory mitiation required will offset impacts to the Albemarle Pamlico Estuary System.

C5. EPA commented that the impacts of Alternative L should be further minimized and identified specifically, the nonriverine hardwood wetland area in Bonnerton listed by the North Carolina Natural Heritage Program as a Significant Natural Heritage Area (SNHA) of national importance, and areas surrounding Broomfield Swamp and Cypress Run in the S33 Tract that were avoided under the SCR boundary.

R4. Through efforts led by the North Carolina division of Water Quality, further minimization of the impacts to the SNHA has occurred. On January 15, 2009, the NC Division of Water Quality (NCDWQ) issued certification pursuant to Section 401 of the Clean Water Act that mining Alternative L would not violate State water quality standards provided several conditions were followed. One of these conditions required the avoidance of an additional approximately 124 acres of the SNHA, resulting in total avoidance of approximately 174 acres (approximately 64%) of this SNHA as depicted on the attached modified Alternative L boundary graphics. Additionally, modified alternative L includes further avoidance of areas surrounding Broomfield Swamp and Cypress Run. The current modified Alternative L impacts 19 more wetland acres than does the SCR boundary in S33 and the majority of these acres are highly degraded wetlands in heavily managed agricultural area.

b. US Fish and Wildlife Service (USFWS)

The majority of the concerns raised by USFWS were similar to those raised in its comments on the Draft and Supplemental EIS and have been thoroughly addressed either in the FEIS or in the ROD.

C1. USFWS expressed concern that the Corps had not considered importation of ore in the analysis.

R1. The potential for ore importation and the reasons it was eliminated from study are thoroughly addressed in Section 2.6.2 of the FEIS.

c. North Carolina Division of Marine Fisheries (NCDMF)

C1. Disappointed that the Corps "chose not to adequately address" the concerns raised by NCDMF in comments to the Draft EIS and the Supplement to the Draft EIS and that the Corps "never contacted the NCDMF to talk about these issues during preparation of the Final EIS."

R1. The Corps responded directly to the concerns raised by the NCDMF both in modifications made to the EIS between the Draft and Final, and in specific response to comments on the DEIS and SDEIS included as part of the FEIS. During the more than 8 year process of analyzing the potential impacts of the proposed activity and preparation of the FEIS, the Corps met 22 times with representatives of state and Federal review agencies and concerned non-governmental organizations. The NCDMF was invited to each of these meetings, given ample advance notice of these meetings and given the opportunity to present information at all. The NCDMF chose not to attend 10 of the last 13 meetings.

C2. NCDMF and others have argued that all avoided streams and wetlands on the NCPC tract need to be addressed as "lost" aquatic resources.

R2. Section 4.2.1.11 of the FEIS discusses likely impacts to fish and wildlife values. The scale and likely magnitude of these impacts are discussed above. With Modified Alternative L all appropriate and practicable steps to minimize the adverse effects of this action on the aquatic environment have been taken. Minimization efforts have resulted in the maintenance of wildlife corridors around all major water bodies. Additionally, conditions included in any authorization will ensure that impacts and reclamation occur over time, thereby affording more motile wildlife the opportunity to relocate to undisturbed or reclaimed areas.

Section 4.2 of the FEIS thoroughly discusses the likely indirect effects of the project on surrounding wetlands and aquatic habitat, including nursery areas and EFH. As discussed above, the project will likely result in some modification of the ecosystems of the upper reaches of tributaries located within the project area, but outside the actual impact footprint. Impacts will, however, be minimized by the avoidance of riparian wetlands and watershed. As referenced throughout Sections 3 and 4 of the FEIS, onsite research indicates that while the nursery functions of these areas may be impaired to some degree, they will not be completely lost. It is fully expected that nutrient cycling will continue, organic matter will continue to be provided and any changes in water quality will be within the toleration limits of most aquatic species present. This, combined with the benefits provided to these and other nursery areas within the watershed by the compensatory mitigation efforts should ensure that overall impacts to nursery

functions and habitat suitability of the lower Pamlico River estuary are appropriately minimized, and unavoidable impacts are compensated for.

C3. NCDMF calculated that the "indirect impacts to EFH/HAPC total 3,349 acres" and stated that the only way to substantially avoid these impacts is to avoid mining in the NCPC Tract.

R3. I disagree with this assessment. It should be noted that Alternative L directly impacts only approximately 2 acres of area meeting the South Atlantic Fisheries Management Council's (SAFMC) definition of EFH. The NCDMF's calculation of EFH/HAPC impacted thorough Alternative L (3,349 ac) appears to include all areas within the project area that could meet the EFH definition (613 ac) and the entire surface area of South Creek proper (2,736 ac). Many of the areas within the project area overlap, resulting in the same acre being counted more than once. For example, there are 38 acres of area meeting the SAFMC designation of "tidal creeks" within the original project area, all or portions of these areas also meet the SAFMC designation of "unconsolidated bottom" and "estuarine SAV habitat", and the state definition of "Primary Nursery Area". Rather than pare these areas out as falling into more than one category, NCDMF has used the acreages repetitively to inappropriately inflate the overall number of acres. Table 3-18 of the FEIS provides the correct acreage (410) of EFH and HAPC listed by the SAFMC in the project area. As discussed in the ROD, Modified Alternative L would avoid approximately 3.7 acres of tidal palustrine forest EFH at the headwater of Huddy Gut. Direct impacts to EFH under Modified Alternative L would be less than 2 .

C4. NCDMF expressed the opinion that the mitigation addresses only direct impacts.

R4. The Corps disagrees with his statement. The minimization efforts associated with the development of Alternative L were specifically targeted at reducing both direct and indirect impacts to the open waters and nursery areas of the Pamlico River estuary. With the exception of a small portion of the Parker Farm mitigation site included to increase the function of that site as a large and contiguous wildlife corridor, the compensatory mitigation efforts are located entirely within the Lower Pamlico River watershed. The direct and indirect benefits this mitigation will supply to the Lower Pamlico River Watershed and to South Creek Specifically are discussed in Appendix I of the FEIS and in Section 7 of the ROD. All members of the review team have been asked to participate in site visits and review of specific plans for most of the proposed mitigation sites. Only NMFS, NCWRC and NCDWQ have participated.

C5. The potential effect on fishery resources exposed to heavy metals and the likelihood of this exposure is not addressed in the FEIS.

R5. Section 4.1.3.1 of the FEIS thoroughly addresses the current conditions in the surrounding estuary through citation of site specific research projects. This section explains the findings and likely sources of increased concentrations of heavy metals. This section also provides context for metal concentrations found in the vicinity of the existing mining operation by comparing them to concentrations found in other areas of he Pamlico Sound estuary as well as other estuaries. As indicated in Section 4.1.3.1, as well as in NCDMF's memo, evidence suggests that

any increase in metals potentially related to the PCS operation were likely a result of historic practices that have been discontinued.

d. North Carolina Wildlife Resources Commission (NCWRC)

C1. The Entrix report provided in Appendix F of the EIS did not adequately address impacts to freshwater species nor did it establish a linkage between biota and previous mining impacts in the area. Therefore NCWRC asserts that the ability to predict impacts based on the Entrix alone is negated.

R1. Likely impacts to the water quality and habitat value of the nursery creeks originating in the project area are assessed in Section 4.2 of the FEIS. The value and limitations of the information contained in the Entrix report is thoroughly discussed in Summarized Comment 5 and individual responses to comments found in Appendix J of the FEIS.

C2. NCWRC cites that review of data collected from areas surrounding the existing mine operation indicated elevated levels of cadmium within Huddles Cut and Jacks Creek as compared to background levels within the Pamlico River estuary.

R2. The results of this study are discussed in Section 4.1.3.1 of the document along with probable causes and controls.

C3. Appropriate avoidance and minimization has not been conducted prior to consideration of compensatory mitigation.

R3. For reasons discussed in the ROD and FEIS, I find that all appropriate and practicable measures to minimize impacts to aquatic resources have been accomplished. Determination of the LEDPA, as well as appropriate avoidance and minimization, was made without consideration of compensatory mitigation.

C4. The NCWRC does not agree that a 1.8:1 mitigation ratio is adequate to compensate for the impacts the project will have on the ecosystem.

R4. Implementation of the currently proposed compensatory mitigation plan will result in a 2:1 ratio of wetland restoration along with additional preservation and enhancement.

C5. NCWRC does not believe the compensatory mitigation plan addresses the difference in complexity and function between ecosystems within the NCPC Tract and the proposed mitigation areas.

R5. This issue was addressed in Appendix I of the FEIS and is further addressed in Section 7 of the ROD.

e. Pamlico Tar River Foundation (PTRF)

The majority of the comments made by PTRF have been thouroughly addressed either in the FEIS or the ROD.

C1. The Corps process places emphasis on maintaining profit at all times at the expense of the public's resources.

It seems by this comment that PTRF suffers from a fundamental misunderstanding of both the Corps' practicability evaluation and the overall decision making process. Our decision is in no way based on measuring PCS's profit. The only use we have made of reported "profit" is in demonstrating that a change in the ratio of PCS's cost of mining to USGS's reported "value" of the product appears to have an affect on the company's operating income.

The Corps has given extensive consideration to both the cost of mining the various alternatives, and the important resources impacted by each alternative. As discussed fully in this ROD, I have determined the least damaging practicable alternative, as required by the 404(b)(1) guidelines, and have fully considered both the public interest and the potential for significant degradation to the aquatic environment.

f. Southern Environmental Law Center (SELC)

C1. The economic analysis does not overcome the presumption that less damaging practicable alternatives [than Alternative L] exist

R1. The presumption created by the 404(b)(1) Guidelines is that if a proposed project is not water dependent, "practicable alternatives that do not involve special aquatic sites are presumed to be available" and are also presumed to have less adverse impact on the aquatic ecosystem. 40 CFR Section 230.10 (a)(3). The Corps has agreed, over PCS's strenuous objection, that phosphate mining is not water dependent, which raises a rebuttable presumption that there is a practicable alternative that does not involve special aquatic sites, including wetlands. PCS has provided information in the form of a mine plan that would not involve filling waters or wetlands (the no action alternative), as well as detailed costs for that plan. The Corps has reviewed that information, and concurred in Section 2.7 of the FEIS that mining S33 is currently not practicable.

PCS also has the burden of showing that there is no less damaging practicable alternative to the proposed action, in this case, Alternative L. PCS has provided extensive cost and economic information, in the form of cost models, and information on phosphate market conditions. The Corps has reviewed that data carefully, and has solicited input from EPA economists; the USGS, and others. As explained in Section 2.7 of the FEIS, the Corps has found that Modified Alternative L is the least damaging practicable alternative.

Finally, SELC has argued that the Corps has not considered alternatives "between" SCRA, which the Corps has found to be not practicable, and Alternative L, which the Corps has found to

be practicable. While the Corps has not developed an additional alternative, we have required further minimization of Alternative L, resulting in Modified Alternative L.

C2. The Corps' treatment of potential mining S33 is inconsistent, because the Corps is considering alternatives that include mining essentially all of S33, while at the same time making decisions on practicability recognizing that S33 may not be mined.

R2. I do not find these positions to be inconsistent. Based on the high annual cost of mining the southern portion of the S33 tract, the Corps has consistently found that the stand-alone S33 alternative is not economically practicable under current market conditions. See, e.g., DEIS, Section 2.7.4. The Corps has also noted that the phosphate market is extremely volatile, depending on world demand for and production of phosphate products. Because of this volatility, predicting economic viability of longer term plans becomes increasingly uncertain in the later years of those plans. The Corps' position is that market conditions may change in the future, potentially making the cost of mining all of S33 practicable, and that it is therefore reasonable to include S33 in long term mine plans. Mining S33 occurs after the initial approximately 15 years of all holistic alternatives I have found to be practicable; a permit for any of these alternatives would allow mining S33; it does not require mining S33. In contrast, I cannot find that it is certain that mining all of S33 will become viable, and therefore consider that a practicable alternative must allow approximately 15 years of mining before being required to move to S33. I believe these two treatments of the S33 question are reasonable and consistent.

C3. The FEIS failed to respond to substantive comments of economist Dr. Douglas Wakeman on the SDEIS.

R3. The substantive issues raised by Dr. Wakeman were presented as an Exhibit to SELC's, comment letter of December 31, 2007, on the SDEIS. Dr. Wakeman discussed three perceived problems with "the original 'full cost' analysis in the DEIS"

1. "[T]he analysis was truncated at 15 years, which is wholly inadequate when several of the alternatives exceed 40 years in length. This failure appears to be both arbitrary and capricious, and must be remedied."
2. "[T]he analysis applied Generally-Accepted Accounting Principles . . . financial analysts much prefer to use actual cash flows rather than accounting measures."
3. Failure to use discounted values, so that conclusions could be properly and defensibly drawn on the basis of Net Present Values

SELC's FEIS comment letter also stated that Dr. Wakeman's calculation and comparison of the Net Present Value of the total cost of the various alternatives showed that Alternatives SCRA and SJAA, and possibly DL1B were practicable alternatives. SELC contends that the Corps did not respond to these substantive comments.

The Corps responded appropriately to Dr. Wakeman's comments. With regard to Dr. Wakeman's disapproval of the Marston Cost Model, which used Generally-Accepted Accounting Principles, the Corps pointed out that "the applicant, members of the Review Team and others, including Dr. Wakeman, reviewed the cost model as well as the Corps approach to

practicability during the DEIS process, and no indication was ever given that the model or approach may not be appropriate." The "others" mentioned included Corps and EPA economists. The cost model was presented to Review Team members, including SELC's client, Pamlico Tar River Foundation (PTRF), on April 21, 2005, and discussed at that and subsequent review team meetings. The meeting minutes for June 27, 2006, again attended by PTRF, state that the Corps economist had reviewed the cost model favorably and review team members were invited to have other economists evaluate the model. Pointing out that professional economists had reviewed the Marston model and found it acceptable is a substantive response to Dr. Wakeman's contention that a different method of calculating cost would be preferable. The Corps response that Dr. Wakeman did not raise a concern about any of the DEIS analysis in his comments on the DEIS is also a valid response to this later comment that the DEIS analysis is arbitrary, capricious and unreasonable.

In addition, the Corps responded to the SELC's SDEIS comments regarding use of the Marston Cost model, or full cost model, as opposed to the cash cost model. See, e.g. comments and responses 50 and 52. Interestingly, while Dr. Wakeman's letter, which is Exhibit F to SELC's SDEIS comment letter, criticized the Marston Cost model because of it's use of Generally-Accepted Accounting principals instead of the actual cash flows the cash cost model uses, the body of SELC's letter commented that the Corps should continue to use the Marston full cost model, stating that it "is logical and is how PCS actually accounts for its costs."

With regard to Dr. Wakeman's criticism of the approximately 15 year analysis period, the Corps appropriately responded that Section 2.7 of the FEIS was updated to provide further explanation of the relevance of the 15-year period. Section 2.75 of the FEIS includes an added discussion of why the Corps considers the approximately 15 year period to be appropriate.

Dr. Wakeman's final point of criticism was that the Corps failed to use discounted values in conjunction with a cost analysis using the Capital Budgeting, or cash cost method of calculating costs. Dr. Wakeman's analysis compared the total cost of alternatives, albeit at discounted costs, to one another. The Corps responded by referring the reader to Section 2.7 and the Corps' determination that comparison of total cost of alternatives was "of little use in determining practicability in Section 2.7 of the FEIS, and in response to SELC's comment letter (Response 43). See also, response to general comments; Net Present Value, above.

C4. The Corps' statement that it has not adopted the cash cost model is false.

R4. SELC has also argued that the Corps has been less than candid about its use of the Marston model and cash cost model, by stating in the FEIS that it has not adopted the cash cost model. I believe that SELC's argument is more of a disagreement about terminology than about any misunderstanding of the data and rationale the Corps used in reaching its decision in this matter. The Corps explanation in Section 2.7 of the FEIS is an open and frank explanation of the data and reasoning supporting the practicability determination. See also general discussion, Marston Model v. Cash Cost Model, above.

C5. The FEIS failed to respond to substantive comments contained in a document submitted by PTRF, entitled "Impacts to the Aquatic Environment Associated with PCS Phosphate, Inc. Proposed Mine Expansion" (Report).

R5. The referenced report was attached to PTRF's comment letter dated February 8, 2007, addressing the DEIS, and the merits of the proposed project, which at that time consisted of the AP/EAP alternatives. According to PTRF, the Report shows that "the proposed mine advance [alternatives AP/EAP] would result in the significant degradation of the aquatic environment, and therefore cannot be permitted under CWA Section 404(b)1 guidelines." The Report itself details the specific impacts of the proposed project [alternatives AP/EAP]. The Corps' response to PTRF's comment designated C32 was a statement that the report included relevant information to the consideration of impacts and to the final decision on compliance with the 404(b)(1) Guidelines, and that much of the information had been incorporated into the FEIS. Contrary to SELC's statement, however, that is not the only response the Corps made to the discussions contained in the report.

The Corps also designated as C4 PTRF's comment that the Report states that the "proposed mine advance [AP/EAP] would result in significant degradation", and therefore cannot be permitted. The Corps responded by concurring that the AP/EAP alternative cannot be permitted, because it is not the least damaging practicable alternative, that other alternatives were being considered in the FEIS, and that PTRF's input would be considered in making the final permit decision.

In addition, the body of PTRF's comment letter made the same points as did the Report, albeit in less detail, to which the Corps provided substantive responses. The Report discussed potential elemental contamination, primarily from cadmium; impacts of drainage basin reductions; nutrient cycling; loss of the water quality filtration provided by headwater streams and associated wetlands; impacts from dike construction and mitigation. All of these topics were addressed in the body of the PTRF letter; the Corps properly identified these specific comments and responded to them substantively. See, e.g. comment/responses 24, 26, 27, 31, 34-41 and 44-47. In addition, many of the issues raised in the Report were raised by several commenters, and were discussed in some detail in Summary Responses 5, 7 and 11.

g. <u>National Marine Fisheries Service.</u>

The comments of the National Marine fisheries Service have been thoroughly addressed in ROD, predominantly in Section 8.c.

ATTACHMENT 2 TO RECORD OF DECISION
ACTION ID 200110096
PROPOSED PERMIT SPECIAL CONDITIONS

This Permit authorizes impacts associated with the Modified Alternative L mining boundary depicted on the attached figures titled PCS Phosphate Mine Continuation, for the NCPC Tract dated May 28, 2009 and Bonnerton, and S33 Tracts dated May 18, 2009. This includes impacts to 3,922 acres of Waters of the US included in the Modified 401 Water Quality Certification No 3771 issued by the NC Division of Water Quality on 15 January 2009.

This Permit also provisionally authorizes impacts to 4.98 acres of Waters of the US associated with the relocation of NC Highway 306 as depicted on the attached figure titled PCS Phosphate Mine Continuation, for NCPC dated January 6, 2009. Authorization of this 4.98 acre impact is provisional upon receipt of a 401 Water Quality Certification from the NC Division of Water Quality and approval from the NC Division of Coastal Management in the form of either a Coastal Zone Consistency Determination or a Coastal Area Management Act Permit.

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 Proposed Impact Boundary" dated May 28, 2009 and "Modified Alt L – Bonnerton Proposed Impact Boundary" and "Modified Alt L – South of 33 Proposed Impact Boundary", 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 US 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 and not to exceed 40 feet along the Impact Boundary as identified in the attached map labeled "Modified Alt L – NCPC Proposed Impact Boundary" as presented May 18, 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 Proposed Impact Boundary" and "Modified Alt L – South of 33 Proposed Impact Boundary", 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 2 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 NC 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 2,445 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. In addition,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;" "Conservation Easement – Jacks Creek Modified Alternative L – NCPC;" and "Conservation Easement – Porter Creek Modified Alt L – Bonnerton" all dated May 18, 2009 and attached here.

EE) The Permittee shall not begin work authorized by this permit until 10 days following the issuance date of the permit or until the permitee receives written notification from the Environmental Protection Agency that it will not exercise it's veto authority within the 10 day period.

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.

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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.

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			
SC Corridor			1143.0			3960
P Lands	2075.0	381.0	135.0			26736
U Lands	608.0		117.0			
Upper Back Creek	116.0	38.0	18.0	7066.0		
Rutman	3342.0	129.0	701.0	8793.0	7994.0	1149.0
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

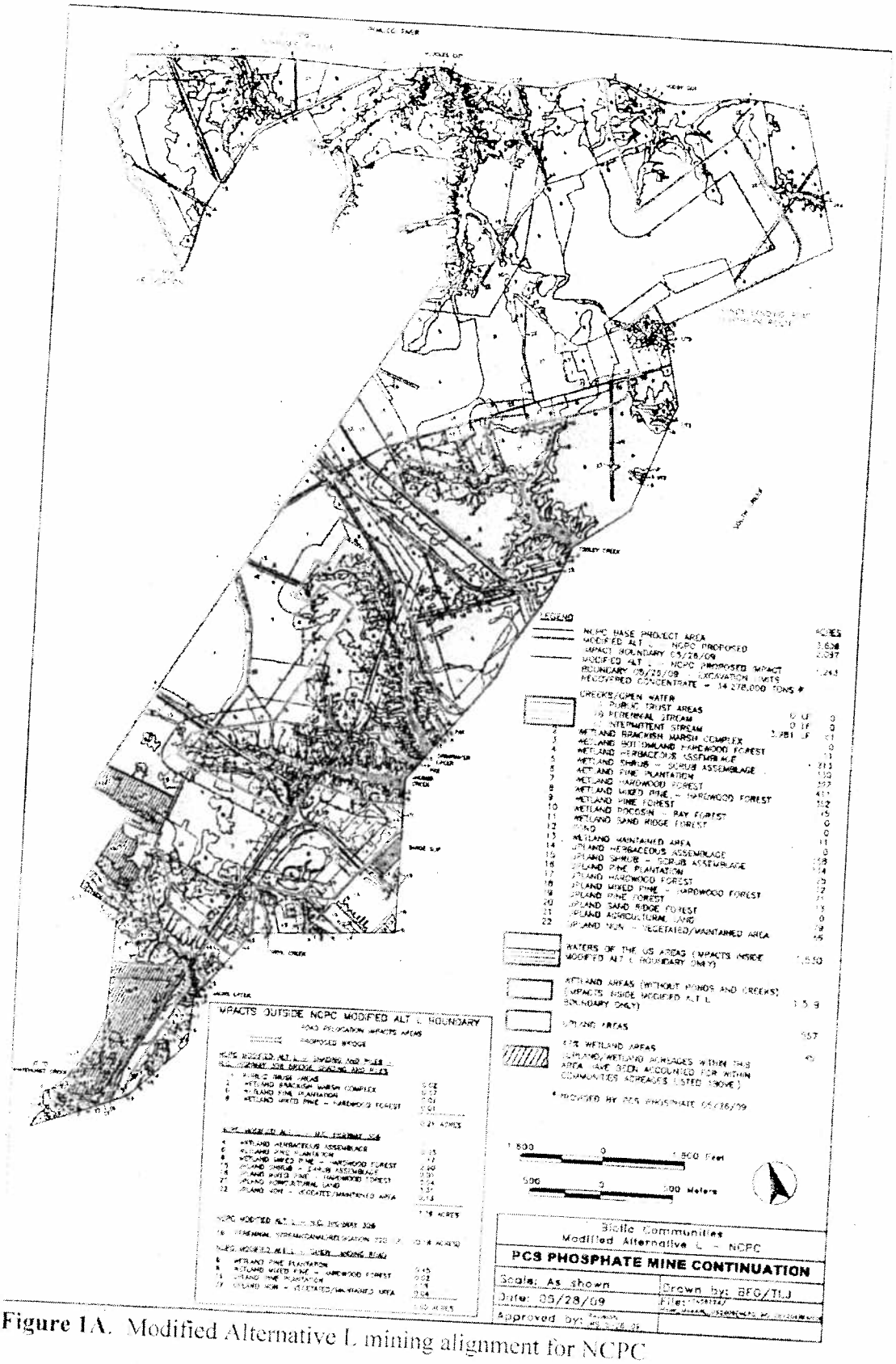


Figure 1A. Modified Alternative L mining alignment for NCPC

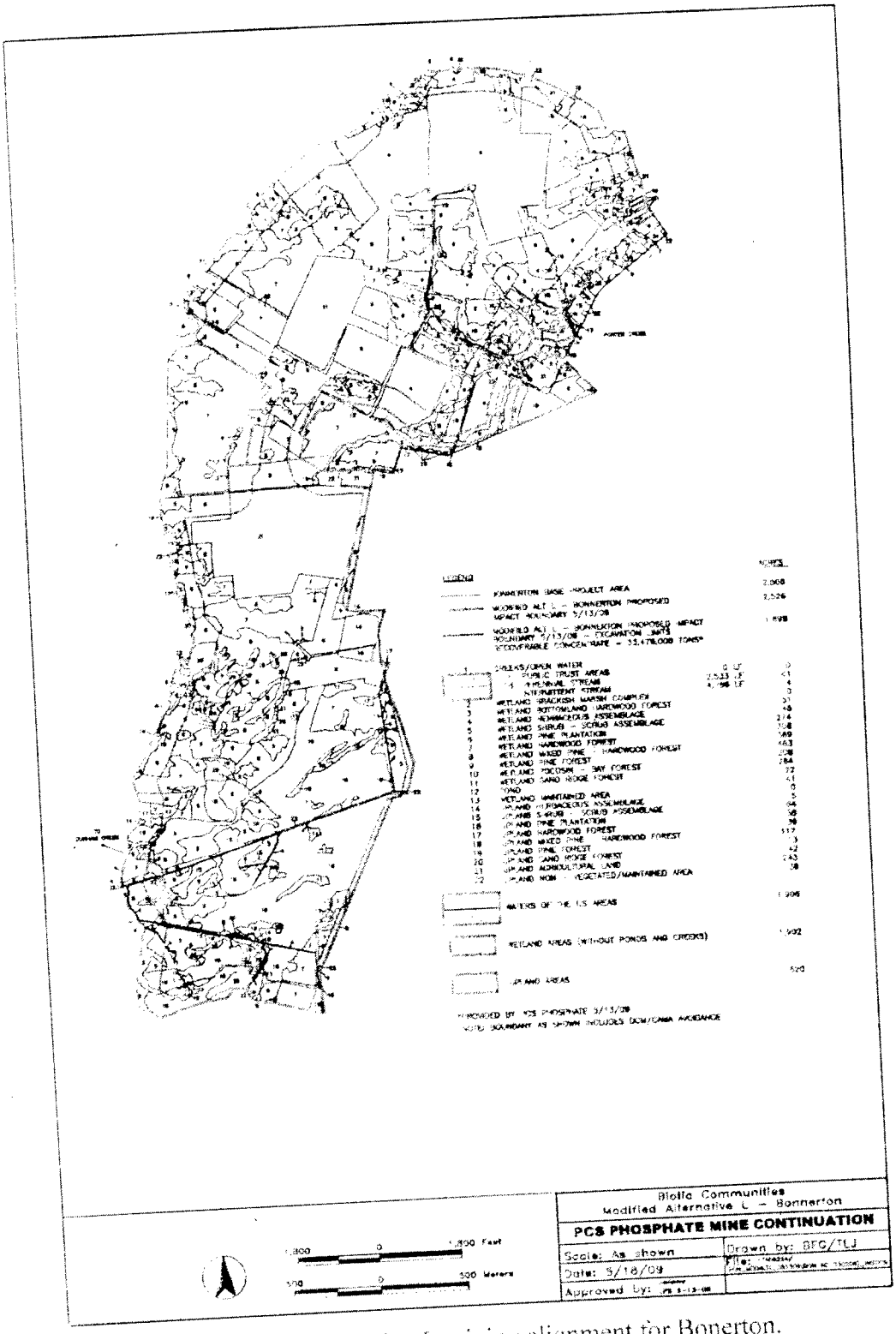


Figure 1B. Modified Alternative L mining alignment for Bonerton.

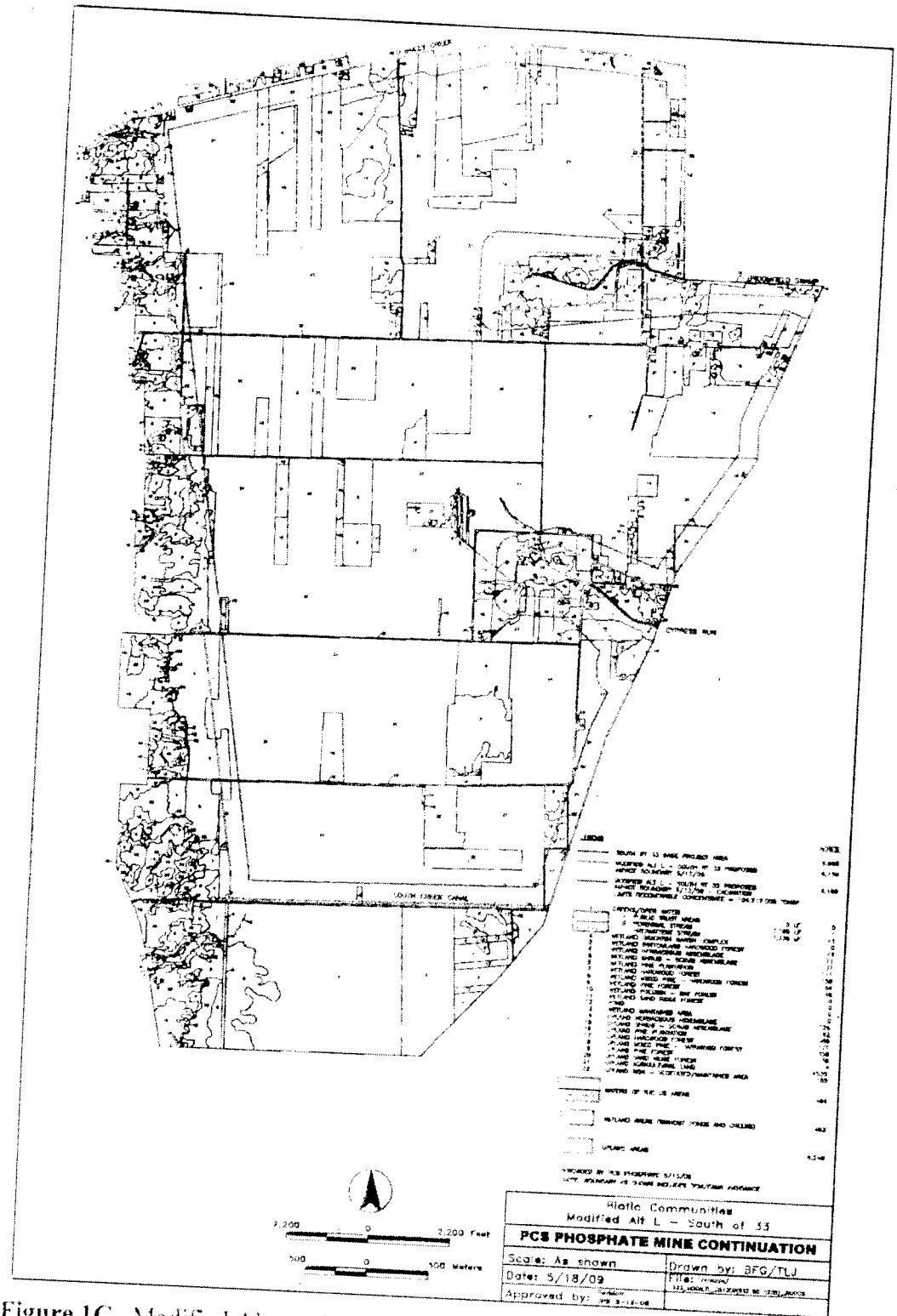


Figure 1C. Modified Alternative L mining alignment for S33.

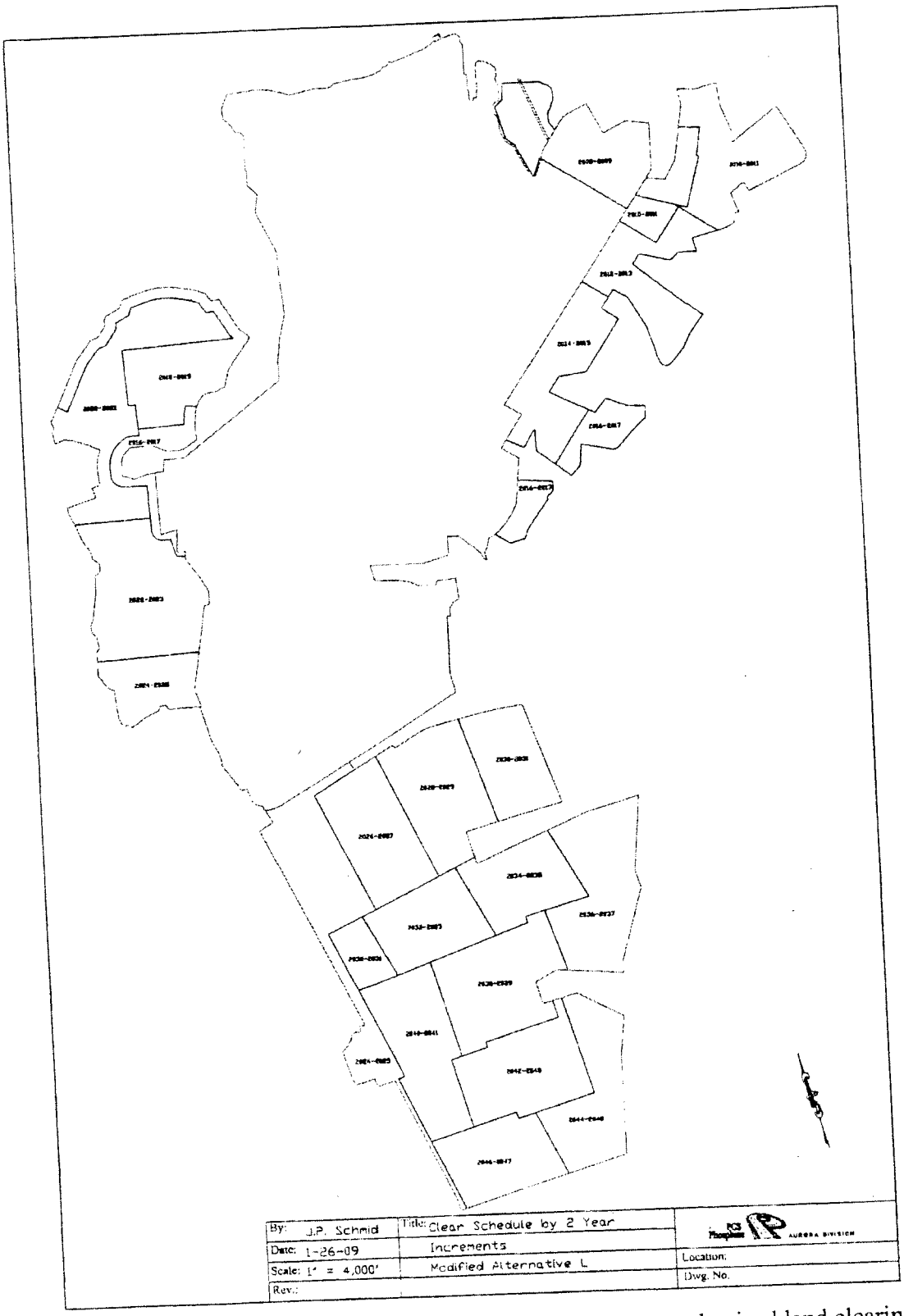


Figure 2. Initial impact schedule. This reflects dates when mechanized land clearing will be necessary in order to prepare for mine advance.

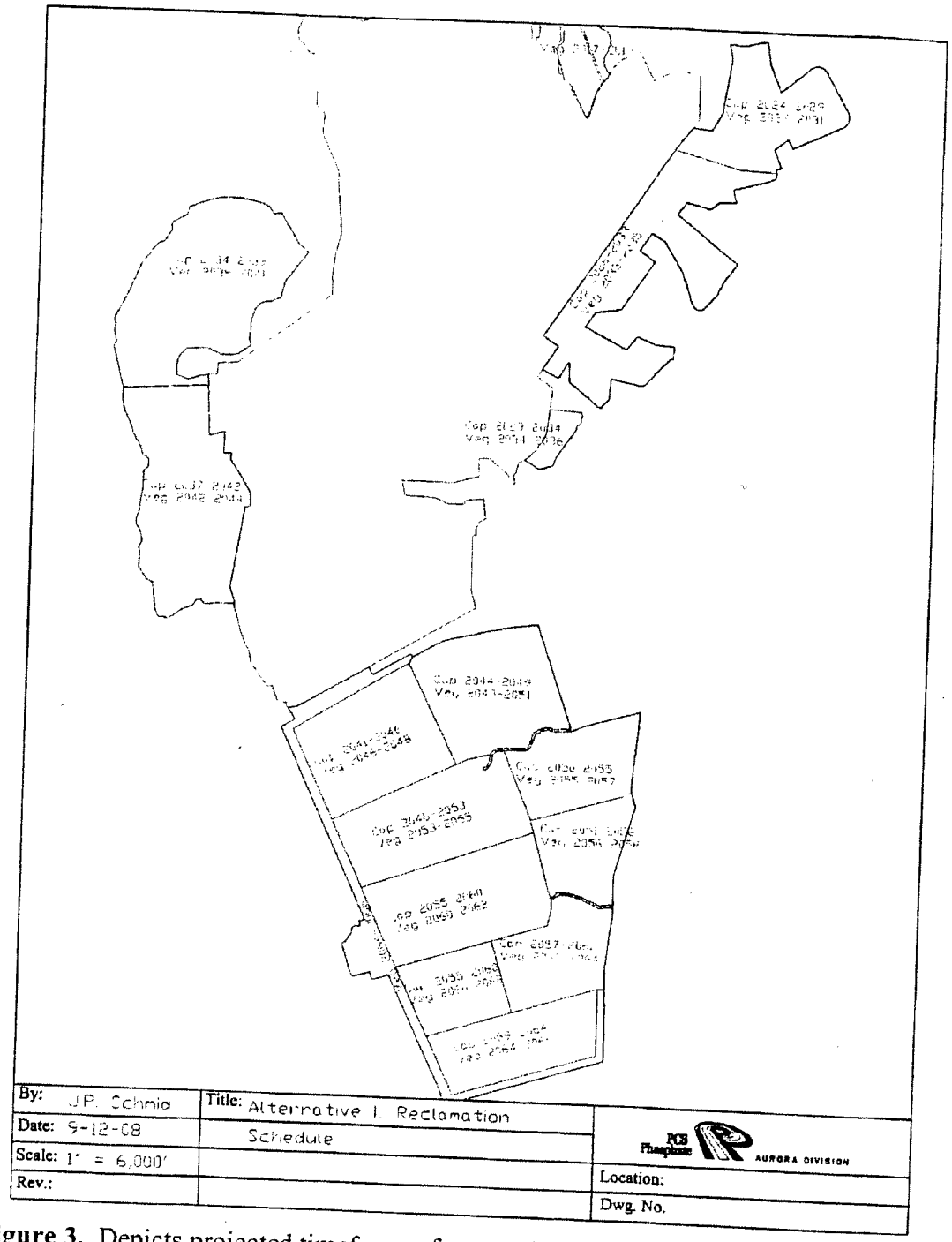


Figure 3. Depicts projected timeframes for completion of reclamation activities.

"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"

bcc

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

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			
SC Corridor			1143.0			3960
P Lands	2075.0	381.0	135.0			26736
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

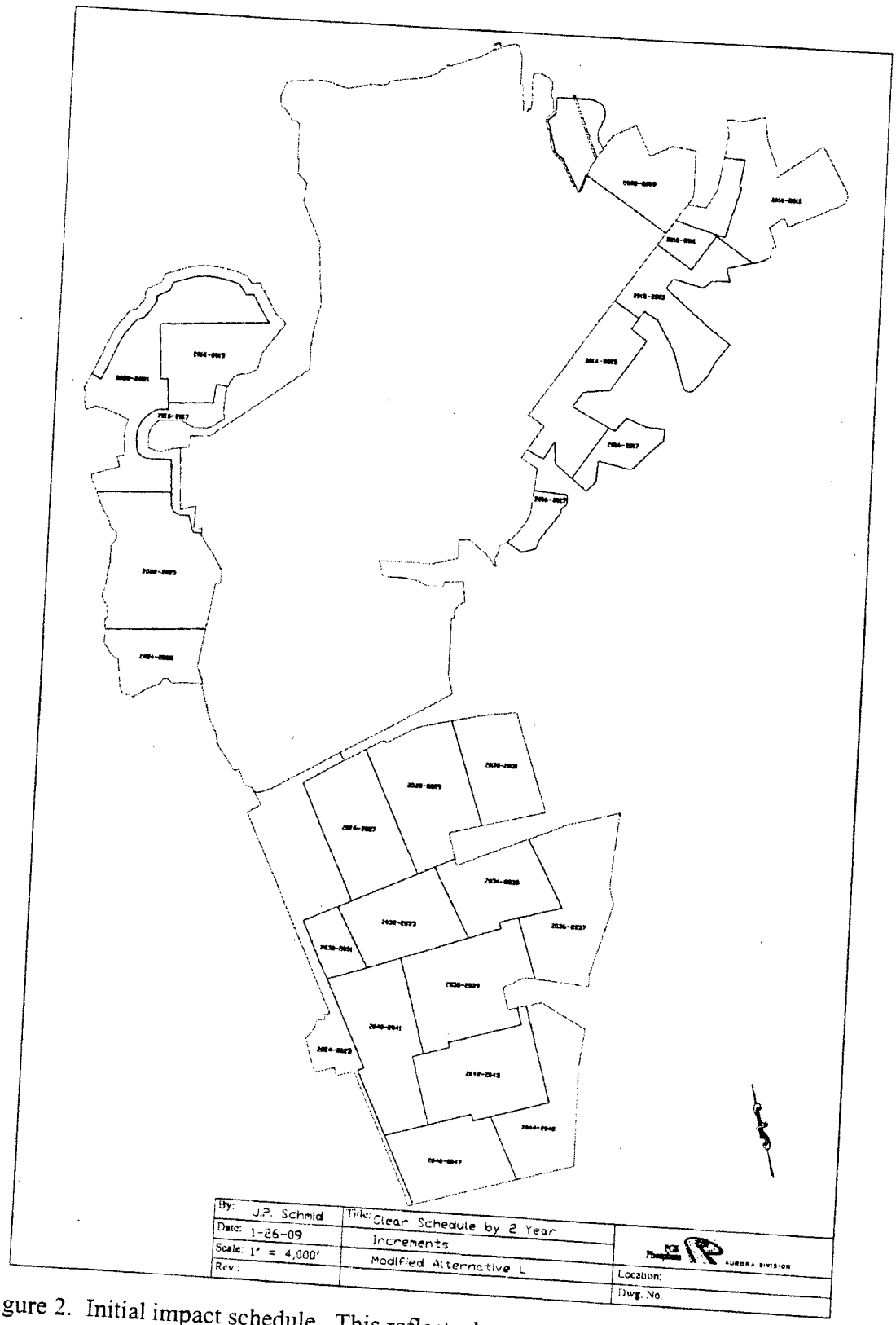


Figure 2. Initial impact schedule. This reflects dates when mechanized land clearing will be necessary in order to prepare for mine advance.

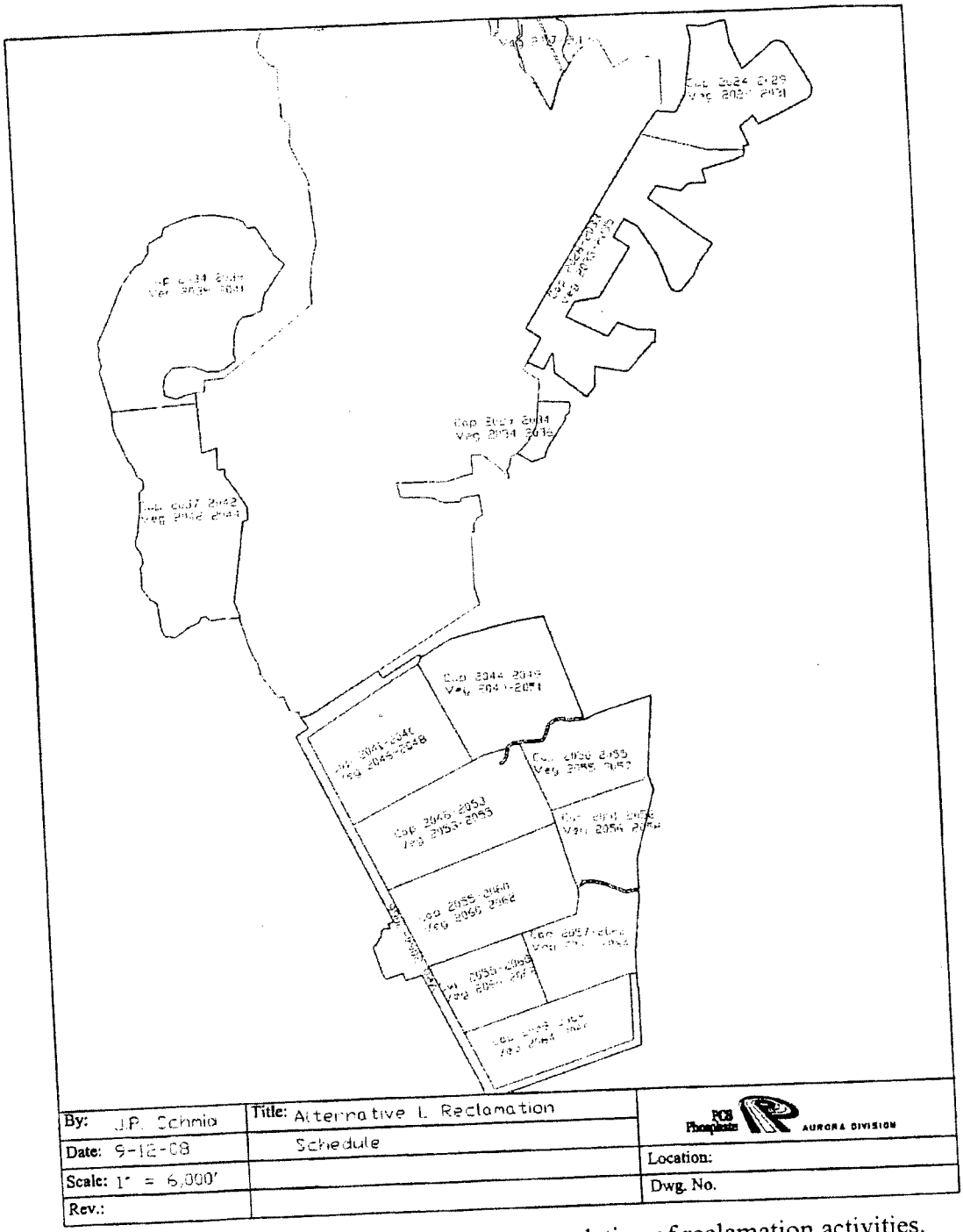
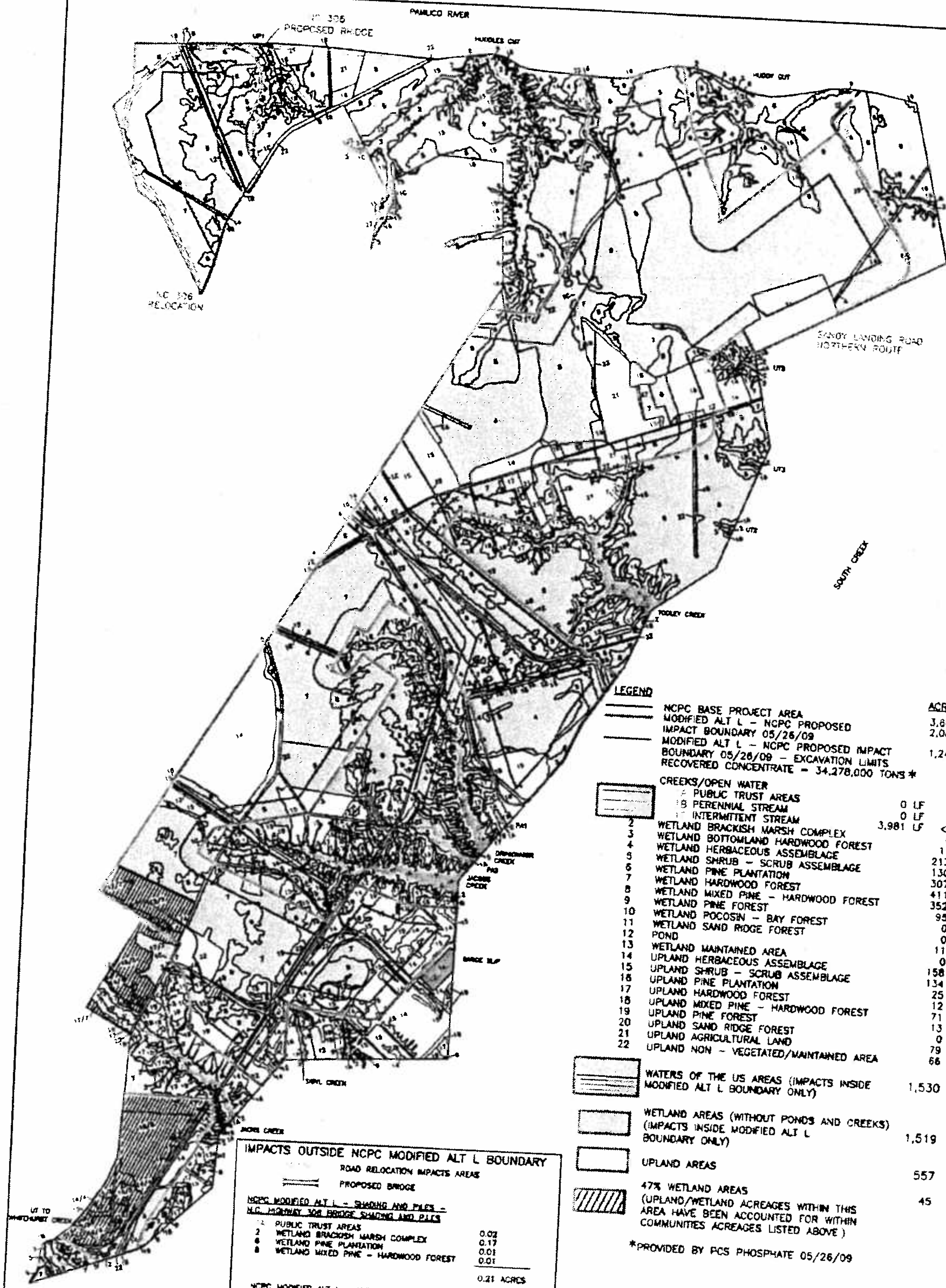


Figure 3. Depicts projected timeframes for completion of reclamation activities.



LEGEND

		ACRES
	NCPC BASE PROJECT AREA	
	MODIFIED ALT L – NCPC PROPOSED	3,608
	IMPACT BOUNDARY 05/26/09	2,087
	MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS	1,243
	RECOVERED CONCENTRATE = 34,278,000 TONS *	
	CREEKS/OPEN WATER	
	PUBLIC TRUST AREAS	
18	PERENNIAL STREAM 0 LF	0
	INTERMITTENT STREAM 0 LF	0
2	WETLAND BRACKISH MARSH COMPLEX 3,981 LF	<1
3	WETLAND BOTTOMLAND HARDWOOD FOREST	0
4	WETLAND HERBACEOUS ASSEMBLAGE	11
5	WETLAND SHRUB – SCRUB ASSEMBLAGE	213
6	WETLAND PINE PLANTATION	130
7	WETLAND HARDWOOD FOREST	307
8	WETLAND MIXED PINE – HARDWOOD FOREST	411
9	WETLAND PINE FOREST	352
10	WETLAND POCOSIN – BAY FOREST	95
11	WETLAND SAND RIDGE FOREST	0
12	POND	0
13	WETLAND MAINTAINED AREA	11
14	UPLAND HERBACEOUS ASSEMBLAGE	0
15	UPLAND SHRUB – SCRUB ASSEMBLAGE	158
16	UPLAND PINE PLANTATION	134
17	UPLAND HARDWOOD FOREST	25
18	UPLAND MIXED PINE – HARDWOOD FOREST	12
19	UPLAND PINE FOREST	71
20	UPLAND SAND RIDGE FOREST	13
21	UPLAND AGRICULTURAL LAND	0
22	UPLAND NON – VEGETATED/MAINTAINED AREA	79
		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

	PUBLIC TRUST AREAS	
2	WETLAND BRACKISH MARSH COMPLEX	0.02
6	WETLAND PINE PLANTATION	0.17
8	WETLAND MIXED PINE – HARDWOOD FOREST	0.01
		0.01
		0.21 ACRES

NCPC MODIFIED ALT L – N.C. HIGHWAY 306

4	WETLAND HERBACEOUS ASSEMBLAGE	
6	WETLAND PINE PLANTATION	0.03
8	WETLAND MIXED PINE – HARDWOOD FOREST	1.47
15	UPLAND SHRUB – SHRUB ASSEMBLAGE	2.80
18	UPLAND MIXED PINE – HARDWOOD FOREST	0.01
21	UPLAND AGRICULTURAL LAND	0.04
22	UPLAND NON – VEGETATED/MAINTAINED AREA	3.31
		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	
8	WETLAND MIXED PINE – HARDWOOD FOREST	0.45
16	UPLAND PINE PLANTATION	0.02
22	UPLAND NON – VEGETATED/MAINTAINED AREA	1.09
		0.04
		1.60 ACRES

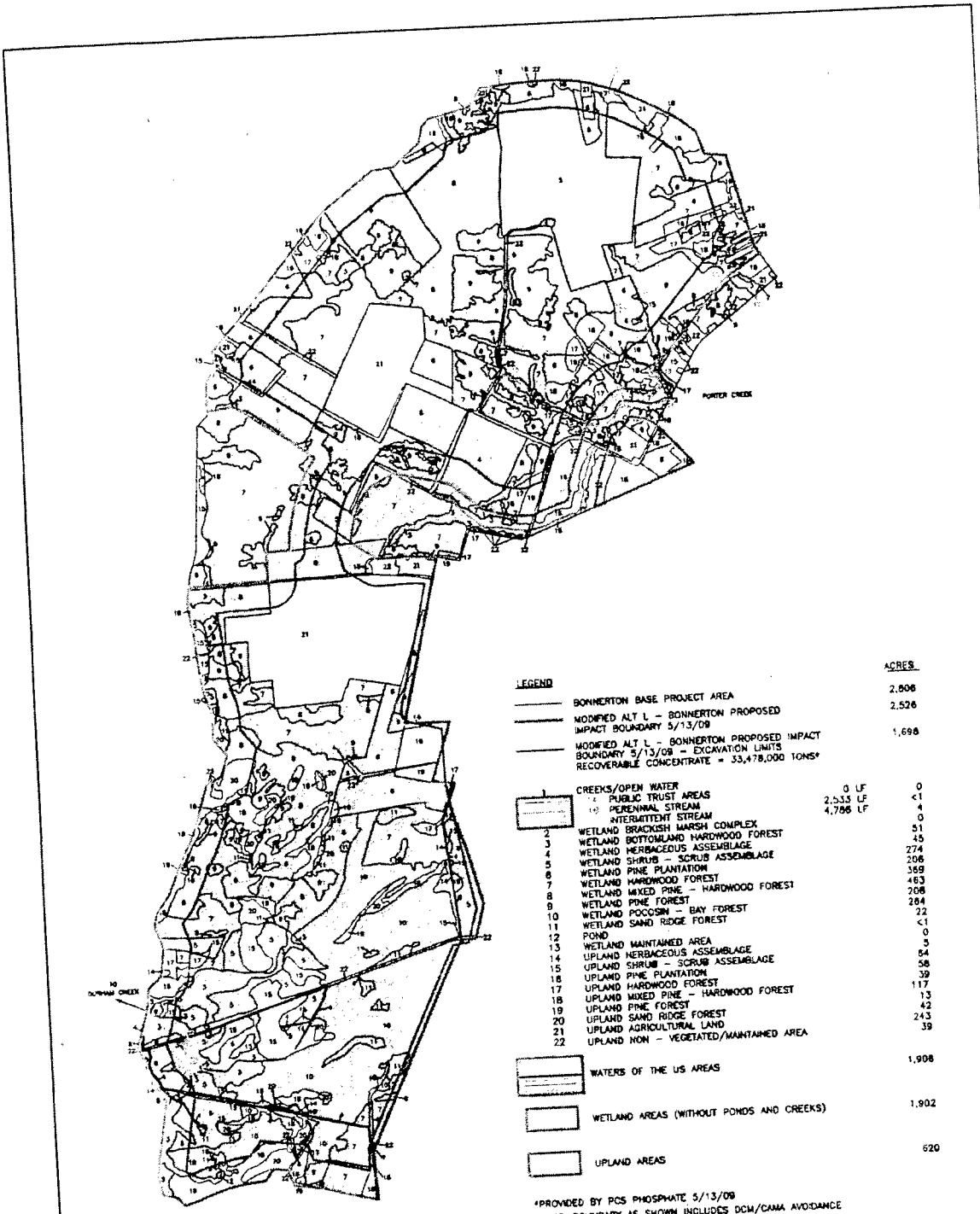
1,800 0 1,800 Feet

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: 17436224/ NCPC_ModAltL_052609(NCPC BC 051209)Biotic
Approved by: Revision JPS 5-26-09	



LEGEND			ACRES
	BONNERTON BASE PROJECT AREA		2,506
	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	0 LF	0
	PUBLIC TRUST AREAS	2,533 LF	<1
	PERENNIAL STREAM	4,786 LF	4
	INTERMITTENT STREAM		0
2	WETLAND BRACKISH MARSH COMPLEX		51
3	WETLAND BOTTOMLAND HARDWOOD FOREST		45
4	WETLAND HERBACEOUS ASSEMBLAGE		274
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		206
6	WETLAND PINE PLANTATION		369
7	WETLAND HARDWOOD FOREST		463
8	WETLAND MIXED PINE – HARDWOOD FOREST		208
9	WETLAND PINE FOREST		284
10	WETLAND POCOSIN – BAY FOREST		22
11	WETLAND SAND RIDGE FOREST		<1
12	POND		0
13	WETLAND MAINTAINED AREA		9
14	UPLAND HERBACEOUS ASSEMBLAGE		84
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		58
16	UPLAND PINE PLANTATION		39
17	UPLAND HARDWOOD FOREST		117
18	UPLAND MIXED PINE – HARDWOOD FOREST		13
19	UPLAND PINE FOREST		42
20	UPLAND SAND RIDGE FOREST		243
21	UPLAND AGRICULTURAL LAND		39
22	UPLAND NON – VEGETATED/MAINTAINED AREA		
	WATERS OF THE US AREAS		1,908
	WETLAND AREAS (WITHOUT PONDS AND CREEKS)		1,902
	UPLAND AREAS		620

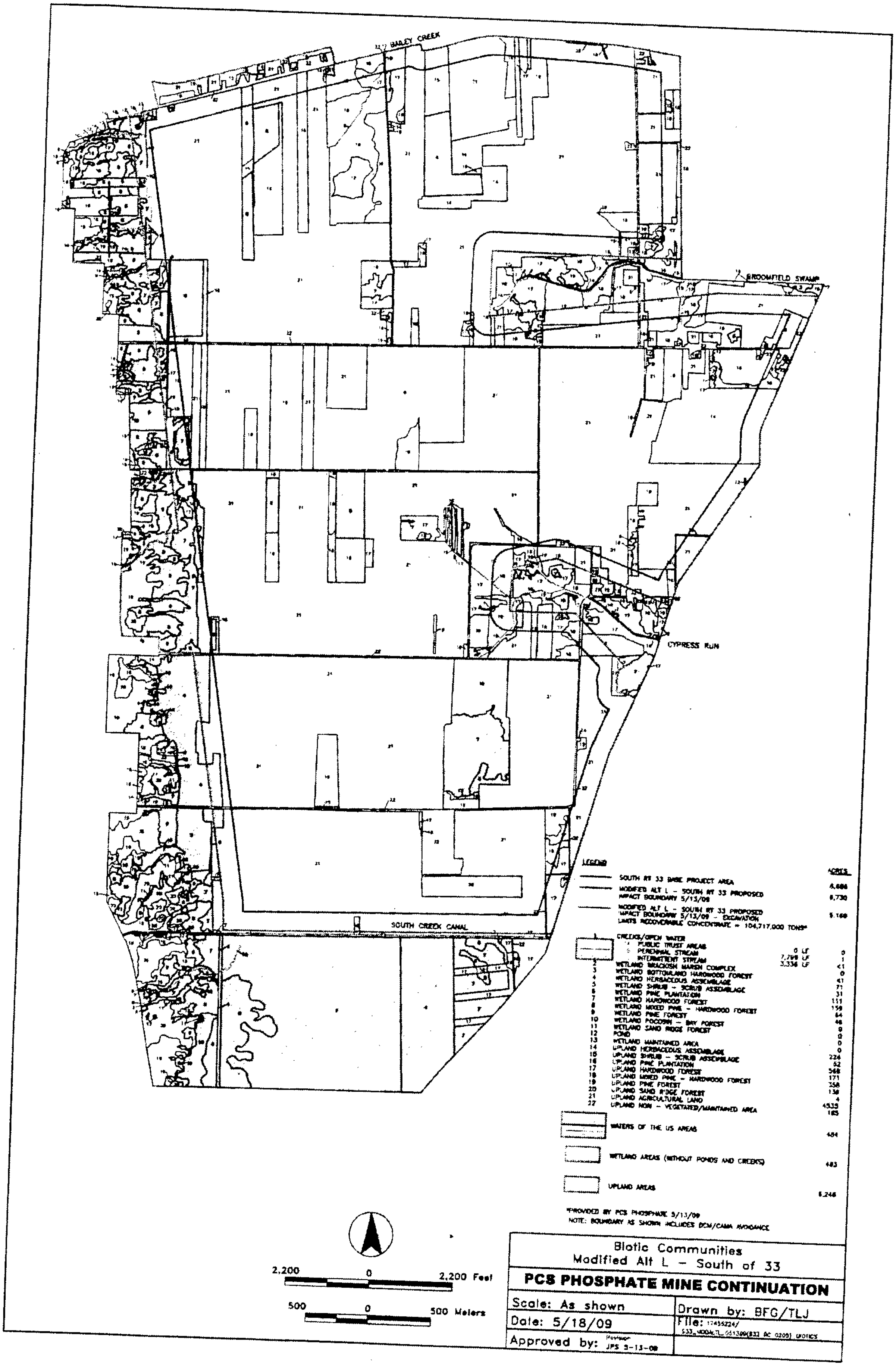
*PROVIDED BY PCS PHOSPHATE 5/13/09
NOTE: BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE

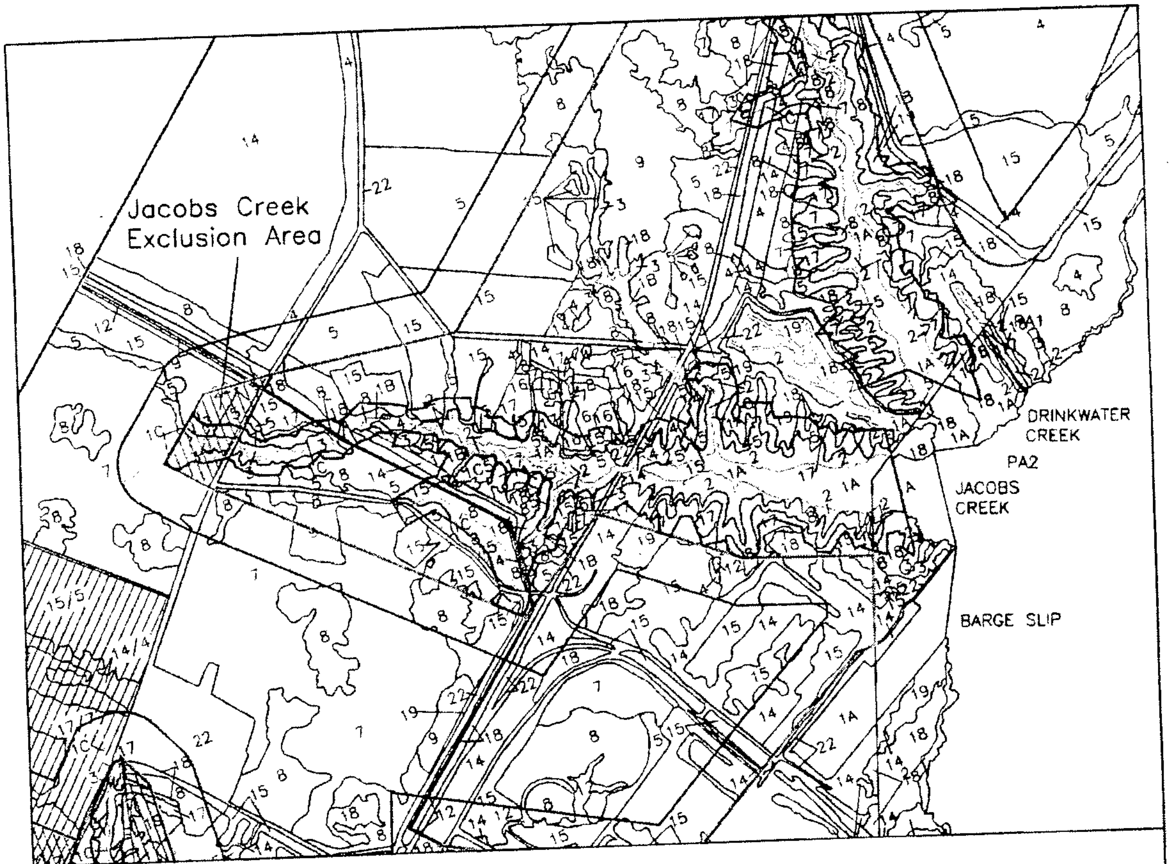
1,800 0 1,800 Feet
500 0 500 Meters

Biotic Communities
Modified Alternative L – Bonnerton

PCS PHOSPHATE MINE CONTINUATION

Scale: As shown	Drawn by: BFG/TLJ
Date: 5/18/09	File: 7458224/BON_MODALTL_051309(BON BC 052208)_BIOTICS
Approved by: Revised: JPS 5-13-09	


BAILEY CREEK
BROOMFIELD SWAMP
CYPRESS RUN
SOUTH CREEK CANAL
LEGEND
ACRES
SOUTH RT 33 BASE PROJECT AREA 4,686
MODIFIED ALT L – SOUTH RT 33 PROPOSED IMPACT BOUNDARY 5/13/09 8,730
MODIFIED ALT L – SOUTH RT 33 PROPOSED IMPACT BOUNDARY 5/13/09 – EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 104,717,000 TONS* 5,166
1 CREEKS/OPEN WATER
PUBLIC TRUST AREAS 0 LF 0
PERENNIAL STREAM 7,799 LF 1
INTERMITTENT STREAM 3,336 LF <1
2 WETLAND BRACKISH MARSH COMPLEX 0
3 WETLAND BOTTOMLAND HARDWOOD FOREST 41
4 WETLAND HERBACEOUS ASSEMBLAGE 71
5 WETLAND SHRUB – SCRUB ASSEMBLAGE 31
6 WETLAND PINE PLANTATION 111
7 WETLAND HARDWOOD FOREST 159
8 WETLAND MIXED PINE – HARDWOOD FOREST 64
9 WETLAND PINE FOREST 46
10 WETLAND POCOSIN – BAY FOREST 0
11 WETLAND SAND RIDGE FOREST 0
12 POND 0
13 WETLAND MAINTAINED AREA 0
14 UPLAND HERBACEOUS ASSEMBLAGE 224
15 UPLAND SHRUB – SCRUB ASSEMBLAGE 62
16 UPLAND PINE PLANTATION 568
17 UPLAND HARDWOOD FOREST 171
18 UPLAND MIXED PINE – HARDWOOD FOREST 358
19 UPLAND PINE FOREST 138
20 UPLAND SAND RIDGE FOREST 4
21 UPLAND AGRICULTURAL LAND 4535
22 UPLAND NON – VEGETATED/MAINTAINED AREA 185
WATERS OF THE US AREAS 484
WETLAND AREAS (WITHOUT PONDS AND CREEKS) 483
UPLAND AREAS 8,246
*PROVIDED BY PCS PHOSPHATE 5/13/09
NOTE: BOUNDARY AS SHOWN INCLUDES DCM/CAMA AVOIDANCE
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/ S33_MODALTL_051309(B33 AC 0209) BIOTICS
Approved by: Revision JPS 5-13-09



LEGEND

		LF	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		0.0
	PUBLIC TRUST AREAS	0.0 LF	0.0
	PERENNIAL STREAM	0.0 LF	0.19
	INTERMITTENT STREAM	830 LF	0.0
2	WETLAND BRACKISH MARSH COMPLEX		0.56
3	WETLAND BOTTOMLAND HARDWOOD FOREST		0.0
4	WETLAND HERBACEOUS ASSEMBLAGE		1 28
5	WETLAND SHRUB – SCRUB ASSEMBLAGE		0.0
6	WETLAND PINE PLANTATION		1.82
7	WETLAND HARDWOOD FOREST		0.0
8	WETLAND MIXED PINE – HARDWOOD FOREST		0.09
9	WETLAND PINE FOREST		0.0
10	WETLAND POCOSIN – BAY FOREST		0.0
11	WETLAND SAND RIDGE FOREST		0.04
12	POND		0.0
13	WETLAND MAINTAINED AREA		0.0
14	UPLAND HERBACEOUS ASSEMBLAGE		1.84
15	UPLAND SHRUB – SCRUB ASSEMBLAGE		0.0
16	UPLAND PINE PLANTATION		0.0
17	UPLAND HARDWOOD FOREST		0.01
18	UPLAND MIXED PINE – HARDWOOD FOREST		0.0
19	UPLAND PINE FOREST		0.0
20	UPLAND SAND RIDGE FOREST		0.0
21	UPLAND AGRICULTURAL LAND		0.35
22	UPLAND NON – VEGETATED/MAINTAINED AREA		
	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

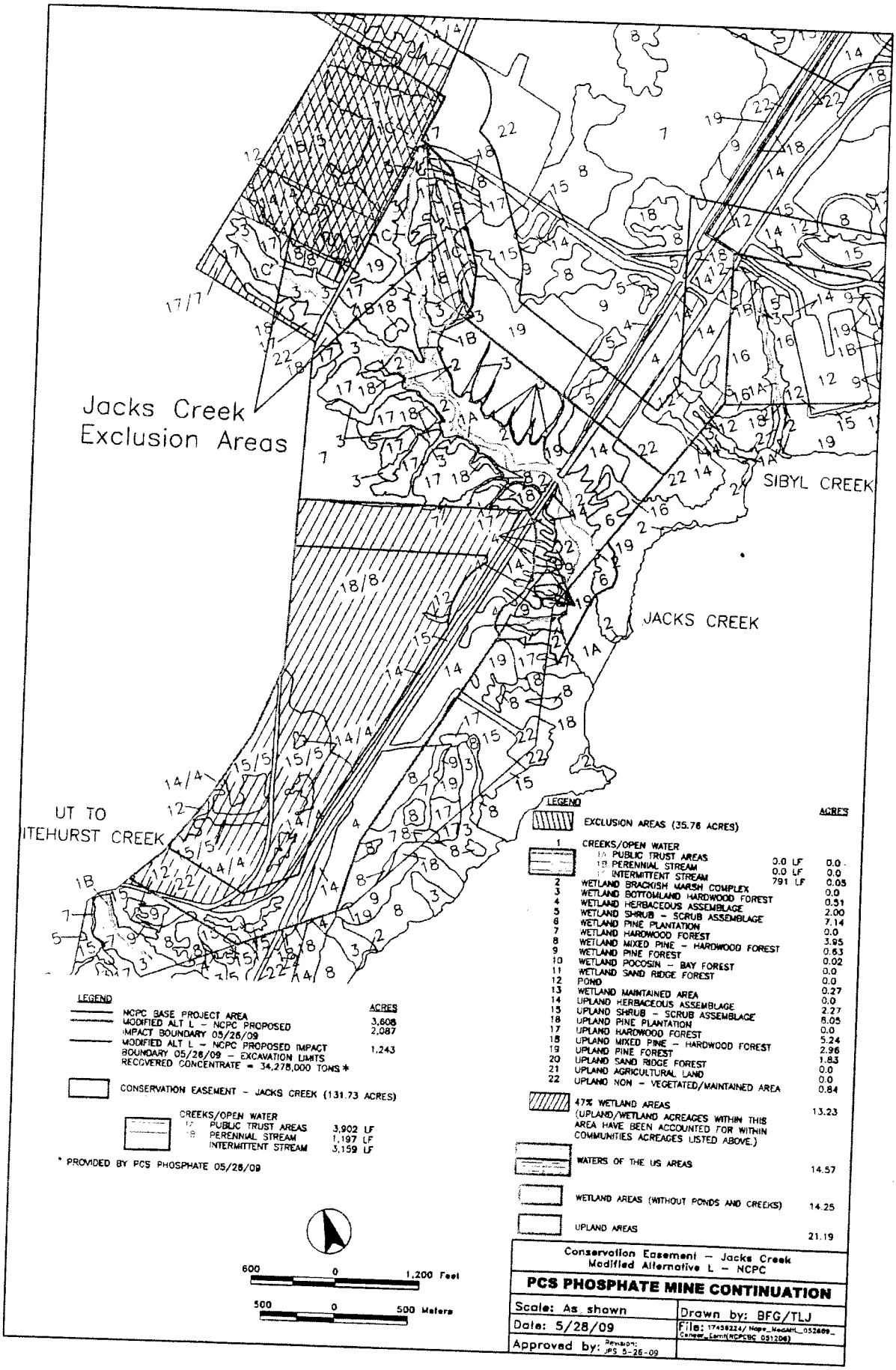
800 0 1,600 Feet

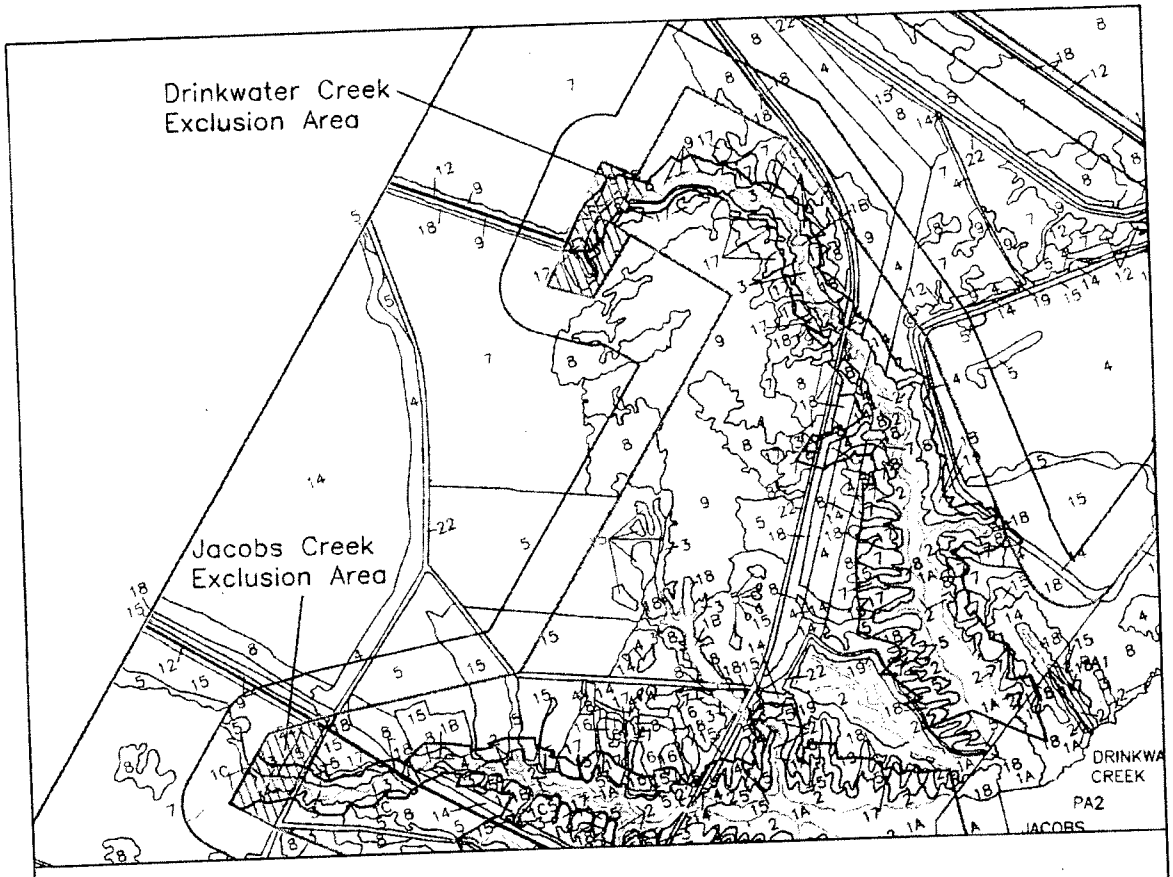
500 0 500 Meters

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/Ncpc_ModAlt_051309_Conser_Esmt(NCPC BC 051206)
Approved by: Revision JPS 5-13-09	


Jacks Creek
Exclusion Areas
SIBYL CREEK
JACKS CREEK
UT TO
ITEHURST CREEK
LEGEND
NCPC BASE PROJECT AREA
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09
MODIFIED ALT L – NCPC PROPOSED IMPACT BOUNDARY 05/26/09 – EXCAVATION LIMITS RECOVERED CONCENTRATE = 34,278,000 TONS *
ACRES
3,608
2,087
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
ACRES
EXCLUSION AREAS (35.76 ACRES)
1 CREEKS/OPEN WATER
1A PUBLIC TRUST AREAS 0.0 LF 0.0
1B PERENNIAL STREAM 0.0 LF 0.0
1C 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
600 0 1,200 Feet
500 0 500 Meters
Conservation Easement – Jacks Creek
Modified Alternative L – NCPC
PCS PHOSPHATE MINE CONTINUATION
Scale: As shown
Drawn by: BFG/TLJ
Date: 5/28/09
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	3.87
7	WETLAND HARDWOOD FOREST	0.0
8	WETLAND MIXED PINE – HARDWOOD FOREST	1.06
9	WETLAND PINE FOREST	0.0
10	WETLAND POCOSIN – BAY FOREST	0.0
11	WETLAND SAND RIDGE FOREST	0.32
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	1.36
18	UPLAND MIXED PINE – HARDWOOD FOREST	0.0
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.)	
	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

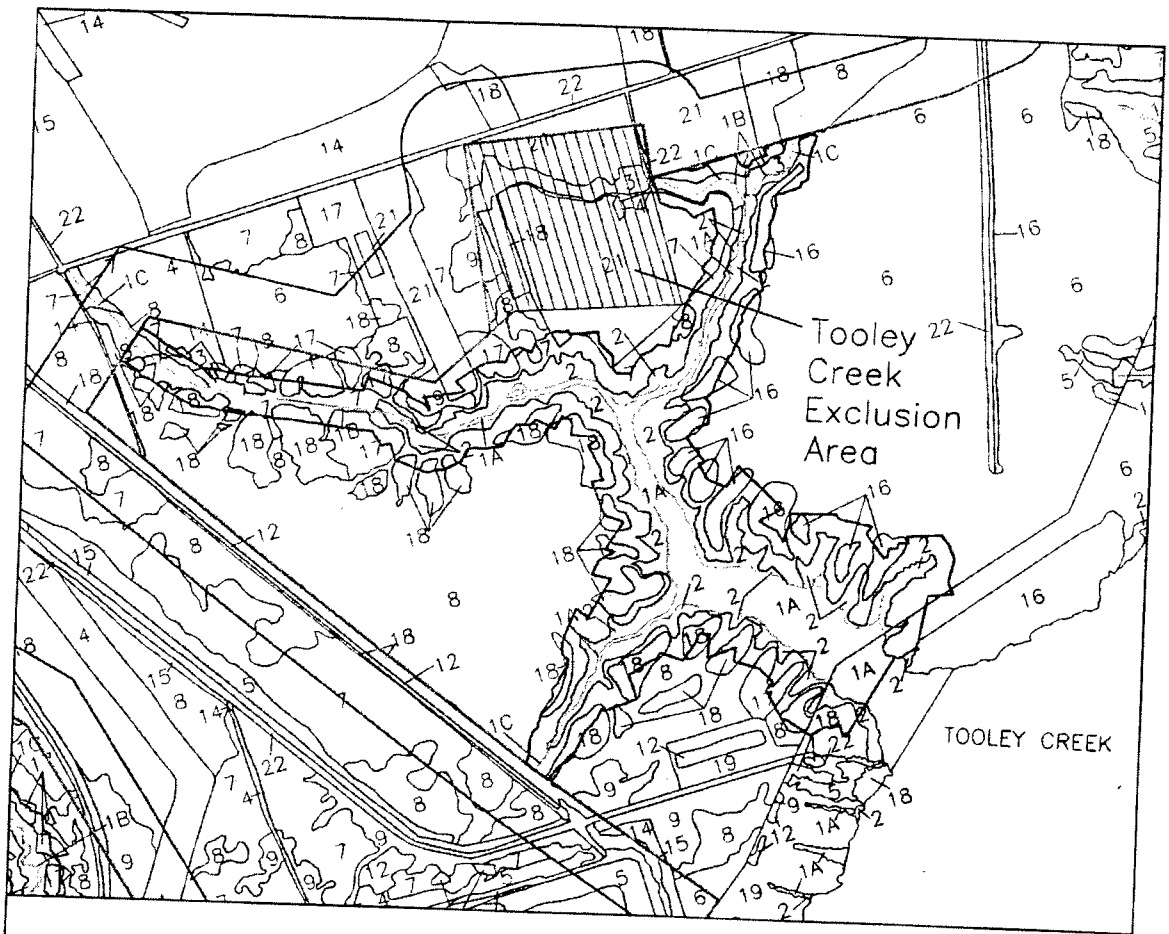
600 0 1,600 Feet

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: 17436224/ncpc_ModAltL_051309_Conser_Easmt(NCPC BC 051208)
Approved by: Revisions 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		
	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		0.18
	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

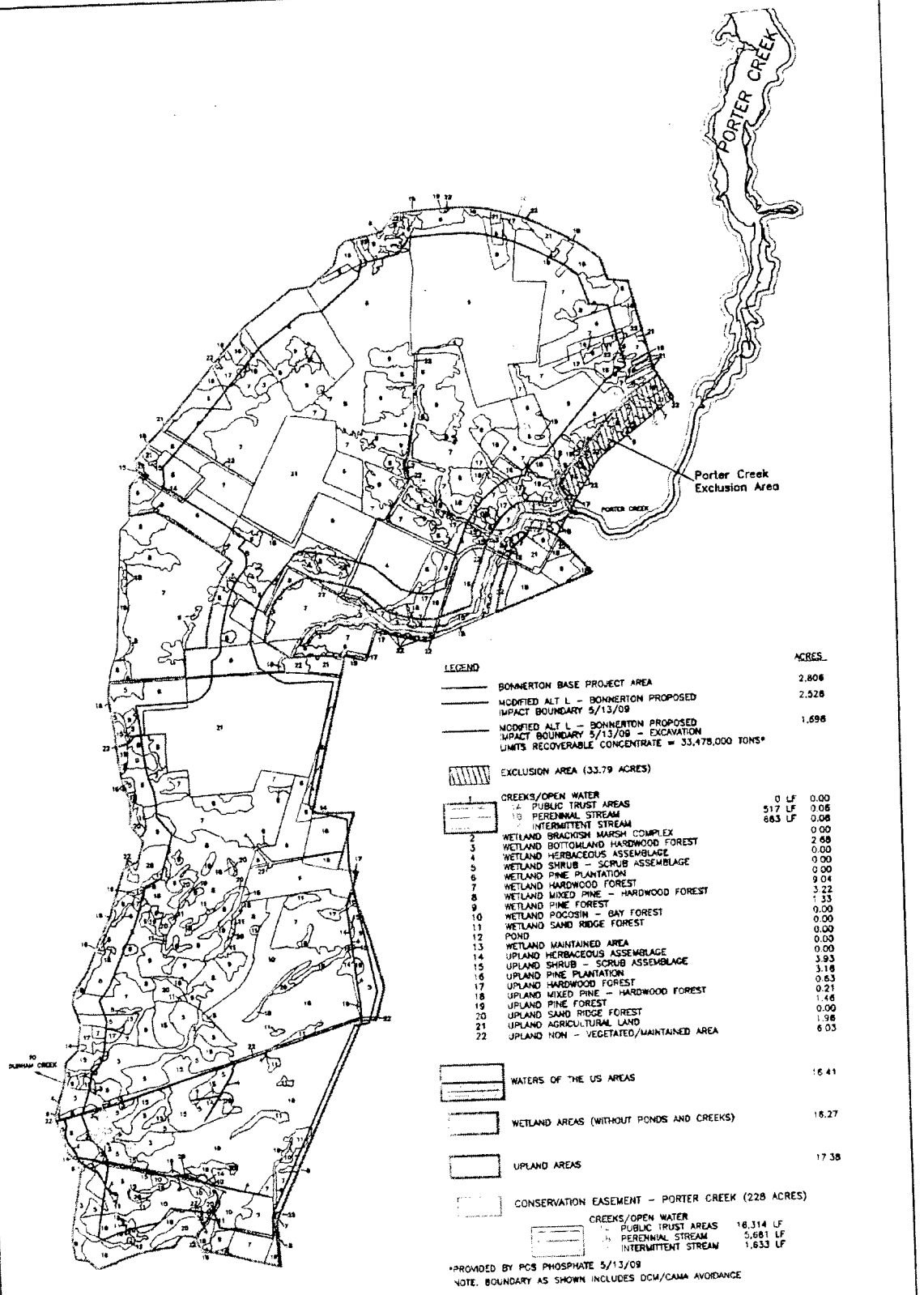
500 0 1,200 Feet

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: 17436224/Ncpc_MineAlt_051309_Consv_Easmt(NCPC BC 051209)
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	2,528
	MODIFIED ALT L – BONNERTON PROPOSED IMPACT BOUNDARY 5/13/09 – EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 33,478,000 TONS*	1,696
	EXCLUSION AREA (33.79 ACRES)	
1	CREEKS/OPEN WATER	
	A PUBLIC TRUST AREAS	0 LF 0.00
	B PERENNIAL STREAM	517 LF 0.05
	C INTERMITTENT STREAM	883 LF 0.06
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	3.93
15	UPLAND SHRUB – SCRUB ASSEMBLAGE	3.18
16	UPLAND PINE PLANTATION	0.63
17	UPLAND HARDWOOD FOREST	0.21
18	UPLAND MIXED PINE – HARDWOOD FOREST	1.46
19	UPLAND PINE FOREST	0.00
20	UPLAND SAND RIDGE FOREST	1.96
21	UPLAND AGRICULTURAL LAND	6.03
22	UPLAND NON – VEGETATED/MAINTAINED AREA	
	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	
	A PUBLIC TRUST AREAS	16,314 LF
	B PERENNIAL STREAM	5,681 LF
	C INTERMITTENT STREAM	1,633 LF

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

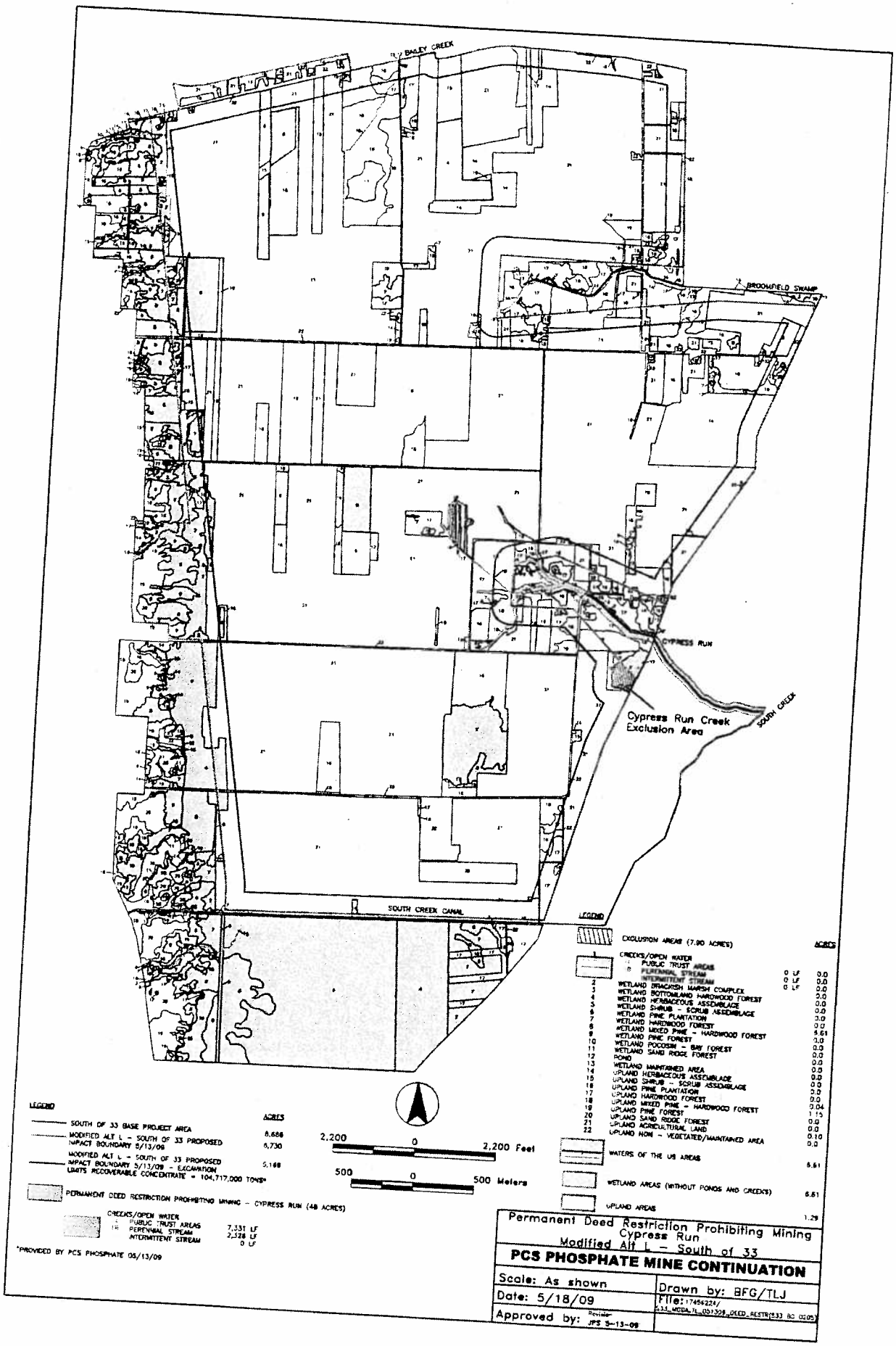
1,800 0 1,800 Feet

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: [illegible]
Approved by: JPS 5-13-09	


BAILEY CREEK
BROOMFIELD SWAMP
CYPRESS RUN
Cypress Run Creek
Exclusion Area
SOUTH CREEK
SOUTH CREEK CANAL
LEGEND
SOUTH OF 33 BASE PROJECT AREA
MODIFIED ALT L - SOUTH OF 33 PROPOSED IMPACT BOUNDARY 5/13/09
MODIFIED ALT L - SOUTH OF 33 PROPOSED IMPACT BOUNDARY 5/13/09 - EXCAVATION LIMITS RECOVERABLE CONCENTRATE = 104,717,000 TONS*
PERMANENT DEED RESTRICTION PROHIBITING MINING - CYPRESS RUN (48 ACRES)
CREEKS/OPEN WATER
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
EXCLUSION AREAS (7.90 ACRES)
WATERS OF THE US AREAS
WETLAND AREAS (WITHOUT PONDS AND CREEKS)
UPLAND AREAS
Permanent Deed Restriction Prohibiting Mining
Cypress Run
Modified Alt L - South of 33
PCS PHOSPHATE MINE CONTINUATION
Scale: As shown
Date: 5/18/09
Approved by: JPS 5-13-09
Drawn by: BFG/TLJ
File: 17456224/
Revised

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
Ph: (919) 967-1450
Fax: (919) 929-9421
www.southernenvironment.org

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