

CELRP-OP-F

Application # LRP 2008-280

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment and Statement of Finding for Above-Numbered Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

1. Application as described in the public notices numbered 09-38 and 10-26.

APPLICANT: Glacial Sand and Gravel Company
P.O. Box 1022
Kittanning, Pennsylvania 16201

WATERWAY & LOCATION: This project is located in an unnamed tributary to Black Run and adjacent wetlands 1.7 miles west of the borough of West Liberty, along West Liberty Road in Worth Township, Butler County, Pennsylvania

LATITUDE & LONGITUDE: Latitude North: 41.00564°
Longitude West: -80.0838°

PROJECT PURPOSE

Basic: To construct a sand and gravel processing plant with stockpile area.

Overall: To construct a sand and gravel processing plant to wash and screen various grades of aggregate material and stockpile this material on site while recovering as much marketable aggregate material beneath the plant as feasible. The purpose of the plant is for the associated ponds to provide adequate water supply to be used as wash water and to allow for re-cycling of water to sustain ground water levels.

Water Dependency Determination: This project is not a water dependent project.

PROPOSED WORK: To facilitate construction of the plant and ponds, the applicant proposes to fill 2.49 acres of wetland (of which 2.3 acres is jurisdictional) and approximately 246 linear feet of unnamed tributary to Black Run. The 0.6 acre increase in proposed wetland impact and 6 linear foot increase in stream impact, from what was originally proposed, was determined to be necessary given the uncertainty whether the un-impacted portion of Wetland 2 would continue to be classified as wetland after the proposed grading. This increase in impact necessitated the second Public Notice (10-26). Approximately 50 linear feet of stream has already been impacted for the construction of a 24" diameter culvert crossing to gain access to the site. An additional 0.01 acres of wetland and 10 linear feet of stream would be temporarily disturbed for the installation of a sanitary

sewer line. To mitigate the loss of both wetland and stream function, 2.7 acres of emergent and shrub scrub wetland will be created north of West Liberty Road and south of the large existing wetland (Wetland 1) which will not be disturbed.

Avoidance and Minimization Information: Several offsite alternatives were considered. Given that the project purpose is sand and gravel mining and processing, offsite properties that did not contain recoverable sand and gravel reserves in a sufficient quantity and quality were not considered to be viable alternatives. The offsite alternatives included Mine 31, and properties owned by Madden, McCoy, Barron, Miller, Reichert, Smith, Pfeifer, Pizor, and Dickey. The McCoy, Miller, Reichert, Pfeifer, and Smith properties did not contain the desired sand and gravel and therefore were not considered any further. Although the Madden, Dickey, and Pizor properties did contain sand and gravel deposits, several issues existed which precluded selection of these sites. Reasons ranged from amount of aquatic resource present to the sand and gravel present not meeting industry standards.

Three alternative site designs were discussed within the Mine 47 review area. Alternative 1, the Original Mining Plan, maximized the extraction of reserves and proposed to mine beneath wetland 1. Almost 70 acres of wetland would be impacted, as well as over 1500 linear feet of stream if this alternative was permitted. The consequence to this alternative is the amount of impact to the aquatic environment. Alternative 2, the Minimal Impact Mining Plan, would eliminate the need for impacts to all wetlands. The only impact would be for the existing access road. In order to facilitate the minimization of impacts, the treatment ponds would have to be reduced in size and relocated. This would not serve the project purpose of the proposed sand and gravel mine and processing plant. The third Alternative, Preferred Mining Plan, includes construction of five processing ponds. This alternative would impact 2.49 acres of wetland (only 2.3 acres of which is jurisdictional) and 246 linear feet of unnamed tributary. This alternative effectively meets the project purpose and objectives by providing adequate mineral extraction while avoiding and minimizing impacts to the furthest extent practicable. This alternative avoids approximately 53% of wetlands and 82% of streams within the review area and ensures no impact to the hydrology of wetland 1.

It has been determined, through multiple alternative analysis revisions that the preferred alternative is avoiding and minimizing to the furthest extent practical when considering the timeline of the proposed Mine 47 site and the adjacent Mine 31 site longevity. Given the deposition of marketable aggregate materials, other potential sites in the area considered, and quality of proposed to be impacted aquatic resources in consideration with the amount of avoided resources (i.e. wetland 1) the avoidance and minimization criterion of this review has been satisfied.

In conclusion, all aforementioned factors being weighed (the alternative, and potential impacts to the human environment), I have determined that this proposed project will have a significant positive impact on the quality of the human environment, and an Individual Department of the Army Permit is appropriate for this proposed activity.

Compensatory Mitigation: A mitigation plan has been proposed to adequately offset the loss of aquatic resource function by creating 2.7 acres of emergent and shrub scrub wetland for stream and wetland impacts. This mitigation wetland will be created in the footprint of the removed esker and will be adequately buffered from wetland 1 and is proposed to be protected in perpetuity by a conservation instrument. This mitigation plan will fully mitigate the loss of 2.3 acres of jurisdictional wetland and 246 linear feet of unnamed tributary to Black Run. This mitigation plan also adequately considers temporal loss assuming that wetland mitigation may not be constructed when stream and wetland impacts are incurred. The entire permanent impact to jurisdictional wetland is 2.3 acres and assuming an average width of 3 feet by 246 linear feet of the unnamed tributary to Black Run gives a stream impact area of 738 square feet or 0.02 acre. So impacts to wetlands and stream total 2.32 acre, meaning an additional 0.38 acre of wetland mitigation will be constructed. The mitigation wetland will be monitored for at least 5 years to document its biological success as well as groundwater monitoring of the wetland 1 complex which will also be required to preclude impact to wetland 1 going unnoticed.

EXISTING CONDITIONS: The project area as it currently exists south of West Liberty Road is mostly farm field with narrow buffers existing between the existing streams and wetlands. North of West Liberty Road lies a large wetland complex and esker.

2. Authority.

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403).
- Section 404 of the Clean Water Act (33 U.S.C. §1344).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

3. Scope of Analysis.

a. NEPA.

(1) Factors.

- (i) Whether or not the regulated activity comprises "merely a link" in a corridor type project.
The regulated activity is not a link in a corridor type project. There is no linear aspect of this project.
- (ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.
The allocation of marketable sand and gravel resources does dictate the configuration of the regulated activity to satisfy project purpose.
- (iii) The extent to which the entire project will be within the Corps jurisdiction.
The entire project will not be within Corps jurisdiction. Of the 77.6 acre permit

area only approximately 2.32 acres of jurisdictional Waters of the U.S. is proposed to be filled resulting in a limited scope.

(iv) The extent of cumulative Federal control and responsibility.

(2) Determined scope.

Only within the footprint of the regulated activity within the delineated water.

Over entire property. *Explain.*

b. NHPA "Permit Area".

(1) Tests. Activities outside the waters of the United States are/are not included because all of the following tests are/are not satisfied: Such activity would/would not occur but for the authorization of the work or structures within the waters of the United States; Such activity is/is not integrally related to the work or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and Such activity is/is not directly associated (first order impact) with the work or structures to be authorized.

Activities outside waters of the United States (WOUS) are not included in the permit area because the project could happen without the authorization from the Corps for work within WOUS. The activity is not integrally related to the work to be authorized within WOUS and the activity is not directly associated with the work to be authorized.

(2) Determined scope. All of the tests are not met therefore only the fill area in WOUS will be considered in the NHPA scope.

c. ESA "Action Area".

(1) Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

(2) Determined scope. Only the fill area will be considered in the scope of the ESA Action Area given no federally listed species were found to exist within the review area.

d. Public notice comments. NA

(1) The public also provided comments at public hearing, public meeting, and/or *Explain.*

(2) Commentors and issues raised.

On August 12, 2009 and May 4, 2010 this office initiated agency and public coordination via Public Notice No. 09-38 and 10-26 respectively. Comments were requested by

September 14, 2009 and June 2, 2010 respectively.

Twenty-two commenters replied in response to Public Notice 09-38. Comments ranged from concerns with the alternatives analysis, mitigation plan, esker and hydrology concerns, as well as threatened and endangered species concerns. Ten commenters requested a Public Hearing. The requests for a Public Hearing were denied in writing on October 14, 2009 as the Corps determined that no new information would be gained by having a Public Hearing. In general, many of the concerns were not pertaining to issues within the scope of the Corps jurisdictional authority. The comments and Corps position are detailed below.

a. In a letter from the U.S. Environmental Protection Agency (USEPA) dated September 14, 2009, they recommend the applicant thoroughly evaluate upland alternatives that will avoid and minimize impacts to aquatic resources to the maximum extent practicable. This can be accomplished by identifying the Least Damaging Practicable Alternative via a revised alternative analysis. While the current alternatives analysis discusses extracting the fullest amount of aggregate material for economical purposes this cannot be the only factor in determining project viability and need for impacting aquatic resources. In addition the USEPA needs to see upland alternatives considered prior to a mitigation discussion. In-kind mitigation is desired for stream impacts and can be explored offsite and should not necessarily be limited to property ownership.

b. In several letters with attachments from [REDACTED], she voices concerns about hydrology, the possibility of alternate site locations to consider, and realignment of Swope Road. Specifically, one of her concerns (in an e-mail to Tyler Bintrim dated September 24, 2009) in section 14.4 Wetland Impact Analysis/ Assessment The EADS Group states that, "Mining within any portion of the permit area is very likely to significantly reduce or completely terminate the hydrological regime that supports this wetland community." Per letter dated October 19, 2009 the Corps agrees it is unclear which wetland community is being referred to and this should be addressed. It has been the understanding of the Corps that data from previous hydrologic studies showed that wetland 1 will not be impacted in any way including limiting hydrologic supply. Furthermore The EADS Group states, if required wash water is to be obtained from wells, and not recycled from existing surface water, a significant drawdown of the ground water table will result. The Corps has made it clear that any groundwater change that may occur cannot alter wetland 1 in any way or additional mitigation will be required.

In addition, the Corps believes alternate site locations for the plant need to be addressed in an alternatives analysis to determine if the proposed site will actually result in the smallest aquatic impact. [REDACTED] believes there are other sites in the area that should be investigated for locating this plant. These sites including the McCoy Farm, the Barron Farm, the Miller lease, or Reichert lease which are all in close proximity to the site and need to be discussed as possible alternatives.

Finally the Corps has indicated if Swope Road was being considered (or still is being

considered) to be relocated as a result of increased truck traffic then this needs to be included in the permit application. This is necessary from a single and complete standpoint.

c. In a letter from Andrew Zadnik of the Western Pennsylvania Conservancy, concerns with regards to wetland 1 (the fen) and pH levels are discussed. Fens and subsequent vegetation can be sensitive to changes in pH. Per letter dated October 19, 2009, the Corps needs some evidence that mining and washing activities in the area would not cause a change in the pH of the groundwater and subsequently impact wetland 1. Given the quality of wetland 1, it should not be negatively impacted in any way whether direct or indirect.

d. In a email and attachments from Pennsylvania Department of Conservation and Natural Resources (PA DCNR) dated September 14, 2009, they have significant concerns about hydrology affecting two state listed endangered plant species (*Scirpus acutus*, and *Cladium marscooides*) and a state threatened plant specie (*Carex alata*). Per Corps letter dated October 19, 2009, more information and studies are needed to rule out hydrology change potentially affecting state listed plant species and ultimately wetland 1. The DCNR has recommended contacting their geologist Mr. Gary Fleecker to discuss concerns regarding hydrology and the esker. They are requesting that if a permit is issued and work is occurring in and around wetland 1 all equipment be washed thoroughly to prevent any invasive species being introduced to the high quality wetland.

e. In an email and attachments received September 1, 2009 from several Slippery Rock University geology professors, the concern about hydrology to wetland 1 being negatively affected by removal of the esker is again voiced. Using a figure calculated by The EADS Group that approximates 273,267 cubic yards of sand and gravel that could be removed from the esker the geology professors have reasonably approximated that the esker contains 8.8 million gallons of water and given the highly permeable nature of the esker it is subsequently providing base flow to help maintain wetland 1. They also feel given the area and past glaciation that it will fall under immense pressure from the aggregates industry over the next 50 years. Given this, per letter dated October 19, 2009, the Corps believes protection of existing aquatic resources is even more important to sustain a balance between industry and the environment.

f. In an email and attachments received September 1, 2009 from [REDACTED] of the Citizen's Environmental Association of the Slippery Rock Area, Inc., she states that eskers are traditionally used as burial sites for aboriginal people. She also believes that the Pennsylvania Historical Museum Commission (PHMC) revised their response to indicate the area has a high probability of significant archaeological sites.

g. In an email from Steven Kepler, Pennsylvania Fish and Boat Commission, received August 20, 2009, he states that there are still endangered species concerns amongst other issues including the alternatives analysis. Per Corps letter dated October 19, 2009, it was requested that dialog be initiated with the Pennsylvania Fish and Boat Commission to

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rectify their issues and copy this office on that response.

- h. In a letter from [REDACTED] received September 14, 2009, she expresses her concern about the wetlands and well water being contaminated by the proposed activities. She is also concerned about the wildlife in the area as a result of the proposed plant.
- i. In an email with attachments from [REDACTED] received September 14, 2009; he is concerned about the Swope Road relocation possibly happening and protection of the esker. He also expresses his concern that state endangered species may exist in wetland 1.
- j. In an email from [REDACTED] received September 14, 2009; she expresses her concern about the possibility of the hydrology being altered given the proposed project.
- k. In an email from [REDACTED] received September 13, 2009; she expresses her concern that the fen, Tamarack Lake, and the esker are all integrally related. She also admits that Glacial has proven to be a good neighbor in the area and hopes they will continue to be good neighbors and carefully examine the environmental impact proposed.
- l. In a letter from the U.S. Fish and Wildlife Service (USFWS) dated September 4, 2009, they state that no federally listed or proposed threatened or endangered species under their jurisdiction are known to occur in the area. Therefore, no further coordination under the Endangered Species Act is required with them. They offer some information on the eastern massasauga and advise The EADS Group to contact the Pennsylvania Fish and Boat Commission. The USFWS advise that the alternatives analysis is not sufficient as offsite alternatives have not been considered and they are requesting the opportunity to review the mitigation plan once all alternatives have been considered.
- m. In a letter from [REDACTED] received September 3, 2009, he wanted to submit comments he had previously prepared for the PA DEP. His primary concerns are noise, traffic, wildlife, property values, and the visual impact the proposed mining may have on the surrounding area.
- n. In a letter dated August 25, 2009, [REDACTED] expresses her concerns about wildlife, aesthetics of the surrounding land, and water ways.
- o. In an email from [REDACTED] received September 2, 2009; she is concerned about the esker, endangered species, and agricultural land.
- p. In an email from [REDACTED] received August 31, 2009; she is concerned with the health and safety of her family. She is also concerned about property values and wildlife. She admits that the truck drivers have been polite and cautious and that she can appreciate the fact that they are making a living also.

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- q. In an email from [REDACTED] received August 31, 2009; they express their concern for the hydrology impacting Tamarack Lake and the surrounding wetlands.
- r. In an email from Fred Lochner of the Wild Waterways Conservancy, received September 1, 2009, he writes to express his concerns with the natural environment and wildlife. His largest concern is with the esker and the potential interruption of hydrology in the area. He would like to see the esker spared at the very least from the mining proposal.
- s. In a letter from [REDACTED], they are concerned about possible disruption to the ecosystem that ultimately supports their lake. They are also concerned about possible erosion and sedimentation which may contaminate the ecosystem.
- t. In an email with attachments from [REDACTED] received August 30, 2009, she expresses her concern for the mining of the esker and how it will affect the environment. She does not want to see the geologic structure impacted.
- u. In an email with attachment from Dr. Gene Wilhelm received August 29, 2009; he is concerned about the existence of the American Bittern, the bittern survey methods, and impacts to the fragile ecosystem.
- v. In an email from [REDACTED] received August 20, 2009; she is expressing her concerns for the esker and associated wetland. She is requesting the environmental impact be fully considered during the permitting phases of this project.

As previously mentioned, per letter dated October 19, 2009, the Corps required the applicant to draft a response addressing all of the concerns received as a result of the Public Notice. The Corps recommended avoiding the esker so as not to negatively impact hydrology to wetland 1. It was stated that if secondary impacts to wetland 1 did occur as a result of mining the esker that mitigation at a significantly higher ratio would be required. Wetland 1 was requested to be placed in a conservation instrument. Additional hydrology study data was requested and reference of a 50 foot protective buffer between wetland 1 and the esker was made.

On November 13, 2009, a meeting was held with Glacial and The EADS Group to discuss the October 19, 2009 letter. It was determined that due to the quantity of comments received that these comments would be addressed as a group. It was also decided that instead of a "cost to benefit analysis" of the need to mine the esker that additional documentation would be provided to the Corps showing that no secondary impacts to wetland 1 hydrology would occur. On December 29, 2009 The EADS Group submitted their response to the Corps' October 19, 2009 letter incorporating information from the November 13, 2009 meeting. This response included a alternatives analysis and hydrology report. The response document was forwarded to the comment agencies and posted to the district FOIA page for public access to the responses.

Another meeting was held on January 27, 2010 with Glacial and The EADS Group to discuss their December 29, 2009 submittal. Items were discussed that were not adequately addressed in their response document. In addition, the Corps Regulatory Branch contracted the assistance of civil engineer Jessica Corton of the Corps to review the hydrology report as she had the necessary background in Geotechnical Engineering. Ms. Corton was also present at this meeting to request the additional information that she needed for her review. As a result of her review, Ms. Corton found there would be little to no impact on downstream tributaries nor to wetland 1 as a result of the proposed project.

In addition, as a result of the January meeting, the applicant did not feel comfortable that the remainder of wetland 2 (that was not proposed to be filled) would remain as wetland being partially filled. This determination meant that the proposed amount of impact would increase from 1.89 acres to 2.49 acres of fill and necessitated the second Public Notice (10-26) of this project.

Five commenters responded to the second Public Notice (10-26) and their comments remained similar in nature to the first round of comments. One commenter requested a Public Hearing. This request for a Public Hearing was denied in writing based on the fact that no new information pertinent to the Section 404 review would likely be provided because the Corps was currently working the unresolved issues and because the State held a hearing on February 19, 2008. The comments are detailed below.

- a. In an email from [REDACTED] received May 5, 2010, she states that she lives directly across from the plant and has no objections to the permit. She wanted a copy of the drawings that were more legible which were provided by the Corps.
- b. In an email from the U.S. Environmental Protection Agency Region III, received May 28, 2010, they state that they support the Corps decision to issue a second Public Notice due to the uncertainty of secondary impacts to wetland 2. They are again voicing very similar concerns to their first comment letter with the alternatives analysis that is seemingly only considering economic factors. While economic factors may be considered, they cannot be the only factor in justifying fill in Waters of the U.S.
- c. In a letter from [REDACTED] received June 1, 2010, he reiterates his concerns being the owner of Tamarack Lake with regard to the ecosystem.
- d. In a letter from [REDACTED] received June 7, 2010, he expresses concerns with ground water in relation to the proposed mining of the esker.
- e. In a letter from [REDACTED], received June 9, 2010, she expresses concerns with the alternatives analysis, ground water, and mitigation amongst some other issues. Her issue with the alternatives analysis is a similar issue that the Corps and State are currently having, as well as the U.S. EPA.

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On June 17, 2010, the Corps drafted a letter to the applicant requiring they address the comments received in regard to the alternative analysis, the current status of Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) issue, and that they update [REDACTED] on the additional ground water studies that have been conducted.

The EADS Group submitted a response to the June 17, 2010 letter on July 16, 2010, copying all the various comment agencies on their letter. The letter was provided to [REDACTED] and [REDACTED] by the Corps. The response detailed a timeline showing why they could not completely avoid impacts to wetland 2 and the unnamed tributary. In short, the use of the temporary ponds at their Mine 31 site are not feasible to be used permanently because the ponds are severely undersized, evident from the ponds silting in every seven to ten days. Currently water is being pumped back and forth between Mine 31 and 47 and mining would last six to nine years at Mine 47 and 17 to 23 years at Mine 31 site. This timeline demonstrated why impacts to wetland 2 and the unnamed tributary were necessary and supported the Alternative Analysis. The hydrology issue was clarified with updates being provided on more recent hydrologic analysis. In all, the esker itself only makes up 1.5% of the total wetland 1 watershed. The Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) issue was cleared up with a clearance letter from the Pennsylvania Fish and Boat Commission dated July 29, 2010.

A pre- denial letter was issued by the Pennsylvania Department of Environmental Protection (PADEP) Knox District Mining Office on July 20, 2010. On October 12, 2010 a call was made to Chris Yeakle of the PADEP. It was explained that the July 16, 2010 submittal from The EADS Group cleared up all of the outlying section 404 issues and that the Corps would be drafting a permit with strong monitoring and mitigation conditions to adequately offset the proposed amount of impact.

Since then (outside the Public Notice comment period) several phone calls from [REDACTED] and an email with letter from [REDACTED] have been received. Both individuals are still strongly against issuance of this permit. The Corps regulatory authority was explained to [REDACTED] over the phone. While she insists the alternative analysis is not sufficient, it was explained why the alternative analysis is deemed acceptable by the Corps. [REDACTED] still does not agree with the findings in the EADS Group's hydrology report. The Corps requested via email on October 26, 2010, that the EADS Group provide [REDACTED] with a map showing wetland 1's watershed to illustrate the finding that the esker is only providing 1.5% of wetland 1's hydrology. In addition it was requested that The EADS Group provide [REDACTED] with a statement that the groundwater of wetland 1 will be monitored as a special condition of the permit and that if any decrease in flow to wetland 1 is noticed that additional mitigation will be provided.

This information was provided by The EADs Group on November 1, 2010 and forwarded to [REDACTED] on November 2, 2010. As of December 6, 2010 no response from [REDACTED] has been received. Concurrently the hydrology report and letters from [REDACTED] were coordinated with Greg Currey and Kevin Gabig (regulatory Project Managers) who both have degrees in Geology. Following review they both feel there are

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aspects of the hydrology report that could have been changed to make the hydrology findings more conclusive and that additional monitoring wells north of the road would give a better indication of groundwater flow direction however groundwater issues and geologic formation issues are not within regulatory jurisdiction, though they have been considered during review of this application.

██████████ submitted additional comments with additional questions on November 1, 2010, pertaining to why Mine 47 cannot be built to the specifications of Mine 31 to the south. In addition she still has alternatives analysis concerns. These concerns were forwarded to the EADS group on December 1, 2010.

On December 7, 2010 a phone conversation with ██████████ and an email sent to ██████████ transpired explaining that all public interest factors had been weighed and that a permit would be issued in the upcoming days.

No other responses have been received in reference to either of the Public Notices nor to any responses to Public Notice comments prepared by the EADS Group (which were submitted to the sister comment agencies) as of December 6, 2010.

(3) Site was/ was not visited by the Corps to obtain information in addition to delineating jurisdiction.

On April 30, 2008 the site was visited to verify the delineation. Marcia Haberman and Ty Bintrim along with PADEP Mining, PA Fish and Boat Commission, The EADS Group, and others attended this joint site visit. Some minor adjustments to the delineation map were made and it was determined that the site is potential habitat for the Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) which is a Federal candidate species and listed as endangered by the Commonwealth of Pennsylvania.

A follow up site inspection was conducted on July 30, 2009, by Ty Bintrim, Kyle Schwabenbauer (The EADS Group), and Chris Yeakle (PADEP Mining). During this site inspection it was determined that unauthorized fill had been placed in the UNT 3 Black Run for a 24" by 50 foot long culvert crossing to gain access to the site which was beginning to be developed in the upland. It was explained that while this crossing may qualify for a waiver 2 from the state (being as the watershed has less than a 100 acre drainage area) the crossing must be permitted by the Corps from a single and complete project perspective. Additional mitigation was then required for this unauthorized crossing. The consultant investigated other streams in the area that could possibly benefit from mitigation however was unable to come up with any. As a result it was proposed to add additional wetland mitigation to the proposal. Being as this crossing was going to be assessed along with the total impact for the project and mitigation for the unauthorized crossing was being proposed this crossing was allowed to remain as it would be permitted when the Section 404 permit is issued.

(4) Issues identified by the Corps. See above.

(5) Issues/comments forwarded to the applicant. NA/ Yes.

(6) Applicant replied/provided views. NA/Yes.

(7) The following comments are not discussed further in this document as they are outside the Corps purview. NA/ Yes *Explain*.

4. Alternatives Analysis.

a. Basic and Overall Project Purpose (as stated by applicant and independent definition by Corps).

Same as Project Purpose in Paragraph 1.

Revised: *Insert revised project purpose here and explain why it was revised.*

b. Water Dependency Determination:

Same as in Paragraph 1.

Revised: *Insert revised water dependency determination here if it has changed due to changing project purpose or new information.*

c. Applicant preferred alternative site and site configuration.

Same as Project Description in Paragraph 1.

Revised: *Explain any difference from Paragraph 1*

Criteria. Three alternatives were considered in the permit application for Mine 47. These alternatives were the “Original Mining Plan” the “Minimal Impact Mining Plan” and the “Preferred Mining Plan”. Several issues dictated site layout for these alternatives.

Issue	Measurement and/or constraint
Haul Roads	Grade less than or equal to 9%
Haul Roads	Minimum sight distance and minimum radius of curvature of 250 feet
Slopes	Greater than 16% slope is unsuitable for development
Slopes	Final grading, fill, or cut shall not be steeper than 2 horizontal to 1 vertical.
Road Usage	Site access should minimize use of township roads
Air quality	Shelter from wind (avoid hilltops)
Ponds	Adequate detention time dictates pond sizing

d. Off-site locations and configuration(s) for each. (e.g. alternatives located on property not currently owned by the applicant are not practicable under the Section 404(b)(1) Guidelines as this project is the construction or expansion of a single family home and attendant features, such as a driveway, garage, storage shed, or septic field; or the construction or expansion of a barn or other farm building; or the expansion of a small business facility; and involves discharges of dredged or fill material less than two acres into

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jurisdictional wetlands.)

Off-site locations and configurations

Description	Comparison to criteria
Mine 31	
[REDACTED]	Large amount of onsite wetlands which would require larger impacts to achieve the same project purpose.
[REDACTED]	Contains limestone and coal deposits rather than sand and gravel.
[REDACTED]	Does not contain desired sand and gravel deposits.
[REDACTED]	Contains limestone and coal deposits rather than sand and gravel.
[REDACTED]	Contains limestone and coal deposits rather than sand and gravel.
[REDACTED]	Contains limestone and coal deposits rather than sand and gravel.
[REDACTED]	Contains limestone and coal deposits rather than sand and gravel.
[REDACTED]	Enrolled in agricultural preservation program and will not sign lease with Glacial.
[REDACTED]	Sand and gravel deposits are not marketable to customer needs.

e. NA) Site selected for further analysis and why.

f. On-site configurations.

Description	Comparison to criteria
Original Mining Plan	Proposed impact 67 acres of wetland and 1576 LF of stream. This alternative, while maximizing sand and gravel reserves and meeting project purpose, would eliminate almost 100% of the aquatic resources on site.
Minimal Impact Mining Plan	Proposed impact 56 LF of stream however there would be a reduction in treatment pond storage capacity therefore not meeting the proposed project purpose and shortening the treatment plant lifespan. In addition there would be a loss of sand and gravel reserves beneath the ponds limiting the economic feasibility of the project.
Preferred Mining Plan	Proposed impact 2.3 acres of jurisdictional wetland and 246 LF of stream channel while meeting the project purpose and objectives and preserving approximately 53% of onsite wetlands and 82% of onsite streams.

g. Other alternatives not requiring a permit, including No Action.

Description	Comparison to criteria
No Action	The no action alternative would not meet project purpose and need as a sand and gravel processing plant is needed in the vicinity of Glacial's sand and gravel mines to sustain their business.

h. Alternatives not practicable or reasonable. The Original Mining Plan is not practicable because of the proposed impact to the aquatic resources on site which is nearly 100% of onsite resources. A large and good quality wetland (wetland 1) would be mined through for sand and gravel resulting in sufficient damage to a larger wetland complex and ecosystem offsite. Likewise the Minimal Impact Mining Plan is not reasonable because the treatment pond storage capacity would be reduced, the treatment plant lifespan would be shortened, and a large amount of sand and gravel reserves beneath the ponds would be lost limiting the economic feasibility of the project.

i. Least environmentally damaging practicable alternative (LEDPA). It has been determined, through multiple alternative analysis revisions that the Preferred Mining Plan is avoiding and minimizing to the furthest extent practical when considering the timeline of the proposed Mine 47 site and the adjacent Mine 31 site longevity. Given the deposition of marketable aggregate materials, other potential sites in the area considered, and quality of proposed to be impacted aquatic resources in consideration with the amount of avoided resources (i.e. wetland 1) the avoidance and minimization criterion of this review has been satisfied and the Preferred Mining Plan is the LEDPA.

5. Evaluation of the 404(b)(1) Guidelines. (NA)

a. Factual determinations.

<p>Physical Substrate.</p> <p><input type="checkbox"/> See Existing Conditions, paragraph 1</p> <p><input checked="" type="checkbox"/> The UNTs Black Run are somewhat impacted by previous farming activities however natural substrate does exist and could potentially provide habitat.</p>
<p>Water circulation, fluctuation, and salinity.</p> <p><input type="checkbox"/> Addressed in the Water Quality Certification.</p> <p><input checked="" type="checkbox"/> Water circulation and fluctuation indicative of similar order streams.</p>
<p>Suspended particulate/turbidity.</p> <p><input type="checkbox"/> Turbidity controls in Water Quality Certification.</p> <p><input checked="" type="checkbox"/> Turbidity controls provided by Section 404 permit through Best Management Practices in permit special conditions.</p>
<p>Contaminant availability.</p> <p><input checked="" type="checkbox"/> General Condition requires clean fill.</p> <p><input type="checkbox"/></p>
<p>Aquatic ecosystem and organism.</p> <p><input type="checkbox"/> Wetland/wildlife evaluations, paragraphs 5, 6, 7 & 8.</p> <p><input checked="" type="checkbox"/> Will be adequately mitigated considering acreage of mitigation wetland project and perpetual protection that will be established for the mitigation wetland.</p>
<p>Proposed disposal site.</p> <p><input checked="" type="checkbox"/> Public interest, paragraph 7.</p> <p><input type="checkbox"/></p>
<p>Cumulative effects on the aquatic ecosystem.</p> <p><input checked="" type="checkbox"/> See Paragraph 7.e.</p> <p><input type="checkbox"/></p>
<p>Secondary effects on the aquatic ecosystem.</p> <p><input checked="" type="checkbox"/> See Paragraph 7.e.</p> <p><input type="checkbox"/></p>

b. Restrictions on discharges (230.10).

- (1) It has/has not been demonstrated in paragraph 5 that there are no practicable nor less damaging alternatives which could satisfy the project's basic purpose. The activity is/is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does/does not need to be located in a special aquatic site to fulfill its basic purpose.
- (2) The proposed activity does/does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (based on information from the certifying agency that the Corps could proceed with a provisional determination). The proposed activity does/does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity does/does

not violate the requirements of a federally designate marine sanctuary.

- (3) The activity will/will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.
 - (4) Appropriate and practicable steps have/have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraph 8 for description of mitigative actions).
6. Public Interest Review: All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors that have had additional information relevant to the decision are discussed in number 7.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	General environmental concerns.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Historic properties.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood hazards.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain values.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Land use.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shore erosion and accretion.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water supply and conservation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

7. Effects, policies and other laws.

a. NA

Public Interest Factors. *(add factors that are relevant to specific project that you checked in number 6 above and add a discussion of that factor)*

Factor	Discussion
Aesthetics	Several of the comments discussed aesthetics of the area given the large wetland and Tamarak Lake complex to the north and the esker. Construction of a sand and gravel processing plant and mining of the esker to recover its valuable sand and gravel reserves will undoubtedly compromise the aesthetics of the area. However the large wetland complex will not be affected by the mining of the nearby esker as determined by the consultant's ground water studies and the possibility of a secondary effect to wetland 1 will be monitored as special conditions to the Section 404 permit. If the wetland is impacted, additional mitigation will be required. Eskers are not regulated by Section 404 of the Clean Water Act, which is the Corps jurisdictional authority. Therefore, the Corps' position on this issue is that there is no overriding benefit or detriment to the public interest.
Water supply and conservation	Several commentors had concerns about ground water supply being impacted by the pumping of ground water for use in the sand and gravel processing plant's ponds. The consultant's results of groundwater studies indicate that groundwater will not be impacted. Furthermore, the reason for large ponds is to reuse as much water as possible only requiring "make up" water from the wells. Other concerns about water supply were that mining of the esker would change ground water flow patterns and ultimately dry up wetland 1. Again the evidence provided by the consultant does not indicate that wetland 1 will lose any ground water supply. While others still believe wetland 1 will be impacted by removal of the esker, the Corps' position on this issue is that this potential impact can be mitigated through the monitoring of ground water levels as special conditions to the permit.
Considerations of property ownership	Some comments discussed property value in the area if a sand and gravel mine and processing plant is permitted in the vicinity. Adjacent property owners had concerns of dust, noise, and traffic safety. While these factors were considered it is the Corps' position on this issue that there

	is no overriding benefit or detriment to the public interest.

b. Endangered Species Act. NA

The proposed project:

(1) Will not affect these threatened or endangered species:

Any/ . *Explain.*

(2) May affect, but is not likely to adversely affect:

Species: . *Explain.*

(3) Will/ Will not adversely modify designated critical habitat for the .

Explain.

(4) Is/ Is not likely to jeopardize the continued existence of the .

Explain.

(5) The Services concurred/ provided a Biological Opinion(s).

A determination of “no effect” has been made for this project given the September 4, 2009 clearance letter received from the U.S. Fish and Wildlife Service which they state, “Except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to occur within the project impact area. Therefore, neither Biological Assessment nor further consultation under the Endangered Species Act (Act) is required with the Fish and Wildlife Service”. No response was received from the U.S. Fish and Wildlife Service in response to the second Public Notice (10-26). The Service offered some comments about the federal candidate species, the Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) which is listed as endangered by the Commonwealth of Pennsylvania. This species was cleared by the Pennsylvania Fish and Boat Commission in a July 29, 2010 letter where they state, “We concur with the report’s conclusion- presently, eastern massasauga rattlesnakes do not exist at these wetlands.”

In addition, the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) have significant concerns about hydrology affecting two state listed endangered plant species (*Scirpus acutus*, and *Cladium marscooides*) and a state threatened plant specie (*Carex alata*). Being as this project is not proposed to directly affect wetland 1, nor is the hydrology expected to be altered to wetland 1; these State species will not be affected.

- c. Essential Fish Habitat. Adverse impacts to Essential Fish Habitat will/will not result from the proposed project. *Explain.*
- d. Historic Properties. The proposed project will/will not have any affect on any sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state, or local significance based on letter from SHPO dated August 29, 2008/ .
A letter from the Pennsylvania Historical and Museum Commission (PHMC) containing comments on the project's potential effect on both historic and archaeological resources, dated August 29, 2008, was received with the application stating that, "This report meets our standards and specifications as outlined in *Cultural Resource Management In Pennsylvania: Guidelines for Archaeological Investigations (BHP 1991)* and the Secretary of the Interior's Guidelines for Archaeological Documentation. We agree with the recommendations of this report and in our opinion no further archaeological work is necessary for this project." In addition, two Public Notices were advertised for this project which did not result in any further comments from the PHMC. Therefore it was determined that this project will have no effect on archaeological artifacts or historical structures.
- e. Cumulative & Secondary Impacts. The geographic area for this assessment is approximately 25 square miles.
- (1) Baseline. Corps permits for the period 1996 to 2010 has authorized the fill of 0.1 acre of wetlands and 657 linear feet of stream within the geographic area under analysis. This data is reliant on the accuracy of the regulatory database OMBIL Regulatory Module (ORM2). The projection is that authorizations will continue at the current rate/ increase/ because the area is continually developing and sand and gravel extraction is a big business in this prior glaciated region. Natural resource issues of particular concern [from Corps & non-Corps activities] are largely negligible for this area given the resources however there are nice resources in select areas that should be protected as with any area on the map.
- (2) Context. The proposed project is typical of /a precedent /very large compared to / other activities in the watershed. Development similar to the proposal have occurred since 1996 with the submittal of the Elliot Processing Plant Individual Permit Application.
I have evaluated the past, present and reasonably foreseeable future impacts, to the best of my ability, within the approximately 25 square mile analysis area. An aerial view of this vicinity indicates the most prominent land use in the area which is farming. Numerous farm fields surround the proposed Mine 47 Processing Plant. Only two other sand and gravel operations were noted within this area. A check of the Regulatory database indicates only 10 permit actions

have been processed within this analysis area. At least six of these projects were general permits for utility lines, boat launches, directional boring, and road crossings. One of these projects was withdrawn. Only one project was a individual permit for another sand and gravel processing plant. Also within this area is a PennDOT advanced wetland compensation bank with a 3 acre wetland. Obviously, this information relies heavily on the quality of the data entered into the Regulatory database however being as most of these projects were general permits the overall impact to this watershed could not be adverse.

As for reasonably foreseeable future impacts, given the area, sand and gravel will likely continue to develop however at this time it is not causing environmental concern. A key issue of concern for this watershed is runoff and discharge of water from processing ponds possibly causing siltation of nearby streams and wetlands. This concern can be adequately mitigated through strong Erosion and Sedimentation Control Plans and monitoring of these sand and gravel processing facilities.

The area of cumulative effect assessment was deemed sufficiently sized because considering the entire 8 digit HUC as a whole could not be accurately accomplished given its size. While the 25 square mile area does not represent the entire 8 digit HUC, it does portray a representative portion. Given the project will be fully mitigated and preserved in perpetuity on site one can conclude the proposed sand and gravel mine and processing plant will not have a significant impact on the resources.

- (3) Mitigation and Monitoring. The project affects the following key issue(s): filling 2.3 acres of wetland and 246 linear feet of stream for the construction of sand and gravel wash ponds. The magnitude of the proposed impact is small within the watershed. Avoidance and minimization methods include limiting the pond size and sand and gravel extraction to the minimum necessary impact to aquatic resources that will result in negligible cumulative impacts within the watershed. Compensatory mitigation, namely wetland creation and monitoring described herein will result in a self mitigating project. A mitigation plan has been proposed to adequately offset the loss of aquatic resource function by creating 2.7 acres of emergent and shrub scrub wetland for stream and wetland impacts. This mitigation wetland will be created in the footprint of the removed esker and will be adequately buffered from wetland 1 and is proposed to be protected in perpetuity by a conservation instrument. This mitigation plan will fully mitigate the loss of 2.3 acres of jurisdictional wetland and 246 linear feet of unnamed tributary to Black Run. This mitigation plan also adequately considers temporal loss assuming that wetland mitigation may not be constructed when stream and wetland impacts are incurred. The entire permanent impact to jurisdictional wetland is 2.3 acres and assuming an average width of 3 feet by 246 linear feet of the unnamed tributary to Black Run gives a stream impact area of 738 square feet or 0.02 acre. So impacts to

wetlands and stream total 2.32 acre, meaning an additional 0.38 acre of wetland mitigation will be constructed. The mitigation wetland will be monitored for at least 5 years to document its biological success as well as groundwater monitoring of the wetland 1 complex which will also be required to preclude impact to wetland 1 going unnoticed.

- f. Corps Wetland Policy. Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.
 - g. (NA) Water Quality Certification under Section 401 of the Clean Water Act has/has not yet been issued by /State/Commonwealth.
 - h. Coastal Zone Management (CZM) consistency/permit: Issuance of a State permit certifies that the project is consistent with the CZM plan. There is no evidence or indication from the _____ that the project is inconsistent with their CZM plan.
 - i. Other authorizations.
 - j. (NA) Significant Issues of Overriding National Importance. *Explain.*
8. Compensation and other mitigation actions.
- a. Compensatory Mitigation
 - (1) Is compensatory mitigation required? yes no [If “no,” do not complete the rest of this section]
 - (2) Is the impact in the service area of an approved mitigation bank? yes no
 - (i) Does the mitigation bank have appropriate number and resource type of credits available? yes no
 - (3) Is the impact in the service area of an approved in-lieu fee program?
 yes no
 - (i) Does the in-lieu fee program have appropriate number and resource type of credits available? yes no
 - (4) Check the selected compensatory mitigation option(s):
 - mitigation bank credits
 - in-lieu fee program credits
 - permittee-responsible mitigation under a watershed approach
 - permittee-responsible mitigation, on-site and in-kind
 - permittee-responsible mitigation, off-site and out-of-kind

- (5) If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project): A mitigation bank or in lieu fee program are not available options in this area to mitigate for this project making the proposed option environmentally preferable.
 - (6) Other Mitigative Actions A conservation instrument has been proposed to protect the mitigation wetland in perpetuity as well as a buffer zone between mitigation wetland and naturally occurring wetland 1. Not to mention the ground water will be monitored to preclude any impacts to wetland 1 as a result of mining activity.
9. General evaluation criteria under the public interest review. We considered the following within this document:
 - a. The relative extent of the public and private need for the proposed structure or work. (e.g. Public benefits include employment opportunities and a potential increase in the local tax base. Private benefits include land use and economic return on the property; for transportation projects benefits include safety, capacity and congestion issues.) This sand and gravel plant could provide an increase in the local tax base.
 - b. There are no unresolved conflicts as to resource use.
 - c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited. Detrimental impacts are expected to be minimal although they would be permanent in the construction area. The beneficial effects associated with utilization of the property would be permanent.
10. Determinations.
 - a. Public Hearing Request: NA
 I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.
 - b. Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or

indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders.

- (1) EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians. This action has no substantial direct effect on one or more Indian tribes.
- (2) EO 11988, Floodplain Management. Not in a floodplain. (Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above.)
- (3) EO 12898, Environmental Justice. In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.
- (4) EO 13112, Invasive Species.
 There were no invasive species issues involved.
 The evaluation above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.
 Through special conditions, the permittee will be required to control the introduction and spread of exotic species.
- (5) EO 13212 and 13302, Energy Supply and Availability. The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety. (The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.)

d. Finding of No Significant Impact (FONSI). Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

e. Compliance with 404(b)(1) guidelines. NA

Having completed the evaluation in paragraph 5, I have determined that the proposed

CELRP-OP-F (Application #LRP 2008-280)

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application

discharge complies/does not comply with the 404(b)(1) guidelines.

- f. Public Interest Determination: I find that issuance of a Department of the Army permit is not/is contrary to the public interest.

PREPARED BY:

//SIGNED//

By Tyler Bintrim on 12/7/2010

Project Manager

Date:

REVIEWED BY:

//SIGNED//

By Nancy Mullen on 12/9/2010

Chief, Northern Section
Regulatory Branch

Date

Mr. Tyler Bintrim
US Army Corps of Engineers
Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

9 December 2010

Ref: CELRP-OP-F 2008-280
Notice No. 10-26

Dear Sir,

I reiterate my call for your rejection of the application filed under provisions of Section 404 of the Clean Water Act. I further maintain that destruction of the Jacksonville Esker, in part, violates the Constitution of the Commonwealth of Pennsylvania. Please allow me to elaborate upon my concerns. In particular, I focus this letter upon the reasserted claim that removal of portions of the esker will affect only 1.6% of the watershed to wetland one, and its associated implication that such action might only effect 1.6 % of the recharge to wetland one.

The segment of the esker lying immediately to the north of West Liberty Rd. and immediately to the east of West Liberty Rd, might well encompass approximately 1.6% percent of the area of the watershed, but the associated implication that it would only encompass 1.6% of the hydrologic budget for the wetland is flawed. Glacial outwash, or sand and gravel, which composes the esker, is widely recognized to be a geological deposit with superlative ground water storage and transmission properties. To assume a linear and direct proportionality between the area upon which outwash sits and its contribution to water storage and seepage within a watershed is flawed logic. The outwash is likely to contribute greater influence over water supply.

In addition, the portion of the esker described above, and lying within Tax Map 4F-66, Parcel 5B, is not the only portion of the esker to be removed by the proposed mining activities. The second portion of the esker to be removed lies south of West Liberty Road, proximal to MW3 and MW4, and west of Township Rd. 396, also known as Moore Rd. This portion of the esker connects the expansive kame delta to the esker. This portion of the esker, in which MW3 and MW4 are emplaced, along with the delta connected to it, represent a vast expanse, both areally and volumetrically, of superior aquifer materials. When the Phase II Pit is emplaced at this location, all of the water storage capacity, as well as the immense transmissivity, of these deposits will likely be removed from the watershed of wetland one. This portion of the watershed of wetland one may well exceed one third of the watershed area. Hydrologically, however, one again, this portion of the delta contains sand and gravel deposits over 100 feet thick. It can reasonably be expected to contain an immense volume of ground water. Seepage from these deposits will no longer be expected to drain toward wetland one, once the Phase II Pit is emplaced.

All told, removal of these two sections of esker can be prudently expected to have a substantial effect upon the water balance of wetland one, an exceptional value wetland. The dimensions of the delta and esker, south of West Liberty Road and within the

watershed of wetland one, coupled to the exceptional storage capacity and permeability characteristic of glacial outwash, portend that perhaps 40 %, maybe even 50%, of the water supply for the wetland can be imperiled by the proposed alterations of topography. Indeed, in the context of impacts related to removing portions of the esker south of West Liberty Road, the additional removal of the esker segment north of West Liberty Road sounds quite unreasonable. Particularly because the monitoring data collect throughout most of period of investigation, clearly reveal hydraulic gradients from both potions of the esker northward toward wetland one.

Lastly, again, the West Liberty Esker eminently deserves protection from the proposed mining and reconfiguration activities because of its uniqueness. The Constitution of the Commonwealth of Pennsylvania states (in part) that the people have the right to the natural, historical, and aesthetic resources of the environment, including generations yet to come. The Jacksville esker has long been recognized to be the best, most in-tact, and widely admired esker in the state. This esker, and the associated deltaic complex, is not completely understood. The portion of the esker under application for mining is crucial to reconstructing the natural history of the Late Pleistocene. It has not been sufficiently studied. To my knowledge, there is no geophysical imagery of its internal structure. It is reasonable to believe that additional study could enrich our understanding of deglaciation and ice margin dynamics. Moreover, it is the constitutional right of the citizenry to have this unique feature preserved in perpetuity.

Please deny this permit application.

Respectfully,

A large black rectangular redaction box covering the signature area.

EXEMPTION #6 - PRIVACY