



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

June 17, 2010

Operations Division  
Regulatory Branch  
**2008-00280**

Glacial Sand and Gravel Company  
c/o Kyle Schwabenbauer  
The EADS Group, Incorporated  
Clarion Office  
15392 Route 322  
Clarion, Pennsylvania 16214

Dear Mr. Schwabenbauer:

I refer to Glacial Sand and Gravel's revised application for Mine 47, received March 5, 2010, which included an increase in the amount of proposed impact. Currently, the applicant proposes to construct a sand and gravel processing plant in Worth Township, Butler County, Pennsylvania to wash and screen various grades of aggregate material and stockpile this material on site. 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 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 increase in impact for this project 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. 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.

As you are aware a second Public Notice (#10-26) was advertised for this project given the increase in amount of proposed impact. This Public Notice comment period closed on June 2, 2010. Enclosed are comments received regarding the project:

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- a. In an email from [REDACTED] received May 5, 2010, she states that she [REDACTED] [REDACTED] has no objections to the permit. She wanted a copy of the drawings that were more legible which were already provided by this office.
- 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.

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- c. In a letter from [REDACTED] received June 1, 2010 he reiterates his concerns being the [REDACTED] [REDACTED] 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. Please respond to [REDACTED] [REDACTED] and give him an update on the additional ground water studies which have been conducted recently. Please copy this office on your response to [REDACTED]
- 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.

It is understood that temporary wash ponds have been constructed in uplands on Mine 31 adjacent to the permit site. These wash ponds are not proposed to be used permanently because they are currently sitting on top of marketable sand and gravel. It is also understood that eventually the proposed settling ponds on Mine 47 will be used as stockpile area and the sand and gravel process water will be circulated through the water impoundment. The temporary nature of the wash ponds on Mine 47 requiring permanent impacts to existing wetlands and streams does not completely explain why these impacts must occur while satisfying the alternatives analysis component of our review.

Seemingly, if the temporary ponds can be used until the mine pit is exposed on Mine 47 for washing the aggregate material, then the mine pit could be utilized for washing aggregate materials from under the current temporary ponds on Mine 31. This would all together negate the filling of wetland and stream on Mine 47 for purposes of washing aggregate. You should address this issue by sending a response to this office, the Pennsylvania Department of Environmental Protection- Mining Office, U.S. Environmental Protection Agency, and [REDACTED] [REDACTED] (These mailing addresses can be found below in the copies furnished.) Please be sure to completely address this issue by providing a timeline of projected temporary wash pond usage and explain why the upland areas could not be utilized for stockpile areas.

Please update this office of the current status of the Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*) issue as well. Has the Pennsylvania Fish and Boat Commission requested additional survey work? Please address these issues within 30 days of receipt of this letter in order to continue the review process of this permit application.

If you have any questions, please contact Tyler Bintrim at 412-395-7115 or email at [tyler.j.bintrim@usace.army.mil](mailto:tyler.j.bintrim@usace.army.mil) and reference Corps project number 2008-280 in all future correspondence.

Sincerely,

//SIGNED//

Scott A. Hans  
Chief, Regulatory Branch

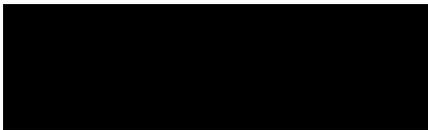
Enclosure

Copies Furnished:

Christopher Yeakle  
PA DEP, Bureau of District Mining Operations  
P.O. Box 669  
Knox, PA 16232

Jeff Lapp  
U.S. Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103

Steven Kepler  
PA Fish and Boat Commission  
450 Robinson Lane  
Bellefonte, PA 16823



#6 - PRIVACY

The hydrology report was reviewed by civil engineer, Jessica Corton (EC-DS) to determine any impact the proposed mine would have on the downstream tributaries and Wetland #1. In a meeting held with USACE on 28 January 2010, The EADS Group and Synder Associated Companies, Inc mentioned that water would be maintained within the excavated region during mining of the site. This was found to be concurrent with the Hydrology Report provided by EADS Group. The site is proposed to be mined by surface equipment and then switched to appropriate "armed" equipment (i.e., an excavator) to remove material below the ground water table therefore, maintaining the similar water pressure within the area.

Splitting the proposed plant location to the south and Wetland #1 to the north is the terminus of an esker with a northwest to southeast trend. To mitigate the loss of Wetland #2 for the proposed plant, a portion of the esker is to be modified in geometry. Monitoring well MW-5 is located directly within the concerned area and its readings show that the groundwater elevation is approximately that of Wetland #1. Modification of the esker will maintain at least five (5) feet of overburden above the highest groundwater table reading. Once again, the water pressure in the area should not be affected by this difference.

The groundwater data provided was limited to the monitoring wells (MW-1 through MW-9) north, west, and central to the site as well as two springs that feed into the wetland area. Without additional data from the south and east of the proposed mine site and north and east of the current wetland (#1) it is difficult to determine any outlying conditions that will affect the groundwater at the site. Based on the provided information of monitoring wells and springs on the proposed mine site, there will little to no impact on the downstream tributaries and Wetland #1.

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

June 1, 2010

Re: CELRP-OP-f 2008-280

Dear Ty,

I am writing in response to Public Notice No.10-26 for Application No. 2008-280. Thank you for this opportunity to comment.

In the months following the last comment period for this application, Army Corps requested and the applicant supplied a response to numerous concerns generated by the first public notice. In addition, the applicant submitted a Hydrology Report to Army Corps and DEP NW. DEP NW requested further information which the applicant supplied in the form of a report and new pump test data. Glacial submitted revisions to the Mine 47 mining permit application to DEP Mining, as well as revisions in the form of a minor modification to the Mine 31 mining permit as it pertains to the Rodgers Plant operations. An NPDES addendum indicating a need for more water thus the need to construct more ponds was discussed by Glacial and a PNDI review for that project was completed by DCNR. Glacial also submitted to DEP NW a Wetland Impact Report detailing the unanticipated interception of groundwater at the Rodgers Plant site and an analysis of the diversion of the water to Wetland #2

In light of issues found in these subsequent reports and applications, I would like to respectfully call for a **Public Hearing** in order to explore these new developments, and to provide the applicant, regulatory bodies and citizens an opportunity to reach a point of clarity and understanding concerning the Wetland Impacts and related issues. Thank you very much.

I would also like to request that this permit application be denied until such time as Glacial can answer in a clear, concise, accurate, and consistent manner, all of the following questions, and the questions and concerns submitted by agencies and the public; so that Army Corps can, in due diligence, uphold its responsibility to study the information and make the best permit decision on behalf of the public interest and the environment. Thank you again.

**Some new questions and concerns:**

**1. Are Wetland Impacts necessary?**

Module 3-3 Alternative 3 – Preferred Mining Plan submitted as part of the Mine 47 permit application 2010 revisions states:

*"The preferred mining plan includes the construction of five process/settling ponds, four of which will impact Wetland 2. These ponds are necessary for operation of the processing plant, as they allow suspended solids to settle from the wash water.*

Due to the timeframe associated with obtaining regulatory permits, *Glacial is also planning to construct temporary process/settling ponds on the Mine 31 site to the south of Mine 47. These temporary ponds will function in place of the ponds proposed to impact Wetland 2 until regulatory encroachment permits can be secured. It is not practicable to leave these ponds in place and permanently avoid all impacts to Wetland 2 in the long-term because the ponds will be constructed above of marketable reserves of sand and gravel.*

*After mining has commenced and marketable reserves are removed from areas east of the proposed plant, the settling ponds located over Wetland 2 may be relocated to the pit area to allow for additional space for sand and gravel stockpiles adjacent to the processing plant."*

This new information plus the Mine 31 modification narrative indicate that the three ponds on Mine 31 will be adequate to run the Rodgers Plant at full capacity 60 hours a week. I understand that the applicant does not want to leave these ponds in place permanently because they rest on reserves of marketable material. However, I applaud Glacial's creativity in developing this temporary location and plan.

Glacial further states that if permits for Wetland Impacts are approved they will construct the ponds in Wetland 2 as originally planned but may later move the ponds again into the mining pit area to the east of the Plant, once the Mining permit is approved and mining begins.

My questions are:

- a. As it appears now from the Mine 31 minor modification approval and the narrative in the Mine 47 revisions, the length of time needed for having the ponds in Wetland 2 may be short and temporary. If this is the case, is there a way to coordinate the mining plans so as to avoid Wetland Impacts altogether?
- b. Are there other locations on site where the ponds could be placed if needed?
- c. Is it possible to find alternatives that would not cause this loss to the environment from the filling in of Wetland 2 for the settling ponds for such a short time, and then using it for stockpiling material?

Such a plan might also save time and financial resources for Glacial as they would not have to provide a replacement wetland.

## 2. How much water is needed for the Rodgers Plant?

The 2/25/10 Mine 31 revisions state, "Based on the history of the plant at the Elliot site, there will be a loss of 1% (50 gpm) within the product itself." "The anticipated 50 gpm wash loss will be replenished by the production well located on the Rodgers Plant site."

a. Am I correct in thinking this means that as the anticipated 400 tons of material per hour are processed, 50 gallons per minute of water will adhere to the material and be lost during the 60 hours of weekly Plant operations? Does this equal 3000 gallons per hour, 30,000 gallons per ten hour work day, 180,000 gallons per 6 day work week, and 7,200,000 gallons per 40 work weeks a year? Thank you.

b. Mine 47 2010 revisions 8.3 a) page 8-8 states "If pumping of groundwater is planned, indicate the estimated gallons/day to be pumped." I did not see this figure. Could Glacial please explain where it can be found?

The 10/5/09 narrative for the NPDES Addendum states, "*Because of changes to the original plant design a higher volume of water will be needed during the sand and gravel operations.* Therefore, additional processing ponds will be required. The ponds will be constructed entirely above the local water table."

c. Could Glacial please explain if they feel this higher volume of water was taken into consideration during their latest pump test which based its positive conclusions on the 50 gpm extrapolated from the Elliot Mills Plant?

d. Could they please indicate how much more water is needed due to the Rodgers Plant redesign?

e. Earlier Mine 47 revisions 2/25/08 state, "The processing ponds (1-4) could be located outside the 100' stream barrier. If these ponds were repositioned outside the intermittent stream barrier they would not fully capture surface water runoff from the area immediately east and north of their location. *This would require additional groundwater pumping for production water.*"

When the above statement which indicates that moving the ponds from their original site will require more groundwater pumping is coupled with the redesign of the Plant, how much more water will be needed in addition to the 50 gpm?

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f. The 12/2/09 letter to [REDACTED] from DEP NW "requested that Glacial provide certain technical information demonstrating that the *proposed activities in the expansion area and the operation of Monitoring Well "M-W1" as a production well are protective of the surface and groundwater resources.*"

I did not see mention of the NPDES expansion area in the Hydrology Report or elsewhere. Could Glacial please provide the requested information? Thank you.

g.. Lastly, the latest pump test from April 2010, page 8, indicates that the equipment at Monitoring Well 1, the Production Well, is not designed to pump more than 84+ gpm and the flow rate will be diminished as the pump has to overcome head to pump the additional 27' to reach the elevation of the Plant. Perhaps this is a mute point and MW 1 can easily accommodate a more powerful pump, but I was wondering, if additional water is needed, will MW 1, as it is now configured, be able to supply it?

I understand that Glacial's reports indicate that there is no connection between the deeper aquifer from which the production water is drawn and the wetlands, so perhaps these questions are not in your jurisdiction and should be directed to DEP. However, if the volume of water that is being pumped from the aquifer 60 hours a week is more than 50 gpm, and since it appears the Rodgers Plant may be in operation for decades, perhaps it should be considered in terms of cumulative environmental effects on domestic water supplies in the area which draw from the same aquifer as the production well, as indicated in Glacial's submissions. Thank you.

**3. What feeds Wetland #1?**

The Hydrology Report indicates that there is a 339 acre drainage/recharge area which supplies the water to and includes Wetland 1.

a. Could Glacial please supply a map showing this 339 acre area? Thank you. It will be very helpful to know what areas should be protected from future alterations that may affect the hydrology to Exceptional Value Wetland 1.

b. The Hydrology Report states that "the flows beneath the portion of the Esker within the permit area account for approximately 3-5 acres or only 1% to 1.5% of the total recharge to the wetland complex." Does this mean that each acre in the system contributes an equal amount of water to the Wetland?

c. Could Glacial please describe how this portion of the Esker contributes recharge, however small, to Wetland 1?

d. In a letter to DCNR dated 2/12/10, Glacial states "In addition, grading during reclamation and construction of the mitigation wetland will ensure that surface runoff north of West Liberty Road will continue to flow toward Wetland 1"

The 12/29/09 letter to Army Corps e.)also states "After mining, the establishment of the mitigation wetland and grading of disturbed areas north of West Liberty Road will ensure that surface runoff is restored so that it flows as it did prior to mining."

Could Glacial please describe where this runoff will come from once the Esker is mined, how it will travel to Wetland 1, how runoff from the remaining Esker will travel across Swope Road to reach the wetland areas, how much runoff will be captured in the

replacement wetland, and how the physical barrier between the two wetlands as indicated in Mine 47 2010 revisions pages 14-66, 67, will affect runoff entering Wetland 1? Thank you.

#### 4. What feeds Spring 1d and Spring 5b?

The Hydrology Report states, "The recharge area to the spring at 1d is 3-5 acres, while the recharge area for spring 5b is approximately 9.0 acres. Both springs have almost a water year of data collected and have base flows of 2.5 and 6 gallons per minute, respectively. Of the 9 acre recharge area for Spring 5B less than 2 acres would be included in the mining area. The recharge area to Spring 1d could include a portion of the groundwater found at the base of the esker, which as discussed, *infra*, will not be encountered by mining."

a. Could Glacial please provide maps showing the recharge areas to Springs 1d and 5b? Thank you. Again, this is important, as I understand, because these springs help to provide water to the critical habitat for threatened and endangered species and will need to be protected well into the future.

b. In a letter to Army Corps dated 12/29/09 Glacial states, "Concerns raised by the EPA related to potential "secondary impacts" including disturbance of springs feeding the wetland are not valid due to the fact no springs exist within the proposed mining area north of West Liberty Road (Exhibit 6.2)."

Since the narrative in the Hydrology Report says that less than 2 acres of recharge area for Spring 5B are included in the mining permit area, could Glacial please explain how mining those acres will impact the hydrology to Spring 5b, even though Spring 5b is itself not included in the mining permit area? Thank you.

c. Since Spring 1d appears to be inside the mining permit area (it is a bit difficult to read the map and symbols at that point), could Glacial please provide a map of the proposed mining area and its relationship to both springs? Thank you. If such a map already exists, and I have overlooked it, could you please tell me which one it is? Thank you.

This map along with the new map requested in a. above will also be helpful in determining if the recharge area to the springs will be disturbed by mining.

d. Could Glacial please indicate which map submitted to Army Corps with the Hydrology Report shows the Springs? I could not find this map on the FOIA page. Perhaps I overlooked it. I want to be sure Army Corps, their geologist, and anyone else using the FOIA pages have this information. Thank you.

However, I did see a 6.2 map with springs in the Hydrology Report sent to DEP NW. The Hydrology Report received by DEP NW appeared to have the same information as the

report sent to Army Corps, just slightly rearranged and paged differently, plus it included the 6.2 map.

e. Could Glacial please clarify the statement, "The recharge area to Spring 1d could include a portion of the groundwater found at the base of the esker, which as discussed, *infra*, will not be encountered by mining."? Thank you.

f. Later, in section C. *Impacts of Mining on the Groundwater System*, the report states, "In the area north of West Liberty road, the mining depth will be restricted to stay above the water table. Both during and following mining and reclamation the surface topography and corresponding recharge will remain part of the shallow ground water system north of the road and wetland#1."

The Mine 47 permit application 2010 revisions state on page 8-13 Mining North of West Liberty Road, "Mining in this area will be constructed a minimum of five (5.0') above the shallow aquifer. This will permit the normal percolation of the rainfall/snowmelt events through the reserves maintaining the status quo at the site."

Am I correct in thinking that the area of the Esker to be mined will be taken down to 5 feet above the water table, and then this area will be changed into the replacement wetland for Wetland #2? If this is so, and the hydric soils from Wetland 2 are brought over to make the base of the replacement wetland, as indicated in the Mine 47 2010 revisions, could Glacial please explain how much percolation will occur through the base of the wetland into the recharge area of Spring 1d?

g. Could Glacial please explain how the surface topography will remain the same after 45' in elevation of Esker have been mined?

h. The 12/29/09 response to EPA's concerns further states, "In addition, mining is not proposed below the water table in this area, so impacts to springs would not occur even if they did exist in this area."

In #7 below a quote is mentioned which leaves me with questions regarding depth of mining. Am I correct in thinking mining will go below the water table to accommodate the hydrology of the wetland replacement?

i. Could Glacial please explain if in h. above they are saying mining below the water table would impact the springs?

j. Is the proposed lake south of West Liberty Road in Phase 2 mining part of the Spring 5b recharge area?

**6. What is the location of the discontinuous clay layer and what part does it play in the hydrology of Wetland 2?**

The Wetland Analysis Report for intercepted water at the Rodgers Plant states that a discontinuous clay barrier, which is found *extensively over the site*, creates the shallow groundwater system that primarily supports the smaller Wetland #2 south of West Liberty Road. Other reports mention this clay layer.

a. The map entitled Pump Test for Glacial Sand and Gravel Mine 47 submitted to DEP NW in 2010 shows the clay layer supporting the shallow groundwater system. The blue lines are running through Wetland 2 and travel west. They also travel along the edge of Wetland 1 moving inward. Could Glacial please supply a map showing the clay layer as it exists over the entire site? Thank you.

b. The original Mine 47 permit application 14.4 Wetland Impact Analysis/Assessment states, "Due to the sole dependence of this wetland community on surface water runoff, spring outcrops and a perched water table as sources of hydrology, avoiding or minimizing impacts as part of the mining permit are not feasible. *Mining within any portion of the permit area* is likely to significantly reduce or completely terminate the hydrological regime that supports the wetland community." This is referring to Wetland 2.

Perhaps this is a concern more for DEP Mining, but I am wondering if Army Corps is also concerned about the possible loss of hydrology to Wetland 2 from mining?

c. Could Glacial please explain how mining north of West Liberty Road which is in the permit area would likely reduce or terminate the hydrology to Wetland 2, south of West Liberty Road, as indicated in the statement above?

Is the hydrology connected?

d. If I am not mistaken, I noticed that the new Mine 47 revisions do not include the statement in point b. above. If this is so, could Glacial please explain if their experts still believe these facts to be true? Thank you.

e. The Hydrology Report contains a Pump Test Report (As Submitted with SMP Application). The last sentence of the Pump Test Conclusions appears to have some words missing. Could Glacial please supply them? I would like to understand the location and function of this gray silt layer. Thank you.

The sentence reads, "There is a surface aquifer, which is perched by the gray silt layer and supports the shallow wetlands on the [REDACTED] property and across West Liberty Road will not be effected by the production well usage."

## 7. Questions about wetland mitigation/replacement plan and impacts to Wetland 1

I am having difficulty understanding the mitigation plan and hope that Glacial will be able to help me, please. Thank you.

a. There are several statements relating to the depth of mining in the mitigation area:

- page 8-13 Mine 47 2010 revisions (please see 4d above) states "Mining in this area [north of West Liberty Road] will be conducted a minimum of five (5.0) above the shallow aquifer."

- page 6 from the Hydrology Report states "In the area north of West Liberty Road, the mining depth will be restricted to stay above the water table."

- page 2 from the 12/29/09 letter from Glacial to Army Corps states "In addition, mining is not proposed below the water table in this area, so impacts to springs would not occur even if they did exist in this area."

- page 2 from a letter to DCNR dated 2/12/10 states "The limits of proposed mining north of West Liberty Road will be based on seasonal groundwater elevations, which will continue to be monitored this spring. Mining will be limited to an elevation approximately five feet above the seasonal high groundwater table."

- page 8-8 Mine 47 2010 revisions states "The mining North of West Liberty Road will not intercept the perched system associated with Wetland Complex #1. Mining will be conducted at a minimum of five (5.0') above the projected average water-table at the 1199.msl. During the construction of the wetland mitigation area however, excavation will be done to the level of the water table or just above in order to assure the viable growth and success of the Wetland."

- pages 14-65 and 66 Mine 27 2010 revisions state "Soil saturated conditions are expected to occur throughout the growing season from the surface to one (1) foot below the surface based on the existing data gathered during the delineation of the adjacent wetland community, exploratory test pit data, and monitoring well data. *The site exhibits a perched water table that outcropped in many places along the upland/wetland boundary of the adjacent wetland community. This supporting hydrology will be intercepted by excavation and grading as part of the Phase 1 reclamation plan to create and maintain soil saturated areas.* The final grades (elev. 1,198.5'-1,200') will also permit temporary boundary inundation in some portions of or the entire replacement site during storm events and seasonal fluctuations from surface water runoff. The interfacing of perched ground water and surface water is expected to provide soil saturated conditions throughout and beyond the growing season."

Do I understand correctly that the first statements say that mining will stop five feet above the water table, and the latter statements say that the water table will be intercepted, which will provide the hydrology for the replacement wetland? Thank you.

**b. Analysis of Practicable Alternatives 3.2 Alternative 2 – Minimal Impact Mining Plan** page 6 Army Corps Analysis and page 14-78 Mine 47 2010 revisions states “In addition to minimizing direct impacts to wetlands, *this alternative would ensure that indirect impacts to wetlands (i.e. loss of hydrology) were not a result of mining. To accomplish this, mining north of West Liberty Road would be limited to keep the pit floor above the water table. Consequently, hydrology to Wetland 1 would not be impacted.*

**3.3 Alternative 3 – Preferred Mining Plan** states “At the time of mining, *the pit floor will be limited to a depth approximately five feet above seasonal water table elevations to ensure that there are no impacts to hydrology sources to Wetland 1.*

These statements indicate that the only way to ensure the hydrology to Wetland I is not compromised is to keep mining above the water table. Since the mitigation plan says that “This supporting hydrology will be intercepted by excavation and grading as part of the Phase 1 reclamation plan to create and maintain soil saturated areas”, could Glacial please explain how hydrology to Wetland 1 will not be impacted by the mitigation plan?

c. Based on the above statements, could Glacial also please describe the hydrologic connection they believe exists between the mining area north of West Liberty Road and Wetland 1? Thank you.

d. Will the replacement wetland have an outlet? If not, what will keep it from becoming stagnant?

If so, how will the water leave the wetland? Will it run into Wetland 1?

e. DCNR and Army Corps have both asked that a buffer area be left between the replacement wetland and Wetland 1. Is this because there is concern about water running from the replacement into Wetland 1?

If not, could someone please explain the purpose of the buffer area? Thank you.

f. Will the two wetlands be connected hydrologically?

g. I would like to thank Glacial for beginning to comply with DCNR’s washing requirement as indicated on page 14-67 of the Mine 47 2010 revisions which state “that any construction equipment or machinery previously exposed to invasive plant material must be washed offsite prior to use within the proposed mitigation area or Rodgers Plant construction area. This step will reduce the potential for introduction of invasive plant species and protect native plant communities.”

That is very kind.

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Could Glacial please explain how they will know which machinery or equipment was exposed to invasive plant material? Will Glacial wash all machinery and equipment as a precaution? Will Glacial also wash all vehicles as requested? Has Glacial started this washing program for the NPDES permit area? What consideration is given to travel between Mine 31 and the NPDES and Mine 47 permit areas?

The DCNR requirement states under **Both Project Areas** referring to the Mine 47 permit area and the NPDES permit area, "please thoroughly wash all vehicles, equipment and machinery at a carwash offsite to remove any invasive plant propagules prior to bringing onsite and commencing any construction activity." Thank you.

#### **8. What effects will road relocations have on the mitigation area?**

In a letter to DCNR dated February 12, 2010 and in the December 29, 2009 letter to Army Corps Glacial says that there have been some discussions with township officials regarding road relocation but there has been no agreement or engineering study done.

a. Could Glacial please explain the purpose of the notarized, signed pages in the Road Variance entitled AGREEMENT made on January 5, 2009 by and between Glacial Sand and Gravel and Worth Township? Thank you.

These pages detail the road relocations of portions of Swope and West Liberty Roads which Glacial agrees to do at their sole cost and expense if DEP grants approval of mining north of West Liberty Road, and if the township grants the Road Variance, which they did, and also signed and notarized on January 5, 2009.

b. Could Glacial please disclose how much land will be lost to the road relocations and how much acreage will be left for the mitigation area in the footprint of the Esker, next to Wetland 1?

c. *DEP requested that wetland mitigation be at a ratio greater than 1:1.* If the acreage left after road relocation is not large enough for mitigation could Glacial please tell us what other locations they have considered for the replacement wetland?

d. Could Glacial please explain how they arrived at the figure of approximately 3-5 acres for the portion of the Esker in the permit area north of West Liberty Road? This was stated in the Hydrology Report.

e. Could Glacial please explain why, "It would be premature to include speculation regarding potential road realignment at this time."?

The Mine 47 revisions dated 2/25/08 page 10-1 states "Actual production mining will begin in Phase 1 to remove sand and gravel deposits sufficiently for realignment of West Liberty Road and to create the depression shown on cross section C-C. This depression

*will be the location of wetland mitigation for the wetland disturbance area south of W. Liberty Road.” Page 10-5 states “This Phase 1 mining, identified in Module 10.1, will facilitate the proposed road relocation and wetland mitigation area. Road relocation is proposed on W. Liberty Road (T-860) from the intersection with Swope Road (T-382), and extending to the southeast for a distance of approximately 700’ where it will blend back into the existing roadway between the dwelling on property No.6 and the shed across the road.”*

I hope Glacial can understand how the above statements coupled with the signed Agreement caused many of us to think Glacial had been discussing and planning for road relocations for at least two years.

f. Could Glacial please indicate when they think it will be prudent to discuss the road relocations and the relationship to the mitigation site? Thank you.

## **9. Questions about Alternative Analysis**

I am confused about alternative analysis and hope someone will be able to help me understand this concept/regulation. Thank you. I will be happy to finally understand this important requirement.

a. Several agencies and members of the public have expressed concern that Glacial seems to be proposing impacts to streams, wetlands and primary agricultural lands for purely economic reasons, and Glacial was requested, if I am not mistaken, to look for alternative locations for their washing plant. Were they also required to look off site for new mining opportunities, as indicated by their response?

b. Am I correct in understanding that Glacial’s latest submissions, in particular the Mine 47 2010 revisions below, continue to list economic factors as the reasons for impacting aquatic resources – streams and wetlands, and primary agricultural lands?

Page 1-4 of the Mine 47 2010 revisions states, “The alternatives explored in developing the mining plan included not only the avoidance of the currently listed farmed areas, but also peripheral areas of sensitive habitats. Initially the permit area was to have included the entire property including the area designated as Wetland #1. *During the application process* it was determined that this area held a unique natural habitat and was removed from the mining plans prior to submittal. This greatly reduced the potential recovery of the reserves available at the site and by extension the recovery of the capital investment costs of acquiring the property. To avoid the areas under cultivation would further diminish the recoverable resources to such an extent as to make the entire project unfeasible and result in the loss of all monies invested.”

c. I am wondering, is there a law that states that a mining company can mine any property that it purchases, no matter how many impacts it may need to make in order to complete the mining project and recover its investment? Thank you.

*If not, could Glacial please explain if prior to the purchase of the rights to sand, gravel and rock under the Rodgers property, and prior to purchase of the Rodgers property itself, Glacial, their geologists and other experts researched, were aware of, and took into consideration any of the following?*

1. That mining of 66+ acre Wetland 1 would be cost prohibitive because of high mitigation expenses, so purchasing Wetland 1 would mean revenue lost. The Analysis of Practicable Alternatives 4.0 Conclusions states, regarding the Original Mining Plan which proposed to mine Wetland 1, "Required mitigation for such extensive impacts also would not be practical from an economic standpoint."
2. That the site had limited space for stockpiles of materials so that Wetland 2 and portions of Unnamed Tributary 3 after being filled for temporary settling ponds might have to be used for a stockpile area as indicated in 3.3 Alternative 3 – Preferred Mining Plan.
3. That site constraints would require the placement of Pond 5 to encroach the required 100' setback to Unnamed Tributary 1 required by DEP Mining and requested by PA Fish and Boat Commission, and Ponds 1-4 to be placed in a jurisdictional Wetland and the headwaters to a stream.
4. That the PNDI Project Environmental Review Receipt dated 10/10/06, page 4-3 original Mine 47 permit application, which lists one potential impact to a plant might mean that after inquiry to DCNR and further study, mining might be limited, and/or one or both of the wetlands could be labeled Exceptional Value and need to have the hydrology protected.
5. That waiting for the PNDI review letter and further study of the area might indicate the necessity of avoiding any sensitive areas.

The PNDI review letter dated 1/9/07 indicated that the plant lived in calcareous swamps and swales.

6. That the Jacksville Esker which has been listed as one of The Outstanding Scenic Geologic Features of Pennsylvania since at least 1979 and is known as the best preserved Esker in Pennsylvania is part of our geologic heritage.

Did Glacial's geologists realize that they were planning to purchase, mine, and sell the end of this rare geologic feature?

7. That historic records for rare and noteworthy plants of the West Liberty Bog are available from the Carnegie Museum of Natural History, Herbarium Records. I believe a list of these plants was submitted to both Army Corps and DEP during previous public comment periods.

8. That the USGS Topographic Map of the Mercer quadrangle dating back to at least 1913 shows the area of Wetland 1 depicted as a *Marsh*.
9. That Township ordinances might cause site constraints as indicated in Analysis of Practicable Alternatives 3.0 Onsite Mining Alternatives.
10. That DEP regulations regarding pond sizing as indicated in Analysis of Practicable Alternatives 3.0 Onsite Mining Alternatives might also cause site constraints.
11. That purchasing a property with so many limiting factors, potential challenges, and permitting processes might be financially impractical.

Thank you very much.

Please see [www.co.butler.us/recordser](http://www.co.butler.us/recordser) for documentation of transfers of rights to sand, gravel and rock under the Rodgers property and for the purchase of the Rodgers property. Do a simple search for Glacial Sand and Gravel, Ennstone, Inc. - the holder of sand, gravel and rock rights, Buffalo Valley - Glacial's sister company who purchased sand, gravel and rock rights, and/or Carl Rodgers, owner of the property.

10/13/06 Non-Mortgage Assignment Ennstone, Inc and Buffalo Valley Ltd  
10/26/06 Agreement –Rodgers, Carl S. Jr./Rodgers, Norma L./Glacial Sand and Gravel  
10/26/06 Non-Mortgage Assignment – Rodgers, Carl and Buffalo Valley Ltd  
1/2/07 Warranty Deed – Rodgers, Carl and Glacial Sand and Gravel

#### **10. Miscellaneous questions in response to Glacial's submissions**

- a. Could Glacial or Army Corps please provide a copy of Ms. Jessica Corton's report for the public to read? Ms. Corton is the reviewing geologist for Army Corps quoted in Glacial's 2/12/10 letter to DCNR as stating, "I believe there will [be] little to no impact on the downstream tributaries and Wetland #1 as your report states."
- b. The above letter from Glacial also states "In addition, the attached Hydrology Report adequately explains the quantity of water necessary for operation of the plant and the source of this water."

Could Glacial please indicate where in the Hydrology Report the quantity of water needed by the Plant is listed? Thank you.

- c. The 12/29/09 letter to Army Corps c) states "this wetland [1] does not meet the unique water chemistry characteristics of "fens" based on water samples collected within the wetland."

Could Glacial please supply their definition of a fen and the scientific basis for it? Thank you.

d. The 12/29/09 letter to Army Corps also states in m.) "It is worth noting that the reclamation of similar sand and gravel sites has resulted in enhanced wildlife habitat. The Western Pennsylvania Conservancy has purchased reclaimed sand and gravel mines in the past due to the enhancement of wildlife habitat."

Could Glacial please document the names and locations of these reclaimed mines?

e. Could the Army Corps please explain why they will no longer require a cost benefit analysis of the need to mine a portion of the esker, as requested in their October 19, 2009 letter to Glacial? Thank you.

f. The Hydrology Report says that Tamarack Lake did not exist before 1940 and the Mine 47 2010 revisions page 8-13 state, "Tamarac Lake did not exist before 1950 and was probably created due to mining activities."

Could Glacial please document the mining they believe occurred to create and later enlarge Tamarack Lake? Thank you. Could they also provide an accurate date of when it was created, an estimation of the depths of mining that they believe occurred to create the very shallow lake, and documentation that waters backing out of Tamarack Lake have contributed to the water in Wetland 1 as indicated in their submissions? Thank you.

g. Could Glacial please document when Worth Township was told that the Rodgers Plant will operate 60 hours a week?

h. Could Glacial please document when the Township officials told Glacial that they preferred Glacial to use Swope and Barron Roads as the access roads to Rte. 108?

i. The 12/29/09 letter to Army Corps d.) states in a comment to DCNR "There is no regulatory basis for contacting (redacted name) in reference to the esker." The 3/13/09 PNDI review letter requested that Glacial contact DCNR geologist, Gary Fleeger, to discuss the removal of the end of the Esker which is listed as a geologic Resource of Concern in the Pennsylvania Natural Heritage Program.

Subsequent PNDI review letters continued to list the Esker as a Resource of Special Concern. And if I am not mistaken, the PNDI Environmental Review screening tool requests that applicants contact the jurisdictional agency to discuss these impacts.

Could Glacial please explain further why they feel they are not required to follow this PNDI review requirement? Thank you.

j. The Army Corps letter to Glacial, 10/19/09, o.) expresses concern about agricultural land. I did not see a response to this concern in Glacial's 12/29/09 letter.

Could Glacial please address this concern regarding the effects of mining on agricultural lands? Thank you.

**10. Army Corps' evaluation of the national concern for both protection and utilization of important resources – soil, minerals, and water.**

Agencies and citizens have submitted numerous concerns regarding protection of important resources. Glacial has likewise shared their concern and desire to utilize - mine and sell - important resources. I would like to emphasize that protection of important resources such as *soil, minerals, and water* can also lead to utilization and economic gains from those resources, and need not be seen as opposition to progress.

I would ask that during review, the Army Corps please consider the cumulative environmental and economic effects of mining projects in our area on soil, minerals and water, and the resulting loss of farmland and integral wetlands, and their potential to provide generations to come with *sustainable, regenerative products and jobs* producing food, fiber and feedstock as well as recreational, educational and scientific opportunities. Thank you

a. Maintaining agricultural lands is one way to protect and utilize important resources. Our local area has already lost many good acres of farmland, and if all of the leases are permitted, I would guess that the cumulative effect will be many hundreds if not thousands of acres of active or potential farmland destroyed or damaged locally and in the surrounding municipalities and counties.

The Northwestern Butler County Multi-Municipal Comprehensive Plan states "Extraction is a growing industry in the Project Area, which has a major impact on land use. Operations can be noisy, discouraging some land use from locating nearby. The sites must also be remediated to restore them to their previous land cover or allow for a new developable use." It also states under *Worth Township*, "The percentage of acreage categorized as extraction is the most of any municipality in the project area."

- Could Glacial please provide figures on the current and proposed acreage of lost current or potential farmland in Worth Township, and surrounding municipalities and counties so that Army Corps can weigh the cumulative effects of lost farmland against the economic gains for this company and mining project? Thank you.

This same data could be used to ascertain the potential and current cumulative impacts to connected **wetlands**.

b. I believe that I have heard or read that farmland can be restored to its former land use after mining. But Ron Gargas, former Conservation Director for the State of Pennsylvania, Adjunct Professor of Sustainable Agriculture at Slippery Rock University, and long time local organic farmer states:

*"It is impossible to restore what Mother Nature has created over millennia, when you look at the complexity of the food web and the interaction of life, minerals, and soil moisture.*

*As desertification, salination and development progresses on open agricultural land, the food chain becomes progressively threatened since only 1/32 of Earth's landmass is even capable of producing food, fiber and feedstock, which is after all the beginning of all "new wealth" in the ecosystem - where the truly raw materials of water, sunlight, and carbon dioxide culminate in the food, fiber, and feedstock which is our existence on our planet.*

*Soil composition with a preponderance of sand and gravel is the most productive since moisture moves easily up to the surface and excess surface moisture moves to lower reaches making the land much more valuable to traditional agriculture practices."*

Perhaps even the Esker, which Glacial points out was once used as pasture land, could be used for that agricultural pursuit again.

- Could Glacial please provide studies or documentation of the results of reclaimed farmland, i.e. productivity, drainage, nutritional value of food produced, availability of water, soil composition, microorganisms, etc. pre and post mining? Thank you.

This would be especially beneficial in the current Mine 47 vicinity because, if I understand correctly, this area holds some of the best farmland in Butler County.

c. Geologists tell me that glaciated areas are blessed with abundant water, however, some water in the Slippery Rock area is not palatable as drinking water due to iron, sulfur, bacteria, hardness, chlorine, or other residues, and many people use water filtration systems or buy bottled water. In addition, the Northwestern Butler County Multi-Municipal Comprehensive Plan states that "There is some concern about preserving the aquifers in Worth Township."

The 50gpm which Glacial proposes to use from a production well as makeup water for the Rodgers Plant may not seem like much in terms of industrial usage or when drawing from a healthy aquifer, but if I am calculating correctly, does this mean that 50 gpm equals 7,200,000 gallons per 40 working weeks a year?

I do not know the quality of this water but if it has been filtered by the sand and gravel and is of good drinking quality it could provide 7,200,000 gallons of valuable drinking water a year. And if one person uses an average of 5 gallons of pure drinking and cooking water per week this aquifer could hold a healthful and essential resource. If sold at even one dollar a gallon this water would be worth millions of dollars. This is just to suggest that preserving water for the future, and generations to come would be a tremendous act of restraint and stewardship, and perhaps profit. Good quality water like good farmland is a gift.

The pump test data says that some neighboring properties share this aquifer so *even if* the water is of lesser quality it is still used and is adequate for domestic purposes.

Water resources may also be strained in the future as gas drilling companies approach local water sources to buy water. In addition, the increased need for pure water nationwide due to water mining, infiltration of salt water into fresh water, contamination, drought and large industrial usage may someday put pressure on our local systems to supply water for this greater need.

- Could Glacial please provide maps and narratives of the aquifers their mining has and will affect in the Slippery Rock area, the Harrisville area, etc? Thank you.

I hope that Army Corps will take into consideration the effect of this sand and gravel mine and Rodgers Plant as well as other current and future sand and gravel, limestone, coal, gas and oil mining/drilling from all of the companies mining/drilling in the Slippery Rock area and beyond, and the cumulative effects on water resources both in wetlands and at a deeper level. Thank you.

I appreciate very much this opportunity to comment and ask for further information and clarification from Glacial. I look forward to their responses, and their continued spirit of cooperation and creativity as detailed above, for which I am grateful.

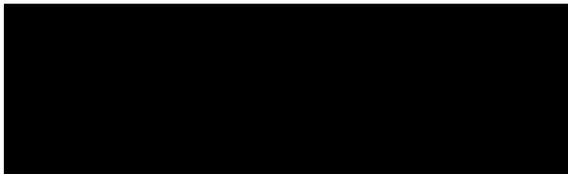
I realize that Glacial is eager to begin operations at the Rodgers Plant and Mine 47, but I hope that they and the regulatory bodies will realize that many important questions are still unanswered, and that patience, teamwork and insightfulness are required during this next phase of the journey.

In time, I believe, workable, responsible and ethical solutions to these permitting concerns will be found.

Thank you all for your patience, and dedicated work.

Thank you again for this opportunity to comment.

Sincerely,



#6 - PRIVACY

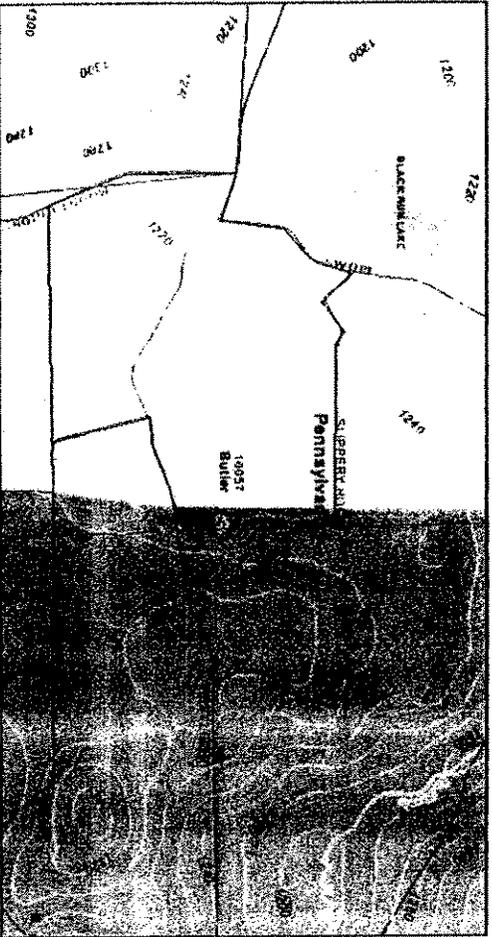
# PNDI Project Environmental Review Receipt

Project Search ID: 20061010059358

Project Name: Mine 47

Date: 10/10/2006 10:32:04 AM

## Project Location



4-3

Project Name: Mine 47

On Behalf Of: Private Individual

Project Search ID: 20061010059358

Date: 10/10/2006 10:31:58 AM

# of Potential Impacts: 1

Jurisdictional Agency:

Pennsylvania Department of Conservation and Natural Resources

Project Category: Mining, Sand and gravel (upland/wetland)

Project Location

Decimal Degrees: 41.0063 N, -80.0855 W

Degrees Minutes Seconds: 41° 0' 22.7" N, 80° 5' 7.8" W

Lambert: -573833, 88062051, 737441, 44440289 ft

ZIP Code: 16051, 16057

County: Butler

Township/Municipality: WORTH

USGS 7.5 Minute Quadrangle ID: 536

Quadrangle Name: SLIPPERY ROCK

Project Area: 172.8 acres

Glacial Sand & Gravel  
Mine 47

### Location Accuracy

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

### 1 Potential Impacts

Under the Following Agencies' Jurisdiction:  
Pennsylvania Department of Conservation  
and Natural Resources



# Michele Mustello Butler County

## Web Services Detailed Data Results

**Instrument:** 200702200003866      **Volume Page:**      **Display Doc**  
**Recorded:** 2/20/2007 12:18:46 PM      **Prepared:** 2/15/2007      **Pages: 1**  
**Document Type:** WAIVER OF RESTRICTIONS      **Consideration:**  
**Grantor:** RODGERS, CARL S JR / RODGERS, NORMA L  
**Grantee:** GLACIAL SAND & GRAVEL CO  
**Notes:**  
**Legal Description:**  
**Marginal:**

**Instrument:** 200701020000021      **Volume Page:**      **Display Doc**  
**Recorded:** 1/2/2007 9:47:49 AM      **Prepared:** 1/2/2007      **Pages: 5**  
**Document Type:** WARRANTY DEED      **Consideration:** 234295.5  
**Grantor:** RODGERS, CARL S JR / RODGERS, NORMA L  
**Grantee:** GLACIAL SAND & GRAVEL CO  
**Notes:**  
**Legal Description:** Parcel: 330-4F66-7, Acr: 61.071, Municipality: WORTH TWP / Parcel: 330-4766-5B, Acr: 95.126 / /  
**Marginal:** Fwd 200805160010909 (AGSEC AREA)

**Instrument:** 200610260027399      **Volume Page:**      **Display Doc**  
**Recorded:** 10/26/2006 1:15:03 PM      **Prepared:** 10/26/2006      **Pages: 2**  
**Document Type:** AGREEMENT      **Consideration:**  
**Grantor:** RODGERS, CARL S JR / RODGERS, NORMA L / GLACIAL SAND & GRAVEL CO  
**Grantee:** GLACIAL SAND & GRAVEL CO / RODGERS, CARL S JR / RODGERS, NORMA L  
**Notes:**  
**Legal Description:** Sub/Condo: RODGERS SUB, Parcel: 4F66-5B, Lot/Unit: 1, Acr: 95.126, Municipality: WORTH TWP / Parcel: 4F66-7, Lot/Unit: 2, Acr: 80.050  
**Marginal:**

**Instrument:** 200610260027397      **Volume Page:**      **Display Doc**  
**Recorded:** 10/26/2006 1:11:04 PM      **Prepared:** 10/26/2006      **Pages: 3**  
**Document Type:** NON-MORTGAGE ASSIGNMENT      **Consideration:**  
**Grantor:** RODGERS, CARL S JR / RODGERS, NORMA L  
**Grantee:** BUFFALO VALLEY LTD  
**Notes:**  
**Legal Description:** Acr: 175.000, Municipality: WORTH TWP  
**Marginal:** Blkvd BOOK 2231 682, Blkvd 200106010013853 (CNSNT)



Contour interval 20 feet  
 Distances to mean sea level



Edition of Nov. 1913, reprinted 1944  
 Polyconic projection

PA  
 MERCER  
 NADCO-WOOD/16

80 07 (Bracket)

## Bintrim, Tyler J LRP

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**From:** Chin.Stephanie@epamail.epa.gov  
**Sent:** Friday, May 28, 2010 5:08 PM  
**To:** Bintrim, Tyler J LRP  
**Cc:** Lapp.Jeffrey@epamail.epa.gov  
**Subject:** PN 10-26, LRP 2008-280 Glacial Sand and Gravel Co

Tyler,

EPA has reviewed the re-advertising of PN 09-38 for Glacial Sand and Gravel Company's proposal for construction of a sand and gravel processing plant. The applicant proposes to fill 2.49 acres (2.3 acres jurisdictional) of wetland and approximately 246 lf of unnamed tributary to Black Run. This is an increase of 0.6 acres of wetland and 6 lf of stream from the original public notice. EPA supports the Corps' decision to re-advertise the public notice after a hydrological analysis due to the uncertainty of secondary impacts on Wetland 2.

In response to PN 09-38, EPA wrote a letter, dated September 14, 2009, expressing concerns with alternatives/selection of the LEDPA; mitigation; and secondary impacts. Our comments regarding selection of the LEDPA remains germane. According to the February 2010 revised alternatives analysis, the Minimal Impact Mining Plan is not feasible due to economic reasons stemming from the loss of sand and gravel reserves and reduced capacity of the ponds. EPA would like to reiterate that while economic factors can be considered in determining project viability, it should not be the single factor for developing justification for not avoiding development in waters of the US.

EPA has no additional comments to provide. Thank you for the opportunity to comment.

Stephanie

Stephanie S. Chin  
U.S. Environmental Protection Agency - Region III Office of Environmental Programs (3EA30)  
1650 Arch Street Philadelphia, PA 19103  
Office: 215.814.2747  
Fax: 215.814.2783  
[chin.stephanie@epa.gov](mailto:chin.stephanie@epa.gov)

Dear Mr. Bintrim,

The purpose of this correspondence is to express concerns involving the mining of the land 1.7 miles west of the Borough of West Liberty. Through information provided in public notice number 09-38, it is clear that the mining operation may have a profound impact on the property that my wife and I purchased in May 23, 2008.

#6 - PRIVACY

We reside at [REDACTED] Tamarack Lake and the resulting outflow/ wetlands that spill from this waterway. This real estate supports a diverse ecosystem, permitting various plant and animal life to exist. During our short period of ownership, we have watched bald eagles and ospreys fish in the lake on a daily basis, followed great blue herons, green herons, wood ducks, mallard ducks, and Canada geese as they raised broods on the islands within the lake, followed the progress of painted turtle and snapping turtle nests, and simply enjoyed the landscape as the seasons progressed.

Due to the fact that this ecosystem depends on the streams and wetlands that feed the lake, I do not feel it is possible for the Glacial Sand and Gravel Company to fill one of the streams that feeds the waterway and create new lakes without disturbing, or altering, our property and ultimately the wildlife and plants that reside in this region. I am concerned that the mining operation will extrude sand and gravel from the esker, which borders the wetlands that directly feed our lake. I am concerned that the existence of lake will be impacted. I am concerned that pollution, in the form of sedimentation and erosion, thermal elevation, and water contamination will impact the ecosystem. I am concerned that a mine/ environmental inspector has not even attempted to contact us to discuss possible issues, or create a benchmark for water testing.

I am not requesting a public hearing because I feel that my thoughts and feelings, which are quite clear in this letter, are properly conveyed. Although, if future issues do arise, I will not hesitate to take further action.

As a former chemistry teacher, I am aware of the hazards of mining. As a current high school administrator, I am aware that the best-laid plans can turn for the worse. As an individual that loves the outdoors and is a member of Ducks Unlimited, I am aware of the value of wetlands and believe they are a natural resource that cannot be squandered or artificially replaced. Finally, my wife and I purchased this property with the full intent of preserving the integrity of real estate, which we do not want to change.

Sincerely,

[REDACTED] #6 - privacy

**Bintrim, Tyler J LRP**

---

**From:** Bintrim, Tyler J LRP  
**Sent:** Friday, May 07, 2010 10:01 AM  
**To:** [REDACTED] #6 - privacy  
**Subject:** RE: CELRP-OP-F 2008-280

**Attachments:** document2010-05-07-095736.pdf



document2010-05-07-095736.pdf ...

Ms. Rea,  
This attachment should be clearer. Thank you for your comment.

Sincerely,

Tyler J. Bintrim  
Regulatory Project Manager  
U.S. Army Corps of Engineers Pittsburgh District Federal Building, 20th Floor 1000 Liberty Avenue Pittsburgh, PA 15222

[www.lrp.usace.army.mil](http://www.lrp.usace.army.mil)

P: 412-395-7115

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

**From:** [REDACTED] #6 - privacy  
**Sent:** Wednesday, May 05, 2010 10:27 PM  
**To:** Bintrim, Tyler J LRP  
**Subject:** CELRP-OP-F 2008-280

This is in reference to the recent letter we received in the mail about the Glacial Sand and Gravel Co. application. I live [REDACTED] and have no objections to the permit, but I would like a copy of the drawings that I could actually read. The ones received in the mail are not readable, they are much too light.

Thank you,

[REDACTED] #6 - privacy

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

2 June 2010

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

Dear Sir,

I encourage your rejection of the application filed under provisions of Section 404 of the Clean Water Act. I further maintain that destruction of the Jacksville Esker, in part, violates the Constitution of the Commonwealth of Pennsylvania. Please allow me to elaborate upon my concerns.

The description of work implies that a portion of the esker, lying to the north of West Liberty Road will be destroyed to accommodate the creation of mitigation wetlands. Furthermore, it is asserted that Wetland 1 will not be disturbed. I believe that reasonable and prudent interpretations of the landscape, and the associated hydrogeologic framework, suggest that both implications are false. Thus, part 9 – Evaluation – must consider the impacts upon water quality and general environmental effects.

Attached is a water table level contour map drawn according to customary techniques for the monitoring data reported for 11/12/09. This map reveals the context for some of my concerns. I open by noting that the water table geometry displayed is typical for many of the monitoring surveys reported in the associated permit materials. Please note: (1) water table elevations are consistently higher in monitor well 5, on the esker, than in monitor wells 6 & 7, in wetland one. Thus, there is clearly northerly flow from the esker into the wetland. (2) the ridge of the esker continuing southeasterly across West Liberty Rd to monitor well three upholds a ridge of groundwater that also can be prudently interpreted to flow northward to wetland one. Thus, the groundwater data contained in the application materials provide evidence of northerly flow from the esker, consistently over the duration of the monitoring period.

In addition to this concern arising from the groundwater elevation data, no map has been included in reports (to my observation) that discloses the area of the watershed delineated to provide flow to wetland one. It is not clear to me if portions of the esker and delta south of West Liberty Road are included in the recharge area for wetland one. A reasonable interpretation of topography should include a portion of the delta and the ice marginal esker in this recharge zone. The landscape tilts downhill to the north and the groundwater elevation data support northward flow from this region into the pathway leading to wetland one.

I also wish to express concern about interpretations the history of Tamarack Lake and wetland one. While it is clear that water levels have varied through the years due to both natural and anthropogenic variations, a prudent interpretation of the geologic setting would describe that both basins are Pleistocene kettles that were lakes early in their existence, as testified to by their underlying lacustrine clay layers. Thus to arbitrarily start their accounting or assessment of their value as wetlands when their land-use was

6/7/2010

agricultural, or they were drained of standing surface waters, might be misleading. These basins present wetland characteristics that have existed for over 10,000 years, and whose periodic saturation status can be envisioned to have varied greatly during the interim.

Lastly, I wish to state that while eskers hold no protection status based upon their general character alone, 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 Jacksonville 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,

Patrick A. Burkhart, PhD  
Hydrogeologist and  
Professor of Glacial Geology