

BIOIMPACT, INC.
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ST. CROIX, U.S.VIRGIN ISLANDS 00851

February 24, 2016

Erika A. Kellerhals
Member
Kellerhals Ferguson Kroblin PLLC
9100 Port of Sale Mall Suite 15
St. Thomas, VI 00802

Re: Great St. James Permitting

Dear Erika,

Thank you for contacting Bioimpact, Inc. in regard to the permitting for Great St. James. I have revised leaving out the new additional dock. I feel that this is an excellent decision. Trying to permit the dock extension and the additional dock would have been extremely difficult without a very compelling argument of why both were absolute necessary. The extension of the dock, while it will have impacts can easily be justified. I have listed each item separately and provide a discussion of how I feel we should best approach the permitting. I have also provided a detailed discussion of what will be required and finally have provided a cost for these services.

Existing Well and TPDES

I would like to contact Syed Syedali and Jeffery Johnson at the Division of Environment Protection and check on the status of the well and if there is a well water allocation permit. They will be pleased that the new owner is reaching out to get the well in to compliance. We need to get an idea on the existing RO capacity and based on the fact it was operating we can assume that the well is capable of producing that much volume. We could also get a draw down test done of the well to determine the potential volume if a larger RO is desired. We should analyze the water quality to determine if its drawing fresh water, brackish water or saltwater. In any event we will have to apply for the allocation permit and it usually only takes 2 to 3 weeks to get the permit issued especially since we should have no issues since there is no one else in our aquifer.

Once we know the size of the RO and figure out where we are discharging I can get the TPDES application filled out and in. This unfortunately can take a while; by regulation they have 180 days to evaluate the permit. We should be able to this much quicker if we push on Vernill Roberts who is in charge of TPDES permits.

Also if we are thinking of putting in a small Waste Water Treatment Plant(WWTP) we will need to include the WWTP in the TPDES as well. Utilizing a small plant will provide effluent to irrigate with for landscaping. There are monitoring requirements for TPDES permits but they should be minimal for the systems the size we are looking at.

Dock Extension

We will need to have a dock design and determine how far we intend to extend the dock. There are seagrasses all around the dock and we are going to have to transplant the grass which will end up in the dock footprint. This will be a Major modification to the CZM permit and a modification to the COE permit. The COE permit will require consultation by the federal reviewing agencies National Marine Fisheries, Fish and Wildlife Service and EPA. I will need to do the benthic studies and develop the mitigation and monitoring plans. There is seagrass and we will have impacts we will have to mitigate. We will need to justify and show that we are minimizing impacts to the greatest extent possible while making the dock practical and safe for use to service the existing compound.

Electrical Cable from Great Bay

I have just finished permitting and installing the viNGN cable in Great Bay that goes to St. Croix. When I developed that route, I purposefully stay north of the LSJ line because I figured that eventually a cable would be needed. The first question that comes to mind is would a cable from LSJ to GSJ be considered. I ask this just because it would be a shorter route and save on cable cost.

Cables have a smaller footprint and are flexible, I can usually find a feasible permittable route that works well with the proposed location for the beach manhole on the island. However it is extremely important to stay away from ESA corals to the greatest extent possible. Because of the shallowness between GSJ and St. Thomas they will expect us to survey and route the entire length. Once permitted and installed we will be required to monitor the cable for the first several years to look at impact.

I know you spoke to Clinton Hedrington and he spoke to me about the cable. I told him it was imperative that VIWAPA immediately get in compliance with their cable monitoring so it does not impact us on this permitting..

Approach

We can start on the well/TPDES permitting immediately as soon as we can get any information on the RO or well I would suggest that we do a site visit pull as much information as we can off what is there take a well water sample and start the permitting. The faster we can determine what we want to do with the waste water the faster we can get this long lead permit going.

We need to do the preliminary siting survey for the new cable landing. At the same time we can do an assessment of the resources seaward of the dock and can make a recommendation on the length of extension which would be the easiest to permit.

Once we have determined location and preliminary designs we should attend an Interagency Meeting with the U.S. COE in San Juan and a Pre-application meeting with CZM so that we can determine their issues and concerns. Then we need to complete the environmental studies and prepare the permit documents and then work through the review process with the agencies. As you are aware the CZM process is going to require a public hearing, a decisional hearing and a senate hearing.

The exact siting of the cable routing will dictate what studies will be required and what mitigation will be required. Special turtle and marine mammal guidelines will be required by the permitting agencies for all in water construction and structures. Because the area has reefs containing *Acropora palmata* and *A. cervicornis*, *Orbicella spp.* *Dendrogyra* and *Mycetophylla* special coral surveys will be required by NMFS. It will be of the utmost importance to avoid reefs to reduce the potential of having to engage in formal

Section 7 consultation with the Federal Agencies. We should be able to site the cable so we do not have to go through Section 7.

The project will require a Major Coastal Zone Management (CZM) Water Permit., a U.S. Army Corps of Engineers (U.S. ACOE), reviewed by NMFS, Federal Fish and Wildlife Service (FWS) and the Environmental Protection Agency (EPA) and a Water Quality Certificate from the Division of Environmental Protection. The COE, NMFS and FWS all require special project information and very detailed alternative analysis of the project area and construction procedures. If either NMFS or FWS determine that the project may impact endangered species Formal Section 7 consultation will be required. We will route the cable the best as possible to avoid this.

Archeological surveys will probably not be required for the extension of the dock and the cable lay. I can ask David Brewer of VISHPO if one will be required and if not I will get a letter from him saying so.. If we need an archeological study I can get proposals for you. If we have to do a study, once its complete we will request a clearance letter from the DPNR State Historic Preservation Officer (SHPO).

As stated before the cable landing site, and cable route selection will be critical in determining permit times and permits required. We know that the dock extension will impact seagrass.

The Environmental Assessment Report will act as the main reference document for the Coastal Zone Management Permit application, the U.S. ACOE permit application, and the Water Quality Certificate and for any other approvals which may be required. Because the federal agencies require more detailed and in depth studies than CZM these will be incorporated in to CZM's EAR format so that only 1 document has to be produced and circulated. Below I have provided a Scope of Work associated with producing the Environmental Assessment Report and what services Bioimpact, Inc. is proposing to provide and where we will need assistance with. The sections that are self-explanatory I have not elaborated on. Once all the studies have been completed for the EAR it will take approximately 3 weeks to put the document together.

ENVIRONMENTAL ASSESSMENT REPORT LAND AND WATER

- 1.0 Name and Address of Applicant
- 2.0 Location of Project
- 3.0 Abstract: This is an overview of the entire proposal, its impacts and mitigations.
- 4.0 Statement of Objectives: What are the objectives of the overall application. We will need to be provided information from the applicant on what the purpose of the application.
- 5.0 Description of Project: Detailed description of the project and how the proposal will be implement and how it will be used.
 - 5.01 Summary of Proposed Activity: Summary of construction activities again in detail.
 - 5.01a Purpose of Project: What the proposal hopes to accomplish (much like 4.0).
 - 5.01b Presence and Location of Any Critical Areas or Possible Trouble Spots:
This section describes the potential environmental problems and issues which will arise in association with the project. We will address the federally required "Avoidance, Minimization and Mitigation" measures within this section.
 - 5.01c Method of Construction: We will need detailed information as to what kind of equipment will be used for the construction and associated cable lay and about the installation operation. We will need to be able to state whether anchors or spuds will be used and if necessary identify anchoring and spudding areas for barges.

5.0ld Provisions to Limit Site Disturbance: The steps we are taking to minimize site disturbance and to mitigate for impacts that cannot be avoided. The minimization steps and mitigation plans will then be discussed in this section.

5.0le Sediment Control Devices to be Implemented: Unless shoreline trenching is necessary there should be minimal if any need for control devices. However, if any trenching or excavation is necessary we will need to have seafloor length turbidity barriers around the point of excavation. It should be noted however that this should be kept to a minimum. The offshore work will require sediment control devices for the construction work.

5.0lf Schedule for Construction Activities & Implementation of Sediment Control Measures: We will need to present the detailed schedule of each construction activity and subsequent activity. This does not have to be actual dates but time frames.

5.0lg Maintenance of Sediment and Siltation Control Measures: If we have to use turbidity barriers how will they be maintained.

5.02 Exhibits and Drawings: This project will require full sized drawings as well as drawing at an 8.5 x 11 format for the USACOE application. The USACOE drawings will need to include both profile drawing as well as site plan drawings. These drawings will need to be provided by the designing engineer or architect.

5.03 Project Workplan: A detailed discussion of the phases and subprojects and their timing in relationship to reach other.

6.00 Environmental Setting and Probable Project Impacts on the Natural Environment

6.01 Climate and Weather: Bioimpact will describe the climate and weather of the locale and how it will affect the proposed project. Both FWS and NMFS require that we state in the application what sea conditions we will construct and when the construction will be postponed.

6.02 Landforms, Geology, Soils, and Historic Land Use: Bioimpact describe the geology and sediments of the proposed locations and their impact on the project and the impact of the project on the geology and seafloor.

6.03 Drainage, Flooding and Erosion Control

6.03.A Impacts on Terrestrial and Shoreline Erosion: Bioimpact, Inc. will provide a detail description of how the proposed cable landing will impact the existing shoreline and their impact on terrestrial and shoreline erosion as well as impact on longshore currents and sediment movement.

6.03.B Relationship to the Coastal Flood Plain: Bioimpact will determine and then document the relationship of the docks and power cable to the coastal flood zones.

6.04 Fresh Water Resources: Bioimpact will describe the freshwater resources within the area and the project's impact on those resources (none).

6.05 Oceanography: Bioimpact will conduct the necessary field studies and research to adequately describe the project area. Marine water quality is addressed in this section. We will discuss the potential impact of sea conditions on the project and how it may affect the installation and use of the docks. We must also discuss under what sea conditions construction will be postponed.

6.06 Marine Resources: Bioimpact will conduct the benthic survey of the area and assess the project's impact on the benthic resource. We will have to provide detailed benthic survey map for dock extension and cable and landing and locate the coral and seagrass communities within the area. We will need to show where vessels might stop and what impact the vessels might have during construction. The survey will need to completely map the benthic resources within the area. We will address Essential Fish Habitat in this section of the EAR to meet the NMFS requirement.

6.07 Terrestrial Resources: The report will address the shoreline areas that will be potentially impacted during the power cable installation and dock access.

6.08 Wetlands: Bioimpact, Inc. will identify any wetlands near or adjacent to the cable landing site. Bioimpact will describe the potential impacts of the landing on wetlands.

6.09 Rare and Endangered Species: Bioimpact will identify any endangered species which may be impacted by the project. We will need to address sea turtles and marine mammals as well as the 7 listed coral species. We will identify and map the ESA listed corals and show their location in relationship to

the docks, the cable, barges and cable laying vessels. We will list all step taken to avoid the corals and what measures will be taken during the dock extension construction and cable lay to prevent impact to these species.

6.10 Air Quality: The impact on air quality during the cable lay and dock will be discussed.

7.00 Impact of Proposed Modification on the Human Environment

7.01 Land and Water Use Plans: Bioimpact will draft this section as to the projects compliance with federal and local statutes.

7.02 Visual Impacts: Bioimpact will describe the impact of any above water features. This will be important as to how the cable crosses the near shore and shoreline areas and how the cable protection affects the appearance of the coastline. We will also have to discuss the appearance of the dock.

7.03 Impact on Public Services and Utilities: This should be negligible since it's an offshore cay.

7.04 Social Impacts: This should also be negligible since its and offshore cay.

7.05 Economic Impact: We will discuss submerged land fees that will be paid, construction spending and revenues to VIWAPA.

7.06 Impact on Historical and Archeological Resources: If needed , I will get archeological proposals and once complete will request a clearance letter from DPNR/SHPO. The first thing I will do is meeting with SHPO to see if we even need.

7.07 Recreation Use: Bioimpact will describe the use of the project area for recreation and the impact of the project on recreational use this will mostly relate to the Great Bay end of the cable since the project is on a private cay.

7.08 Waste Disposal: We will discuss the disposal of any waste during installation.

7.09 Accidental Spills: We will discuss potential spills form equipment and vessels during the installation of the cable and dock construction and what will be done to abate those spills.

7.09 Potential Adverse Effects Which Could not be Avoided: Bioimpact, Inc. will discuss the adverse impact that cannot be avoided and what is being done to minimize and mitigate for those impacts.

8.0 Mitigation of Impacts

Bioimpact, Inc will produce the Water Quality Monitoring Plan and Environmental Monitoring Plan as well as any mitigation plans which may be required for the project. NMFS has been requiring long term monitoring on marine projects and cables, and long-term after storm surveys.

9.0 Alternatives to Proposed Action; For the federal agencies we must provide very detail alternative analysis of different methods of meeting our primary goal and detailed analysis of different project sites. We will need to produce a weighted matrix.

10.0 Relationship Between Short Term and Long Term Uses of Man's Environment:

Bioimpact will discuss the impact on man's short term and long term uses of his environment. We will discuss many of the secondary impacts as well as cumulative impact questions raised in the COE's EAs of (their internal permitting document) in this section.

Timing

For the well permitting we can probably have all the information necessary for the application within two weeks of being given notice to proceed. The TPDES permit will take two weeks prepare once we have an RO design and if desired, a WWTP design. If we want to stay with the existing RO we can order the schematics and work from there. For the RO and WWTP the only drawings we will need are the location drawings and any building changes we are planning, the plants we should be able to get from the product information.

We are available to start preliminary surveys for the dock extension and cable landing. It will take 2 weeks because of variable weather and sea conditions to narrow down the potential sites. We can conduct the detailed benthic surveys while the designs are being finalize and then once we have final designs we can have the Environmental Assessment Report, and all monitoring and mitigation plans

prepared for your review in about 3 weeks. At present applications can only be submitted to CZM the first 5 working days of the month. CZM then has 15 working days to deem the application complete. There are usually 2 rounds of questions before being deemed complete. Being deemed complete is however at the whim of the agencies and seldom is anything they ask for truly an incomplete item. Usually incomplete items are legal in nature. Once deemed complete CZM has 60 days to set a public hearing and then 30 days to render a decision on the application. Hearings are usually held in 40 to 45 days and the decision hearing is usually between 2 and 3 weeks after the hearing. Once the decision has been rendered the permit is prepared and the submerge land lease(s) negotiated. The permit will then be forwarded to the Governor for signature who then sends the permit to the legislature for approval. At present the permit is first presented to the Committee on Environmental Protection and then if approved by the committee forwarded to the Body of the Whole. We may be required to appear at both hearings. The timing on the gubernatorial and legislative approval is dependent on lobbying.

The USACOE application will be submitted concurrently. COE publishes a Public Notice once they feel they have all the information they need to evaluate the proposal. The Public Notice runs for 30 days and within that time frame the federal reviewing agencies (NMFS, FWS, and EPA) comment on the project. At the end of the 30-day period the COE puts together the comments and we are asked to respond. The federal reviewing agencies usually forward me their comments as a courtesy as soon as they are written. I usually communicate directly with NMFS and FWS to address their concerns before responding through the COE to minimize time. If we answer the questions which are raised to the COE's satisfaction and to that of the reviewing agencies an Intent to Issue Letter is issued. Once we have a Coastal Consistency Letter (written when the CZM permit is granted) and a Water Quality Certificate (which will be requested by CZM during the process), the COE issues the permit. If there are issues with endangered species the federal reviewing agencies may require an informal or formal Section 7 Consultation and may require the production of a Biological Assessment. All the information for a Biological Assessment should be contained with the EAR and it should only require reformatting for this document.

COST:

Well/TPDES

Assisting in gathering the information on the well and preparing the application documents and following up with agency\$2500.00

TPDES Permitting

Prepare the TPDES application and follow it through with Vernill Roberts at DEP\$3500.00

Preliminary Site Assessment

Bioimpact, Inc. is proposing to find the best cable landing site and suggest a practical extension length, we estimate that it will take 2 days of dive survey to cover the area and find a suitable landing site.

Assessing dock length and establishing cable landing will be \$7,500.00.

Environmental Assessment Report/Permit Applications:
Including

- All necessary terrestrial and marine surveys and the compilation of all environmental data for permit document.
- Preparing a draft EAR for review
- Preparation of the final EAR and application forms
- Response to deficiency items and Requests for additional information
- Follow through with agencies to expedite the permit process
- Attendance at Pre-Application Meeting, Interagency Meeting, Meetings with NMFS, FWS, COE, CZM as necessary, Public Hearings and Senate Hearings

This does not include drafting of a Biological Assessment (BA) if Formal Section 7 Consultation is required by NMFS or FWS, if the dock site and route can be laid out to avoid endangered species this may not be necessary. All information should be contained with the EAR and the BA should only require the re-formatting of the document.

This does not include reproduction cost of the document or cost of public notices. These will be billed at cost.

The Lump Sum Cost of the Environmental Assessment Report, COE, CZM and WQC applications and associated studies, meetings and hearings will be \$ 47,500.00. Cost for work on the EAR and for additional services will be billed monthly as work progresses. A retainer of \$7,500.00 is requested at the commencement of work.

The agencies require site and pre-lay route marking and videoing, and delivery of video's to agencies for their review. The cost of the pre-construction marking and videoing will be \$ 7500.00.

For the installation of the cable, construction of the dock and other potential related activities will require in-water monitoring and the cost will be determined by the approved monitoring, mitigation and water quality monitoring plans.

Cable Lay Monitoring, including boat, captain, divers, principle, all necessary photographic and sampling equipment (usually more than 8 hours, and early hours) during all lay activities including installation of articulated pipe if necessary, including reporting and video of activities will be \$ 4500.00/day.

Additional Services will be billed as following:

Amy Claire Dempsey, M.A. Principle	\$200.00/hour
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Travel and other Expenses will be billed at Cost

I look forward to working with you. I look forward to your earliest response. Please do not hesitate to call if you have any questions or concerns.

Respectfully submitted,



Amy Claire Dempsey, M.A.
President, Bioimpact, Inc.

