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**Re:** Area wide Environmental Impact Statement (AEIS) for Phosphate Mining in the Central Florida Phosphate District (CFPD)

Dear Sirs:

Please accept these comments on behalf of SCCF, outlining our major concerns regarding the scope of the Area wide Environmental Impact Statement (AEIS) for Phosphate Mining in the Central Florida Phosphate District (CFPD). The scope of the AEIS needs to adequately identify, evaluate and address the significant potential direct, indirect, secondary and cumulative impacts of past, present and future phosphate mining activities in the CFPD. We request the AEIS Team consider expanding the scope and time frame of this AEIS as needed to address these matters and comply with the applicable NEPA and CEQ guidelines to insure that the valuable social, economic and environmental resources downstream of phosphate mining activities in the Charlotte Harbor watershed are not adversely impacted.

The Sanibel Captiva Conservation Foundation (SCCF) is in its 44<sup>th</sup> year of conservation committed to the conservation of coastal habitats and aquatic resources on Sanibel and Captiva and in the surrounding watershed. Our main office, nature center and marine research lab facilities are located on Sanibel Island. SCCF owns and manages over 1,800 acres of wetlands and uplands on and adjacent to Sanibel, Captiva, Pine Island Sound, and Charlotte Harbor. As an affected downstream party, SCCF is one of many stakeholders that lobbied for this AEIS to be conducted. As such, we have a real stake in making sure that this AEIS is conducted in a manner that will

insure that phosphate mining activities 'upstream' in the Peace and Myakka River watersheds do not adversely impact the 'downstream' coastal environmental resources of Southwest Florida or the health, safety and welfare of the millions of people that live and visit here.

### **Geographic Scope**

The Corps AEIS website states: "The Corps will study the environmental impacts of the Proposed Action within the CFPD...and the AEIS will consider the potential for significant cumulative effects of the proposed phosphate mines and mine expansions in the CFPD." Further, the website map showing the CFPD ('study area') does not include the Charlotte Harbor estuarine complex, including the waters around Sanibel and Captiva. On one hand, this strongly suggests that the Corps is considering the CFPD to be the AEIS 'study area'. On the other hand, the website also states: "The issues of concern and the methods used to evaluate those issues will be defined through the scoping process."

We encourage the Corps to recognize that the entire Charlotte Harbor watershed from I-4 to the Gulf of Mexico is hydrologically and ecologically inseparable.

Further, there are hundreds of scientific studies documenting the fact that large scale land use activities upstream in a watershed are very likely to adversely impact areas downstream. More specifically, it is well documented that past phosphate mining activities in the Charlotte Harbor watershed have caused many serious adverse impacts to the Peace River and to the downstream estuaries.

Although this AEIS intends to look at potential downstream impacts, the evidence that the potential for mining activities to adversely impact these valuable downstream resources is so great, we believe it behooves the Corps to do far more than just 'look at' this issue. We strongly believe the Corps needs to expand the geographic scope of this AEIS to include all areas downstream of mining in the Charlotte Harbor watershed that could potentially be adversely impacted by phosphate mining activities. Specifically, this would include all parts of the Peace River, Myakka River, and the Charlotte Harbor estuarine system, including Matlacha Pass and Pine Island Sound.

In addition, the AEIS needs to give as much consideration to the potential downstream economic, social, and environmental impacts as given to the on-site impact analysis.

### **Environmental Impact Analysis**

The Charlotte Harbor estuarine complex provides important habitat for hundreds of species that are ecologically and economically important to the region and the nation, the Congress of the United States designated it an 'Estuary of National Significance' in 1995. The importance of this resource is reflected in the hundreds of millions of local, State and Federal dollars that been spent acquiring, restoring and managing lands in and around the Harbor.

The Charlotte Harbor estuaries are also considered 'essential fish habitat' for many federally managed species protected by the Magnuson-Stevens Act and many other State and Federally protected species of reptiles, amphibian, birds and mammals, like the many shore/wading birds, ospreys, bald eagles, sea turtles, dolphins, manatees, etc. In 2003 the Small-Toothed Sawfish was officially listed as a federally-endangered species. To provide better protection for this endangered species, the Charlotte Harbor Estuary was proposed as Critical Habitat for the Small-Toothed

Sawfish in 2008. It has been determined that a resident reproducing population of smalltooth sawfish exists only in southwest Florida. Estuarine habitats near sources of freshwater inflow appear to be an important feature in species distribution.

The ecological health and productivity of Charlotte Harbor is dependent on a regular mixing of freshwater from the watershed and salt water from the Gulf of Mexico. Modifying freshwater inflows on either long-term or short-term temporal scales can alter existing aquatic communities. Disrupting the timing and rate of freshwater inflows can cause an imbalance in salinity in the estuary and result in changes to vegetative communities as well as local populations of fish, benthos, and other wildlife.

Numerous, objective scientific (USGS) studies and administrative rulings have concluded that past and present phosphate mining and related activities dramatically alter the existing surficial and sub-surface physical and geological features of an area, which results in drastic alterations to the volume, timing, and distribution of fresh surface water flows. Surface water flow patterns are disrupted during site preparation and mining, and are permanently altered in areas where clay settling areas (CSAs) or phosphogypsum disposal areas (gyp stacks) are constructed.

The altered topography of the post-mining landscape can also cause the hydrologic isolation of isolated wetlands that have not been mined. The vital tributary areas that provide surface water inflows to isolated wetlands via sheet flow or small streams are often mined, reducing sources of freshwater for the remaining vegetation. In fact, the State and Water Management District 'Peace River Cumulative Impact Study', published in 2009, documented that past mining practices have also permanently removed many miles of headwater, second and third order streams and creeks and many thousands of acres of wetlands that helped create and maintain the health and productivity of the downstream estuaries. Mining and related activities result in the degradation of aquatic, wetlands and uplands habitats within the watershed, as well as estuarine habitat and ecological communities.

More specifically, phosphate mined lands in the Peace River watershed increased from 7,495 acres in the 1940s to 143,000 acres in 1999, including the mining of approximately 88,000 acres of native upland, 35,000 acres of wetlands, 14,000 acres of intensive agricultural land, and 6,000 acres of other lands. The total loss of wetlands in the Peace River watershed between the 1940s and 1999 totaled over 136,000 acres due primarily to agriculture and mining (PBS&J, 2009).

Low order streams are very important ecological niches and provide habitat for a wide variety of fish, birds, and other wildlife. Loss of natural stream channels can alter or eliminate fish and wildlife habitat, and alter surface water flows and runoff, surface water storage, aquifer recharge, and evapotranspiration. Stream losses in the Peace River watershed between the 1940s and 1999 totaled 342.7 miles. The largest losses were due to phosphate mining (101.2 miles).

Other factors that affect natural systems include changes in discharges to the upper Peace River that have led to a reach of the river regularly drying out during some portion of the dry season. These occurrences are not typical of a higher order stream and adversely impact fish and benthic populations, locally and downstream.

The Magnuson-Stevens Act requires the Corps to consult with the National Marine Fisheries Service (NMFS) regarding any federal action or permit (phosphate mining activities) that might adversely impact 'essential fish habitat' (EFH). In turn, NMFS is required to address impacts of phosphate strip mining and its interruption of freshwater flows to the watershed related to the

habitat and nursery system in Charlotte Harbor for all the federally manage species and the Small-tooth Sawfish.

Unfortunately, review of past Corps phosphate permit documents reveal that NMFS has cited internal 'policy' and staff shortages as the basis for not identifying or evaluating these 'essential fish habitat' impacts and has even responded to the Corps that mining in the watershed would not adversely impact 'essential fish habitat'. In our opinion, we believe these responses are totally unjustified and unsupportable.

As such, we believe it is imperative that the AEIS fully identify and evaluate the potential impacts to all federally protected species, federally managed species, threatened and endangered species that occur downstream of phosphate mining activities, especially those that reside and/or utilize the Charlotte Harbor estuarine complex.

### **Economic Impact Analysis**

It is well known that tourism, sport and commercial fishing, boating, water sports and nature appreciation generate billions of dollars annually and are an economic cornerstone of coastal communities in southwest Florida. This is especially true for the world famous destination resorts of Sanibel and Captiva Islands. The Ding Darling National Wildlife Refuge on Sanibel alone draws nearly a million visitors a year. A large part of these economic benefits stem from the inherent natural productivity of the surrounding estuaries. It is also well known that estuaries are one of the most productive habitats on earth, providing environmentally sensitive breeding and nursery areas for most ecologically and economically important species, many which are vital to the commercial and recreational fishing industry in our region. Mining activities that could adversely impact these resources would be devastating, both environmentally and economically.

Case in point: red tide is a salt water organism that cannot thrive where salinities are below 18 parts per thousand for extended periods, and as such, rarely occur 'inside' Charlotte Harbor. However, in 1994, low freshwater flows to the estuaries created high salinities and in turn, allowed a red tide bloom that killed nearly 150 manatees and millions of fish inside the Harbor. In recent years, recurring red tides in the area have also killed many shorebirds, sea turtles other estuarine dependent species and severely impacted coastal tourism.

Since mining activities capture, divert and reuse billions of gallons of rainfall and surface water annually, per NEPA requirements, it behooves this AEIS to thoroughly examine the cumulative impact of all past, present and future likely mining and other activities that prevent freshwater flows from reaching downstream rivers and estuaries. Likewise, per NEPA, the AEIS should identify all the potential social, economic and environmental resources that could be adversely impacted by these freshwater diversions related to mining and other activities.

### **Water Quality**

Phosphate mining and related activities in the Peace River watershed can also negatively impact water quality. Discharges from active mines, some unreclaimed land, beneficiation facilities, and fertilizer manufacturing plants are regulated under the NPDES permitting system and are better managed than in previous years. Also, much of the process water used is now recycled. However, accidental spills do occur, although less frequently than in the past, and can produce catastrophic damage to riverene and estuarine ecosystems.

Water quality monitoring indicates that total phosphorus (TP) and orthophosphate (OP) values were generally highest in the northern region of the watershed. Similar spatial patterns were also observed for fluoride which is often found in association with phosphorus. These elevated concentrations of phosphorus and fluoride are directly associated with areas of historic and current phosphate mining (PBS&J, 2009).

Degraded water quality and periodic fish kills have been associated with some phosphate mining areas following accidental spills from CSAs and mining operations (PBS&J, 2009). Toxic levels of chemicals in process water, as well as the smothering effects of clay-laden water in the event of a CSA dam break, can cause severe damage to stream and river reaches. A USGS study also reported that water quality downstream of the mining outfalls and clay-settling areas is influenced by these mining outfall and CSA areas, with significantly higher concentrations of calcium, sulfate and magnesium.

Clearly, it is imperative that the AEIS thoroughly review all existing water quality data to better understand how phosphate mining activities are impacting water quality in the downstream estuaries and quantifying their social, economic and environmental impacts.

Finally, since the Corps has not yet completed a list of potential cumulative impacts (per NEPA and CEQ guidelines) that are logically prerequisite to finalizing the scope of the AEIS, we request that the deadline be extended another 60 days. Similarly, we believe the timeframe for study completion is inadequate to cover the many potential impacts mining at such a large scale may have our valued water bodies and protected back bays and estuaries.

We strongly urge the Corps, EPA and AEIS Team to seriously consider expanding the scope and time frame of this AEIS as needed to comply with the word and intent of applicable NEPA and CEQ guidelines.

Sincerely,



Rae Ann Wessel

Natural Resource Policy Director