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*Pat Brister*  
*Parish President*

November 22, 2013

Rankin-Hinds Pearl River Flood & Drainage Control District  
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Gentlemen:

St Tammany Parish wishes to thank you for the opportunity to provide comments to the Draft Feasibility Study and Environmental Impact Statement for the Pearl River Watershed. The Parish has identified the subject study to be of high importance and requests that these comments and your response be placed into the administrative record for the proposed Environmental Impact Study (EIS) as required under the National Environmental Policy Act (NEPA). Detailed review comments follow in the attached document.

Per Public Meetings, the Alternatives to be studied in the EIS include:

1. No Action
  2. Relocation of homes
  3. Levees only
  4. Levees with lake (Pearl River widening and outfall structure)
- ... Or combinations of the above alternatives

St Tammany Parish Council objected by Resolutions (2008 and 2013) to the two separate alternatives representing #3, commonly referred to as, "Two Lakes" and "One Lake" Plans. STP Engineering staff is concerned with consequences from loss of volume and velocity associated with the additional proposed impoundment in the Pearl River headwaters.

The Parish welcomes further review and dialogue with Rankin Hinds Pearl River Flood & Drainage Control District in light of the significant impact the proposed development may have on the lower Pearl River Basin, which is located in St Tammany Parish.

We appreciate your review and consideration of this request.

Sincerely,

  
Eddie Williams, P.E.  
Director of Engineering

cc: Mrs. Patricia Brister, President, St. Tammany Parish  
Ms. Gina Campo, Chief Operating Officer, St. Tammany Parish  
Mr. David Brunet, Coastal Manager, St. Tammany Parish  
Mr. David Doss, State Director, U.S. Senator David Vitter, Louisiana  
Ms. deEtte Smyth, Ph D, Regulatory Manager  
Mr. Paul Carroll, P.E., Drainage Engineer  
Mr. R. Artigue, Council District #13  
Mr. G. Bellisario, Council District #9  
Mr. J. Bender, Council District #12  
Mr. T.J. Smith, Council District #14  
Mr. F. Drennan, Mayor, City of Slidell  
Mr. James Lavigne, Mayor, Pearl River  
Dr. Donna O'Dell, P.E., Director of Engineering, City of Slidell  
Mr. K. Turner, J.D., Rankin-Hinds Pearl River Flood & Drainage Control District

*Enclosure*

## St Tammany Parish review comments on the *Draft Feasibility Study and Environmental Impact Statement for the Pearl River Watershed*

### Historical Perspective: Development of the Ross Barnett Reservoir

#### Flow Observations Downstream of the Proposed Lake (St Tammany Parish and Bogalusa, Louisiana)

Construction of the Ross Barnett Reservoir began in 1960 and was completed in 1963. The 33,000 surface acre lake reached average capacity in 1965. Following construction of the Ross Barnett Reservoir near Jackson, MS, historical low flow discharge rates measured at the USGS stream gauge Pearl River @ Bogalusa have decreased from 1100 cfs<sup>1</sup> down to 1020 cfs<sup>2</sup>. It appears that the controlled discharges from the Ross Barnett Reservoir have reduced the historical low flows in the West Pearl River @ Bogalusa.

Further, we calculate that the proposed additional 1500 surface acre impoundment may further reduce the flow by as much as 90 cfs. The West Pearl River in St Tammany Parish already experiences many environmental consequences resulting from reduced flow being released from the Ross Barnett, specifically: Quiescence, eutrophication and rooted macrophyte, shoaling, navigation impediments, saltwater intrusion into the River and shallow drinking water wells, loss of habitat, loss of commercial fisheries and risk from wasteload allocation (WLA) excursions from the International Paper (IP) Mill<sup>3</sup> in Bogalusa. All vulnerabilities result from lack of volume and reduced velocity from the headwaters during critical low flow months. Thus, additional headwater reductions are environmentally unacceptable.

### Potential Environmental Impacts

Additional development, particularly levees and impoundments, in the Pearl River Watershed upstream of STP could have many Environmental Impacts, including:

- Air Quality
- Aquatic Resources
- Business & Industrial Activity
- Community Cohesion
- Cultural Resources
- Population Growth
- Recreation Resources
- Recreational & Commercial Fisheries
- Socio Economic Questions
- Threatened & Endangered Species
- Water Quality & Quantity
- Wildlife Resources

The Parish will discuss the underlined subjects in more detail, below.

#### **Business & Industrial Activity**

Regulatory compliance for the WLA for the International Paper Mill on West Pearl @ Bogalusa is dependent upon a minimum design flow of 1400 cfs at that location. During the excursion (black liquor release) in August 2011, the critical low flow was historical at 1160 cfs. This reduction in flow (coupled with permit exceedences resulted in egregious damage to 60 miles of the Lower West Pearl River.

<sup>1</sup> 1100 cfs (instantaneous, 9/15/1954 pre-construction and 1580 cfs, 9/15/1954 10<sup>th</sup> percentile for this date 1938-2012)

<sup>2</sup> 1020 cfs (instantaneous, 10/29/1964 post-construction and 1230 cfs, 10/29/1964 10<sup>th</sup> percentile this date 1938-2012)

<sup>3</sup> Minimum Design Flow W. Pear River @ Bogalusa for the IP Mill WLA is 1400 cfs

### Population Growth

Apparently the minimum flowrate for discharges released from the Ross Barnett Reservoir is based upon regulatory compliance to accommodate the Wasteload Allocation (WLA) for Jackson, MS Wastewater Treatment Plant (WWTP). Is there a growth factor built into this release?

### Recreation Resources

Boating for recreation and navigation are currently compromised due to increased siltation, debris accumulation and rooted macrophyte establishment from quiescence due to lack of flow & velocity during critical low flow events.

### Threatened & Endangered Species

The Louisiana Department of Wildlife and Fisheries will be taking over the property in and near the Pearl River owned by the USACE in the near future and restoring habitat for Sturgeon and other endangered species with projects such as removing weirs. The primary intent is to restore Sturgeon spawning grounds and population in the Pearl River up to the Ross Barnett Reservoir. The hope is to eliminate the endangered / threatened status of this fish. Any project done downstream of the Ross Barnett Reservoir needs to address this habitat and spawning need. There doesn't appear to be any research to support the idea of Sturgeon being able to use devices like fish ladders.

### Water Quality & Quantity

The evapo-transpiration losses due to this project need to be determined. The current 1500 surface acre "Levee with Lake" proposal can lose as much as about 90 cfs due to evaporation depending on air and water temperatures. A geotechnical investigation will also be needed to determine what the gain or loss will be due to groundwater effects. This loss will result in an increased minimum discharge of the Ross Barnett Reservoir in order to maintain adequate flows during low flow events.

Currently the Pearl River and its distributaries are suffering from inadequate low flow that is impacting water quality, discharge limits for effluent dischargers such as International Paper, recreation due to shallow draft limitations, fish populations, aesthetics impacting swamp tours given in St. Tammany Parish, and saltwater intrusion into the lower portion of the river. Since 2006, the Louisiana Coastal Protection and Restoration Authority and the US Geological Survey (USGS) have developed and maintain a Coastwide Reference Monitoring System (CRMS) for wetland restoration efforts. The site houses monitoring datasets of hydro geomorphological parameters that characterize coastal habitats in Louisiana. Some of the parameters that are monitored include: water level, soil porewater salinity, percent organic content and surface elevation/accretion. There are three CRMS sites in the vicinity of the coastal Pearl River. All indicate increased saline concentration in porewater, perhaps attributable to less fresh water down the Pearl River. The site link is presented here: <http://www.lacoast.gov/crms2/Home.aspx>.

Private drinking water wells in STP were inventoried in 2011; there were determined to be 105 wells within ¼ mile of the West Pearl River in STP that are registered with Louisiana Department of Natural Resources; many of which are considered to be shallow (<75' deep). These shallow wells are extremely vulnerable to saltwater intrusion. With increased population pressure in the Pearl River Basin, the cone of depression will draw more saltwater up into the wells. With less fresh water available, the number of well failures is expected to become substantial.

Existing environmental impacts due to the Ross Barnett Reservoir are causing significant environmental impacts due to reduction to low flow. The proposed additional lake will exacerbate this problem unless the Ross Barnett Reservoir operation is modified. While this is being looked at, we would like the Ross Barnett operations plan to be reviewed to see if additional low flow could be maintained when needed to address the environmental impacts in Louisiana resulting from low flow.

The Pearl River in Louisiana is considered to be a national treasure is designated by LDEQ as an Outstanding Natural Resource Water (ONRW) and by LDWF as a Scenic Stream and is subject to higher WQ standards.

Lake Pontchartrain that will verify the WLA for the IP Mill at Bogalusa. The TMDL was completed in early 2013, but has not yet been made public

## Modeling

### Modeling and CI Flow with the Naval Research Laboratory

The current proposal includes a reduction of flooding in Jackson due to lowering the tailwater condition, thereby speeding up flows. This increase in flow due to loss of floodplain storage needs to be mitigated by the volume of storage created downstream. An unsteady model showing both maximum flooding and duration of flooding needs to be run downstream to the mouth of the river. In Louisiana, both flood height and duration cause issues on a yearly basis during high flow events.

St. Tammany Parish, NOAA, and the Naval Research Lab are collaborating on the creation of a model of the Pearl River south of Bogalusa to the mouth and into Lake Borgne in order to improve weather forecasting. When this model is complete, it may be of use in the EIS being prepared for this project.

### Study Boundary Conditions

The proposed study area needs to be revised to include the entire watershed from the Ross Barnett Reservoir to the mouth of the river.

STP recommends that the RH... work with the NRL to expand the northern boundary (grid and modeling capabilities) to produce a defensible, robust model of the current conditions and projections of the Alternatives Analyses.

### Proposed “Levees with Lake Alternative”

As discussed in the November 20, 2013 Public Meeting, there are other project Alternatives that should be considered. The current “Levees with Lake” proposal does not appear to be optimized for environmental impacts or financial cost. The project which would be anticipated to have the least environmental impact and financial cost would be a modification to the operation of the existing Ross Barnett Reservoir. This reservoir appears to have the storage capacity to handle local water needs while additionally serving at least a limited flood protection role. The next least damaging impact would be to excavate only to an elevation which would be dry in low flow to minimize increases in evaporative and groundwater losses. The land which is lowered could even be replanted as wetlands to minimize local environmental impacts. This should be a lower cost option with similar benefits to the proposed project. A levees only option should not be considered due to increases in downstream flooding.