

Oral Testimony

Thomas L. Jackson, P.E., D.WRE

June 16, 2009

Senate Environment & Public Works Committee

Good Morning Madam Chairperson, and members of the Committee, my name is Thomas Jackson. Thank you for the opportunity to be here. I will submit a copy of my testimony along with supporting documents and ask that they be entered in to the record.

I appear before the committee today on behalf of the Southeast Louisiana Flood Protection Authority – East and as an engineering expert on planning and design of large drainage and pumping systems.

I am a Commissioner and past president of the Flood Authority. I am also the 2003 National President of the American Society of Civil Engineers (ASCE) and have served on the ASCE External Review Panel (ERP) providing external peer review of the Corps Interagency Performance Evaluation Taskforce (known as IPET) and their investigation of the New Orleans area hurricane protection system performance during Hurricane Katrina.

I am a registered Professional civil engineer in several Gulf States and a Diplomate with specialty certification in Water Resources engineering. I am retired from AECOM, Inc. as Senior Vice President and Chief Engineer of the firm.

Educated at Tulane University I am also a lifelong resident of New Orleans and Jefferson Parishes with experience in managing design of most of the large pumping stations built in the Orleans, Jefferson and St Bernard Parishes during the last 25 years. I am very familiar with this area and the problems in storm protection that we have had over the years.

My report to you today will focus on the selection of options for the pumping stations planned by the Corps of Engineers for the three outfall canals at the lakefront in Orleans Parish within the jurisdiction of the SLFPA–East.

First, some background:

The 17th Street, London and Orleans Outfall canals drain the central part of the City of New Orleans and a portion of the east bank of Jefferson Parish. These canals each are approximately two miles long from the New Orleans Sewerage and Water Board

(S&WB) outfall pumping stations to the lakefront. They are subject to tidal surges in Lake Pontchartrain which result in pressure on the levees of these canals.

Following Hurricane Betsy flooding, during the sixties and seventies, under the Corps' Lake Pontchartrain and Vicinity Hurricane Protection authorization, the Corps raised these existing canal levees to approximately twelve and one half feet above sea level. While the Corps' consulting firms recommended "T" walls to raise these canal levees, the Corps insisted that "I" walls be used because it was cheaper and within their budget for the project. Unfortunately, during Hurricane Katrina, sections of these cheaper "I" walls failed and were breached along 17th Street and London Ave. canals, catastrophically flooding the City and portions of Jefferson Parish.

Breach closures are now in place and temporary floodgates have been built at the lakefront to prevent hurricane tidal surges from entering these canals. The levee and floodwall along the 17th Street Canal from the temporary gates and pumps at the lakefront to Pumping Station number 6 has been declared to be safe by the Corps **only** up to a water level of 6.0 ft., not 12.5 ft. as designed and built under Lake Pontchartrain Hurricane & Vicinity Protection Authorization in the 1960' & 70's.

However, the temporary pumps and floodgates operations now required during storm surges, even during non-hurricane events, will raise these canal levels at or near the 6 ft. water levels against these floodwalls that is the maximum considered safe at this time by the Corps' evaluations. However, as will be explained later, the conditions in these canals that affect safe water levels are constantly changing.

OPTION 1

Permanent pumping stations at the lakefront are planned by the Corps under Option 1 with flood gates so that local pumping stations can pump drainage water directly into Lake Pontchartrain during non hurricane events without secondary pumping of the lakefront stations and utilizing the secondary pumping at the lakefront only when lake levels approach maximum safe water levels in the canals.

The Corps contends that only Option 1 is within the Congressional Authorization and budget for lakefront flood protection, even though the Corps has on numerous occasions admitted that Option 2 is technically superior to Option 1.

The Corps is now proceeding quickly with plans to build "Option 1" which includes only a new pumping station and flood gate at the lakefront to keep storm surges out of these canals. This plan will allow normal lake tides in these canals during lake levels of 5 or 6 and closing off flood gates to surges only during hurricanes. Thus lake level tides would continue pressing against the defective canal levees and floodwalls, possibly as much as 98% of the time.

Option 1 will leave responsibility for the Corps' defective levees and floodwalls to local interests while pumping storm water every time it rains. During a hurricane event, the

Corps' Option 1 will require closure of the tidal gates at the lakefront and require closely orchestrated operation of the local pumps and the lakefront pumps so as not to raise water levels in the canals above the safe water levels designated by the Corps. The bottom line is that the Corps built poorly designed floodwalls, and now they want to put the responsibility for their errors on "local interests", saying they can now provide protection only at the lakefront in accordance with congressional authorization.

An extremely crucial consideration in the selection of the Options at issue is that the safe water levels in these canals are not static. Every time the S&WB pumps rain water, silt from urban runoff settles to the bottom further restricting the canals. From time to time the canals must be dug out to remove this silt. This cleaning will further deteriorate the levees and floodwalls and reduce the safe water level to a point that the S&WB pumps cannot be operated at full capacity resulting in flooding the City even in non-hurricane conditions. In addition, the stability of the levee and I-walls will continue to deteriorate because of very poor soil conditions beneath the levees.

New Orleans had addressed its rainfall drainage with canals. Now in order to correct the faulty floodwalls designed by the Corps along these canals, the Corps proposes Option 1 which would correct only the lake surge problem while creating a serious danger from rainfall flooding even in non-hurricane events. It is incomprehensible that an Agency of the Federal Government, that is, the Corps, would be allowed by Congress to only partially correct such a serious error and dump the responsibility for the consequences of that error on local government, as would happen under Option 1.

OPTION 2 IS THE SOLUTION

So what is the solution? Option 2 as shown by the Corps in the "90 day report to Congress" would provide a full time pump station at the lakefront on each of the canals, removal of local pump stations and conversion of the canals to low level drainage canals which would negate the need for the existing defective interior levees. The corps has not adequately studied Option 2 and has rejected it outright saying that they are "not authorized" to do any work that is not along the new hurricane protection alignment along the lakefront. The Corps has even publically admitted numerous times that Option 2 is a technically superior solution for overall needs.

During the deliberation of the options for protection of the outfall canals, the Corps conducted numerous meetings with local interests. I represented the Flood Protection Authority in those meetings. The Corps then convened a technical panel of fourteen experts to evaluate the options. I was invited by the Corps to serve as an expert on that group as well. The recommendation of the panel of experts was to construct Option 2 – not Option 1.

ADVANTAGES OF OPTION 2

1. First and foremost, elimination of the intrusion of high water levels into the heart of the City at each of the three outfall canals.
2. Elimination altogether the need for the defective levees and floodwalls.
3. Improvement to local drainage. Converting the outfall canals to low level drainage canals will allow drainage water from adjacent streets to be discharged directly into the canals, and not requiring routing the water up to two miles back to the pump stations raising the water to lake level as the Corps' Option 1 requires. This could vastly improve drainage in the lakefront area versus the additional danger to drainage that Option 1 would create.
4. Drainage systems in Jefferson and Orleans could be interconnected at Canal number 2 in Jefferson to the 17th Street Canal. This connection could be gated during normal operation and open only during extreme rainfall in either parish to prevent flooding in whichever area is threatened. The same interconnection could be provided through Hoey's cut if Option 2a is constructed.

OPTION 2a

In an attempt to reduce the volume of rainwater in the 17th Street Canal, Jefferson Parish officials suggested building a pumping station in Jefferson Parish pumping rainwater into the Mississippi River. That was designated as Option 2a because it is an addition to Option 2. As a member of the Southeast Flood Protection Authority- East, we have not previously commented publically on Option 2a because technically Option 2a addresses issues outside of the Authority's jurisdiction; However, Option 2a would be helpful because it would decrease the load on the over-burdened levees along the 17th Street Canal

WHAT ARE WE ASKING CONGRESS TO DO FOR US TODAY?

1. We ask that as soon as possible the Congress re-write the authorization for the protection of the three outfall canals to include the necessary improvements to provide protection along the lakefront as well as any work necessary to eliminate the defective and inadequate protection along the outfall canals;
2. We ask that Congress authorize and require that the Corps conduct a thorough study of all three Options for storm protection of the three outfall canals;
3. We ask that Congress require that the Corps include the services of at least two external peer review experts be employed during this evaluation; and

4. We ask Congress to create a panel of local interests and instruct the Corps and the peer review experts to provide monthly reports, to this local panel and to this Congressional Committee.

Until this is done and the best option is constructed, the protection for the New Orleans East Bank area is less than Congress authorized. The interim pumping stations and gates built with considerable tax dollars can provide protection as adequate as Option 1 while the best solution is studied and constructed. While normally local interests would be asking that the Corps quit studying and build improvements, this is a situation where adequate studies have not been conducted and the wrong solution is underway by the Corps. Whatever is constructed the people of the New Orleans area will be burdened or benefitted with the results for at least the next 100 years.

The people of this community deserve the best solution -- haven't they suffered enough at the hands of nature and Corps errors? Please do not allow the Corps to fail us again based on the Corps' short-sighted and unnecessarily restrictive interpretation of "Congressional Authorization" for hurricane protection.

Thank you for the opportunity to present this report. I will be happy to answer any questions.