

25 August 1980

MEMO FOR RECORD

SUBJECT: Meeting on Orleans Parish Outfall Canals - Lake Pontchartrain
& Vicinity, Louisiana

<u>Date of Meeting</u>	22 Aug 80
<u>Place of Meeting</u>	New Orleans District Office
<u>Attendance</u>	List of Attendants Attached (Incl 1)

Purpose of Meeting: The purpose of this meeting was to brief local interest on the New Orleans District's Alternative Plans study for the Outfall Canals and to solicit their input and recommendations for a preferred plan.

Summary of Meeting: The meeting was opened by Mr. Chatry welcoming the guests and explaining the purpose of the meeting. Mr. Stutts then briefly outlined the status of the outfall canals in relationship to the Lake Pontchartrain and Vicinity, Hurricane Protection Project and indicated the course of action that the District planned to take in having the outfall canals included as part of the Lake Pontchartrain Project. Mr. Stutts stated that the District planned to prepare a letter report to its higher authority which would present the alternative plans and recommend a plan of action. Input from the local sponsor would also be contained in the letter report. Mr. Stutts indicated that the time schedule for the letter report would call for submittal to higher authority in approximately 3 months. The next sequence of design documents, i.e., GDM, DDM and P&S would probably require 1 1/2 years each in the preparation and thus a total time frame of 5 1/2 years to 6 years was contemplated before construction could be initiated. Mr. Stutts then briefly discussed the four options or plans for which cost estimates had been prepared. (See Inclosure 2.) These options consist of the following plans:

a. Plan 1 provides for lateral protection along each of the three outfall canals. This plan would employ various combinations of I-wall, T-wall and earthen levees along each side of the existing canals from their lakeward outfalls back to the existing pumping stations. A positive cutoff in the form of T-walls would be constructed in front of the existing stations. The plan presented employees an optional combination of each type wall and levee.

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b. Plan 2 uses concrete box culverts that would be designed to convey the flow pumped by the existing pumping stations to the lake. This system would be completely inclosed and again provide for positive cutoffs (sluice gates) at the existing stations. As can be seen from inclosure 2, this alternative is the most expensive plan investigated.

c. Plan 3 consists of auxiliary pumping stations at the outfall or lakeward end of the canals. Provisions for gravity drainage would be made by either providing flow through capability, i.e., gates under the stations, or else a separate gated structure would be incorporated in the design. The auxiliary stations would need to be operated only during hurricane conditions and during nonhurricane conditions the gravity structure along with the existing pumping stations would provide drainage for the city.

d. Plan 4, the least costly plan presented provides for a gated structure at the lakeward end of each canal. The system would be operated so that the gates would remain open at all times except during the critical hours of a hurricane. At the critical hour, the gates would be closed and all pumping from the city into Lake Pontchartrain would have to cease.

Following the presentation of the alternative plans, a discussion about capacities of the auxiliary pumping stations ensued. Mr. Stutts stated that the cost estimates shown on inclosure 2 for Plan 3 were based on replacement of 80% of the nominal capacity of the combined flows entering each outfall canal. Mr. Soileau indicated that the 80% capacity was arrived at through hydraulic studies which showed that during a project storm, i.e., 8.5 NGVD elevation in Lake Pontchartrain, the canals ability to convey the flows along with the increased head differentials cause a 20% reduction in the discharge capacity of the stations. Mr. Sullivan of the Sewerage and Water Board of New Orleans (SWB) stated that a feasibility study is presently being conducted by Modjeski and Masters, to increase the capacity of Pumping Station No. 6 from 7,000 cfs to 10,000 cfs and that each station in its turn would be upgraded by as much as 40% over the next 10 years. Mr. Chatry pointed out that unless improvements were made to the outfall canals, an increase in discharge capacity would not affect the auxiliary pumping stations design capacities but only the size of the gates for the gravity structure.

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A discussion of the pros & cons of Plan 2 ensued. Mr. Bodet of the Orleans Levee District (OLD) stated that a plan that would allow abandonment of the lateral levees along each canal would, from OLD's viewpoint, be highly desirable since the levees constituted a considerable maintenance problem. Mr. Stutts pointed out that the cost estimates shown in inclosure 2 are for first cost only and that O&M cost had not been determined for any of the plans. Mr. Sullivan agreed that any plan that would allow abandonment of the alteral levees along the canals would be advantageous. As he saw it, Plan 3 offered little or no advantage in this regard. Plan 3 requires that the existing pumping stations and levees still be maintained. The question of constructability of Plan 2 came under discussion as it would appear that a plan of this type would require that the station or stations along each canal be shut down during their respective construction period. Mr. Guizerix stated that some provisions had been made when preparing the cost estimates to allow for a reduced pump capability. Part of the boxes for the multi barrel culvert system could be constructed while leaving some of the canal cross-section open to allow for pumping. In any event it was acknowledged that execution of the plan would be difficult but not impossible.

Earlier in the meeting Mr. Stutts had indicated that the District had originally looked at a plan in which improvement would be made to the existng outfall canals and new pumping stations would be built at the lakeward end of each canal. In this plan, the existing pumping stations would be abandoned and removed. Cost estimates for this plan were not detailed because of th extremely high cost of the plan. Under the Lake Pontchartrain and Vicinity Hurricane Protection project the limitation on cost sharing would be governed by the least costly plan that would meet project objectives and not interfere with interior drainage. Studies to date show that Plan 3 is the plan that best meets this criteria. Mr. Chatry stated that should OLD and the SWB prefer a plan in which the existing stations were abandoned and new stations constructed at the lakefront, then it would be possible to work out an appropriate cost sharing formula. A rough estimate based on inclosure 2 would indicate that Federal participation would be limited to approximately \$100 million. Mr. Sullivan stated that he believed that in the long run, a plan moving the existing pumping stations to the lakefront would be in the best interest of the city but that he would doubt that the voters of New Orleans would pass a bond issue on such a costly plan without sizable Federal participation and that with moneys from the hurricane project maybe now would be the appropriate time to make the move to the lakefront.

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Commitments Made:

Because of the exchange of information and the wishes expressed by OLD and SWB, the District agreed to revise its cost estimates to reflect the anticipated future pumping capacities of the three stations.

Mr. Vincent Greco was designated as the SWB contact person for this work. The District also agreed to develop cost estimates for a plan which would call for replacement of the existing pumping stations by new stations at the lakeward end of the outfall canals. Modification of the outfall canal inverts would be incumbent in this estimate. Upon completing this work a second meeting would be scheduled to review the results.


D. VANN STUTTS

Meeting Orleans Parish Outfall Canals

New Orleans District
22 August 1980

ATTENDANTS

Gasper A. Chifici	DOTD, Office of Public Works
A. Jay Combe	LMNED-HC
Cecil W. Soileau	LMNED-HD
Robert J. Guizerix	LMNED-DG
Carl R. Guggenheimer	LMNED-DD
Tom Harrington	LMNED-M
Jorge A. Romero	LMNED-DD
Frank Vojkovich	LMNED-FS
Philip Napolitano	LMNED-FS
Rodney P. Picciola	LMNED-F
Vincent Greco	S&WB
G. J. Sullivan	S&WB
Lawrence Bodet	Orleans Levee District
Earl Magner	Orleans Levee District
Frederic M. Chatry	LMNED
D. Vann Stutts	LMNED-MP

SUMMARY OF PRELIMINARY COST ESTIMATES

AUG 80

ORLEANS PARISH OUTFALL CANALS

ALTERNATIVE PLANS STUDY

<u>ALTERNATIVE</u>	<u>LONDON AVENUE</u> (\$) ¹ x 1,000,000	<u>ORLEANS AVENUE</u> (\$) ¹ x 1,000,000	<u>METAIRIE RELIEF</u> (\$) ¹ x 1,000,000
① PARALLEL PROTECTION LEVEES, I-WALLS & T-WALLS (WITH POSITIVE CUTOFF AT EXISTING PUMPING STATIONS	80	60	50
② CONCRETE BOX CULVERTS WITH POSITIVE CUTOFF AT EXISTING PUMPING STATIONS	100	75	95
③ AUXILIARY PUMPING STATIONS WITH FLOODGATE CLOSURES AT THE LAKEFRONT	40	20	35
④ FLOODGATE CLOSURES AT THE LAKEFRONT AT THE OFFSET	2	1	2

(¹)

TOTALS : ① 190,000,000
 ② 270,000,000
 ③ 95,000,000
 ④ 5,000,000