State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

WILLIAM C. HULS
SECRETARY

August 8, 1984

Colonel Robert C. Lee
District Engineer
New Orleans District, Corps of
Engineers
P. O. Box 60267
New Orleans, LA 70160

RE: C840314
Freshwater Diversion to Barataria and Breton Sound Basins Feasibility Study

Dear Colonel Lee:

Because of the importance of wetlands, and the vast fisheries and biological resources which they support, we have reviewed this project in great anticipation of the benefits which the State of Louisiana and the nation will derive. Land loss, particularly in these basins, has been documented to be occurring at unprecedented rates, with estimates as high as 102 km^2/yr. or 0.8% annually (Gagliano et al. 1981).

The reasons for this disappearance of wetlands are complex, with subsidence, lack of sediment input, salt water intrusion and canal dredging being the main contributors. Therefore, the implementation of freshwater diversion into Barataria and Breton estuaries will serve to increase productivity and slow land loss by the introduction of the sediment rich, freshwater from the Mississippi River.

A review of the applicable coastal use guidelines for freshwater diversion i.e. 7.1, 7.2, 7.4, 7.5 and 7.7 indicates that at this time the tentatively selected plan is consistent with the Louisiana Coastal Resources Program to the maximum extent practicable, in accordance with the Coastal Zone Management Act of 1972 (as amended), and the NOAA consistency regulations 15 CFR 930.30. However, the Coastal Management Division would appreciate the opportunity to comment as required by 15 CFR 930.37(c) on any future changes or supplemental reports which may result as the project is further developed, so that a consistency determination can be made as each major decision is made.

Again, we urge the Corps to move ahead with the tentatively selected plan, and we look forward to working with you in the future on this important, and worthwhile project.

Sincerely,

William C. Huls

By: C. G. Groat

WCH:CGG/ct

cc: Peter Tweedt
Ann Berger-Blundon

SUMMARY

SEPTEMBER 11, 1989 MEETING OF BARATARIA BASIN POLICY TEAM

HARVEY, LA.

On Monday, September 11, 1989, the fourth meeting of the Barataria Basin Policy Team (BBPT) was held in Room 1 on the second floor of the Jefferson Parish School Board Building, 501 Manhattan Blvd., Harvey, La. Roll call was at 9:36 A.M. Thirteen of the possible 25 representatives or alternates were present. Two representatives or alternates arrived after the roll call. A total of 15 representatives or alternates were present (Attachment).

The Summary of the August 29 Meeting of the BBPT was reviewed and accepted without modification or objection.

There was no old business to complete or technical reports to receive. Discussion moved directly into the consideration of the Passive policy statements for EMU 1. The Policy Team members discussed and analyzed the proposed policy statements. Several policies were modified and/or moved to other sections. Work was intensive from the opening until adjournment at approximately 3:40 P.M. Mr. Dugan Sabins, DEQ, will make a short report to the Policy Team on possible definitions of the term "full" as it applies to sewage treatment.

Several decisions were made by the Policy Team. First, the Facilitator will compile the revised policy statements for EMU 1 and the policies for Short-term Active projects for EMU 2. These will be distributed to the Policy Team within two weeks of the September 11 meeting. Second, the Facilitator will review the Policy statements for EMUs 3 and 4 and identify those which are similar to those revised for EMUs 1 and 2. This summary will be sent to the Policy Team with the revised policy statements. Third, the Policy

Team unaminuously voted to add a representative of the Governor's Coastal Advisory Committee and the National Park Service to the BBPT. Total membership of the BBPT is now 27. It was emphasized that these new members must agree to be active participants. Fourth, the issue of what constitutes a Quorum will be decided at the fifth BBPT meeting. Finally, the next meeting of the BBPT will be on **October 12, 1989 at 9:30 A.M. in the LOUISIANA ROOM on the first floor of the NEW Department of Wildlife and Fisheries Building on Quail Drive in Baton Rouge.** Exit I-10 at Essen Lane and drive to Perkins Road. Turn right on Perkins Road and travel approximately two miles. Turn left on Quail Drive. The new building is past the bridge on the left. See Attached map.

Mr. Greg DuCote has requested that Mr. Dugan Sabins, DEQ, make a twenty minute presentation on the relationship between DEQ and DHH and their respective water quality programs on point and non-point source pollution abatement. Mr. Sabins has been asked to have a written supplement for each BBPT representative.

Barataria Basin Policy Team

SEPTEMBER 11, 1989 Meeting
Harvey, La.

ROLL CALL

FEDERAL

Corps of Engineers, New Orleans District -- Oscar Rowe

Environmental Protection Agency, Region VI -- Laura Townsend

Fish and Wildlife Service, Lafayette, La. -- Gerry Bodin

National Marine Fisheries Service, B.R., La. -- Ric Ruebsamen

National Oceanic and Atmospheric Administration -- Absent

Soil Conservation Service, Alexandria, La. -- Bill Savant

STATE

Environmental Quality -- Dugin Sabins

Health and Hospitals -- Absent

Natural Resources -- Greg DuCote

Wildlife and Fisheries -- Absent

LUMCON -- Lawrence Rozas

PARISHES

Assumption -- Absent

Jefferson -- John Uhl

Lafourche -- Ed Fike

Orleans -- Absent

Plaquemines -- Absent

St. Charles -- Gretchen Binet

St. James -- Kermit Kraemer

St. John -- Absent

SPECIAL INTEREST

Commercial fishing -- Absent

Conservation - Louisiana Nature Conservancy -- Absent

Land owners -- Allen Ensminger

Oil and gas industry -- Vincent Cottone

Sportsmen -- Edgar Veillon

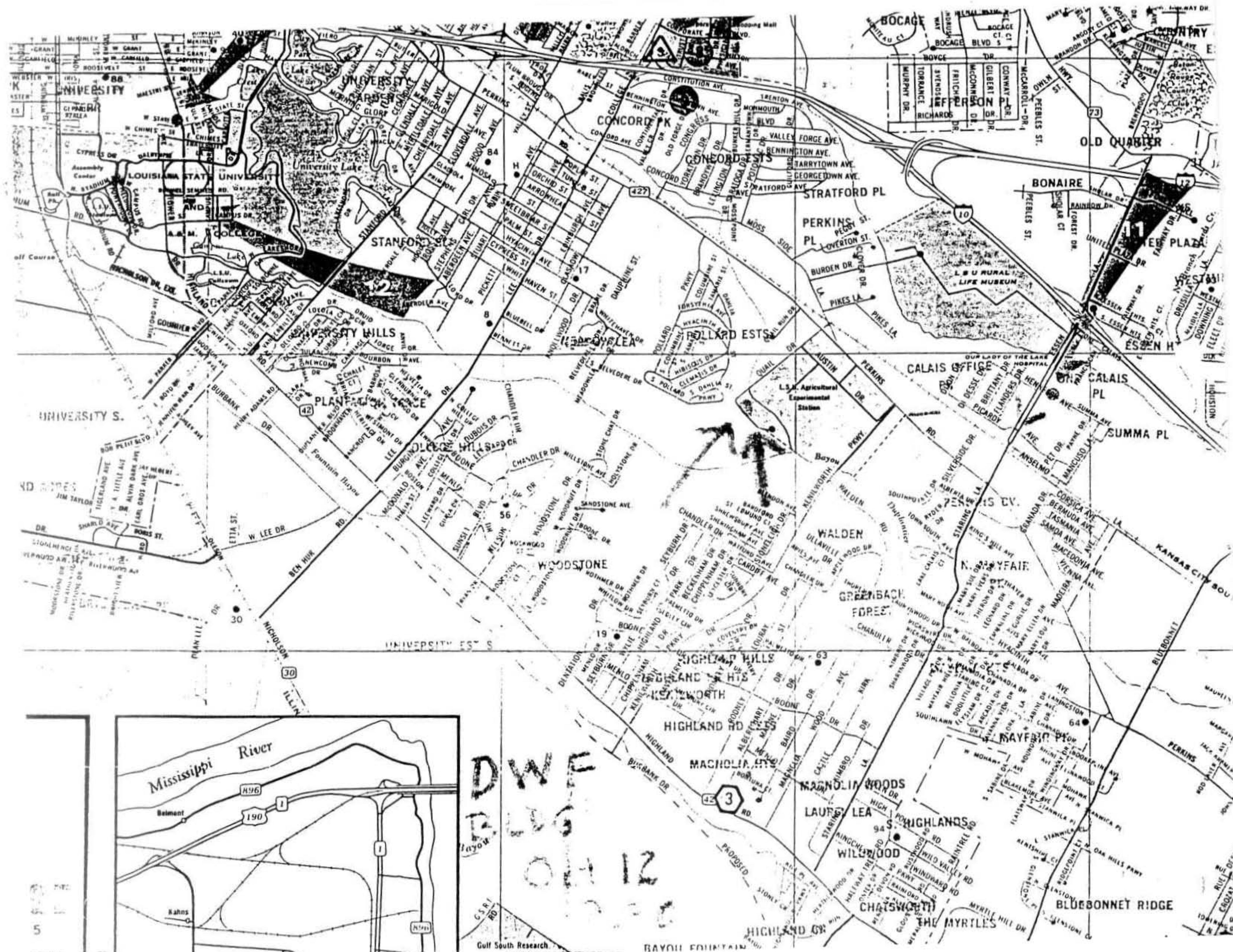
Trapping -- Absent

INTRODUCTION OF ALTERNATES AND VISITORS

Richard Hartman
Sam Holder
Frank Ehert
Chuck Killebrew
Mike Lyons
George Neusaenger
Ramona Mayer

15 PRESENT; 10 ABSENT

A QUORUM = 12 PRESENT.


UNIVERSITY
UNIVERSITY GARDEN
University Lake
LOUISIANA STATE UNIVERSITY
A. & M. COLLEGE
STANFORD
UNIVERSITY HILLS
PLANTATION TRACE
COLLEGE HILLS
CONCORD PK
CONCORD ESTS
STRATFORD PL
PERKINS PL
JEFFERSON PL
OLD QUARTER
BONAIRE
L S U RURAL LIFE MUSEUM
POLLARD ESTS
CALAIS OFFICE
CALAIS PL
SUMMA PL
ESSEN HTS
L.S.U. Agricultural Experimental Station
WALDEN
GREENBACK FOREST
N. MAYFAIR
PERKINS CV.
WOODSTONE
HIGHLAND HILLS
HIGHLAND RD ESTS
MAGNOLIA HTS
MAGNOLIA WOODS
LAUREL LEA
S. HIGHLANDS
WILDWOOD
CHATSWORTH
THE MYRTLES
BLUEBONNET RIDGE
UNIVERSITY S.
UNIVERSITY ESTS
Mississippi River
Belmont
Kahns
Gulf South Research
BAYOU FOUNTAIN
KANSAS CITY SOU
DWF
BLG
OH 12

WORKING DRAFT

RECOMMENDATIONS FOR POLICIES AND ACTIONS

in the

BARATARIA BASIN, LOUISIANA

prepared by

BARATARIA BASIN POLICY TEAM

SEPTEMBER 11, 1989

Rod E. Emmer, PhD.
Facilitator

9-26-87 Don Elguezabal - COE

Congressman Tauzin requested consideration of alternative alignments of Davis Pond project. Development interests want new alignment. COE will do preliminary evaluation of alternatives may be ready the end of Oct. Briefing meeting with Parish Council (St Charles) on Oct 21. COE not anxious to revise will delay project a min. of one year and compleate hurricane protection levee project.

Dom Elguezabal
862-2599
Manager for Davis
Pond Project

ATTENDANCE RECORD

DATE(S)	SPONSORING ORGANIZATION	LOCATION
12/14/89	USCOE	LA DVV + F Bldg. Baton Rouge

PURPOSE Davis Pond Rock Weir

PARTICIPANT REGISTER *

NAME	ORGANIZATION	TELEPHONE NUMBER
Dom Elguezabal	LMNLC	862-2599
Carl E. Anderson	LMN ED	862-2610
Peggy M. Jones	NMFS	389-0508
Pamela A. DeLoach	LMNED	862-2621
Lisa Montelepre	LMNED-HD	862-2425
Ronny Paille	USFWS	318-264-6630
David Vigh	CELMN-PD-RE	504-862-2540
Bill Good	DNR/CRD	504-342-7305
John de Mond	CMD/DNR	504-342-7591
Gregory J. DuCote	DNR/CMD	504/342-7591

LMV FORM 583-R
(replaces LMN 906)
AUG 87

* If you wish to be furnished a copy of the attendance record, please indicate so next to your name.

PROPONENT: CELMV-IM

Rec'd 10-11-89

State of Louisiana

OFFICE OF THE GOVERNOR

Baton Rouge

70804-9004

BUDDY ROEMER
GOVERNOR

September 28, 1989

POST OFFICE BOX 94004
(504) 342-7015

Colonel Richard V. Gorski, District Engineer
U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Colonel Gorski:

Reference is made to your September 21, 1989, letter inquiring about the State's intentions relative to the Bonnet Carre' Freshwater Diversion Project. It is my understanding that we are being asked to agree to contribute 20 percent (approximately $15 million) of the currently estimated first cost of the project and a like percentage of the annual operation and maintenance costs.

During a recent meeting, my Wetlands Conservation and Restoration Task Force reviewed the merits of both the Bonnet Carre' and the Davis Pond Freshwater Diversion Projects in light of this State's current wetland policy and its fiscal capability for cost-sharing in the construction of such projects. Based on these considerations, it was that group's unanimous recommendation that the State agree to provide 25 percent of the cost of construction, operation, and maintenance of the Davis Pond Structure despite Congressional authorization of that project at 100 percent federal cost. I fully support that recommendation contingent upon a federal commitment that the project schedule will be expedited to begin the construction phase (real estate acquisition) for the Davis Pond Project in federal fiscal year 1991, or earlier.

I also support the additional recommendation of my Task Force that the Bonnet Carre' project be put on hold until it can be compared with more efficient alternative vegetated wetland enhancement uses for limited Mississippi River water and sediment resources. This comparison could be accomplished during the cost-shared Louisiana Comprehensive Coastal Wetland Planning effort to be initiated this fall.

Clearly, projects like Davis Pond that enhance and conserve vegetated wetlands in a cost-effective manner are consistent with the Presidents's announced goal of no net loss of wetlands. We trust that you will support this State's recommendations to further that goal.

To advance further discussion on this matter, please contact David Soileau, my Coastal Activities Coordinator, at (504) 765-2812.

Sincerely,

Buddy Roemer

Buddy Roemer
Governor

cc: David Soileau
Raymond W. Stephens, Jr.

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

SEP 21 1989

Life Cycle Project
Management Office

Honorable Buddy Roemer III
Governor of Louisiana
Post Office Box 94004
Baton Rouge, Louisiana 70804

Dear Governor Roemer:

We have been advised that the Office of Management and Budget has completed its reexamination of the Mississippi and Louisiana Estuarine Areas project (the so-called Bonnet Carre' freshwater diversion structure). OMB has determined that the project should be treated as the kind of fish and wildlife enhancement project for which 25 percent non-Federal construction and operation and maintenance would be appropriate.

Based on an equitable distribution of benefits received, Louisiana's share is 20 percent and Mississippi's share is 5 percent of project costs. We currently estimate that the cost of construction will be $76 million and the annual cost of operation and maintenance will be $734,000. I enclose a more detailed cost breakout.

If we are to meet our proposed January 1995 completion date, we must conclude a Local Cost-Sharing Agreement by April 1990. In order to make this happen, I will need your written intentions on cost-sharing by October 20, 1989.

Sincerely,

Richard V. Gorski
Colonel, U.S. Army
District Engineer

Enclosure

Revised 12 September 1989

MISSISSIPPI - LOUISIANA ESTUARINE

COST ALLOCATION ($000)

	TOTAL	THRU 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	SCH BAL	PERCENT
TOTAL	76,000	3,337	1,674	9,100	11,200	11,300	23,000	2,800	13,589	100%
FEDERAL	57,000	3,337	474	6,800	8,400	8,500	17,200	2,100	10,189	75%
NON-FEDERAL	19,000	0	1,200	2,300	2,800	2,800	5,800	700	3,400	25%
LOUISIANA	15,200	0	960	1,840	2,240	2,240	4,640	560	2,720	20%
MISSISSIPPI	3,800	0	240	460	560	560	1,160	140	680	5%

Operation, Maintenance & Rehabilitation Yearly Cost (beginning Jan 1995)

TOTAL	734.0
FEDERAL	550.5
NON-FEDERAL	183.5
LOUISIANA	146.8
MISSISSIPPI	36.7

Rec'd 10-11-89

DAVIS POND FRESHWATER DIVERSION STRUCTURE

West Guide Levee Alignments

IMPACTS

Alignment No. 1 - Original alignment:

1. Most expensive alignment for Davis Pond project.
2. Least expensive alignment for Willowdale Hurricane Protection project.
3. Approximately 1,055 acres of wetlands would less likely be developed in the future if
4. Alignment ~~preferred by DNR~~ agreed to by state and federal agencies.
5. No direct delays to Davis Pond project.

Alignment No. 2 - Shortest alignment:

1. Least expensive alignment for Davis Pond project. Savings amount to approximately $0.5 million.
2. Most expensive alignment for Willowdale Hurricane Protection. project. Additional cost is approximately $1 million.
3. Approximately 965 acres of wetlands would more likely be developed in the future. However, Section 404 permits would be required.
4. Benefit/cost (B/C) ratio for the Hurricane Protection project would be below 1.0 causing the Hurricane Protection feasibility study not to be initiated. There would be no Federal hurricane project proposed for west bank of St. Charles Parish (Willowdale area).
5. Davis Pond project would be delayed about 1 year to supplement the Environmental Impact Statement (EIS) and complete reviews.
6. Alignment preferred by two local property owners.

Alignment No. 3 - Compromise alignment:

1. Savings to Davis Pond project of about $300,000
2. Increase Willowdale Hurricane Protection project cost about $400,000.
3. Davis Pond project would be delayed about 1 year to supplement the Environmental Impact Statement (EIS) and complete reviews.
4. Approximately 545 acres of wetlands would more likely be developed in the future. However, Section 404 permits would be required.
5. Hurricane Protection project would have a very low B/C ratio and further study may indicate there would be no interest in a Federal hurricane protection project for the west bank of St. Charles Parish (Willowdale area).

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

October 6, 1989

Life Cycle Project
Management Office

Mr. Gregory J. DuCote
Local Coastal Programs
Coastal Management Division
Department of Natural Resources
P.O. Box 44487
Baton Rouge, Louisiana 70804-4487

Dear Mr. DuCote:

As requested by the St. Charles Parish Council, a public meeting on the alternative west levee alignments for the Davis Pond Freshwater Diversion project has been scheduled for October 12, 1989 at 7:00 P.M. Participation by you, or a member of your staff, is requested.

Sincerely,

Domingo J. Elguezabal
Life Cycle Project Manager
for Project Management

Encl

L_PARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

October 6, 1989

Life Cycle Project
Management Office

Mr. Gregory J. DuCote
Local Coastal Programs
Coastal Management Division
Department of Natural Resources
P.O. Box 44487
Baton Rouge, Louisiana 70804-4487

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Sincerely,

Encl

Domingo J. Elguezabal
Life Cycle Project Manager
for Project Management

Mr. Elguezabal

ST. CHARLES PARISH
COUNCIL

P. O. BOX 302 • HAHNVILLE, LOUISIANA 70057
(504)783-6246 (504)466-1990

OCTOBER 5, 1989

P U B L I C N O T I C E

A MEETING HAS BEEN SCHEDULED FOR THURSDAY, OCTOBER 12, 1989, 7:00 P.M., COUNCIL CHAMBERS, COURTHOUSE, HAHNVILLE, TO DISCUSS THE DAVIS POND FRESHWATER DIVERSION PROJECT.

BY ORDER OF THE
COUNCIL CHAIRMAN

s/ STEVE SIRMON
STEVE SIRMON

PUBLISH IN RIVER PARISHES GUIDE
OCTOBER 8, 12

2/15/96 Davis Pond

Carl Anderson - COE / El Gazobo / Sue Hawes / David Vigh

1.3' elevation of rock weir.
6 months of impoundment - Jan - June.

LW&F - structure in Bayou Verrette.

COE will consider putting in structure along w/ rock weir or
notches in the rock weir.
Purpose of pond is to ~~a~~ equivalate water temp.

Sue - predicted trees on ridges to go to more
water tolerant trees. → Cypress.

Ridge = 2 1/2' elevation.

Sue - 1 week retention time needed to elevate the temperature

If rock weir lowered it may increase velocity
of water ~~in~~ ~~causing~~ erosion.

Flowage easement - area within levees & levee. ~~Also~~
Will buy area ~~and~~ where structure is to be placed.

COE is looking to purchase of Wet area for
West Bank HPL.

West Jefferson Levee District & St Charles is not
happy about mitigation plan.

of 1500 acres - 400 acres would be developed.

25' bottom width of borrow canal on west side

Levee must be 700' off of Highway - Edge of road to center of levee.

2000 - 2400' off road with alternative to put interchange.

70 acres direct impact

Impacts to excluded area - development

90% of fee title goes to flow easement.

1-1½ year for supplemental alignment.

Jensen Beach -

Route Loop - part of original I 310

LCA - agreement between State & Fed.
State may buy flowage easement

Col willing to revise roads/facilities but want letter requesting deviation from alignment 1.

EPA - wants EIS for all alternate alignment

L&E&F - does not care which alignment as long as there is a minimum of delay.

Landowners will attempt injunction

Nature Conservancy -

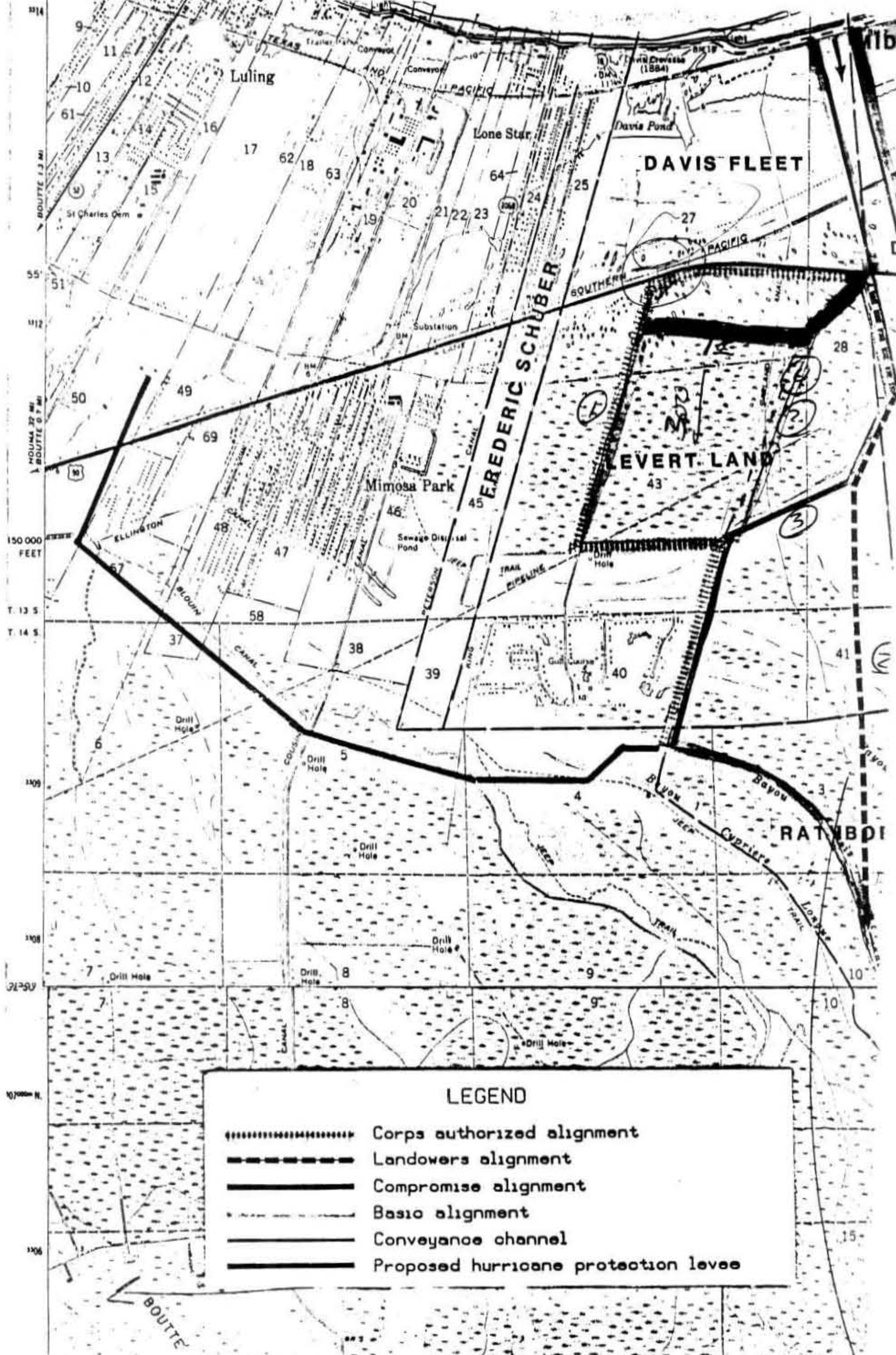
C-DM - July deadline

1500 acres - Nature Conservancy

Water: Bird High - COE, NMFS, U.S. F&WS, EPA all feel that 404 and CZM is not sufficient to prevent area west of alignment B for development pressure. All very critical of the system, in particular Curt Ribsamen who took the opportunity to smear CMD. It appears [redacted] and was out right stated as such, that the inclusion of this land was almost solely to prevent the destruction of bottom land hardwood ridges by development rather than to fulfill any engineering need for the Owings project. It is an accepted fact that the authorized alignment will severely alter those ridges through impoundment which will likely result in a change of habitat to fresh marsh. High contention in an altered W.C. is better than one developed. The lane alignment alternative B would impact fewer acres than the authorized alignment but the quality of the impacted habitat may be greater

Discussion about possibility of the Nature Conservancy purchasing the ridge/swale system then turning it over ~~to~~ LW&F. Reason that wasn't done before was it appeared that area would be included in authorized levee alignment. If alignment be were to be used the purchase of the area could not be considered match (learned latter that State would have to buy it from Conservancy if they purchase it).

Talking with Bill Good after meeting what Loileau & he are looking to do is realignment authorized alignment and purchase the land out right as Fee title by paying the difference between the flood easement price & the fee simple price. Thought that way injunction would be avoided and price of land should be based on wetland rather than developable land (which is doubtful that it is under the constraints of 404 and CZM).



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Planimetry by photogrammetric methods from aerial photographs taken 1965. Topography by planetable surveys 1967

Supersedes map dated 1932–52

Selected hydrographic data compiled from USC&GS Chart 1050 (1966). This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum

10,000-foot grid based on Louisiana coordinate system, south zone

1000-meter Universal Transverse Mercator grid ticks, zone 15, shown in blue

Where omitted, land lines have not been established

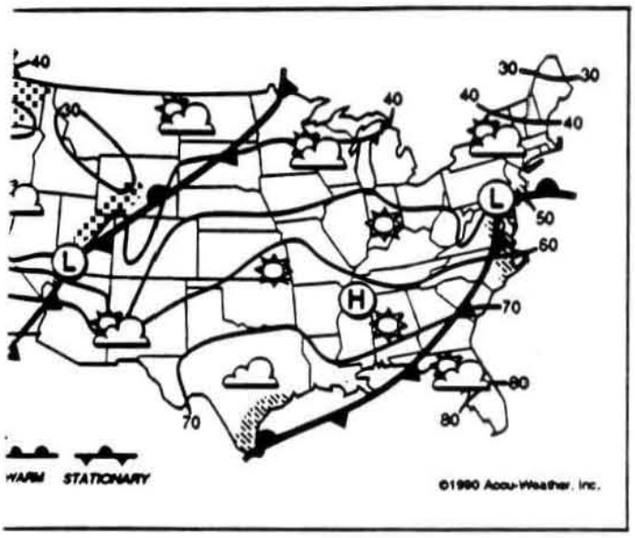
All or part of this quadrangle lies within a subsidence area

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

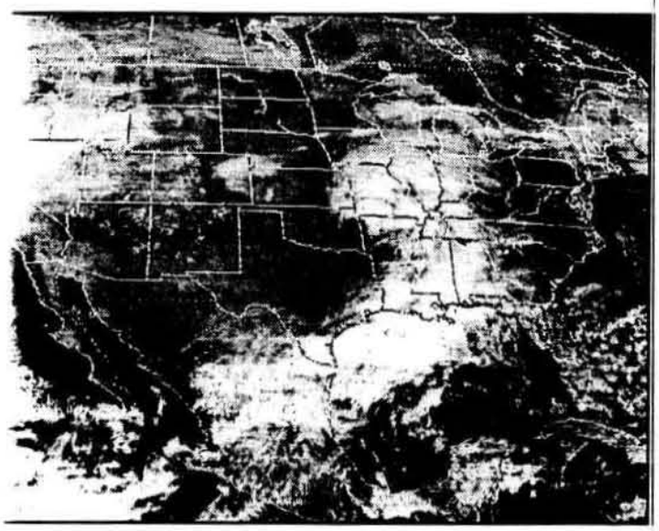
To place on the predicted North American Datum 1983 move the projection lines 19 meters south and 8 meters east as shown by dashed corner ticks

P861069 – Permit to St Charles P.
(5) 24" culverts
for mitigation of P851840 E, Lavon SP St Charles W.L.
E shopping center at Hwy 90
15

2/6/90 Don Elgazalli -
Called to brief me on Davis Pond, did not realize I was with Good last Friday. Said the Hurricane protection levee will have 1 culverts because they do not want to spend $ for mitigation for loss of WL.. Thought that F&WS may have objection to alternative alignment based on conversation w/ Fruge a few days ago. He is meeting with the Parish Engineer about a pump station in the NE corner of the area W of the [illegible] basin.



forecast from the National Weather Service.



cloud photo was taken Tuesday at 12:30 p.m.

er's forecast

Skies	Hi	Lo	City	Skies	Hi	Lo	City	Skies	Hi	Lo
fair	09	b09	Chicago	ptcldy	43	32	Nashville	cloudy	55	39
snwrs	52	34	Dallas	sunny	64	38	New York	ptcldy	48	34
ptcldy	60	44	Denver	sunny	48	22	Orlando	ptcldy	78	51
cloudy	45	30	Honolulu	windy	81	70	Philadelphia	cloudy	50	32
cloudy	58	45	Houston	ptcldy	68	44	Phoenix	fair	65	42
ptcldy	29	12	Kansas City	ptcldy	53	31	Portland, Me.	sunny	39	18
ptcldy	43	28	Las Vegas	cloudy	54	41	St. Louis	ptcldy	50	34
ptcldy	75	53	Los Angeles	ptcldy	61	47	San Francisco	ptcldy	53	37
cloudy	45	28	Memphis	ptcldy	57	40	San Juan, P.R.	sunny	85	69
ptcldy	67	44	Miami Beach	ptcldy	78	64	Seattle	rain	44	33
cloudy	60	39	Minneapolis	ptcldy	43	23	Shreveport	sunny	67	39
cloudy	42	23					Washington	ptcldy	52	37

dav's tides

St. Charles irked to be overlooked on wetlands project

By LISA FRAZIER
River Parishes bureau

St. Charles officials are taking the state and federal government to task for not notifying them earlier of a wetlands project planned in the parish.

The council Monday night unanimously approved a resolution asking the Army Corps of Engineers and the state's Department of Natural Resources to consult the parish before planning wetlands mitigation projects for St. Charles.

Through mitigation, companies that damage wetlands with construction or other projects are required to offset the damage by financing a wetlands enhancement project near the damaged area.

Council members were surprised in January when they learned that federal and state agencies had chosen an area next to the Salvadore Wildlife Management Area in Luling to mitigate wetlands damage caused by the Westwego-Harvey Canal hurricane levee in Jefferson Parish.

"St. Charles Parish officials were not consulted before this property was proposed for mitigation," Councilman Steve Talbot's resolution states. "The parish for which property is being considered for mitigation should have a voice in the planning process."

Though St. Charles wetlands will benefit from the mitigation, council members were upset because they were not consulted before the decision was made and because the mitigation conflicts with a separate project the council supports for the area.

The mitigation project would interfere with the proposed alignment for a freshwater diversion project that the corps plans to construct near Davis Pond. The project will divert fresh water from the Mississippi River into the coastal bays and marshes in the Barataria Basin to replenish them and battle coastal erosion.

The hurricane levee would mark the western boundary of the diversion project's stilling pond, used to warm the cool river water before it flows to the wetlands.

The corps has drafted a levee alignment that snakes around the area planned for mitigation. It includes 1,500 acres unnecessary to the project.

But an alternative alignment developed by the property owners and backed by the council would run straight north to south, split the mitigation site in half and leave the 1,500 acres for future use by the landowners.

The corps engineer for the diversion project, Domingo Elguezabal, said the landowners' alternative alignment would complicate the mitigation efforts.

The council two weeks ago unanimously approved a resolution supporting the alternative alignment. Councilman Chris Tregre of Hahnville urged the council to fight the corps if the agency refuses to realign the levee.

La. fishermen eligible

600,000 cu yds for dredging of outfall channel

C-DM - submitting in June

Mitigation for W. Jessamine Protection levee included
West Wego to Harvey Project under construction

COE permit for levee ~~on Rollof~~ Rathborn land but not construction within.

Bonnabel - 3 month C-DM delay - $\frac{1}{2}$ million $ saving reduction. Reduce length. Reducing 60' of structure

St Charles Parish is voting on resolution by end on month to support or oppose new alignment

Land owners want to meet again w/ COE. Want to be brought in process earlier.

11-14-89

Davis Pond meeting St Charles Courthouse

Carl
Lisa
David V.
Ronnie Paille
Peggy Kenny

Dave Foliey, Dave Chambers, Fred Decoto,
Dom Elgazable

Structure - set at -11. 14 x 14 culverts - 4 culverts

~~#~~ Lift gate - screw gate type with power assist

Jan - May:

1.6' mean high tide

COE - will contract w/ DNR to operate. Daily inspection -
Can shut down in ± 1/2 hr. Portable generator will take ± one hour.

Monitoring program will dictate schedule of openings.
With develop a mathematical model.
4 year monitoring will fine tune schedule.

Weir Design -
Rock weir for erosion protection.
Plan to excavate material → fill w/ bedding material then place rock
36" rip rap. 1.6' MGVD top of crest.
.3' difference between mean high & mean low.
Leakage through the rock weir
Floatation canal → back side of rock weir → backfill
but with a shallow ditch
Borrow on the front side would enhance structure from wave actions.
Problem may arise from rock weir holding too much water. Paille suggested
±4 40" culverts to help alleviate problems (opening in rock weir may clog)

Gretchen Benoit 4/17/90

LACES - Civil Engineering

$17,000

Jason Benoit - T.L. James

467-6000. Computer Division

Dredging

(Rich Smith) -

BD - before Dredging soundings.

AD - after dredging - report Cu yds to COE. → computer

Geo Technical Lab.

Nov 7th Flooding - Armond Subdivision

Public meeting for input

FEMA - Denton

FEMA Rich - COE

Base flood - place in Armand

Flow easement require pumps calculated.

No appreciable additional cost for construction

Lafere Company - split property with Louisa

Greg Sear - Rathbone

Carl Anderson - the Wet area is not necessary for

86 Water Resources act - planning did not require mitigation prior to 86. Area also still require mitigation

Lafere is adamantly opposed to the #1 alignment

Leon Vial - Louisa property owner.

Charles: Davis Pond 10-12-89

Chris Frezzel
Jay Rabin
Hubert Shentz
COE:
Dom Elgazahel
Joe Wetzel
Davis Vie
Joe Coplec - RealEstate
Carl Anderson

'84 Congressional Authorization
Year ago Tanzi asked to look at alternative alignments.

Alignment 2 reduces cost by ½ million.
Bucket dredge & borrow canal
Levee from elevation 7 to elevation 6.

Alternative 3 - reduce cost by $300,000
savings in length of levee & real estate savings.
If alternative is pursued must supplement EIS.

any consideration of realignment will cause a need of

$9.2 million for alignment 2

CoE - looked a incremental cost to raise levee. If 6' of water is already present it just be to be raised by 1'.

Elevation is only deficiency of the guide levee

B/C ratio is still favorable even if area is

David Vie -
Wetland include BLHW, marsh etc.

Align #1 - 140 acres W.L. impacted. No mitig. required. (Prior to water resources c
All require one for one compensation.

Align #2 - additional 90 acres of W.L. to a
a cost $216,000 cost. Indirect impa
to enclosed areas are considered m
and no mitigation

Projected date if proceeding
land aquisition in next year
Construction March of '92
Operation in '96

Steve Simon - When does COE need answer from Parish.
Dom - need Parish input ASAP.
G D M - general design memorandum.
should be complete June 90.

COE - in buying flowage easement

Joe Wattz - COE, ~~on~~ working on feasibility
study of Hurricane Protection Levee. for
~~Willowdale~~ → Found positive B/C
ratio for H.P.L. because of
Recon Number
levee with Davis Pond. Realignment
increase cost by $1 million. Alignment
3 increase by $400,000,
Can't proceed with Hur. P.L. unless ~~to~~ Davis
pond levee alignment is decided.
Total [illegible]

FEMA - no new fill (take fill of
with Armond).
Moutons on new building.
Sec 12 extension

Advisory Committee - original align.
Council - wanted land owner
Sent Committee's recommendation to
Gorski. Sent letter to Breaux
saying the COE would go origin.

Carl Anderson - Engineering - 862-261

Direct Federal Agreement - Federal Rules & Federal Courts. U.S. Justice Dept.
Condemnation
Loss of value before & after the project.
"Estate" written - don't take minerals in flow easement but in levee & channel yes

- Price quoted does not include "contingency" factor
25% contingency factor.

Dave Soileau - Congressional Authorization for alignment
Act 6 - Task Force (Authority) and Trust Fund.
Constitution protection of Trust Fund.

OK to cost levee recently for Davis Pond & Bonne Carre - Trust fund establishes stable source of money to match Fed $
Davis Pond has been prioritized over Bonne Carre

If alternative alignment is chosen
Eliminate preferred routing
Eliminat[e] diversion benefits to the
" " " deltaic impact
Elimination of sheet flow - disruption of
"Environmental Enhancement" project
moving levees will reduce benefits.

$800 per acre in value of land used in B/C
Comparable sales.
~~$500.00/acre~~

Economic branch - $1400 per acre in value of marsh (not fair market value) - Report has not been
Has not been used for B/C ratio.
Bob Bacon of COE in person to report from.

Contract appraisers - property owner involved along during the assessment.

32 acres – $72,000 mitigation

Hurricane Protection 88 acres
$208,000 mitigation. Indirect on enclosed area – no impact

Align 2 = 95 additional acres if alignment 2
$220,000 cost of mitigation. Area enclosed would (of 1300 acres) 520 would be developed in 50 yr. life
$1,248,000 mitigation cost.

Align 3 70 acres –
875 acres induced (350 developed)
$840,000 mitigation

575 acres in #3
450 acres in #2 (below 3)

Commitment from the Governor that La would provide money (even if 100% federal) upon the expedited movement of the COE on this project. Task force may pull back offer if delays are when

25%

Parish will meet within a month (if not sooner) to make recommendation on alignment. How they would like COE to inform them the status of discussions. COE is hearing w/ the land owners. There was an app. leaning toward accepting the original alignment if moving it ~~threatens~~ Hurricane Protection Levee project.

Joe Kopreck - Real Estate
Joe Kopec
Staff Opinion COE
862-1174

Lois Brooks BOTB
(realestate operations

ADVOCATE 2/26/93

Corps agrees to project assessment

By BOB ANDERSON
Environmental editor

Bowing to the demands of environmental and conservation organizations, the U.S. Army Corps of Engineers has agreed to do an environmental assessment of what a proposed $80 million project will do to Lake Pontchartrain.

The Coalition to Restore Coastal Louisiana has asked the state not to put up its share of the funds for the Bonnet Carre Freshwater Diversion project until the corps answers questions about the impact on the water quality of the lake.

"We're going to address all the issues raised by the public," said Bruce Baird of the corps.

The main concerns appear to be the impact on fishing and recreation in the lake as a result of regular diversion of water from the Mississippi River into the lake, corps officials said.

The environmental impacts of the diversion structure are largely unknown, could cause environmental damage and Louisiana is being asked to pay what appears to be a disproportionate share of the project, said Mark Davis, the coalition's executive director, in a letter to the state.

The main benefit of the project is that it would help oyster production off the Mississippi coast, Davis said in an interview.

The coalition stopped short of opposing the project, but suggested that a number of questions be answered before the state commits $15.7 million toward the project's construction and millions more for its maintenance.

Dom Elguezabal, the corps' senior manager of the project, said when the assessment is completed in several months the corps will decide whether it needs to do a more intensive Environmental Impact Statement.

The corps did an Environmental Impact Statement in 1984, but environmentalists maintained the work was inadequate and the lake has changed a great deal in the last 10 years.

Freshwater diversion structures are designed to add fresh water to areas where saltwater intrusion is a problem. Environmentalists maintain that salinity is not a problem in the area where the fresh water would be routed.

The project would be near the Bonnet Carre Spillway, which is used to route river water into the lake during times of flood to help ease pressure on the river's levees.

Local man arrested in rape of 12-year-old

City police arrested a Baton Rouge man Wednesday night and accused him of raping a 12-year-old girl earlier this month, records state.

An arrest warrant issued for 18-year-old Dwayne W. "Frog" Jenkins accuses him of raping the girl Feb. 14 in a garage in the 1700 block of Pocahontas Street.

Jenkins and another man allegedly coaxed the girl into drinking beer with them until she became intoxicated, according to the warrant.

Jenkins is accused of raping the girl after the other man pulled her clothes off, the warrant says.

When police arrested the other man, he told officers that Jenkins had sex with the girl, the warrant says.

In addition, the victim picked out Jenkins' picture and identified him as the man who raped her after viewing a lineup of six photographs, the warrant says.

Police booked Jenkins, of 1213 N. 48th St., into Parish Prison on one count of aggravated rape, a prison spokesman said.

Jenkins remained in Parish Prison Thursday night with bond set at $100,000, the prison spokesman said.

Four cited on DWI counts here

City police reported that four people have been cited for driving while intoxicated since Feb. 23.

The people cited and the counts against them are:

•Alphonse Giles, 39, of Route 1, Box 122, Roseland, cited Feb. 24 for first-offense DWI, improper lane usage and driving under suspension.

•John L. Landry, 40, of 13526 Coursey Blvd., No. 1007, cited Feb. 23 for first-offense DWI, speeding and driving under suspension.

•Thomas Moore, 30, of 334 Brice St., cited Feb. 23 for first-offense DWI and improper lane usage.

•Lisa K. Fontenot, 26, of 8 Cedar Place, Hammond, cited Feb. 23 for second-offense DWI and speeding.

From: Katherine Vaughan
To: Chuck Villarrubia
Date: Wed, Apr 8, 1998 1:09 PM
Subject: Re: permits

It is my understanding the Corps uses an E/A, not a permit and the state will have to make a consistency call. Please let me know if I'm not correct on this.

Katherine

>>> Chuck Villarrubia 04/08/98 12:54PM >>>
Katherine,

Do you want permits for WRDA (Davis Pond and Caernarvon); I checked with CMD and they are largely consistency determinations. There are of course other permitted activities in the project boundaries.

Charles R. Villarrubia
Natural Resource Geoscience Supervisor
LA Department of Natural Resources
Coastal Restoration Division
PO Box 94396
Baton Rouge, LA 70804-94396
504-342-0932
fax 504-342-9417
chuckv@dnr.state.la.us

CC: Bill Good

Davis Pond

C840314 *
C910249 *
~~C910246?~~ A-4
C960109 } Pipeline relocations
C940164 } cut-gone

Caernarvon

C840314 *
C840069
C850719 *
C940412 -

C#
Applicant name
brief description of activities authorized
Issue date

MEMORANDUM

MARCH 3, 1998

TO: Mr. Gerry Duszynski, Assistant Administrator
Ms. Diane Smith, Assistant Administrator

FROM: Katherine G. Vaughan,
Assistant Secretary

RE: Permit information for CWPPRA projects

In an effort to consolidate information regarding long term obligations under the CWPPRA program, I am evaluating permit obligations for individual CWPPRA projects. Accordingly, please have Project Managers compile the following information for each CWPPRA project under their management: a list of all permits (or applications) for each CWPPRA project, including permit number(s), permittee (or applicant), a brief description of the activity authorized by the permit, and beginning and expiration dates of the permit. Bear in mind that most projects will have regulatory approvals from both the state (Coastal Use Permit and/or Federal Consistency Determination) and the Corps (Section 10/404 permits).

Additionally, please ensure that the quarterly reports include this information and that it is updated by the Project Managers on a regular basis.

Thanks!

MEMORANDUM

April 13, 1998
DRAFT

To: Brian Marcks

From: Jeff Harris

Re: Coastal Use Consistencies relevant to Davis Pond and Carnarvon Freshwater Diversion Projects, St. Charles and Plaquemines Parish, Louisiana

Following is a listing of Consistencies files within the above referenced areas, together with applicant name, brief project description and issuance date.

DAVIS POND

C840314, New Orleans District, Corps of Engineers, provides feasibility study for plans for the construction and operation of Mississippi River freshwater diversion structures in the Davis Pond area of St. Charles Parish and in the Canarvon area of Plaquemines Parish, Louisiana. Consistency granted by DNR August 8, 1984.

C910249, New Orleans District, Corps of Engineers, provides changes in the West levee alignment and facility operation plans to accomodate changes caused by construction and interchanges

associated with upgrade of U. S. 90 in the vicinity of Davis Pond. DNR Consistency granted May 18, 1992. check date w/ Brenda

C930379, New Orleans District, Corps of Engineers, modification of the Davis Pond Freshwater Diversion Structure consisting of a change in pumping capacity and construction of rock weir. Consistency granted Dec. 15, 1993.

Canarvon

C840314, New Orleans District, Corps of Engineers, provides feasibility study of plans for the construction and operation of Mississippi River freshwater diversion structures in the Canarvon area of Plaquemines Parish and Davis Pond area of St. Charles Parish, Louisiana. DNR Consistency granted May 18, 1984.

C850719, New Orleans District, Corps of Engineers, provides plans for the construction and operation of a Mississippi River freshwater diversion project at Canarvon, Plaquemines Parish, Louisiana. DNR Consistency granted Dec. 5, 1985.

check date w/ Brenda

PERTINENT DATA

Location of Project:	Southeastern Louisiana in St. Charles Parish on the west bank of the Mississippi near Mile 118 AHP.[1]
Project Purpose:	To introduce freshwater from the Mississippi River into the Barataria Basin.
Area of Influence	
Datum Plane	National Geodetic Vertical Datum (NGVD)[2]

Hydrologic Data

Temperature (°F)	82.0
Average maximum monthly	51.8
Average minimum monthly	68.9
Average annual	
Precipitation	
Average maximum	
Average minimum	
Average annual	

Structure

Capacity	10,650 cfs
Box Culvert	4
Gates	4
Dimensions:	
Gross Width of Structure	71 feet
Clear Width of Structure	56 feet
Length of Culverts	353.5 feet
Clear Width of U-Shape Channel (Inflow Monoliths)	65 to 85 feet
Length of U-Shape Channel (Inflow Monoliths)	66.5 feet
Clear Width of U-Shape Channel (Outflow Monoliths)	65 to 88 feet
Length of U-Shape Channel (Outflow Monoliths)	123 feet

[1]Refers to Above Head of Passes (AHP)
[2]Elevations herein are in feet referred to National Geodetic Vertical Datum (NGVD) unless otherwise noted.

Elevations	
Invert of Culvert	-11.0
Roof of Culvert	
Top of Culvert	+6.0
Top of U-Shape Channel Slab (Inflow Monoliths)	-11.0
Top of U-Shape Channel Walls (Inflow Monoliths)	
Top of U-Shape Channel Slab (Outflow Monoliths)	-11.0 to -15.5
Top of U-Shape Channel Walls (Outflow Monoliths)	

Inflow Channel

Length	535 feet
Bottom Width	85 feet
Bottom Elevation	-11.0
Side Slopes	1V on 3H

Outflow Channel

Length	11,043 feet
Bottom Width	120 feet
Bottom Elevation	
Side Slopes	1V on 3H, -15.5 to -16.6

Weir

Length	10,500 feet
Width	20 to 30 feet
Elevation	+1.6

Levees

MRL B/L Sta

Top Width	
Design Elevation	
Side Slopes	

Outflow Channel Guide Levees

Top Width	10 feet
Design Elevation	7.0
Side Slopes	1V on 4H

Ponding Area Guide Levees

Top Width	8 feet 4
Design Elevation	7.0 to 8.0
Side Slopes	1V on 4H

Met with: Ron Gomez
Dave Faulkner
Bill Good
Jerry Dunzweiler
Fred Whitrock
Bill Savant
Dave Chambers

A Davis Pond Primer

4/17/90 2:00 pm

HISTORY

1/26/83: Kevin Friloux, St. Charles Parish President, drafts eight point manifesto and sends it to Col. Lee. He demands:

1) no expense to St. Charles for construction, operations or maintenance of "facility".
2) involvement of St. Charles in facility operation.
3) hurricane levee on west side.
4) reclassification of wetlands of particular concern to St. Charles as non-wetlands.
5) permits for designated levees and 5 pump stations.
6) state or federal funding for pump station operation.
7) state or federal funding for mosquito control abatement.
8) adequate financial remuneration for affected landowners.

5/20/83: Gerald Bordelon (Treen Administration), Coastal Protection Task Force Chairman, responds to Friloux indicating that due to State's financial situation, funding for additional costs to Davis Pond Project was not available.

6/20/83: Col. Lee responds to Friloux stating that enlarging west guide levee was beyond the scope of the project, no commitments made.

7/14/83: St. Charles passes resolution 2479 opposing Davis Pond Project until Friloux' 8 point plan is negotiated.

12/2/83: Friloux writes to Gov. Edwards asking whether his administration will support Davis Pond Project.

3/12/84: Friloux asks Gov. Edwards to have DNR Secretary (Wm. Huls) provide him with State's position regarding Davis Pond.

3/19/84: Gov. Edwards acknowledges Friloux' letter, promises response from Mike Bourgeois, DNR Deputy Secretary.

6/4/84: St. Charles Parish Council passes Resolution 2610 (introduced by Friloux) tentatively approving Davis Pond, under the following conditions:

1) no expense to St. Charles for construction, operation or maintenance.
2) St. Charles involved in operation of the structure

Davis Pond, cont.

3) 2 pumps are provided as indicated
4) West guide levee shall conform to 100 year frequency storm elevation.
5) State, federal and local advisory council be formed for review of project design and construction.
6) "Consideration of straightening the western guide levee from Highway 90 to Willowdale Subdivision."
7) Consideration of flooding impacts on Des Allemands.
8) Considerations of concerns expressed by Rathborne Land Co.

7/19/84: Mike Bourgeois writes Col. Lee (cc: Friloux) acquiescing to all of the parish's (above) demands... "The conditions requested by the Parish are reasonable and must be honored by the Corps in order for the State to support the project.... If the Corps elects to design the levee at a lower level, the State will increase its match to cover the additional cost for raising the levee to the 100-year flood level."

7/31/84: Col. Lee sends Bourgeois (cc: Friloux) letter supporting position DNR's position on Davis Pond.

8/13/84: Friloux tells Bourgeois that Corps' response is not satisfactory, he wants clearer indication of commitment on pump stations and on the straightening of the west levee alignment.

7/27/88: Ray Stephens rescinds the commitments of 7/19/84, and suggests DOTD, Public Works as potential source of funding for west levee enlargement.

10/18/89: St. Charles adopts a resolution (#3413) that all State Agencies coordinate with the parish on projects in their area.

1/22/90: St. Charles adopts a resolution (#3419) requesting that the west guide levee at Davis Pond conform to "Alignment 2".

3/13/90: Ray Davezac, Director of Public Works/Sewerage, St Charles PArish requests that DNR "verify if the planned expenditure for this portion of the Diversion Project [the Cousin's Canal Pumping Station] is $1,000,000.00 as discussed and the approximate date the Parish will receive these funds".

Davis Pond, cont.

CURRENT STATUS

A: Issues to be resolved:

1) West levee alignment. 1A is planned.

2) West levee height. built to project needs.

3) Cousin's Canal Pumping Station ($1,000,000).

4) Pumping station operations and maintenance.

5) LCA language regarding hazardous waste cleanup, etc.

B. Items needed by the end of June:

1) Draft LCA.

2) DNR's intent to sign LCA.

3) Financial Plan.

Interchange alignment

L.C.A. on 24th –

+ J. Brown – COE Realestate – Estimator has been found that meets approval of Newman Trowbridge.

Estimate $1,000/acre.

Open 7 out of 10.

Sorleam est. $1,000,000 to get full fee value.

20 Million budget for Coastal Emergency to buy land. W.L. preservation task force – report but not ready.

Acquisition by landowner

Gov. $20 Million to LWFF for land acquisition

will go with 1A alignment

AGENDA

DAVIS POND MEETING 2/15/90

Purpose: Review technical and environmental pros and cons of various west levee alignments.

Note: Policy on this issue to be determined by Louisiana Wetland Conervation Authority not Coastal Restoration Division.

Questions for Discussion:

1) Would original alignment result in the destruction of 1500 acres of crevasse splay vidge and swale bottomland hardwoods that could be avoided through alignment 2 if this area could be protected from development?

2) Would alignment 2 result in potential development of the area between alignment 2 and the original alignment?

   a. Would entire area within original boundaries be purchased and deeded to LWF if alignment 2 used?

   b. Would area in question remain under permitting and consistency jurisdiction of (COE and CMD)?

      Both 404 and coastal use permitting?

3) Would original alignment negatively impact hydrology (wetlands) west of NW corner of pond?

4) How do costs of construction and O & M of original and #2 compare?

5) Would #2 present serious management difficulties to LWF?

6) How much delay would #2 cause?

7) General discussion.

Davis Pond 2/15/90

Bill Good	DNR / CRD	342-7508
Dom Elquezabal	COE / Proj. Mgr.	862-2599
Carl Andersen	COE / Engr. Div	862-2610
Quin Kinler	FWS	318-264-6630
Lisa Montelepre	COE / Hydraulics Br.	862-2425
Sue Hawes	COE / Environmental	862-2518
David Vigh	COE / Environmental	862-2540
Ric Ruebsamen	NMFS	504/389-0508
Johnnie Tarver	DWF/FHR Div.	504 765 2811
Mike Condrey	DWF / Fish.	504-568-5816
Michael S. Rolland	COE/REALESTATE	(504) 862-1987
THAD J. Brown	COE/Real Estate	504 862 1150
Jeanene Peckham	EPA - 6	214-655-2263
John de Mond	CRD/DNR-Consistency	504-342-7591
Peggy M. Jones	NMFS	504-389-0508
Bill Savant	DNR/CRD	504-342-7305
Bill Good	DNR/CRD	504-342-7308
Gretchen Binet	St. Charles Parish	504-783-660

JOHN BREAUX
LOUISIANA

COMMITTEES:

COMMERCE, SCIENCE, AND TRANSPORTATION

ENVIRONMENT AND PUBLIC WORKS

SPECIAL COMMITTEE ON AGING

United States Senate

WASHINGTON, DC 20510

WASHINGTON OFFICE:
(202) 224-4623

Central Louisiana Office:
534 Murray Street
Alexandria, LA 71301
(318) 473-7370

South Louisiana Office:
The Federal Building
705 Jefferson Street, Room 103
Lafayette, LA 70501
(318) 264-6871

North Louisiana Office:
Washington Square Annex Building
211 North 3rd Street, Room 102A
Monroe, LA 71201
(318) 325-3320

New Orleans Area Office:
Hale Boggs Federal Building
501 Magazine Street, Suite 1005
New Orleans, LA 70130
(504) 589-2531

March 13, 1990

Gretchen Binet
Administrator
St. Charles Coastal Zone Advisory Committee
P.O. Box 302
Hahnville, LA 70057

Dear Gretchen:

In response to your letter on behalf of the Lake Charles Coastal Zone Advisory Committee recommending that the U.S. Army Corps of Engineers pursue the original west guide levee alignment, I contacted federal officials. Enclosed is the response provided to me from the U.S. Army Corps of Engineers.

If I can assist you in any other way, please call on me at any time.

With kind regards,

Sincerely,

John Breaux

JOHN BREAUX
United States Senator

JB/jag
Enclosure

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

90 MAR 12 AM 9:52

March 6, 1990

REPLY TO
ATTENTION OF:
Life Cycle Project
Management Office

Honorable John Breaux
United States Senate
Washington, DC 20510

Dear Senator Breaux:

In your letter of February 5, 1990, forwarding a letter from Mrs. Gretchen Binet, you asked about the alignment for the west guide levee of the Davis Pond Freshwater Diversion project.

Enclosed is a fact sheet on the project that includes information on the alignment of this levee. Based on position taken by the State of Louisiana and Federal environmental resource agencies, I have decided to proceed with the authorized project alignment.

Sincerely,

Richard V. Gorski
Colonel, U.S. Army
District Engineer

Enclosure

Revised 12 February 1990

FACT SHEET

DAVIS POND, LA (MISSISSIPPI DELTA REGION)

AUTHORITY: The project was authorized by the Flood Control Act of 1965, (Public Law 89-298), the Water Resources Development Act of 1974 (Public Law 93-251), and the Water Resources Development Act of 1986 (Public Law 99-622).

PROJECT JUSTIFICATION: Deterioration of the marshes below New Orleans has long been recognized. This deterioration stems from factors such as subsidence, erosion, and saltwater intrusion. The introduction of freshwater and alluviums from the Mississippi River, via the recommended control structure, will serve to reduce this degenerating trend in the local area. The project will benefit existing commercial fisheries by enhancing marsh conditions, thereby improving the fish and wildlife resources of the area. The total average annual benefits include $9,181,000 for fish and wildlife benefits and $237,000 for recreation benefits, for a total of $9,418,000. The remaining benefit - remaining cost ratio is 3.1 to 1 at 8 7/8 percent.

EXPECTED PROJECT OUTPUTS: The project will divert freshwater from the Mississippi River to coastal bays and marshes in the Barataria Bay basin for fish and wildlife enhancement. Benefits will include restoration of former ecological conditions by controlling salinity and supplementing nutrients. The bays are important to oyster production and as breeding areas for shrimp and food fishes while the marsh areas produce natural food for fur-bearing animals and migratory waterfowl. A total of 83,000 acres of marsh land will be perserved and 777,000 acres of marshes and bays will be benefited by the project. The diversion will take place under regulated conditions developed from monitoring the impact on the environment, and the fish and wildlife.

PROJECT DEVELOPMENTAL HISTORY: Initial Mississippi Delta Region studies were suspended in 1973 at the request of local interests who were restudying freshwater needs in the area. The project remained inactive until January 1982, when the State of Louisiana indicated an interest in implementing the Caernarvon structure. A Post-Authorization Change (PAC) report was approved in June 1987, authorizing the Myrtle Grove site on the west bank to be moved upstream to a site called Davis Pond.

PROJECT FACT SHEET
DAVIS POND, LA (MISSISSIPPI DELTA REGION)

This change will increase the marsh area benefited and will maximize total benefits. The State of Louisiana has provided a letter of intent dated 28 September 1989, for the Davis Pond site. General Design Memorandum studies were begun in FY 1988, and are scheduled for completion in June 1990 with start of construction (land acquisition) scheduled for FY91. Present estimated project cost is $40.8 million, (1 October 1989 price levels).

FUNDING REQUIREMENTS: Section 77 of the Water Resources Development act of 1974 (PL 93-251) modified the requirements of local cooperation to reduce the local interest's contribution from 50 percent to 25 percent of the project cost. Section 906f of the Water Resources Development Act of 1986 (PL 99-662) changed the required non-Federal contribution from 25 percent of the project first cost to zero. However, in their letter of 28 September 1989, the State of Louisiana agreed to voluntarily contribute 25 percent toward the first cost of Davis Pond Structure.

Estimated Federal Cost	$30,600,000
Estimated Non-Federal Cost	10,200,000
Total Estimated Project Cost	40,800,000
FY90 Allocation	$ 399,000
Allocations to Date	2,051,000
FY91 Budget Request	845,000
Balance to Complete after FY90	27,704,000

WEST GUIDE LEVEE ALIGNMENT

The project, as originally authorized, provided for the west guide levee south of Highway 90 to follow an alignment that bordered existing development or permitted areas (Alignment #1). This alignment was arrived at after several negotiations between the environmental resource agencies and the Corps and provided for the most benefits to the wetlands.

During preparation of the Feasibility report alternate alignments were considered; but, the authorized alignment was the environmentally preferred plan and maximized intangible wetland benefits.

PROJECT FACT SHEET
DAVIS POND, LA (MISSISSIPPI DELTA REGION)

In October 1988, Congressman Tauzin asked that the Corps look into two alignments being proposed by two of the local landowners. Upon completion of surveys and soil borings, it was determined that one of the proposed alignments, with slight modifications (Alignment #2), would reduce project costs by about $500,000, but would cause a 12 to 18 month delay to the project because of requirements for a supplement to the EIS. An alternate alignment, Alignment #3, would yield savings of approximately $300,000 but would still delay the project 12-18 months.

The State asked that the authorized alignment be used. This was concurred in by other environmental agencies. However, St. Charles Parish feels that the project would be limiting the future growth of the Parish by taking lands not actually needed for project operation.

After considering all the facts related to the levee alignment and the input from interested Federal, State and Local agencies, the Corps decided to follow the authorized alignment. However, if the State requests a change to another alignment, then consideration to such a change will be given.

The September 11, 1989 Working Draft of the Recommendations for Policies and Actions by the Barataria Basin Policy Team has been revised to reflect changes made at BBPT meetings. All of the policies in EMU 1 and EMU 2 through Short-term, Active policies have been revised. Where policies have been moved to another section *the policies are now shown in italics.* This draft also includes policies received after the initial compilation. These policies are shown as underlined text. Finally, the BBPT requested identification of policies in EMU 3 & 4 which are identical or similar to what has been decided. These policies are marked by **enlarged and bold numbers, eg. 3**.

Should you have any questions or need anything, please do not hesitate to call or write Rod E. Emmer or Ray Sauvage, 1260 Main Street, Baton Rouge, La. 70806, (504) 383-7455.

DEPARTMENT OF NATURAL RESOURCES

Coastal Management Division

Bo
Daryl
FRANK

11/27
for 12/3/85
PC 12/1/85
~~DHB~~ 12/4/85

For your information and for anyone else who might be interested - Daryl, Bo etc,

Chip

Bo -
Please copy & Jim.
DC

Daryl,
Do you want this for a file
Bo

P.O. Box 94124 . Baton Rouge, Louisiana 70804-9124 . 504/342-7591

Caernarvon Freshwater Diversion

biological monitoring - 3 phases
3 yr. pre construction
4 yr. post construction program
46 yr. long term program

<u>Marsh vegetation monitoring</u>
- total of 100 miles of transects (Chabreck + Linscombe's)
- sampling stations at 0.25 or 0.50 mi. intervals
- use LORAN C coordinates by helicopter
- ocular estimate made with helicopter hovering
- all marsh species present and percent composition would be recorded
- observations of submerged aquatic veget.

Project for GIS ⇒ <u>not</u> allow quantification of changes in marsh acreage
← can be done by GIS at CMD

Monitor
<u>muskrat</u> populations simultaneously w/ veget

- also <u>waterfowl</u> proposal

<u>fisheries</u>
oysters - spat set intensities on collecting plates (spat/cm²/week)
- grow-out trays

shrimp - continue present efforts along with ~~with~~ additional trawl stations
-also finfish and blue crabs and
collected and monitored

Isohalines
salinity, water temp and conductivity

By TIM TALLEY
Advocate staff writer

Both candidates in the race for the Division J judgeship in the 19th Judicial District Court agree that the chief issue is which of them is best qualified for the job.

Each of the candidates, City Court Judge Curtis A. Calloway and attorney Lawrence "Larry" Dersona, maintain that their professional backgrounds make them best qualified to take over the district court seat.

"Who can do the better job?" Dersona said. The election should be won by the candidate that can best dispense justice, he said.

"It's a lifelong ambition to be judge," he said. "I had a calling from God to enter this race. God has touched me to offer myself for public

Calloway said the election's only issue is "the ability to do the job — that's about it. Certainly, in this race, I certainly am the most qualified candidate."

"The job that I have done over here (in City Court) is open to scrutiny. I'm here until 5 o'clock. When people call me I try to get them some help," Calloway said.

"I'm looking forward to going over there (district court) and working," he said.

Calloway, 52, and Dersona, 36, will face each other in the Oct. 3 primary election for the district court seat. Each candidate is a Democrat.

The Division J judgeship is one of three judgeships up for grabs in a newly-created, predominantly black election subdistrict

jurists. The district court judgeships have parishwide juris diction, but only voters within the subdistrict will participate in the election.

Division J was vacated in March by the retirement of former Judge L.J. Hymel and has been filled with temporary judicial appointments by the state Supreme Court until a permanent replacement was elected.

Calloway, a U.S. Marine Corps veteran of Vietnam, is a graduate of the Southern University Law Center and was in private practice for 16 years before he was elected to a six-year term on the City Court in 1988.

Calloway said he has played an active role in improvements in the operation and management of the court since he took his seat. Calloway has handled both criminal and civil

"City Court is a much better place than it was three years ago," he said.

City Court judges have implemented a docketing system for criminal charges handled by the court. City Court has jurisdiction over misdemeanor and traffic offenses within the city limits.

Calloway said City Court judges have also initiated regular weekly meetings to discuss issues that affect the court.

Calloway said he also wants to influence the system as a district court judge. He said he is particularly interested in helping the victims of alcohol abuse through referrals to rehabilitation services.

☐ See ISSUE, Page 2B

Tangipahoa civil deputy's arrest reported

By CHRISTOPHER BAUGHMAN
Advocate staff writer

Tangipahoa Parish Sheriff Ed Layrisson arrested one of his civil deputies Friday afternoon after an audit of his office found a shortage of about $56,000, a spokesman said.

Layrisson arrested Melba Joiner of 696 S. First St., Ponchatoula, for theft in connection with the missing funds, sheriff's spokesman Chuck Reed said.

Layrisson accused Joiner of embezzling the funds over the last year, Reed said.

Joiner worked in the Hammond substation of the Sheriff's Office in a section that distributes hunting licenses to the public.

Although Reed said he did not know how the woman allegedly took the funds, her job required handling cash from the public. And

☐ See DEPUTY, Page 2B

Davis Pond coastal restoration project finally OK'd, DNR says

By BOB ANDERSON
Environmental editor ADVOCATE 9/21/92

The state has won a battle with the U.S. Army Corps of Engineers for approval of what state coastal officials said is the most important coastal restoration project planned for the state.

Davis Pond is the most significant and important coastal project of all those that have been built or are on the drawing board, said Dave Soileau, assistant secretary of DNR.

The Louisiana Department of Natural Resources had accused the corps of intentionally delaying the project. After 10 years of preparation work, the project appeared to be held up at corps headquarters in Washington, D.C.

But DNR officials said that with the help of U.S. Sen. J. Bennett Johnston, D-La., they have gotten top corps officials to approve construction of the $87 million Davis Pond project, which will help to protect hundreds of thousands of acres of important marsh south of New Orleans.

"The assistant secretary of the Army has approved" the project and the paperwork is "en route back to New Orleans for implementation," Soileau said.

All that has to be done now is to acquire the land and finish the final project design and engineering, he said.

That should begin in a few days and there should be "a project on the ground within a couple of years," Soileau said.

That project will directly preserve 83,000 acres of marsh and benefit more than 750,000 other acres in the Barataria Basin, Soileau said.

But Soileau and other DNR coastal officials had become frustrated by delays that had put the project more than a year-and-a-half behind schedule and what Soileau called attempts by corps headquarters to stall the work as part of an election-year attempt to reduce spending.

A corps spokesman said there had been questions about the project at corps' headquarters in Washington, D.C. and talk of reducing its size and cost.

☐ See POND, Page 2B

The city court judge spent $14,819 on the campaign and had $653 in in-kind contributions.

Calloway's contributions include $400 from a political committee and $11,675 raised from the sale of tickets to a campaign fund-raising event, the report states.

Major contributors include: John J. Pace, $500; United Brotherhood of Carpenters and Joiners of America Local Union 1098-CARPIC, $400; Marks & Lear, $250; Rick A. Caballero, $1,000; Paul H. Due, $1,000; Jo A. Fleming, $350; Newman, Mathis, Brady, Wakefield & Spedale, $300; Ferrara Fire Apparatus Inc., $250; George and George Ltd., $250; Lawrence A. Durant, $250; Thibaut, Thibaut, Bacot & Latchem, $250; Taylor, Porter, Brooks & Phillips, $500; Ferrara & Eyre, $500; Antony J. Marabella Jr., $250; Mathews, Atkinson, Guglielmo, Marks & Day, $250; Syed A. Salat & Associates, $250; Raymond L. Simmons, $250; Mr.

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Lawrence 'Larry' Dersona: Division J candidate

or Mrs. Karl Koch, $250; Steven F. or Linda B. Watkins, $250; G. Stephen Covert, $250; Thomas C. D'Amico, $250; Etta Kay Hearn, $250; Greco & Greco, $250; Lewis O. Unglesby, $250; Paul Richard Matzen, $250; L.D. Sledge, $500; and Walter Landry Smith, $1,000.

her with a knife. Emergency workers treated her for lacerations before taking her to the Baton Rouge General Medical Center.

Police were searching for the assailant Sunday evening, described by Cavell as a black man in his 30s. A witness who saw the man running from the scene said he was wearing a turquoise T-shirt, a blue ball cap and dark shorts.

Another witness saw a man fitting that description leaving the area in an

witness said he sa
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truck.

Several resident
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commented on the
attack occurring a
of the afternoon n
populated apartme

Police are askin
any information abo
389-3853.

City police officials say man sho

A 30-year-old man was shot twice Sunday night while talking to someone in a car on West Johnson Street, city police spokesman Cpl. Kevin Cavell said.

Another person may have been injured in the shooting, but investigators were not sure, Cavell said.

The man, who was shot once in the arm and once in the back, walked into the police department's Second District after the incident.

Emergency Medical Services personnel at the scene said the man went into shock and had to be taken to Our Lady of the Lake Regional Medical Center.

Cavell said the victim was shot while

talking to some men

Investigators did
the shooting late Su

Chris Robinson s
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shooting occurred.

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Deputy

CONTINUED FROM 1B

Reed said Joiner sometimes worked by herself in a room.

As a civil deputy, Joiner did office work and did not carry a gun or make arrests, Reed said.

The missing funds first came to light during a yearly internal audit begun in July, Reed said.

The Sheriff's Office called in an outside auditor to confirm the findings. After that was done, Reed said both auditors presented their findings to Layrisson.

After her arrest, Joiner admitted she had taken the money, Reed said.

"It is my understanding that there was a confession and an agreement to assist in the investigation," Reed said.

But Reed said he did not know if Joiner told investigators why she took the money or what she did with it.

Joiner has worked in the Sheriff's Office for eight years, Reed said, and her arrest stunned him.

"She was involved with charity functions and was well-respected in the neighborhood," Reed said. "It was a shock to everybody."

Layrisson booked Joiner into the Hammond substation, Reed said.

She bonded out on a personal property and surety bond a short time later, he said.

Pond

CONTINUED FROM 1B

That project will directly preserve 83,000 acres of marsh and benefit more than 750,000 other acres in the Barataria Basin, Soileau said.

But Soileau and other DNR coastal officials had become frustrated by delays that had put the project more than a year-and-a-half behind schedule and what Soileau called attempts by corps headquarters to stall the work as part of an election-year attempt to reduce spending.

A corps spokesman said there had been questions about the project at corps' headquarters in Washington, D.C. and talk of reducing its size and cost.

The project will deliver 10,500 cubic feet a second of fresh water to Lake Cataouatche, Lake Salvadore and Barataria Bay.

It will help to imitate the water that built and nourished the marshes before levees were constructed along the Mississippi River. Without that water and the sediment it carries, the marshes are subsiding and eroding at a rapid rate.

The state's marsh is considered important habitat for waterfowl and other wildlife and a necessary nursery grounds for most of the species that make Louisiana a national leader in fish harvest.

The marsh below New Orleans is also considered a vital storm buffer to the city, which is below sea level, because each mile of marsh has the capability of reducing storm surge by 1 foot and also helping to reduce hurricane wind velocity.

CONSISTENCY NUMBER: C85.7.1.91

APPLICANT NAME: COE/NOD

PARISH: PLAQUEMINES

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PREPARED BY:

DATE: 12-5-85

CONSISTENCY NUMBER: C85-0791

APPLICANT NAME: COE/NOD

PARISH: PLAQUEMINES

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DFA | PROJECT DESCRIPTION: 3 DECKS

STATE AGENCY CONST. | FUNDING SOU

WORK TYPE | QUAD | HABITAT | DISTAREA

CUYD | SAVED | PUBLIC HEARING DATE

REV. 9/83

PREPARED BY:

DATE: 12-5-85

State of Louisiana

DEPARTMENT OF WILDLIFE AND FISHERIES
POST OFFICE BOX 15570
BATON ROUGE, LA 70895

J. BURTON ANGELLE, SR.
SECRETARY
(504) 925-3617

EDWIN W. EDWARDS
GOVERNOR

November 18, 1985

Dr. Stuart J. Guey, Jr.
Commissioner of Health
Plaquemines Parish Commission Council
106 Avenue "G"
Belle Chasse, LA 70037

Dear Dr. Guey:

This is in response to your letter of October 22, 1985 requesting that the Louisiana Department of Wildlife and Fisheries not lease particular grounds because of the potential liability associated with the operation of the controlled freshwater introduction. I can assure you this Department has been involved with freshwater diversion projects for some five directors prior to myself, going back to the Olga project. As you pointed out, we have been made aware of liabilities associated with the controlled freshwater diversion projects before, particularly the Bayou Lamoque structure. This was in 1972, and at the time we discussed the matter with the individual and he decided it was more profitable to maintain the lease than to receive a small settlement. However, at that time we became aware of the problem.

In your letter of October 22, you bring up several points that could potentially cause problems. Towards the end of not leasing -- what happens when the structure produces oysters in the area; who would be legally able to take the oysters. Under the present law, virtually no one. Secondly, who will determine the "adversely affected area"?

Dr. Guey, I truly feel after extensive consultation with my legal and scientific staffs that for some years now a subservient clause placed on all new leases in this area should remove this liability. This would be on all leases since they are proposed to be built statewide, and even though flow-through Caernarvon is some 15 years away, it is timely to consider it now. The problem I am running into is the use of the exact wording which should not prevent the oyster leasee from his legal right to obtain damage claims. Our legal counsel and staff has been working on the wording and it will be forthcoming. This will be a statement in the lease document allowing the state to operate the structure without being liable for oyster mortality. Those potential oyster leasees who feel this will present problems should not lease those areas.

Thank you very much for your interest in this matter, and if I can be of any further assistance, please contact me.

Sincerely,

J. Burton Angelle
Secretary

JBA:HES:scn

cc: Senator Samuel Nunez
Representative Frank Patti
Department of Natural Resources, Dr. Chip Groat
Mr. William S. "Corky" Perret
Mr. Harry Schafer
Mr. Ron Dugas
Mr. Mark Chatry
Mr. Al Anderson
Mr. Don Puckett

State of Louisiana

DEPARTMENT OF WILDLIFE AND FISHERIES
POST OFFICE BOX 98000
BATON ROUGE, LA 70898

J. BURTON ANGELLE, SR.
SECRETARY
(504) 925-4007

EDWIN W. EDWARDS
GOVERNOR

11-4-85

AGENDA SENT
PREPARE RESPONSE
FOR SECRETARY
BATON ROUGE OFFICE

DATE: OCTOBER 30, 1985

MEMORANDUM

TO: CORKY PERRET, ASST. SEC.

FROM: J. BURTON ANGELLE, SECRETARY

Please look into this matter and prepare a written response for my signature within 72 hours. Include two copies of your reply for filing in this office. Thank you.

RECEIVED
LA. DEPARTMENT OF
WILDLIFE & FISHERIES
OCT 30 1985
ASSISTANT SECRETARY
OFFICE OF COASTAL
& MARINE RESOURCES

Plaquemines Parish Commission Council

COMMISSIONER OF HEALTH
106 Avenue "G"
BELLE CHASSE, LOUISIANA 70037

DR. STUART J. GUEY, JR.
COMMISSIONER

Phone: 392-6690

October 22, 1985

COPY

Burton Angelle, Secretary
Louisiana Department of Wildlife & Fisheries
P.O. Box 15570
Baton Rouge, La. 70895

Dear Mr. Angelle:

I am requesting that you consider not leasing any additional oyster grounds located in Plaquemines and St. Bernard parishes that will be adversely affected by the proposed Caernarvon Freshwater Diversion project. The continued leasing of oyster grounds in areas where the freshwater diversion will have adverse effects may eventually lead to mitigating activities on behalf of the lessee against the lessor. If you are unable to curtail the leasing of future oyster grounds in the Caernarvon Outfall area, then it should be made known to the lessee that this area may be adversely impacted as a result of the proposed Caernarvon Freshwater Diversion project and that neither the State nor the Parish should be held responsible for the mortality of the oysters on those leased beds.

When reviewing the request for leases to be renewed in this area we request, if possible, that a statement be made so as to eliminate liability of the State and the Parishes which may result from future operation of the structure.

Please consider this request and advise us as to any action the Louisiana Department of Wildlife & Fisheries intends to take.

Sincerely,

Dr. Stuart J. Guey, Jr.
Commissioner of Health

SJG/dbs

cc: Representative Frank Patti
Senator Sammy Nunez

United States Department of the Interior
FISH AND WILDLIFE SERVICE

POST OFFICE BOX 4305
103 EAST CYPRESS STREET
LAFAYETTE, LOUISIANA 70502

October 25, 1985

Mr. Frederic M. Chatry
Chief, Engineering Division
Project Engineering Section
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Dear Mr. Chatry:

The Fish and Wildlife Service has reviewed the draft reports for the biological and hydrological, water, and sediment quality monitoring programs for the freshwater diversion structure at Caernarvon, Louisiana, as requested by your September 26, 1985 letter. This letter is submitted on a planning-aid basis.

The environmental concerns relative to the potential effects of freshwater diversion are adequately addressed by the numerous elements comprising the draft monitoring programs. However, we do not believe that additional modeling is needed for development of operational procedures for the diversion structure. Therefore, we do not consider development of such a model to be a necessary element of the proposed monitoring program.

We appreciate the opportunity to assist in the development of a comprehensive monitoring program for this freshwater diversion feature. We plan to continue our coordination of the biological monitoring program with NOD and Louisiana Department of Wildlife and Fisheries personnel.

Sincerely yours,

David W. Fruge
Field Supervisor

cc: LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources (CMD), Baton Rouge, LA
FWS, Atlanta, GA (AHR/ES)
NMFS, Galveston, TX

ADVOCATE 11-9-97

[redacted] rewriting plan for river diversion

By [redacted]

Gaston Livaudais, a longtime Plaquemines Parish resident and landowner, says he sees lots of evidence that diverting some Mississippi River water into the marsh is working.

On a recent trip, he and others saw thousands of ducks that created what looked like paint smears across the silvery surface of ponds in the marsh being replenished with fresh water from the Caernarvon Freshwater Diversion near Braithwaite.

There's a lot of "duck potato," a freshwater marsh plant that ducks eat after flying south for the winter to Louisiana, he said.

"The waterfowl has drastically improved because you have feed," he said. The alligator population has also boomed, he said. "The only thing you don't see is the nutria. The alligators are taking control of that," Livaudais said.

Livaudais is one of several people who say they see positive things in the marsh where freshwater diversion is occurring.

But there are some who see destruction, not resurrection.

State Sen. Lynn Dean, R-Braithwaite, says he thinks the diversion has done nothing but push oyster and crab fishermen farther away from home. He said he thinks a virus outbreak that hit oyster beds earlier this year is tied to pollution coming into the Breton Sound Estuary from the diversion project.

St. Bernard Parish's sewage treatment plant discharges into the river just above Caernarvon and on some rainy days, the system is bypassed because too much water flows into it, he said. Dean is the former St. Bernard Parish president.

The Department of Natural Resources says the federal Food and Drug Administration studied the virus problem and concluded the outbreak was from local sources and not "distant sources" such as the diversion project.

Pete Jones, a Plaquemines Parish employee who runs the structure, said people who don't see the improvement in the

and concluded the outbreak was from local sources and not "distant sources" such as the diversion project.

Pete Jones, a Plaquemines Parish employee who runs the structure, said people who don't see the improvement in the marsh "don't want to see it. ... People, I think are afraid of change."

And there apparently has been a lot of change since the five 45-foot-square culverts were opened first in 1991. The culverts run from the river under the levee and La. 39 into a canal that opens in the top of the estuary.

At peak flow, the structure can move 8,000 cubic feet of water per second into the marsh. With it comes silt and nutrients that help build land and encourage freshwater plant growth. Much of the marsh's soil comes from plant growth decomposition. The freshwater also pushes the saltwater farther toward Breton Sound.

The Department of Natural Resources said surveys show that the addition of fresh water has increased the waterfowl pass, alligators, nutria, and freshwater vegetation. In nine sample sites, the diversion has created 406 acres of land.

Bill Good, head of the DNR's Coastal Restoration Division, said officials are still not sure how the marsh has been built. It is probably a combination of silt coming in with the water and nutrients that helped make soil more conducive to freshwater plant growth, he said.

Researchers from LSU and University of Southwestern Louisiana are beginning a study to figure out how it all works, Good said.

That's just one of many unknowns that must be dealt with in the concept of diversion.

Good said the hydrology of Caernarvon and other large-scale diversions "is so complicated you cannot model it." One can predict what might happen but not with much certainty.

The advisory board that determines how the structure is operated is considering changing procedures.

Originally run to hit a target salinity level, officials now think that is unfeasible and have rewritten plans to operate it based on flow and needs of the ecosystem, said Program Manager Chuck Villarrubia of DNR.

One person who agrees with Villarrubia is Oniel Malbrough, president of Coastal Engineering and Environmental Consultants Inc. His firm advises Jefferson Parish and other parishes on coastal issues. Right now, Jefferson is trying to determine the impact of a proposed diversion at Myrtle Grove, on the west side of the river down into Barataria Bay.

The experience at Caernarvon tells Malbrough that officials will "have to build it and then manage it."

As more diversion projects are considered, DNR officials will find out if the public agrees with that build-it-then-manage-it philosophy.

Mike Dunne covers the environment for The Advocate.

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

REPLY TO
ATTENTION OF

SEP 26 1985

Engineering Division
Projects Engineering Section

Mr. Dave Chambers
Louisiana Department of Natural
Resources
Louisiana Geological Survey
2133 Silverside Drive
Baton Rouge, LA 70808

Dear Mr. Chambers:

This letter is to bring you up to date on the status of the monitoring program for the Caernarvon Freshwater Diversion Project, and to transmit copies of draft reports for the biological and hydrological, water, and sediment quality monitoring programs.

At the workshop held from October 9-11, 1984, on Grand Terre Island, it was determined that the most efficient way to work out detailed designs for the monitoring programs would be to use smaller subgroups composed primarily of individuals from the larger working group. We have incorporated input from both the large workshop and the numerous smaller meetings in developing the overall monitoring program.

It is requested that you review the enclosed reports and provide your comments by October 25, 1985. If deemed necessary, additional meetings will be held to further discuss the monitoring program.

It has been a pleasure working with you and we look forward to continued cooperation on development of the final monitoring program.

If you have any further questions, please do not hesitate to call.

Sincerely,

Frederic M. Chatry
Chief, Engineering Division

Enclosures

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

REPLY TO
ATTENTION OF

September 14,1984

Engineering Division
Projects Engineering Section

Dear

Thank you for your recent attendance at the monitoring program development meeting for the Mississippi Delta Region Project (Caernarvon Freshwater Diversion Structure). The meeting was a good start towards the development of the monitoring program, and the contribution of your time and expertise towards making the meeting and the program a success is appreciated.

One of the questions brought up at the meeting was how the funding of the program would be handled. Total project costs including engineering and design and construction will be split on a 75% Federal-25% non-Federal basis. The State of Louisiana is currently the non-Federal sponsor for this project and will be responsible for 25% of the cost. Costs for the 3-year pre-and the 4-year post-construction monitoring are included under engineering and design and as such are subject to the 75-25 split. Various state and local agencies already have monitoring programs in the Breton Sound area and some of these programs are required by law. During future workshops the pre-construction monitoring programs will be designed and will determine what will be monitored and where. Existing stations and methods used by the state and local agencies will be used as much as practicable. If additional work is determined necessary for our programs at an existing location, or if local or state agencies install new stations in the area, this additional work will be credited toward the State's 25% obligation. Work that is done by these agencies as

ATTACHMENT 1

part of their normal data gathering programs will not be eligible for credit. No transfer of Federal Funds to State and Local agencies will occur.

We have enclosed for your information a copy of the Memorandum of Meeting and accompanying enclosures.

We look forward to seeing you at the first workshop to be held at the Lyle St. Amant Marine Laboratory on Grand Terre Island on October 9-11, 1984. If we can be of any further assistance, please do not hesitate to let us know.

Sincerely,

Frederic M. Chatry
Chief, Engineering Division

Enclosure

MEMORANDUM OF MEETING

SUBJECT: Monitoring Program Development Meeting
Mississippi Delta Region Project
(Caernarvon Freshwater Diversion)

The meeting to discuss development of the monitoring program for the Caernarvon Freshwater Diversion Project was convened at 10:00 a.m. on August 7, 1984. The meeting was held in Conference Room 1 at the New Orleans District (NOD). It was well-attended and basically followed the agenda provided in enclosure 1. The working group for development of the monitoring program is provided in enclosure 2. Most of the individuals on the group or their representative(s) attended the meeting. A list of meeting attendees is provided in enclosure 3. Mr. Fred Chatry, Chief of the Engineering Division at NOD, delivered the welcoming remarks. He pointed out that this project is actually under design and moving to construction. He stated that this project had its genesis as a specific proposal in the 1950's, but was not authorized by Congress until 1965. Even though the project has always been strongly supported by Federal and state biologists, we were unable to obtain the non-Federal sponsorship required by Congress. We now have support from the State of Louisiana and are optimistic that construction will begin in November 1986. Mr. Chatry emphasized that because Caernarvon will be the first of our freshwater diversion projects to come to fruition, it is essential that it be monitored and operated to best advantage so that the full potential of freshwater diversions in preserving and enhancing estuarine areas be demonstrated. He then turned the meeting over to Mr. Carl Anderson, the overall project manager.

Mr. Anderson asked each attendee to state their name, the organization they represent, and what they foresee as their primary role in the development and implementation of the monitoring program. Mr. Anderson then provided an overview of the history of the project, a general project description, and the current status of the project.

Mr. Anderson then introduced Mr. James Warren from NOD's Hydraulics and Hydrology Section who gave a general overview of the hydrologic and water quality monitoring programs.

Mr. Warren suggested that an objective of collecting hydrologic data is to monitor principal factors that determine water movements and the present salinity regime of the Breton Sound Estuary. It was noted that concurrent measurements of tide fluctuations, precipitation, significant freshwater discharges, air temperature, wind and current velocities, and salinity at critical locations will be required to develop predictive and operational models. Mr. Warren suggested that most of the desired hydrologic data might be most efficiently obtained using in-situ data recording monitors.

Mr. Warren noted that an objective of the water and sediment quality monitoring program is to define mean levels and variability (i.e. probability distributions) of selected parameters before initiating freshwater diversion. It was suggested that data generated by water and sediment quality monitoring would form a base condition to which post-freshwater diversion parameter levels could be compared. Generalized lists of water and sediment quality parameters that could be monitored were presented.

Mr. Warren stressed the need to have one data management system that would allow easy access and manipulation and analysis of data generated by the various monitoring agencies. Use of the Environmental Protection Agency's STORET system was suggested. Finally, Mr. Warren noted the desirability of standardizing sample collection and analysis procedures.

Mr. Warren then turned the meeting over to Mr. Dennis Chew from NOD's Environmental Quality Section to provide a general overview of the biological monitoring program. Mr. Chew stated that we wanted to take advantage, to the maximum extent practicable, of existing monitoring programs carried out by Federal, state, and local entities and to utilize the expertise of individuals familiar with the Breton Sound Basin and/or appropriate monitoring techniques to develop the program.

He said that the purpose of the monitoring program is to establish baseline conditions in order to assess effects of the diversion on biological resources including vegetation, furbearers, alligators, waterfowl, finfish, shellfish, and other important biota. The reasons for the program are to determine if the project is actually doing what we have predicted; to help guide operation of the structure including timing, magnitude, and duration of flow; and to insure that the diversion is not contributing to unacceptable levels of contaminants in vegetation, fish, wildlife, and ultimately humans. Mr. Chew then provided some general guidance on the approach to monitoring the various biological resources. Information in Dr. William L. Klesch's October 5, 1983, Memo for Record entitled "Conceptual Monitoring Activities for Freshwater Diversions within the Coastal Areas of Louisiana and Mississippi" was used in part in the presentation (enclosure 4). Mr. Chew reiterated the importance of sound data management practices and standardization of sampling and analytical techniques. He also emphasized that the monitoring program concentrate on parameters that would yield definitive information on project effects and not just provide a lot of disjunct, meaningless data. Mr. Chew pointed out that NOD envisions the actual technical development of the monitoring programs would be carried out through a series of workshops.

Following the presentations by NOD personnel, each participant was requested to comment on the overall schemes as presented and how they could assist in refinement and implementation of the program. Mr. Chew and Mr. Warren served as facilitators to field and record comments and questions.

Mr. Walter Morse from the Louisiana Department of Health and Human Resources (DHHR) said that they had data on fecal coliforms and some other parameters in the Breton Sound area and that the data is available. He indicated that they would continue to monitor the area and would work with NOD in the monitoring endeavor.

Mr. John Musser of the U. S. Geological Survey (USGS) said they would work with NOD and emphasized the importance of monitoring the

water quality of the river adjacent to the structure. USGS has 10 to 11 years of data from stations at Violet and Belle Chasse. Their data is in the STORET data base.

Mr. Gerald Bodin of the U. S. Fish and Wildlife Service (USFWS) said they would continue to work with NOD in the development of the program. The USFWS has some highly rated contaminant laboratories and should be able to conduct some tissue analyses.

Mr. Mark Chatry of the Louisiana Department of Wildlife and Fisheries (LDWF) said their Seafood Division is in a position and has a desire to play the leading role in monitoring of the seafood resources that LDWF is charged with managing. LDWF is in the process of developing a data management system and putting computers on line.

Messrs. Roy Giardina and Clarence Louvet, Jr., biologists from LDWF Area 2 (Breton Sound), indicated that biological, hydrological, and water quality data exist dating back to the early 1960's. This data varies considerably in degree of accessability.

Dr. Ray Varnell of Plaquemines Parish stated that the parish has several years of continuous data, much of it collected on a weekly basis. Some of this information has already been obtained by NOD and all of their data is available.

Mr. Dave Roberts from Coastal Environments, Inc. (CEI) indicated that they have gathered a substantial amount of data under a study conducted for Plaquemines Parish in order to design an outfall management plan for the Caernarvon Project. Based on his experience in the basin, Mr. Roberts emphasized the importance of monitoring wind speed and direction. He also said that improved methods are needed for establishing elevations in estuarine areas.

Messrs. Dugan Sabins and Michael Schurtz from the Louisiana Department of Environmental Quality (DEQ) said they have up to 10 years of good data on the Mississippi River. Between St. Francisville and

Pointe-a-la-Hache, DEQ has six stations monitored for trace metals on a monthly basis. They have recently added 12 stations for organics and other parameters. Most of the data is in STORET. DEQ has stations in Little Lake and Bay Gardene which have been monitored for the last 5 years. They will cooperate in the program as much as possible.

Mr. Chuck Killebrew from LDWF suggested that everyone put together a summary of their monitoring programs for use at future meetings or workshops. This matter is discussed in more detail later in this memorandum. Mr. Killebrew requested some information on funding for development and implementation of the monitoring program. Further information on this subject is included in the transmittal letter accompanying this memorandum.

Dr. James Geaghan of the LSU Department of Experimental Statistics said he would provide statistical guidance. He presently does statistical work for LDWF and can provide guidance on the monitoring program through that agency.

Mr. Barney Barrett of the LDWF suggested that we establish definitive criteria and objectives for the monitoring program to insure we do not monitor a vast array of items that would give us no concrete answers.

Dr. Robert Engler from the U. S. Army Engineers Waterways Experiment Station (WES) acknowledged that contaminants are certainly a valid concern, but not an insurmountable problem. We will be diverting water from a high energy to low energy system and big Mar could potentially become an area of high pollutant concentrations. However, many techniques are available to monitor effects of contaminants including tissue analyses and plant and animal bioassays. Certain types of laboratory studies could be used to narrow down field monitoring requirements. Dr. Engler noted that the influx of nutrients into the basin via the diversion would be beneficial as marshes are generally nutrient limited.

Allan Ensminger, Chief of the Fur and Refuges Division for LDWF, said that they currently monitor vegetation, furbearers, alligators, and waterfowl. Due to the benefits of the diversion to these resources, it would be essential to continue such monitoring and to increase the monitoring effort in some cases, particularly for waterfowl.

Dr. Tom Pullen from the Army Corps of Engineers Lower Mississippi Valley Division (LMVD) noted that low-altitude infrared photography may prove to be a useful tool in assessing vegetation changes in the basin.

Following the statements from the meeting participants, Mr. Chew indicated that NOD proposed to actually develop the monitoring program through a series of technical workshops. It was generally agreed that this would be a logical approach. The dates for the first workshop are October 9-11, 1984. LDWF has offered the use of the Lyle St. Amant Marine Laboratory on Grand Terre Island for this first workshop. As suggested by Mr. Chuck Killebrew, participants were asked to prepare informational packets concerning their monitoring programs, and have them available at the workshop. The packets should contain specific information concerning hydrologic data collection, water and sediment quality data, tissue analyses, and biological sampling for the Breton Sound Estuary. The packet should include, but not be limited to, the following:

1. Agency, division, section, group, etc.

2. Monitoring program designation and type of monitoring conducted.

3. For each parameter normally monitored under this program please list:

   a. parameter

b. sampling frequency and type of sample, e.g. surface composite, depth-integrated composite, shrimp, oysters, benthic sample, etc.

c. analytical method, normal detection limit, documentation source for laboratory analyses or instrument make, model, and specifications for field observations, gear type, etc. (see Table 1 for examples)

4. How are the data generated by the monitoring program?

a. If the data are put into a computer system, please list system make and model.

b. Would your agency be willing to generate a tape record of several years of observations to be input into a central data management system?

c. If the data are tabulated and stored, please provide a copy of a typical tabulation sheet.

5. List currently active sampling/monitoring locations in the Breton Sound Estuary (Plaquemines and St. Bernard Parishes). Please provide maps and a short descriptive paragraph of each sampling location including approximate latitude and longitude coordinates and any other information that would help field personnel pinpoint the sampling site.

NOD thanked the group for their participation and cooperative spirit. The meeting was adjourned at approximately 1:00 p.m.

CARL E. ANDERSON

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MEMORANDUM OF MEETING

SUBJECT: Monitoring Program Workshop
Mississippi Delta Region Project
(Caernarvon Freshwater Diversion)

The first workshop to discuss development of the monitoring program for the Caernarvon Freshwater Diversion Project was held on October 9-11, 1984, at the Lyle St. Amant Marine Laboratory on Grand Terre Island, Louisiana. The facility was made available to the group by the Louisiana Department of Wildlife and Fisheries. The hospitality and assistance extended by the Laboratory staff was greatly appreciated. The purpose of the meeting was to assemble a group of multi-disciplined individuals representing numerous federal, state, and local agencies and other interested groups to gather information on existing biological, hydrological, and water quality monitoring programs. Based on this information, the group would be able to identify data gaps and recommend sampling programs to collect the additional required information. There was a great deal of interest in the workshop and most of the agencies on the working group were represented. Enclosure 1 is an updated list of the individuals and agencies comprising the working group with current mailing addresses, telephone numbers, and their primary role in development of the program. Enclosure 2 is a list of workshop participants. Some of the people were not able to attend the workshop for the entire 3-day session and the number of participants at any given time varied from about 20-30 individuals. The workshop was moderated by Mr. Dennis Chew and followed an informal and flexible agenda to provide an efficient forum for exchange of information and ideas among participants. The following is an overview of what transpired at the workshop. More detailed information on existing sampling efforts and additional monitoring needs are being generated by various agencies and will be forwarded to the working group as they are developed.

The workshop was convened after lunch on Tuesday, October 9. It began with a brief overview of the status of the project followed by a summary of results of the August 7, 1984, monitoring meeting which was held at the New Orleans District (NOD). At that meeting, NOD personnel had requested that the various agencies having sampling programs in the Breton Sound Basin prepare informational packets concerning their respective programs. In the September 14, 1984, Memorandum of Meeting, we provided examples for presenting the information and requested that it be ready for presentation at this workshop. Mr. Chew asked the agency representatives to present an overview of their sampling programs to the entire working group so everyone would have an idea of the overall extent of sampling efforts in the study area. Most agencies had copies of their informational packets and distributed them to the participants. Agencies making presentations on Tuesday afternoon included the Louisiana Department of Wildlife and Fisheries (LDWF), Plaquemines Parish Environmental Services Laboratory (PPESL), U. S. Fish and Wildlife Service (USFWS), U. S. Geological Survey (USGS), and National Marine Fisheries Service (NMFS).

Messrs. Mark Chatry and Robert Ancelet from LDWF presented information on their monitoring of fishery resources including oysters, shrimp, and other finfish and shellfish species. Their sampling gear includes trawls, plankton nets, pound nets, gill nets, hook and line, meter square sampling, Butler plates, and hand dredges. LDWF also conducts boarding surveys of oyster harvesting vessels on the state seed grounds. A great deal of their data dates back to the late 1960's and early 1970's. In addition to sampling aquatic organisms, LDWF collects a variety of water quality, hydrological, and climatological data at many of the sampling stations. Much of their data is now stored on magnetic tapes and they plan to have all of their data computerized in the near future.

Dr. Ray Varnell presented on overview of the PPESL's sampling programs which include a variety of biological, water quality, and hydrological parameters. They monitor water quality at about 20 stations in the Breton Sound area. A number of these stations are inland of the stations of other

resource agencies and provide information on the upper basin. Their program includes analyses of volatile priority pollutants, pesticides, and heavy metals. Most of their sampling has been conducted over the last 4-5 years. The parish is playing a very active role in the development of the program.

Messrs. Gerry Bodin and Wilfred Kucera from the USFWS discussed the contaminant monitoring conducted by their agency. USFWS, under their National Contaminant Biomonitoring Program, collects fish samples in the Mississippi River at Luling and analyzes contaminant levels in fish tissue. The purpose of the program is to monitor contaminant trends over a long-term period. Sampling began in 1969 and has continued basically on an annual basis to the present.

Messrs. Duane Everett and Charles Demas of the USGS discussed their sampling programs. The USGS, in cooperation with the Corps and Office of Public Works, presently collects water and sediment samples from three sites on the Mississippi River in the vicinity of New Orleans. The three sites are Luling, New Orleans, and Belle Chasse. The period of record for these sites are: Luling, 1973 to present; New Orleans, 1967 to present; and Belle Chasse, 1978 to present. Samples are analyzed for an extensive list of physical and chemical parameters. The USGS presently does not collect samples in the Breton Sound area. However, they have a large amount of historical data for the Mississippi River-Gulf Outlet and Baptiste Collette areas.

Ms. Peggy Keney informed the group that NMFS collects commercial fisheries landings data for the area. However, based on our needs, there are some problems with the data because landings for the Breton Sound and Chandeleur Sound areas are lumped together. With the present method, it is not possible to determine landings just from Breton Sound.

After the agency presentations, the participants divided into two subgroups to discuss existing sampling programs in more detail, identify

data gaps, and recommend additional sampling efforts as deemed necessary to adequately monitor effects of the diversion. Mr. Chew led the subgroup on biological sampling and Mr. Warren led the subgroup on water quality/ hydrology.

The biological subgroup discussed sampling of important resources including oysters, shrimp, blue crab, menhaden, groundfish, red drum, and spotted seatrout. The group determined that LDWF has adequate sampling programs to monitor fishery resources and manage fisheries under existing conditions. However, the proposed diversion would cause changes in distribution and abundance of aquatic organisms and, in order to document project effects, sampling efforts would be required in areas which presently receive little attention. Increased monitoring would be required in the upper basin to document changes and potential adverse impacts, and some monitoring would be required gulfward of existing stations to determine effects of salinity changes in the area.

LDWF currently monitors oyster production on the state-managed areas that produce significant quantities of oysters. They do not normally sample oysters on private leases located inland of the public seed grounds, nor do they routinely monitor production seaward of currently productive areas. The subgroup felt it was very important to document project impacts on oysters in these areas and discussed sampling efforts to accomplish this goal. They suggested that trays of oysters could be placed along transects in the mid to upper basin to monitor spat set, growth, and survival rates. Data from this sampling could be used to establish mortality lines and document any adverse impacts caused by overfreshening. Fourteen stations were tentatively selected. It was also recommended that additional meter square and Butler plate samples be taken on the public oyster grounds to monitor a broader area to assess oyster density, size, and spat set. This would help to determine the extent to which the project is affecting production of oysters gulfward of current oyster producing areas. Boarding surveys of oyster vessels would also be increased.

It was determined that additional sampling would be required to monitor impacts on shrimp resources as a result of the diversion. LDWF currently conducts shrimp sampling to manage the fishery under existing conditions in the basin. An expanded shrimp sampling program would be needed to assess project impacts. It was suggested that several 6- and 16-foot trawl stations be established in the mid to upper basin and gulfward of areas currently sampled. Tentative station locations were selected.

With regard to blue crabs, menhaden, groundfish, and other finfish and shellfish species, they would also be monitored at the trawl stations established for shrimp. These other species are currently identified, weighed, and measured at most LDWF sampling stations.

Red drum, spotted seatrout, and other finfish species are currently monitored through creel surveys. These surveys, as well as other sampling efforts, are being expanded by the recently established Finfish Section of LDWF. Data collected by this section will provide useful information on numerous species of commercial and recreational importance. Mr. John Roussel from LDWF has been added to the working group to represent the Finfish Section.

The water quality/hydrology subgroup discussed existing monitoring programs and their adequacy as related to documentation of project impacts. Since reduction of salinities is the primary purpose of the project, the subgroup agreed that salinity should be the most important parameter to monitor in the basin. The group discussed acquisition of two distinct types of data, i.e., data obtained using in situ data gathering packages and data obtained from laboratory analyses of samples collected in the field. Generally, data derived using in situ monitors would consist of climatological, hydrological, and physical water quality parameters. This information would be used primarily to develop a regression model to guide operation of the structure. Data derived from laboratory analyses would consist principally of measurements of water column, bottom sediment, and plant and animal tissue contaminants.

Members of the subgroup discussed in more detail the sampling programs which they had summarized for the entire group. Dr. Varnell from Plaquemines Parish stated that their sampling efforts, as well as data provided by Coastal Environments, Inc., indicate the area is very homogenous and that few water quality monitoring stations would be necessary. However, most others in the subgroup felt that even if the area is fairly homogenous now, it would not be so predictable once the diversion is initiated. Mr. Kenneth Fox, representing the oyster fishermen in the area, expressed concern over increased levels of fecal coliform bacteria. Mr. Kucera discussed the results of the USFWS monitoring at Luling. Dr. Varnell discussed the results of monitoring conducted by Plaquemines Parish, and Mr. Everett discussed the results of the USGS monthly water quality sampling in the Mississippi River. It appears that most of these sampling results reveal very low levels of contaminants in the water. Generally, members of the subgroup expressed little concern about measurements of metals, nutrients, pesticides, and other parameters in the water column. However, due to the public concern which has been expressed throughout development of the project, it was agreed that limited monitoring of water for contaminants is essential. It was suggested that a water quality monitoring station be established upstream from the diversion structure to detect contaminants, thus allowing the structure to be closed during undesirable conditions. However, continuous monitoring and rapid analysis of the extensive list of contaminants which could be found in the river is not practical. Therefore, it was decided that closure of the structure would have to rely on the existing early warning program used for municipal water supply systems.

Since the list of contaminants found in the water column is very extensive, their levels are generally undetectable or very low, and it is difficult to predict what impact, if any, these levels will have on any living organisms, it was suggested that scans for priority organic pollutants and metals would be a logical approach. Further analyses would be conducted in the event significant levels of contaminants were detected

in the scan. Members of the subgroup decided that water column contaminants be monitored once a month in the pre- and post-monitoring programs.

It was agreed that analysis of sediments, vegetation, and fish and wildlife contaminant levels would provide more useful information concerning contaminant effects than merely analyzing water samples. Dr. Bobby Folsom from WES explained the plant bioassay techniques he has been using to assess uptake of metals by marsh vegetation. He stated that these, as well as selected animal bioassays, would yield valuable information on potential contaminant uptake by organisms in the basin. However, it was noted that most contaminants in the diverted water would be attached to clay particles and would soon settle out. Most metals settling in the marsh would be in a reduced state and largely unavailable to the biota. Nonetheless, it was decided that consideration would be given to employing some of these bioassay techniques as part of the monitoring program.

Following the subgroup meetings, the entire working group briefly discussed what had transpired in the individual sessions. The workshop was adjourned at 5:00 p.m.

The workshop reconvened at 8:00 a.m. on Wednesday morning. Some of the other members of the working group arrived early in the morning and those having information concerning additional existing monitoring programs were asked to address the overall working group.

Mr. Walter Morse of the Louisiana Department of Health and Human Resources (LDHHR) presented information concerning their monitoring program, particularly that related to shellfish harvesting areas. LDHHR has about 70 stations in the study area and samples are generally taken monthly. Samples are analyzed for fecal coliform bacteria and occasionally other microbes. Salinity readings are also taken from these stations. In

addition, LDHHR also conducts periodic tissue analyses of various fishery resources.

Mr. Greg Linscombe of LDWF's Fur and Refuge Division briefed the group on their surveys of vegetation and various wildlife resources. They currently fly a series of transects in the Breton Sound area to assess marsh types and marsh condition. They also conduct periodic aerial surveys of muskrat and alligator populations along the same transects. Several transects would have to be added to fully assess impacts of the diversion. It is estimated that about $10,000 per year would be required for the additional surveys. LDWF also conducts waterfowl surveys in the area. It is likely that the waterfowl survey effort in the area would also require some expansion to properly assess project impacts. This will be discussed further with one of the Department's waterfowl specialists.

Mr. Dave Roberts from Coastal Environments, Inc., (CEI) then explained the studies they conducted for Plaquemines Parish in the area. The Parish intends to implement an outfall management plan to maximize benefits to be realized from the diversion. In order to devise the managment scheme, it was necessary for CEI to conduct some hydrological surveys of the area and model water budgets for the basin. The basic intent of the outfall plan is to spread the flow at the top of the basin to disperse the flow and increase retention time in order to maximize benefits to the marsh while still achieving the other project objectives.

Following the presentations, the group began discussing selection of key locations for placement of a number of in situ data gathering packages in the basin. Data gathered by these instrumentation packages would be crucial to development of an operational model for the structure. A rather lengthy discussion was held concerning whether or not the hydrology of the area was understood well enough to wisely choose station locations without further studies. It was ultimately agreed that general knowledge of the area's hydrology gained by CEI and LDWF during field investigations was sufficient to allow tentative selection of station locations. Monitoring

the success of project objectives and the presence of platforms or other foundations to facilitate installation of the instrumentation packages played a role in the selection. A total of seven stations was selected, although several more would be desirable. Those stations are shown in Enclosure 3. Six of the stations would be established at new locations. One of the stations (#5) would be located at the existing LDWF camp at Bay Gardene. Cost was a major consideration in selecting the number of stations. The instrument packages alone could cost about $20,000 each. If a platform has to be constructed, the cost would be much greater. It was acknowledged that some modification of station locations may be required in the future. Serious consideration was given to placing a station in St. Bernard Parish. Although this area would not be directly affected by the diversion, several people in the group felt the area would be indirectly affected and the impact should be assessed. No final decision was made concerning this matter.

Once the station locations had been selected, discussions began concerning what parameters should be monitored. An extensive list of climatological, hydrological, and physical water parameters was put on the blackboard. The list was screened and prioritized by the entire working group. Efforts were concentrated on selecting parameters which would be used to drive the operational model as well as assess impacts of the project. The original list was tentatively narrowed to nine parameters ranked as follows:

1. conductivity @ 25°C
2. water temperature
3. water level
4. current velocity
5. rainfall
6. wind velocity
7. air temperature
8. relative humidity
9. turbidity

It was agreed that it would not be necessary to monitor all of the chosen parameters at every station. The group tentatively decided to monitor the various parameters as indicated on the next page:

Station Number	Parameter Number
1	1, 2, 3, 9
2	1, 2, 3, 9
3	1, 2, 3
4	1, 2, 3
5	1, 2, 3, 5, 6, 7, 8
6	1, 2, 3, 4
7	1, 2, 3, 4

There was some discussion concerning the feasibility of monitoring turbidity (parameter number 9) with the in situ monitors. The issue is still undecided. It was decided to monitor most parameters at Station 5, since the instrumentation would be located at the LDWF camp. The instruments would be well protected and easily accessible at this location. Dr. Varnell recommended that we contact the National Weather Service (NWS) and ask if they would include this station under their program. If so, it is likely that the NWS would monitor numerous other parameters as well.

Data collected at the seven stations could be integrated with similar data collected at the many stations sampled by the various agencies as described earlier in this memorandum. This data could be used to model and guide operation of the structure. In addition, the hydrological and water quality data could be coupled with information collected through the biological sampling program to assess project impacts and determine causal effects.

The selection of the stations and choice of parameters was a lengthy process and included input from virtually everyone in the group. There was considerable discussion over how the data would be used, how it would interface with data gathered in other sampling programs, and who would actually use the information. This led into discussions concerning data management, including development of field data sheets, data storage, and

computer analysis of the data. Numerous opinions, ideas, and recommendations were brought forth for deliberation by the group. The workshop was adjourned at 5:00 p.m.

On Thursday morning, Mr. Judd Pollard explained the development and status of LDWF's data management system which has been underway for several years. LDWF has a massive amount of information which has been collected over the years. They have been working tediously to computerize this information. They currently have data on the computer for sampling through 1979 and plan to have all of their data on line in the near future. Mr. Pollard's presentation rekindled the data management discussions of the previous day. He explained some of the problems they encountered. He indicated that a data management consultant such as Computer Services Corporation could help overcome some of the problems. Dr. Wiley Kitchens noted that the USFWS has used data management consultants with success. Personnel from LMVD and WES related experiences with data management problems and recommended that serious consideration be given to the idea of using a consultant. The concern of the working group was that data management could pose the most difficult problem in carrying out the extensive monitoring program proposed for the project. No decisions were made concerning the data management issue. Mr. Chee recommended that a task force be assembled to investigate the problem in more detail. The task force would consist primarily of individuals with expertise in data collection, storage, and manipulation and would report to the working group at a future workshop. It was agreed that this would be a logical approach to assess this complex problem.

After completing the data management discussions, we discussed monitoring of contaminants in water, sediments, and plant and animal tissues. This data collection effort would be separate from the data collected by the <u>in situ</u> monitors. Due to concerns over water quality of the River, it was agreed that monitoring changes in contaminant levels as compared to pre-diversion conditions should be an integral part of the overall monitoring program. As discussed previously in this memorandum, it was agreed that monitoring contaminant levels in sediment and plant and

animal tissues would provide more meaningful data on project effects than monitoring of contaminant levels in the water column. However, it was agreed that a limited quantity of water column samples should be taken.

Dr. Bobby Folsom from WES explained, in more detail, the plant bioassay techniques used to measure the potential uptake of ten heavy metals including Zn, Cd, Cu, Fe, Mn, As, Hg, Ni, Cr, and Pb. He said that these techniques could be used to document what effects the project would have on heavy metal uptake by plants in the basin. Dr. Folsom stated that most contaminants in the diverted water would be attached to sediment and clay particles and would tend to settle out in Big Mar or in the upper marsh. Most metals settling in the marsh would be in a reduced state and not readily available to biota. It was agreed that implementation of the bioassay techniques is worthy of further consideration. One problem is they are rather expensive. It was estimated it would cost about $60,000 per year to conduct the studies for this project.

No firm decisions concerning contaminant monitoring were made at the meeting. It was decided that a task force be assembled to discuss this issue and report back to the working group at a future meeting.

A number of meeting participants had expressed a need to depart the island by 11:00 a.m. on Thursday. As this time was approaching, Mr. Chew thanked the participants for their interest and cooperation in the project and the development of the monitoring program. Special thanks were directed to the Laboratory staff for their assistance and hospitality.

It was acknowledged that members of the working group need to maintain direct communication during development of the monitoring program and that individuals would be contacted requesting their involvement in various task force meetings. No firm dates were established for the next full-scale workshop. Dr. Varnell suggested that the next workshop be held in the vicinity of Braithwaite in Plaquemines Parish near the Caernarvon site.

It was agreed that this would be an appropriate location. At this time, it appears the next workshop will be held sometime in January 1985. All members of the group will be contacted to confirm exact dates for the workshop.

The meeting was adjourned at 11:00 a.m.

Dennis Chew
DENNIS CHEW

MISSISSIPPI DELTA REGION PROJECT
CAERNARVON FRESHWATER DIVERSION
MONITORING PROGRAM
WORKING GROUP

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