This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
( ) Will have no effect on those resources
(✓) is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Acting Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service

May 12, 2008
Date

May 9, 2008

Mr. James Boggs, Field Supervisor
U.S. Fish and Wildlife Service
Lafayette Field Office
646 Cajundome Boulevard, Suite 400
Lafayette, Louisiana 70506

Subject: **USACE New Orleans District**
**Contract # W912P8-07-D-0006, Task Order 0010**
**Orleans Parish Pump Station Stormproofing Environmental Assessment**
**Orleans Parish, Louisiana**
**ERG Project No. 014010-072**

Attention David Walther:

Environmental Research Group has been contracted by the United States Army Corps of Engineers New Orleans District to prepare an Environmental Assessment (EA) for the stormproofing of the Orleans Parish pump stations in compliance with the National Environmental Policy Act of 1969 (NEPA).

The project area is in the general vicinity of the City of New Orleans in Orleans Parish, Louisiana (see enclosed map). The project area is encompassed by the Chalmette, Chef Menteur, Lake Willow, New Orleans East, New Orleans West, and Spanish F
Water Board of New Orleans (S&WB) is responsi
Parish. The EA will evaluate 22 pump stations, the
Water Plant and Power Complex, the Old River In
Station that together provide the production of pow
into adjacent estuarine water bodies. The propo
station (DPS) operability and associated operator sa
Orleans Parish Storm Proofing authorized projec
structures, enhanced water intrusion and prote
production, back up generators, underground ductbank for electrical lines, perimeter wall barriers, elevated generator buildings, pump replacement, installation of water wells, and other mechanical, electrical, and miscellaneous protection features.

OPTIONAL FORM 99 (7-90)
**FAX TRANSMITTAL** # of pages ▶ 1

| To Patricia Leroux | From David Walther |
|---|---|
| Dept./Agency | Phone # |
| Fax # | Fax # |

NSN 7540-01-317-7388 5099-101 GENERAL SERVICES ADMINISTRATION

Threatened and Endangered (T&E) species potentially occurring within the project areas include the West Indian manatee *(Trichechus manatus)*. West Indian manatees enter both Lake Pontchartrain and Lake Maurepas on occasion and associated coastal waters and streams during the June through September timeline. Manatee sightings have been regularly reported in the Amite, Blind, Tchefunte and Tickfaw Rivers and in canals within the adjacent Louisiana coastal marshes.

A portion of the project could potentially impact the manatee; therefore the USACE has incorporated the following protective measures to be observed during the construction of the proposed project.

> "The West Indian manatee may occur in the project vicinity. The Contractor shall instruct all personnel associated with the project of the potential presence of manatees in the area, and the need to avoid collisions with these animals. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. The Contractor shall be held responsible for any manatee harmed, harassed, or killed as a result of construction activities not conducted in accordance with these specifications.

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

REPLY TO
ATTENTION OF

December 3, 2008

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

We concur that the proposed undertaking will have no adverse effect on historic properties. This effect determination could change should new information come to our attention.

Scott Hutcheson 1-5-09
Scott Hutcheson Date
State Historic Preservation Officer

Mr. Scott Hutcheson
State Historic Preservation Officer
Department of Culture, Recreation, & Tourism
P.O. Box 44247
Baton Rouge, LA 70804

Dear Mr. Hutcheson:

The Corps of Engineers Hurricane Protection Office (HPO) is attempting to Storm Proof the Drainage Pump Stations (DPS) of Orleans Parish. Storm proofing design criteria was determined to be the threshold wind-speed between the category 4-5 hurricane on the Safir-Simpson scale. The design flood level (DFL) was chosen as the static flood level experienced at each pump station during Hurricane Katrina plus 2 feet of freeboard.

Within the Orleans Parish drainage system there are 7 pump stations considered eligible for the National Register of Historic Places (NRHP) in various capacities. These are stations 1, 2, 3, 5, 6, 7, and 17. In a letter signed by Ms. Pam Breaux dated February 16, 2007, your office commented that DPS # 17 and DPS #5 do not qualify individually for the National Register of Historic Places, but they do qualify as contributing elements to a drainage system district. Therefore, the Corps of Engineers intends to treat the final appearance of these buildings with as much sensitivity as possible, but does not conclude that the modifications necessary at these specific buildings constitutes an adverse impact for National Register eligibility. Not all materials and modifications have yet been selected for the historic pump stations, because it is the express intent of the HPO to select methods and materials that will retain the historic integrity of the buildings. However, based upon the desired protection against threshold wind-speed and DFL, certain procedures are known to be necessary.

The first part of this letter will summarize some general steps that are expected as necessary at all of the historic DPS. Perhaps most importantly, is the need to waterproof the masonry walls of these buildings. HPO is aware of the possibility that waterproofing substances will not allow the masonry to "breathe" from day to day and will therefore trap water that has percolated up or down the walls and eventually cause spalling of the wall. In consultation with Mr. Robert Cangelosi of Koch and Wilson Architects in New Orleans, HPO has identified several choices of material for this use that are believed proven suitable to retain the integrity of the treated masonry. These materials are manufactured by Prosoco, of Lawrence, KS. The final

selection of material must await a fuller completion of designs for each DPS, but the choice will come from among these proven products. The product initially recommended for treatment of mortar between bricks, is no longer manufactured. This product was manufactured by CGM Inc. of Bensalem, PA, who claim that they now make a similar product that will be further researched for use by HPO.

Buttresses to reinforce wall strength may be required at numerous DPS, but these will be placed on the interior to minimize the aesthetic effect to the historic drainage stations. Where roof strengthening must occur, slightly corrugated standing seam type panels may be employed to more closely duplicate the existing roofs. In any situation possible, roofs will be strengthened by the addition of new rafter beams or trusses. In these situations, the old roof material may be removed, new rafters added, and the same roof material or its closest duplicate returned in place.

Windows and doors are the most prevalent known weakness point, for storm proofing these buildings. The difficulty of these points is their obvious allowance for floodwater or damaging winds to enter from outside to inside. It is probable that all doors and window frames will have to be enhanced with addition of a more durable and sealed material. These enhanced seals and frames will be attached to the inside of the building whenever possible, so that the exterior appearance of wood and glass is unchanged. If conditions and available space indicate that new doors or windows must be visible from the exterior, they will be painted or fabricated to closely duplicate the existing wood appearance. Where glass has been used, this may be replaced by an impact resistant substitute.

Four of the NRHP pump stations (DPS 5, 6, 7, and 17) will have large 60 HZ generators installed to run some of the pumps at these stations. These generators will be housed in new buildings or placed on slabs which elevate the units above the flood level and provide for ease of operation and maintenance during adverse weather conditions. These new buildings will be built in a style to mimic the existing architecture of the relevant pump stations.

Hereafter follows a summary of the known structural weaknesses and necessary changes for the historic pump stations. Although each pump station does have certain electrical and mechanical improvements proposed, none of these have potential to affect the historic Wood screw pumps or other workings of historic importance.

**DPS 1**:

-The entire superstructure will have enhanced water protection provided to a minimum of 2.92 feet above the operating floor in the original station portion.

-The four 48" pedestrian doorways shall be minimally modified as required to accept an approved flood barrier.

-The 14' and 15' wide rollup doors shall also be minimally modified as required to accept an approved flood barrier.

-The six wood doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry. The three rollup doors should also be enhanced with hurricane rated units.

-The entire roof system will be strengthened. The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading.

-Manually operated hurricane shutters will be installed on all the 17 unprotected windows. These will be designed and placed so as to avoid any external aesthetic disruption of the existing windows.

-Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. Areas to the northwest portion of the station appear available for this installation.

**DPS 2**:

-The superstructure will have enhanced water protection provided to a minimum of 3.25 feet above the operating floor.

-The four 48" pedestrian doorways and the 96" service doorway shall be minimally modified as required to accept an approved flood barrier. The two single and one double wooden doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry. The one rollup door should also be enhanced with hurricane rated units.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading. Manually operated hurricane shutters will be installed on all the 17 unprotected windows – these will be placed on the interior of the existing windows wherever possible so as to retain the exterior appearance of the existing windows. Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-The entire roof system will be strengthened. The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. Further investigation is required to determine if a well can be installed within the property without disturbing canals.

**DPS 3**:

-The superstructure will have enhanced water protection provided to a minimum of 4.0 feet above the operating floor.

-The four 48" pedestrian doorways shall be minimally modified as required to accept an approved flood barrier. The two 14' wide rollup doors shall be minimally modified as required to accept an approved flood barrier. The twenty 48" window openings will be minimally modified as required to accept approved bolt-on gasketed flood barriers. Manually operated hurricane shutters will be installed on all the 28 unprotected windows. These modifications will be undertaken on the interior side of existing doors and windows, and will minimize aesthetic disruption of the existing appearance of wood doors and windows.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading. The five wood doors and the two rollup doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry.

-The entire roof system will be strengthened. The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. An area north of the west portion of the station should be available for this installation.

**DPS 5**:

This pump station is located at a low area of the city and its foundations and architecture show weaknesses. The existing pump station will be strengthened for storm proofing to the maximum extent possible given the physical limitations of the building. A new elevated structure would be constructed and would house a new control room.

The doors would be enhanced with storm doors, and the rollup door would be enhanced with a hurricane rated unit. The entire roof system of the original station and expansion would be replaced, and the roof trusses would be secured to the foundation by a tethering system. All windows would have manually operated hurricane shutters installed, and all exhaust fans and intakes would be modified or replaced with roll type shutters.

The existing station Pump D is a 1,000 cubic foot per second (cfs) 25 HZ pump that provided dual functionality. It provided additional drainage capacity for DPS 19 via a siphon structure between DPS 19 and DPS 5 underneath the IHNC. Pump D was not repaired after Hurricane Katrina with the anticipation that it would be replaced during the storm proofing work with vertical pumps housed on an elevated structure. The proposed action provides for the replacement of the existing 25 HZ 1,000 cfs Pump D with two new 60 HZ 300 cfs each vertical pumps.

A 60 HZ back-up generator would be installed to power the new pumps. The approximate size of the generator is 3 MW. Included with the generator is a proposed radiator and fuel tanks to be installed on the west side of the pump station property.

A water well (approximately 200 – 700 foot deep) would be dug within the existing pump station property to supply backup water for equipment cooling and lubrication. Excavated materials would be spread around the site if deemed suitable for disposal.

**DPS 6**:

-The superstructure will have enhanced water protection provided to a minimum of 3.83 feet above the operating floor.

-The four 48" pedestrian doorways shall be minimally modified as required to accept an approved flood barrier. The two 12', four 14', and one 14.5' wide rollup doors shall also be minimally modified as required to accept an approved flood barrier. Twenty six of the 48" window openings shall be minimally modified as required to accept an approved flood barrier.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading.

-The entire roof system in the 1980 expansion will be strengthened. The standing seams metal panels on the remaining portion of the station will be replaced with stronger corrugated panels or will be further secured with gasketed screws.

-The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-Manually operated hurricane shutters will be installed on all the 50 unprotected windows. Wind proof/impact resistant glass or shutters will be required at the doors' transom windows.

-Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-The twelve wood doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry. The one rollup door should also be enhanced with a hurricane rated unit.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. Various areas on the station grounds are available for this installation.

**DPS 7**:

-The superstructure will have enhanced water protection provided to a minimum of 7.15 feet above the operating floor.

-In the north wall adjacent to the 'pancake pump' pits, an area of the existing brick mortar masonry that is exhibiting an active leak will require sealing of all cracks and voids in the brick mortar masonry by application of a suitable material.

-The three 25' diameter by 15' deep pits will require sealing of cracks and voids in the brick mortar masonry by application of a suitable material, and the surfaces of the pits shall be waterproofed with a suitable material. The highest limit of waterproofing material will be the lowest extents of the existing glazed brick.

-The three 48" pedestrian doorways and the two 15' wide rollup doors shall be minimally modified as required to accept an approved flood barrier.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading. Manually operated hurricane shutters will be installed on all the 17 unprotected windows. Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-The roof requires no structural upgrade, however the standing seam metal panels will be replaced with a stronger panel and will be further secured with gasketed threaded fasteners. The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-The six wooden doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry. The three rollup doors should also be enhanced with hurricane rated units.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. Areas to the west and southeast of the station appear available for this installation.

**DPS 17**:

-The superstructure will have enhanced water protection provided to a minimum of 4.00 feet above the operating floor.

-The four 48" pedestrian doorways shall be minimally modified as required to accept an approved flood barrier. The two 8' and 5 12'-1" rollup doorways shall also be modified as required to accept an approved flood barrier. The twenty eight 48" window openings shall be modified to accept an approved flood barrier.

-The four hollow metal doors will be enhanced with storm doors that are rated for high wind events and which are anchored to the masonry. The nine rollup doors should also be enhanced with hurricane rated units.

-Buttresses will be used to ensure the walls withstand the required 156 mph wind loading.

-The existing roof trusses are considered sufficient, but they will be tied down to the foundation by use of a tethering system.

-Manually operated hurricane shutters will be installed on all the 59 unprotected windows. Exhaust fans and intakes shall be modified or replaced with roll type shutters.

-An emergency power generator will be installed on land immediately north of DPS 17. This will include a generator building, radiators, and two 30,000 gallon fuel tanks.

-A 200-700' deep water well will be excavated on the outside of the station to supply cooling and lubrication water to the machinery. Areas to the northwest appear available for this installation.

**Carrollton Water Plant and Power Plant**:

The Carrolton Water Plant and Power Plant Complex has not been recently addressed for National Register eligibility. This complex was at one time considered to contain numerous buildings considered eligible for the National Register of Historic Places, but these buildings are known to have been modified in recent years and have lost many components of their NRHP integrity. The Corps of Engineers has undertaken a study to determine if portions of this complex still deserve National Register considerations to maintain integrity and appearance. For purpose of design considerations at this time, the Corps of Engineers Hurricane Protection Office has outlined the steps below to maintain existing historic integrity of any modified building or its components.

-A fence of 3-4' high concrete floodwall will be installed around the Water Plant and Power Plant along the current fenceline and tied to an existing levee along Monticello Avenue. Roadway accesses shall be sealed with hinged flood barriers. Pedestrian entry to the playground area accessed via Leonidas street will be maintained and sealed with a hinged flood barrier. This floodwall will be constructed in a style to enhance the general appearance of the neighborhood rather than detract.

-The Frequency Changer Building and Old River Intake Station will have exterior walls coated with an approved cementitious waterproofing material. Pedestrian doorways and roll up doorways shall be modified to accept approved flood barriers.

-At Powerhouse #2, the Boiler Room, and the Low and High Lift Structure, buttresses will be used to ensure the walls withstand the 156 mph wind loading. The entire roof system will be enhanced. Doors will be enhanced with doors anchored to the masonry and rated for high wind events. Exhaust fans and intakes shall be modified or enhanced with roll type shutters.

-The entire roof system will be strengthened on the majority of buildings at the Plant. Where existing roof trusses are sufficient, they will be tied down to the foundation by use of a tethering system. Hollow metal doors and rollup doors will be enhanced with a storm door anchored to the masonry. Windows will be protected with hurricane shutters. Buttresses will be used to ensure that walls withstand the 156 mph wind loading. Exhaust fans and intakes shall be modified or replaced with roll type shutters.

The Corps of Engineers believes that storm proofing of these historic DPS is critical to the future safety of New Orleans. Furthermore, HPO believes that the issues and weaknesses outlined above can be treated and addressed in a respectful manner so as to not cause adverse impact to the historic nature and the historic integrity of the DPS previously determined as eligible for the National Register of Historic Places. DPS #5 and DPS #17 were determined to not be individually eligible for the National Register of Historic Places, but to be eligible as a smaller part of a large New Orleans Drainage District. The Corps of Engineers believes that these two buildings can be modified or reconstructed in a fashion that can retain their engineering significance in this District, and can present an aesthetic similarity to surrounding architecture.

We include with this letter a summary of some available waterproofing products for masonry and mortar, and a copy of the letter received from SHPO dated February 16, 2007 as regards the National Register eligibility of DPS #5 and DPS #17. Consultation has been undertaken and will continue with your office, and with Mr. Robert Cangelosi, to address future details of modification that may arise. The Corps of Engineers concludes that these necessary modifications will be handled in a manner that causes no adverse impact to historic cultural resources. We invite you to review this conclusion and offer any comment. If you have further questions, please contact Mr. Paul Hughbanks at (504) 862-1100, Paul.J.Hughbanks@usace.army.mil.

Sincerely,

Elizabeth Wiggins
Chief, Environmental Planning
and Compliance Branch

Enclosures

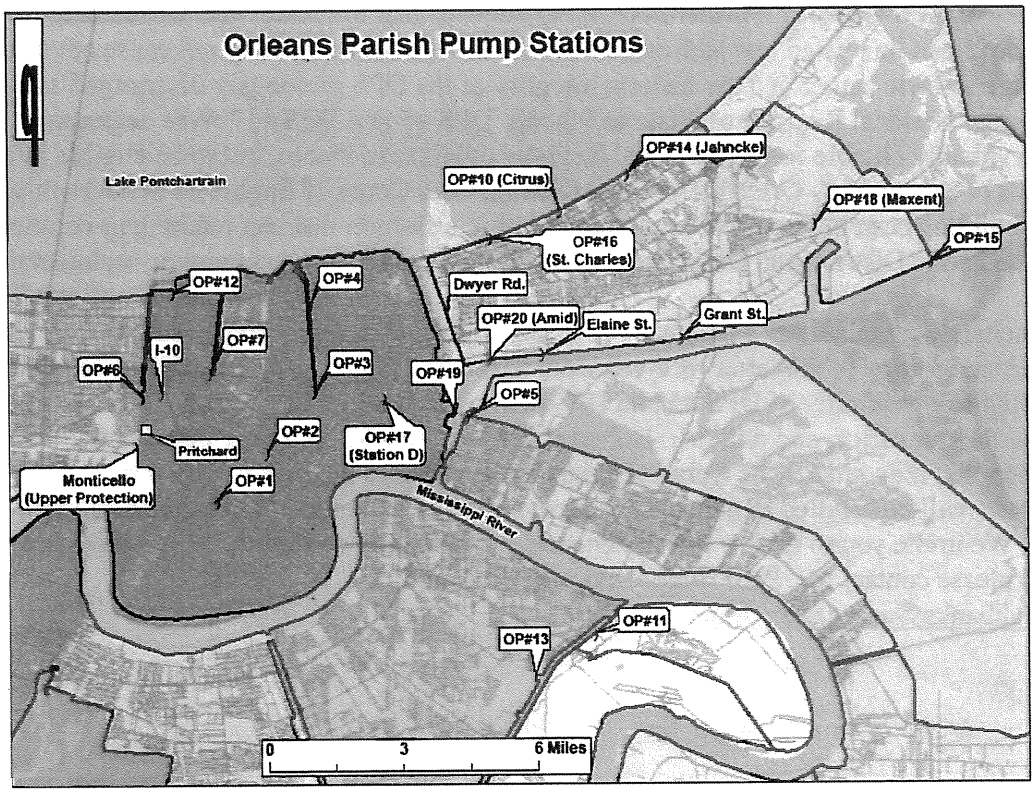


Figure Exec Sum 1. Orleans Parish Pump Station Location

MITCHELL J. LANDRIEU
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF HISTORIC PRESERVATION

ANGÈLE DAVIS
SECRETARY

PAM BREAUX
ASSISTANT SECRETARY

February 16, 2007

Mr. Paul J. Hughbanks, Archaeologist
Hurricane Protection Office
USACE, New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

Re: Draft Report (22-2883)
*Determination of Age and Potential For National Register of Historic Places Eligibility, Orleans Parish Drainage Pumping Stations, Orleans Parish, Louisiana*
New Orleans, Orleans Parish, LA

Dear Mr. Hughbanks:

Thank you for your letter of November 30, 2006, transmitting the above-referenced report. We concur with your assessment that the Orleans Parish Drainage Pumping Stations 1, 2, 3, 6, and 7 are eligible for the National Register of Historic Places under Criteria A and C. However, under Criterion C, we believe they are significant for engineering only. We do not agree that they would meet National Register requirements for architectural significance.

Regarding Drainage Pumping Station 17 (sometimes referenced as 17D), the author of the report notes that it has lost its integrity in terms of engineering, but that it is eligible under Criterion C for architectural significance. We do not agree. However, it would be a contributing element should a drainage district nomination be developed.

Regarding Drainage Pumping Station #5 (c. 1915), we agree with the finding that individually it is not eligible. As the author notes, it contains c. 1915 Wood pumps and would be a "contributing element to a drainage system district in terms of engineering significance."

Finally, we concur that the remaining drainage pumping stations referenced in your report do not meet the criteria for listing in the National Register.

If you have any questions, please contact Mike Varnado of the Division of Historic Preservation at (225) 342-8160.

Sincerely,

Pam Breaux

Pam Breaux
State Historic Preservation Officer

PB:MV:s

http://www.prosoco.com/
Prosoco
3741 Greenway Circle
Lawrence, KS 66046
800-255-4255

## I. Siloxane PD

Item # 40027
http://www.prosoco.com/ProductDetail.asp?ID={D113DB5A-0836-4C51-822E-B0006E080476}

**Description and use**

Sure Klean® Weather Seal Siloxane PD is a ready-to- use, water-based silane/siloxane water repellent. Designed for use on concrete and masonry surfaces, Siloxane PD penetrates more deeply than conventional water or solvent-based water repellents. Low odor and alkaline stable, Siloxane PD is ideal for field or in-plant application to color-sensitive concrete, GFRC, most masonry and stucco surfaces. Application equipment, window glass and areas affected from overspray are easily cleaned with soap and water.

Weather Seal Siloxane PD Volatile Organic Compound (VOC) content is less than 200 grams/liter.

An effective alternative to conventional solvent-based silanes or siloxanes, Weather Seal Siloxane PD penetrates and chemically bonds deep within the masonry substrate to provide long-lasting protection against water-related staining or deterioration. Will not darken most color-sensitive surfaces. Will not produce a surface film or impair the natural breathing characteristics of treated surfaces.

**Advantages**

- Penetrates deeply to produce long-lasting protection on vertical or horizontal surfaces.
- Water based formula minimizes explosion and fire hazards associated with alcohol or solvent- based water repellents.
- Easy soap-and-water cleanup from window glass, window frames and application equipment.
- Low odor reduces risk of application to occupied buildings.
- Alkaline stable — suitable for new "green" concrete.
- Ideal for field or in-plant treatment of concrete or GFRC.

**Limitations**

- Will not prevent water penetration through structural cracks, defects or open joints.
- Limited initial surface repellency.
- When applied to pH neutral surfaces, optimal performance may take up to 14 days to develop.

http://www.prosoco.com/
Prosoco
3741 Greenway Circle
Lawrence, KS 66046
800-255-4255

## II. Siloxane WB Concentrate

Item # 40025
http://www.prosoco.com/ProductDetail.asp?ID={8258D9D8-28EE-4E2B-ADC6-57731831A3C9}

**Description and use**

Sure Klean® Weather Seal Siloxane WB concentrate is a self-emulsifying water repellent concentrate designed for dilution with fresh water at the jobsite. This solvent-free blend of silanes and oligomeric alkoxysiloxanes mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces. Weather Seal Siloxane WB can also be used as a primer to even out porosity and improve adhesion of BMC® Breathable Masonry Coatings.

Weather Seal Siloxane WB complies with all known regulations limiting Volatile Organic Compound (VOC) content.

An effective alternative to conventional solvent-based silanes or siloxanes, Weather Seal Siloxane WB penetrates and chemically bonds deep within the masonry substrate to provide long-lasting protection against water-related staining or deterioration. Will not darken, produce a surface film or impair the natural breathing characteristics of treated surfaces.

**Advantages**

- VOC compliant — contains no organic solvent.
- Concentrate— minimizes storage, transport and container disposal requirements.
- Mix with up to 19 parts fresh water. One gallon concentrate treats up to 4000 square feet.*
- Alkaline stable — suitable for new concrete.
- Penetrates deeply — effective on vertical or horizontal surfaces.
- Ideal for field or in-plant treatment of precast concrete or GFRC.
- Consult coverage rates.

**Limitations**

- Product must be applied within 24 hours of dilution for maximum effectiveness.
- Will not prevent water penetration through structural cracks, defects or open joints.

http://www.prosoco.com/
Prosoco
3741 Greenway Circle
Lawrence, KS 66046
800-255-4255

## III. SL 100 Water Repellent

Item # 40056
http://www.prosoco.com/ProductDetail.asp?ID={0A6A6F85-4DD1-419E-996D-68C0B7D01BCC}

**DESCRIPTION AND USE**

Sure Klean® Weather Seal SL100 water repellent complies with all known regulations limiting the Volatile Organic Compound (VOC) content of architectural coatings and sealers.

SL100 is a modified, 'neat' silane system that offers invisible protection and low volatility. SL100 protects horizontal and vertical concrete and masonry surfaces against water and waterborne contaminants. The small molecular structure of SL100 ensures maximum penetration and colorless protection of dense, color-sensitive surfaces. Ideal for GFRC, integrally colored precast concrete and many types of natural stone.

The absence of a solvent carrier enables applicators to achieve up to 5 times the coverage rate normally achieved with solventreduced protective treatments. Depth of penetration is controlled by the application rate (loading rate).

**ADVANTAGES**

•Excellent surface beading/stain resistance when compared with conventional "neat" silane systems.
•Long-lasting protection.
•Does not form a film or gloss.
•Treated surfaces "breathe" – does not trap moisture.
•Forms an effective chloride screen that reduces surface erosion and corrosion of rebar in reinforced concrete caused by water and water-carried salts.
•Complies with all known national and state AIM VOC regulations.

CGM Inc.
1445 Ford Road
Bensalem, PA 19020
800-523-6570
215-638-4400

**IV. STA-DRI All-purpose sealer**
http://www.cgmbuildingproducts.com/prod4.htm
No detailed product information available. This product is possibly no longer manufactured.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

December 8, 2008

Colonel Alvin B. Lee
District Engineer
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Lee:

Please reference the storm proofing of drainage pump stations (DPS) within Orleans and Jefferson Parishes. Those project features are being conducted in response to Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). That law authorized the Corps of Engineers (Corps) to upgrade some existing hurricane protection projects to provide protection against a 100-year hurricane event. This report contains an analysis of the impacts on fish and wildlife resources that would result from the implementation of storm proofing of DPS and provides recommendations to minimize and/or mitigate project impacts on those resources.

The proposed project was authorized by Supplemental 4 which instructed the Corps to proceed with engineering, design, and modification (and construction where necessary) of the hurricane protection projects so those projects would provide 100-year hurricane protection. Procedurally, project construction has been authorized in the absence of the report of the Secretary of the Interior that is required by Section 2(b) of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). In this case, the authorization process has precluded the normal procedures for fully complying with the FWCA. The FWCA requires that our Section 2(b) report be made an integral part of any report supporting further project authorization or administrative approval. Therefore, to fulfill the coordination and reporting requirements of the FWCA, the Service will be providing post-authorization 2(b) reports for each IER.

This draft report incorporates and supplements our FWCA Reports that addressed impacts and mitigation features for the West Bank and Vicinity (WBV) of New Orleans (dated November 10, 1986, August 22, 1994, November 15, 1996, and June 20, 2005) and the Lake Pontchartrain and Vicinity (LPV) (dated July 25, 1984 and January 17, 1992) Hurricane Protection projects and the November 26, 2007 Draft Programmatic FWCA Report that addresses the hurricane protection improvements authorized in Supplemental 4. However, this report does not

constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA. This report has been provided to the Louisiana Department of Wildlife and Fisheries (LDWF) and the National Marine Fisheries Service (NMFS); their comments will be incorporated into our final report.

## DESCRIPTION OF THE STUDY AREA

Orleans Parish is located in southeast Louisiana in the metropolitan New Orleans area. It is bounded by the parishes of St. Tammany (north), St. Bernard (east), Plaquemines (south), and Jefferson (south and west). Lake Pontchartrain, part of which is included in the city limits, lies to the north, and Lake Borgne lies to the east. Jefferson Parish is located in southeast Louisiana and contains part of the metropolitan New Orleans area. The Mississippi River divides urban Jefferson Parish into an east bank (located north and east of the Mississippi River), and west bank (located south and west of the Mississippi River).

High rainfall amounts during short periods of time are typical of tropical storms, and have the potential to flood much of the low-lying areas of Orleans and Jefferson Parishes (with an average elevation of approximately 5 feet below sea level, and ranging from as high as −12 feet near the Mississippi River to -9 feet) in the absence of the full operation of the forced drainage system. Because of this situation, the area relies upon forced drainage (pumps) to remove excess water during storm events.

Storm water runoff collects in a grid of lateral canals that connect to major outfall canals running throughout the project area. Water flow in lateral canals can move in different directions depending on the rainfall patterns and available pump station capacities. Diesel powered and hydraulic pumps drain the outfall canals. Water is pumped from the outfall canal into adjacent water bodies including Lake Pontchartrain on the east bank and several tidal estuaries on the west bank. Pump operators are needed to run and maintain pumps and associated components and to remove trash and debris that can clog pump intakes. The system's pumping capacity is over 29 billion gallons a day. The flow rate is over 45,000 cubic feet per second. The drainage network includes approximately 90 miles of open canals and 90 miles of subsurface canals.

## FISH AND WILDLIFE RESOURCES

The Service provided a draft programmatic FWCA Report for the hurricane protection project on November 26, 2007. The Service also provided a letter, dated August 7, 2006, addressing threatened and endangered species for the coastal parishes of the New Orleans District. Those reports contain a thorough discussion of the significant fish and wildlife resources (including those habitats) and threatened and endangered species and their critical habitat that occur within the study area. For brevity, those discussions are incorporated by reference herein.

Habitat types found at the DPS sites include open water and developed areas. Due to urban development and a forced-drainage system with the levee system, the hydrology of the area has been altered. The forced-drainage system has been in operation for many years, and subsidence

is evident throughout the area. Developed habitats in the study area include residential and commercial areas, as well as roads and existing levees. Those habitats do not support significant wildlife use.

Open-water habitat within the project area consists of drainage canals in Jefferson and Orleans parishes. These canals are man made features created for control of storm water run-off. The network of these structures illustrates the highly manipulated hydrology of the project area. The canals in the project area do not support significant fishery or wildlife resources. In the future, the habitat value of those canals is not expected to change.

## DESCRIPTION OF SELECTED PLAN

The proposed action in Orleans Parish consists of storm proofing twenty-two (22) DPS, the Carrollton Frequency Changer Building, the Old River Intake Station, the New River Intake Station, and the Carrollton Water Plant and Power Complex. The Sewerage and Water Board of New Orleans (S&WB) is responsible for the water and drainage systems for Orleans Parish. The Orleans Parish Storm Proofing Description of Work Elements Document assessed each DPS, including operator room improvements, structural improvements, leakage removal, wind proofing, electrical improvements, mechanical improvements, and utility improvements. The document identified numerous storm proofing measures, which include, but are not limited to, building hardening, elevated control rooms, modified roof structures, enhanced water intrusion and protection, protecting and enhancing electrical power production equipment, backup generators, underground ducts for electrical lines, perimeter wall barriers, elevated generator buildings, pump replacement, installation of water wells to supply backup water for equipment cooling and lubrication, and other mechanical, electrical, and miscellaneous protection features. It is anticipated that during the design stage other miscellaneous electrical and mechanical improvements may be required.

This proposed project in Jefferson Parish involves storm proofing up to a total of 21 existing pump stations and associated structures within the Hurricane Protection System (HPS) in Jefferson Parish. Each pump station is slightly different and thus different storm proofing activities are proposed for each site. Table 1 contains a summary of the proposed actions for each pump station which are similar to those activities proposed for Orleans Parish.

Storm proofing design criteria were based on the threshold wind speed between the Category 4 and 5 hurricanes on the Safir-Simpson scale. The design flood level (DFL) was chosen based as the static flood level experienced at each pump station during Hurricane Katrina plus 2 feet of freeboard. The design-build contractors are provided with the selected alternative, general engineering information, and a boundary, which will be used as a basis to submit their design of the proposed action. As a result of this design-build approach, specific design details of the proposed action and construction activities are not complete at this time.

## PROJECT IMPACTS

The proposed project sites have been located in areas that are developed therefore, impacts to wetlands and fish and wildlife habitat are minimal. Open-water habitats in the project area are enclosed within the hurricane protection projects. These canals may become stagnant except when pumps are operating to remove rain water. The open water habitat in Lake Pontchartrain at the mouths of the canals will be impacted by the pump station structures. Those habitats no longer support significant fish and wildlife use.

There will be no other habitat impacted as a result of the proposed project. As with the future without project, fish and wildlife and their habitats, in the future with project scenario, are expected to remain unchanged because most lands within the project area are developed.

### Threatened and Endangered Species

Three threatened or endangered species of concern to this project area include the brown pelicans (*Pelecanus occidentalis*), the West Indian manatees (*Trichechus manatus*) and the Gulf sturgeon (*Acipenser oxyrhynchus desotoi*). However, the location of the project areas does not include habitat utilized by these species.

If project construction has not been initiated within 1 year, follow-up consultation should be accomplished prior to making expenditures for construction. If the scope or location of the proposed work is changed, both threatened and endangered species and FWCA consultation should be reinitiated as soon as such changes are made.

## FISH AND WILDLIFE CONSERVATION MEASURES

Coastal wetlands (marsh and forested) are considered by the Service to be aquatic resources of national importance due to their increasing scarcity and high habitat value for fish and wildlife within Federal trusteeship (i.e., migratory waterfowl, wading birds, other migratory birds, threatened and endangered species, and interjurisdictional fisheries). Because the project is not expected to have any adverse impacts to wetlands or other fish and wildlife habitats, the Service has no conservation measures to offer at this time.

## SERVICE POSITION AND RECOMMENDATIONS

There will be no fish and wildlife resources impacted as a result of the proposed project. The Service does not object to the construction of the proposed project provided the following fish and wildlife conservation recommendations are implemented concurrently with project implementation:

1. Any proposed change in the proposed project features, locations or plans that would impact fish and wildlife habitat and/or wetlands shall be coordinated in advance with the Service, NMFS, and LDWF.

2. If the proposed project has not been constructed within 1 year or if changes are made to the proposed project, the Corps should re-initiate Endangered Species Act consultation with the Service to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.

Sincerely,

James F. Boggs
Supervisor
Louisiana Field Office

cc: CEMVN, HPO, New Orleans, LA
EPA, Dallas, TX
NMFS, Baton Rouge, LA
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources (CMD/CRD), Baton Rouge, LA

Table 1. **Summary of the proposed actions at the 21 existing pump stations throughout Jefferson Parish, Louisiana.**

| | Pump Station | Frame | Walls | Roof | Louvers, Doors, Windows | Ventilation | NPW System | Trash Rakes | Fuel System | Pumps | Electrical Equipment | Standby Power | House Power | SCADA Systems | CCTV | Access Roads | Safe Rooms | Other | Climber Screens |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East Bank | Bonnabel [a] | X | X | X | X | X | X | X | X | X | X | X | | | | | X | | X |
| | Canal Street [a] | | X | X | X | X | X | | X | | X | X | | X | X | | | | X |
| | Duncan [a] | X | X | X | X | X | | X | X | X | X | X | | | | | X | | X |
| | Elmwood No.1 [a] | X | X | X | X | X | X | X | X | X | X | X | X | | | | X | | X |
| | Elmwood No.2 [a] | X | X | X | | X | | | | X | X | X | | | | | | | |
| | Parish Line [a] | X | X | X | X | X | X | | | X | X | X | | | | | | | |
| | Suburban No.1 [c] | X | X | X | X | X | | X | X | | X | X | X | | | | X | | X |
| | Suburban No.2 [a] | X | X | X | X | X | X | | | X | X | | X | | | | | | |
| West Bank | Ames [c] | X | X | X | X | X | X | X | X | X | X | X | X | | | | X | X | X |
| | Bayou Segnette No.1 [c] | X | X | X | X | X | | | X | | X | | X | | X | | | | X |
| | Bayou Segnette No.2 [a] | X | X | X | X | X | X | | X | | X | | X | | X | | X | | |
| | Cataouatche No.1 [b] | | | | | | X | | X | | X | X | X | | | X | | | X |
| | Cataouatche No.2 [c] | X | X | X | X | X | | | X | | X | | X | | | | | | X |
| | Cousins No.1 [c] | X | X | X | X | X | X | X | | | X | X | | | X | | | | X |
| | Cousins No.2 [c] | X | X | X | X | X | X | X | X | X | X | X | | | X | | | | X |
| | Cousins No.3 [c] | X | X | X | X | X | | | | X | X | X | | | X | | X | | |
| | Estelle No.1-1 [b] | | | | | | | | | | | | | | | X | | | X |
| | Estelle No.1-2 [b] | | | | | | | | X | X | X | X | | X | X | | | | X |
| | Estelle 2 [a] | | X | X | X | X | | | X | | X | X | | | | X | | | X |
| | Harvey [a] | X | X | X | X | X | X | | X | X | X | X | X | X | X | | | | X |
| | Hero No.1 [c] | X | X | X | X | X | X | X | X | | X | X | | | | | | | X |
| | Hero No.2 [c] | X | X | X | X | X | X | | X | | X | | | | | | | | X |
| | Highway 90 [b] | | | | | | | | | X | X | X | | X | X | | | | |
| | Mount Kennedy [b] | | | | | | | | | X | X | X | | X | X | | | | |
| | Planters No.1 [c] | X | | X | X | X | X | X | X | | X | X | X | | | | | | X |
| | Planters No.2 [c] | X | X | X | X | X | | X | | X | X | X | X | | | | | | X |
| | Westminister [a] | X | X | X | X | | X | | | | X | | X | | | | | | |
| | Westwego No.1 [c] | X | | X | X | X | X | | X | | X | | | X | X | | | | X |
| | Westwego No.2 [c] | X | X | X | X | X | X | | X | | X | X | X | | | | | | X |
| | Whitney Barataria [c] | X | X | X | X | X | X | | X | X | X | X | | | X | | X | | |

a. Frame, walls, and roof would be reinforced to withstand 165 mph winds b. No structural hardening would be done at these pump stations. c. Frame, walls, and roof would be reinforced to withstand 140 mph winds

BOBBY JINDAL
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

# State of Louisiana

## DEPARTMENT OF NATURAL RESOURCES

## OFFICE OF COASTAL RESTORATION AND MANAGEMENT

January 5, 2009

Elizabeth Wiggins
Chief, Environmental Planning and Compliance Branch
Corps of Engineers- New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

RE: **C20080575,** Coastal Zone Consistency
**New Orleans District, Corps of Engineers**
Direct Federal Action
EA #474, Pump Station Stormproofing Activities, **Orleans Parish, Louisiana**

Dear Ms.Wiggins:

The above referenced project has been reviewed for consistency with the Louisiana Coastal Resources Program in accordance with Section 307 (c) of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in the application, is consistent with the LCRP. If you have any questions concerning this determination please contact Brian Marcks of the Consistency Section at (225)342-7939 or 1-800-267-4019.

Sincerely Yours,

Jim Rives
Administrator

JR/GD/bgm

Laura Wilkinson, COE-NOD
Wynecta Fisher, Orleans Parish
David Butler, LDWF
Richard Hartman, NMFS
Bren Haase, OCPR