

# Fish Kill Response Plan

## Emeralda Marsh Conservation Area – Peat Removal Project

Prepared for:

St. Johns River Water Management District (SJRWMD)

Prepared by:



4703 NW 53<sup>rd</sup> Ave  
Suite B-2  
Gainesville, FL 32653

and



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## 1.0 INTRODUCTION

### 1.1 PURPOSE

This Fish Kill Response Plan (FKRP) has been prepared by Florida Potting Soils (FPS) in consultation with the St. Johns River Water Management District (SJRWMD) and Environmental Consulting and Design, Inc. (EC&D). This FKRP outlines the procedures, methods, and equipment used to respond to fish kills associated with the removal of peat from the excavation area within Area 5 of the Emerald Marsh Conservation Area (EMCA). The EMCA Peat Removal Project authorizes the excavation of a 605 acre parcel to remove phosphorus-enriched sediments that are causing elevated phosphorus levels in surface water within the EMCA. Fish known to utilize Area 5 may contain pesticide contaminated tissue, and therefore efforts will be made to avoid conditions that would result in fish kills and subsequent avian consumption of contaminated fish.

The principal objectives of this FKRP are as follows:

- Outline the proposed monitoring procedures and methods,
- Provide an Action Plan for Fish Kill Response,
- Outline equipment and personnel which will respond to Fish Kills,
- Provide information related to disposal of contaminated fish, and,
- Outline notification requirements in case of an event.

### 1.2 PROJECT CONTACTS

Leasee:

Florida Potting Soils  
Attn: Paul Gordon  
862 S. Duncan Dr.  
Tavares, FL 32778

Leasee Consultant:

Environmental Consulting & Design, Inc.  
Attn: Carl Salafrio, President/CEO  
4703 NW 53<sup>rd</sup> Ave, Suite B-2  
Gainesville, FL 32653  
Office: (352) 371-4333  
Mobile: (352) 339-1118

### 1.3 LOCATION AND DESCRIPTION

EMCA is located approximately 8.5 miles northeast of Leesburg in Lake County, Florida. The EMCA Peat Removal Project consists of excavating phosphorus-enriched organic sediment (peat) from a 605 acre portion of the EMCA. The excavated material will be mixed and screened on site to remove debris (large sticks etc.) and then bought and transported to the customer.

## **2.0 MONITORING REQUIREMENTS**

Continuous dissolved oxygen (DO) sampling and visual monitoring will be conducted daily during all excavation and demobilization operations. Water quality will be monitored remotely by a continuous wireless feed from DO monitoring stations in two locations within the lease area.

### **2.1 VISUAL MONITORING**

Florida Potting Soils personnel will visually monitor the mining cells daily during excavation and demobilization. EC&D will train FPS personnel in observing key signs of fish stress and proper removal/disposal of small quantities of dead fish. Work areas within cells will be observed daily by boat at least once in the morning for signs of bird activity and/or fish stress (fish swimming at the surface, gulping for air, etc.) and/or dead fish. The cells will also be observed for signs of dead fish and/or bird activity during the course of normal operations throughout the day. Observations for each day will be recorded on the data forms provided enclosed with this FKR. This form will be provided to SJRWMD staff on a weekly basis.

If 100+ dead fish are seen, FPS personnel and the EC&D project manager will alert the SJRWMD immediately. Depending upon the severity and significance of the event, the FKR notification procedure will also be initiated.

### **2.2 ELECTRONIC MONITORING**

EC&D personnel will be responsible for the remote monitoring of dissolved oxygen levels within the active cells. Two floating dissolved oxygen monitoring stations purchased from In-Situ will be deployed at the site. The DO monitoring stations will be deployed based on project logistics as cells move within the units. Each station will consist of a floating DO probe that will sample DO levels every 30 minutes and will send automatic alarms via text message or email to EC&D and FPS if the DO level drops below a pre-set level.

FPS personnel will provide periodic visual inspections of the monitoring stations during each operating shift to verify correct operation. Instrument failures will be reported as soon as they are discovered. In the event of an instrument failure, FPS personnel will collect daily manual readings until repairs are made. A back-up hand held DO meter will be kept on-site at all times.

In the event of an out-of-range DO alarm, EC&D personnel will contact FPS personnel to visually inspect the cells for signs of dead or distressed fish. FPS personnel will immediately inform EC&D if 100+ dead fish are observed and EC&D will initiate the FKR. The initiation of the FKR requires FPS/EC&D to inform Florida Department of Environmental Protection (FDEP), SJRWMD, Florida Fish and Wildlife Conservation Commission (FWC), and the U.S. Fish & Wildlife Service (USFWS).

### 3.0 RESPONSE PLAN

In the event of a significant fish kill (+100 individuals), the following FKRPP will be implemented within 24 hours of initial discovery and the total response effort will be completed within 96 hours. Any dead fish or other wildlife that surface after this 96 hour period must be removed immediately.

The following action plan will be implemented following the observation of a significant fish kill event:

1. EC&D and FPS will visually survey the area to determine the extent of the fish kill,
2. EC&D and FPS will notify the SJRWMD, FDEP, FWC and the USFWS that a significant fish kill (100+) has occurred and that the Response Plan has been initiated,
3. EC&D and FPS will remove all dead and affected fish and other aquatic animals as quickly as possible by using boats, drag nets, scoop nets, seines and other means and place them into appropriate disposal containers,
4. EC&D will retain several dead fish for possible laboratory analysis and FPS will be responsible for the costs associated with testing the fish,
5. EC&D will sample DO concentrations with handheld DO meter in the immediate area of the fish kill,
6. EC&D will document the approximate extent of the fish kill zone,
7. EC&D will note pertinent data recorded by the water quality monitoring stations,
8. EC&D will notify the Lake County Landfill,
9. EC&D will talk with personnel/witnesses to determine what, if anything, happened, any abnormal behavior of fish or animals affected, and,
10. EC&D and FPS will transport the dead fish to the Lake County Landfill for immediate disposal.

#### 4.0 REQUIRED EQUIPMENT

The following equipment must be maintained by EC&D and FPS for immediate deployment in the event of a fish kill.

- small boats (small engine powered),
- scoop nets, fish seines, and/or hand held dip nets,
- large Heavy Duty Trash Bags or containers appropriate for the size of the fish kill,
- digital camera,
- personal protective equipment (eye protection, gloves, etc.)
- trucks and or other construction equipment (loaders, forklift etc.), and,
- data collection and reporting forms.

#### 4.1 LIST OF PERSONNEL

EC&D and FPS will be responsible for implementing the FKRP. Contact personnel are listed below.

Carl Salafrio (EC&D President/CEO)  
Office: (352) 371-4333  
Mobile: (352) 339-1118  
Email: [csalafrio@ecdfloida.com](mailto:csalafrio@ecdfloida.com)

Paul Gordon (FPS, Operations Manager)  
Mobile: (407) 630-0521  
Email: [pgordon@ljfholdco.com](mailto:pgordon@ljfholdco.com)

Billy Riddle (FPS, Facility Manager)  
Mobile: (352) 638-1072

#### 4.2 WATER QUALITY AND FISH TISSUE TESTING AFTER A SIGNIFICANT FISH KILL

In the event of a fish kill, EC&D personnel will collect (in situ) dissolved oxygen concentration readings using a handheld DO meter. Readings will be collected from random sites throughout the fish kill zone and background readings will be obtained from areas more than 150 feet from the estimated extent of the kill zone. Readings will be collected from the surface, mid-depth, and one foot above the bottom. Mid-depth samples only are sufficient in water that is less than five feet deep.

A sub-sample of dead fish removed from the fish kill zone will be retained for testing and FPS will be responsible for associated costs. Retained fish will be immediately placed on ice and provided to SJRWMD, FDEP, or FWC if requested.

#### 4.3 DISPOSAL

All dead fish will be removed from the fish kill area and be transported to the Lake County Landfill. The landfill is approved to receive contaminated waste. From the EMCA along CR 452, travel southwest on CR 452 for approximately 1.0 miles and turn right onto Felkins Road. Travel south on Felkins Road for approximately 0.8 miles and turn right onto Goose Prairie Road. Travel on Goose Prairie Road for approximately 1.3 miles and turn left onto Emerald Ave. Travel on Emerald Ave for 0.8 miles and turn right onto Co Rd 44 W. Travel west on Co Rd 44 W for approximately 0.5 miles and turn left onto Creek Road. Travel south on Creek Rd for approximately 4.0 miles and turn left onto US-441 / W Burleigh Blvd. Travel on US-441 for approximately 2.2 miles and turn right onto W Alfred St for approximately 0.3 miles. Turn right onto FL-19 S / S Duncan Dr and travel 2.0 miles. Turn left onto Co Rd 561 and travel south for approximately 1.7 miles. Turn right onto Astulla Landfill Rd to access the

Lake County Landfill. The landfill will be notified of a fish kill and expected fish disposal within 24 hours of the discovery of a fish kill.

Lake County Landfill  
(352) 343-3776  
13130 County landfill Road  
Tavares, FL 32278

## 5.0 NOTIFICATION PROTOCOL

EC&D will immediately provide notice of dead or dying birds or fish within EMCA Area 5 to SJRWMD, FWC, FDEP, and USFWS. Details of observed significant fish kills, and the fish kill reporting forms will be provided to FDEP.

St. John's River Water Management District  
Paul Cappetta  
4049 Reid St  
Palatka, FL 32177  
Office: (407) 659-4841  
Mobile: (386) 983-1095  
Email: pcappetta@sjrwmd.com

Florida Department of Environmental  
Protection  
Hailey Ambrose  
Central District  
3319 Maguire Blvd.  
Orlando, Florida 32803  
(407) 897-4336  
Email: Hailey.Ambrose@FloridaDEP.gov

Florida Fish & Wildlife Conservation  
Commission (FWC) –Call first  
Ryan Hamm, Regional Fisheries Administrator  
352-620-7341  
Northeast Region  
1239 SW 10<sup>th</sup> Street  
Ocala, FL 34471-0323  
Fishkill Hotline: 800-636-0511

US Fish and Wildlife Service  
Erin M. Gawera, Fish and Wildlife Biologist  
7915 Baymeadows Way, Suite 200  
Jacksonville, FL 32256-7517  
(904)731-3121 (direct)  
(904)731-3336 (main)  
Fax: 904/731-3045 or 3048  
Email: erin\_gawera@fws.gov