

## Interoffice Memorandum



September 25, 2017

TO: Mayor Teresa Jacobs  
-AND-  
Board of County Commissioners

FROM: Jon V. Weiss, P.E. Director  
Community, Environmental and Development  
Services Department

**CONTACT PERSON: David D. Jones, P.E., CEP, Manager  
Environmental Protection Division  
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SUBJECT: October 3, 2017 – Public Hearing  
Shoreline Alteration/Dredge and Fill Permit Application for Harrod  
Robert Wayne Trustee (SADF-15-10-013)

Harrod Robert Wayne Trustee requests a Shoreline Alteration/Dredge and Fill (SADF) Permit to install riprap along a portion of the bank of the Little Econlockhatchee River on the subject property. The property is located at 4202 Rouse Road in District 5. The Parcel ID for the site is 04-22-31-0000-00-013. The site is located within the Econlockhatchee River Protection Area.

On October 13, 2015, the Environmental Protection Division (EPD) received an SADF Permit Application to install riprap along the Little Econlockhatchee River. The applicant owns approximately 1,800 feet of property along a portion of the Little Econlockhatchee River, which is a tributary of the Econlockhatchee River. This portion of the Little Econlockhatchee River and the Econlockhatchee River are designated by the State of Florida as Outstanding Florida Waters. The applicant states that he has lost a significant amount of riverbank and that the proposed stabilization measures are intended to protect the bank from future erosion. The justification also adds that the stabilization of the riverbank will assist in preserving historic pilings of the Old Iron Bridge and an older timber bridge that once spanned the Little Econlockhatchee River. The area proposed for stabilization is located approximately halfway between the northern and southern parcel boundaries. The applicant proposes to install 150 linear feet of riprap, comprised of natural stone, along a portion of riverbank subject to erosion. The footprint of the riprap is 0.07 acre. Additionally, live plantings will be placed in and amongst the riprap to provide additional stabilization measures and enhance the ecology and view of the project area.

### **Site Conditions:**

Currently, the slopes of the river bank in the areas under consideration for stabilization are nearly vertical, or even concave, and vary from 10-15 feet above the normal water elevation. The applicant's engineer has provided a study of the project, which includes various land surveys dating from 1992 to 2017 that document the erosion of the riverbank over time. Based on the surveys, 12 to 16 feet (measured horizontally) of riverbank has eroded away since 1995. The study further indicates that severe erosion is occurring on the east bank of

the river, approximately 120 feet upstream of the Old Iron Bridge pilings and 50 feet upstream of the timber bridge pilings. According to the study, the erosion process has increased in the past few years, which has accelerated the rate at which soil has been deposited into the river flow-way. Consequently, the cross section area of the flow-way has been significantly reduced.

Vegetation on the slope of the riverbank in the project area is sparse or absent, due to extreme fluctuations in water levels and flow. However, the top of the riverbank is vegetated with live oak and cabbage palm trees, with saw palmetto shrubs and various vines overhanging the riverbank. Some of this upland vegetation is collapsing into the river from erosion of the bank. The lowermost portion of the riverbank has sparse aquatic vegetation at the waterline.

The initial public hearing for the SADF Permit Application was heard by the Board of County Commissioners (Board), on September 13, 2016, but was granted a continuance to December 13, 2016 in an effort to allow the applicant, EPD, and Orange County Public Works (OCPW) more time to review the engineering components of the project.

EPD, OCPW, and the applicant's engineer conducted additional analyses to assess any potential negative effects the project may have on the river and adjacent properties. The applicant's plan will utilize stone riprap to replace shoreline soil that has eroded away. The applicant's engineer has stated that the proposed riprap will not be greater in overall volume nor exceed the previous elevation and contours of the soil it will replace. Therefore, the cross-sectional area of the river will not be reduced, and upstream flooding is not anticipated to be exacerbated.

A few days before the December 13, 2016 public hearing, the applicant provided new information regarding his desire to preserve the pilings associated with the historic Old Iron Bridge. At the public hearing, EPD staff requested another continuance to assess the new information provided by the applicant. Due to a citizen's concern with the requested continuance, the hearing proceeded, during which time EPD staff and the applicant gave presentations, and public testimony was heard.

### **Citizen Input:**

At both the September 13, 2016, and December 13, 2016 public hearings, citizens spoke to convey their concerns or support:

#### *Concerns*

- Obstruction of river flow;
- Potential increase in upstream flooding;
- Reduction of natural shoreline and river-meandering;
- Other potential unknown adverse effects the project may have upstream and downstream of the property;

#### *Support*

- The applicant cares for the land and will conduct the project 'the right way';
- The previous riprap project is beautiful and also traps river sediment;
- Landowners have the right to protect their property;

- The previous riprap project sets a precedent for consideration of approval for similar projects;
- Importance of preserving pilings for historic value;
- The opportunity for the highest and best use of the property should be preserved.

After consideration of the testimony and the request for continuance, the Board approved a motion to postpone the public hearing in order to allow EPD staff and the applicant sufficient time to review the historic and cultural significance of the bridge pilings. Additionally, the Board requested that alternative methods of riverbank stabilization that incorporated a more natural, vegetated view, be investigated. The Board also requested an explanation of which sections of the river have been previously altered.

### **Historic Pilings Assessment:**

EPD staff has reviewed the additional materials provided by the applicant regarding his desire to protect pilings of two bridges on the property, that he asserts are of historical significance. The materials include, but are not limited to:

- Cultural Resource Assessment Survey from Archaeological Consultants, Inc., indicating the bridge pilings and associated trails represent early transportation routes utilized by pioneer families in Orange County;
- Documentation that the bridge pilings have been listed on the Florida Master Site File (FMSF). The FMSF is maintained by the Florida Department of Historical Resources. Any site listed on the FMSF has been documented to be at least 50 years old;
- Letter from two professors at the University of Central Florida attesting to the local significance of the bridge pilings; and,
- Letter from a Certified Master Arborist asserting that an existing tree adjacent to one of the timber bridge pilings is at least 236 years old. The applicant asserts that this tree would have blocked the bridge structure, and therefore must have sprouted and matured after the time period the timber bridge was in use.

### **Riverbank Stabilization Assessment:**

EPD staff and the applicant have investigated alternatives to the proposed riprap. Various trademarked products, including Geoweb, Ecoraster, Geotube, and Shoresox, were reviewed for their applicability, but none proved to be a more suitable method of repairing and preventing erosion for this case. However, the applicant agreed to modify the previous proposal to incorporate plantings within the riprap. Native plants will be installed between the stones to provide a more natural view of the reinforced riverbank. This method is a modified version of "Joint Planting" where the plants are installed into crevices between the rocks that have been placed along the slope, as outlined in the United States Department of Agriculture, Natural Resources Conservation Service, Engineering Field Handbook (Chapter 16 Streambank and Shoreline Protection). The riprap will provide resting and foraging areas for wildlife that is not present in the current condition. Upon completion of the project, a management program will be initiated to control and limit nuisance and invasive exotic vegetative species. This modified Joint Planting method will provide the best shoreline protection for the property, with minimal environmental impact, and still maintain the natural beauty of the river.

## **Previous Alterations and Characterization of the Little Econlockhatchee River:**

### *Previous Riprap Project*

In 2004, the applicant experienced similar issues just upstream and conducted a similar riprap project. The project was conducted without prior authorization from Orange County. Accordingly, an enforcement action was taken by EPD. To resolve the violation, the applicant paid an administrative penalty of \$7,700, and submitted an after-the-fact SADF Permit Application. The applicant indicated that a permitted footbridge over the river was in danger of being undermined by river bank erosion. On January 18, 2005 the Board authorized the installation of 160 linear feet of riprap on each side of the river, through after-the-fact SADF Permit No. 04-006. The violation case was closed on February 10, 2005.

### *Little Econlockhatchee River Characterization*

The Little Econlockhatchee River is a stream in Orange and Seminole Counties located mainly within urbanized areas. The river flows 14.8 miles from southern and western portions of the drainage basin in Orange County, to the north and east to the confluence with the Econlockhatchee River in Seminole County. The drainage basin is 71 square miles in size. Over time, numerous bridges and flood control projects have been constructed along the main river channel and tributaries. While some sections of the river and tributaries have been significantly modified and reconfigured, other portions remain in mostly a natural condition, with only occasional bridges or other structures occurring mainly at road crossings. Accordingly, the river can be characterized into three categories:

#### Natural sections of river with occasional structures

- Includes bridges across the river, such as University Boulevard, Buck Road, S.R. 408, and others.
- Other structures along the river include occasional stormwater outfall pipes, drainage swales, and utility crossings.
- Comprises 6.45 miles of the main river channel.

#### Channelized sections of river

- Includes areas of significant modification to the main river channel including river straightening (canalization), filling of river channel and adjacent wetlands, and dredging.
- Includes five flood control projects constructed by Orange County Public Works.
- Numerous structures, including the S.R. 50 and S.R. 417 bridges, and Michael's Dam at Jay Blanchard Park.
- Other structures along the river include stormwater outfall pipes, drainage swales, and utility crossings.
- Comprises 2.29 miles of the main river channel.

#### Channelized tributaries

- Includes significant modifications to tributaries of the river including straightening (canalization), filling of channel and adjacent wetlands, and dredging.
- Numerous structures, including the Harrell Road and Curry Ford Road bridges, and Banner Dam at Harrell Road.
- Comprised of 34.35 miles of channelized tributaries.

**Enforcement Action:**

No enforcement action for the property subject to this application has been initiated by EPD.

**Notification:**

Notification of the first public hearing was sent to property owners within 500 feet of the project site on August 15, 2016. Additional notification of the second public hearing was not required. Notification of this third public hearing was sent to property owners within 500 feet of the project site, several other concerned citizens, and the applicant on September 15, 2017.

**Complete Application Documentation Available:**

The complete permit application and all supporting documentation submitted by the applicant are available for review at EPD's offices at 3165 McCrory Place, Suite 200, Orlando, 32803.

**Code Requirements:**

Chapter 15, Article VI, Section 15-218(e), Orange County Code, requires the applicant to demonstrate through engineering or other data that the proposed activity will not cause undesirable situations as a result of performance of the activity. EPD requested that the applicant explain how this project will comply with these requirements. The applicant's responses are included as an exhibit in the staff report.

**Staff Recommendation:**

Approval of the Shoreline Alteration/Dredge and Fill Permit Application (SADF-15-10-013) subject to the following conditions:

**Specific Conditions:**

1. This permit shall become final and effective upon expiration of the 30 calendar day appeal period following the date of the filing of the Board's determination with the Clerk of the Board, unless an appeal has been filed within this timeframe. Any appeal shall stay the effective date of this permit until any and all appeals are resolved.
2. Construction activities shall be completed in accordance with the "River Bank Erosion Repair Plans" submitted by American Civil Engineering Co., as received on July 31, 2017 by EPD. The permitted work must be completed within one year from the date of issuance of the permit. In the event that project has not been completed within a year, this permit is void, unless a timely extension request has been received by EPD.
3. Any requests for permit extension must be received by EPD within one year of permit issuance. Any permit extension for the approved construction may be approved by way of Consent Agenda if there are no changes to the authorized activity.
4. This permit does not authorize any dredging or filling, except for the actual installation of the riprap. This permit does not authorize any dredging or filling which may be necessary to provide maintenance or creation of a navigable access from the riprap to the open water.

5. The permittee must install riprap at a 1.5 (Horizontal): 1 (Vertical) slope (maximum) as depicted on the "River Bank Erosion Repair Plans" submitted by American Civil Engineering Co., as received on July 31, 2017 by EPD.
6. The riprap shall be comprised of natural stone a minimum of 18 inches in diameter. No riprap may be installed outside the 150 linear feet of the project area, or above the 'Prior to Erosion Line', as depicted on the plans. Woven geotextile fabric must be anchored and installed beneath the riprap.
7. No native vegetation may be removed from the riverbank without prior authorization from EPD. Nuisance and invasive exotic vegetation shall be monitored and controlled in accordance with the "Monitoring and Management Plan for River Isle Shoreline
8. Stabilization Section" submitted by Bio-Tech, Inc. as received by EPD on July 31, 2017.
9. Prior to initiating the permitted activity, the applicant must provide written notification of the date of commencement. The applicant shall also notify EPD when the project is completed.
10. Within 30 days of completion of the permitted activities, the permittee must provide an as-built drawing on a final survey, signed and sealed by an appropriate professional licensed by the State of Florida, with the notice of completion. The signed and sealed as-built survey shall include, but is not limited to, an aerial view of the project site depicting the centerline of the river, pre-erosion and post-erosion contour lines, elevations of the installed riprap, sovereignty submerged lands safe upland limits line, established conservation area line, current and average water levels, property line, and bottom elevations and cross sections with elevation data depicted for the exact same areas as on the approved plans.

General Conditions:

11. Subject to the terms and conditions herein, the permittee is hereby authorized to perform or cause to be performed, the impacts shown on the application and approved drawings, plans, and other documents attached hereto or on file with EPD. The permittee binds itself and its successors to comply with the provisions and conditions of this permit. If EPD determines at any time that activities are not in accordance with the conditions of the permit, work shall cease and the permit may be revoked immediately by the Environmental Protection Officer. Notice of the revocation shall be provided to the permit holder promptly thereafter.
12. Prior to construction, the permittee shall clearly designate the limits of construction on-site. The permittee shall advise the contractor that any work outside the limits of construction, including clearing, may be a violation of this permit.
13. The permittee shall require the contractor to maintain a copy of this permit, complete with all approved drawings, plans, conditions, attachments, exhibits, and modifications in good condition at the construction site. The permittee shall require the contractor to review the permit prior to commencement of the activity authorized by this permit. The complete permit shall be available upon request by Orange County staff.
14. Issuance of this permit does not warrant in any way that the permittee has riparian or property rights to construct any structure permitted herein and any such construction is done at the sole risk of the permittee. In the event that any part of the structure(s)

15. permitted herein is determined by a final adjudication issued by a court of competent jurisdiction to encroach on or interfere with adjacent property owner's riparian or other property rights, the permittee agrees to either obtain written consent or to remove the offending structure or encroachment within sixty (60) days from the date of the adjudication. Failure to comply shall constitute a material breach of this permit and shall be grounds for its immediate revocation.
16. This permit does not release the permittee from complying with all other federal, state, and local laws, ordinances, rules and regulations. Specifically, this permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property rights, or any interest in real property, nor does it authorize any entrance upon or activities upon property, which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 15, Article VI of the Orange County Code. If these permit conditions conflict with those of any other regulatory agency, the permittee shall comply with the most stringent conditions. The permittee shall immediately notify EPD of any conflict between the conditions of this permit, and any other permit or approval.
17. The permittee is hereby advised that Section 253.77, Florida Statutes, states that a person may not commence any excavation, construction, or other activity involving the use of sovereignty or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
18. Should any other regulatory agency require changes to the permitted activities, the permittee shall provide written notification to EPD of the change prior to implementation so that a determination can be made whether a permit modification is required.
19. EPD shall have final construction plan approval to ensure that no modification has been made during the construction plan process.
20. The permittee shall immediately notify EPD in writing of any previously submitted information that is later discovered to be inaccurate.
21. EPD staff, with proper identification, shall have permission to enter the site at any reasonable time to either, at a minimum: inspect, sample, or test to ensure conformity with the plans and specifications approved by the permit.
22. The permittee shall hold and save the County harmless from any and all damages, claims or liabilities, which may arise by reason of the activities authorized by the permit.
23. All costs, including attorney's fees, incurred by the County in enforcing the terms and conditions of this permit shall be required to be paid by the permittee.

24. The permittee agrees that any dispute arising from matters relating to this permit shall be governed by the laws of Florida, and initiated only in Orange County.
25. Turbidity and sediments shall be controlled to prevent violations of water quality pursuant to Rule 62-302.500, 62-302.530(117) and 62-4.242 Florida Administrative Code. Best Management Practices, as specified in the Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual, shall be installed and maintained at all locations where the possibility of transferring suspended solids into wetlands and/or surface waters due to the permitted activity. If site-specific conditions require additional measures, then the permittee shall implement them as necessary to prevent adverse impacts to wetlands and/or surface waters.
26. Pursuant to Section 125.022, Florida Statutes, issuance of this permit by the County does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the County for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law.
27. Pursuant to Section 125.022, the applicant shall obtain all other applicable state or federal permits before commencement of the activities authorized herein.

**ACTION REQUESTED: Approval of Harrod Robert Wayne Trustee Shoreline Alteration/Dredge and Fill Permit Application (SADF-15-10-013) subject to the conditions listed in the staff report. District 5**

JVW/DJ: mg

Attachments