

## **Borrow Site Identification Guidelines For Levee Repairs**

January 2010

Public Law 84-99 (PL84-99) is the law that provides the authority for the Corps of Engineers (Corps) to provide assistance to levee districts during and after a flood event. Levee districts enrolled in the PL84-99 program can request assistance from the Corps to repair damages resulting from identified flood events. When additional soil is required in order to complete the repair, a borrow site is required.

A borrow site is a location where soil is removed to be used in the repair of damages to earthen levees. In order for federal funding to be used for a levee repair, the borrow site must be approved by the Corps. The Corps has a borrow team that consists of members of branches of the Corps who ensure that a borrow area is in compliance with applicable laws and Corps guidelines.

The Corps' borrow team consists of members of the following offices: Geotechnical, Civil Design, Environmental, Regulatory, Cultural Resources, Environmental (HTRW) Quality Branch, and Real Estate Branches. Each team member has criteria that must be met in order for a site to be used for the supply of borrow material. The following are general summaries of each office's requirements.

### **Geotechnical Branch:**

The Geotechnical Branch evaluates a borrow site location in respect to the levee for stability and water seepage concerns. In general, borrow areas should not be excavated within 300 feet of the landside levee toe or 400 feet of the riverside toe. The soil classification is also critical to the geotechnical team member. In general, soils to be used for levee repair should be clay.

### **Civil Design Branch:**

The Civil Design Branch evaluates a borrow site based on location and access. Sites under consideration must be accessible by equipment required to excavate and transport material to damage location. (ie. Excavators, dozers, scrapers, tractors and pans, over the road or off-road dump trucks) Sites adjacent to damage locations are preferred. If no adjacent borrow is available or practical, off site borrow may be permitted. Temporary haul roads may be required if the borrow site is not adjacent to the damages. Haul distances should be minimized to reduce costs associated with material transportation. The preferred haul distance is less than one mile. Longer haul distances will be evaluated on a case by case basis.

### **Environmental Branch:**

The Environmental Branch evaluates borrow sites and coordinates with state and federal officials to ensure that a borrow site is consistent with all federal, state, and local laws. These laws protect historic places, farmland, wetlands, endangered species, water quality etc. This office is also required by law to document the borrow area and your levee

repair and make this information publicly available. There are many things that must consider and a field survey of the proposed borrow area will always be required.

Generally, borrow sites that can be quickly approved include:

- Currently farmed
- Upland pasture
- Soil set aside from drainage ditch clean outs
- Located in a yard – the Corps can create a lake

Some things to keep in mind when selecting a borrow area:

The borrow area should be at least 660 feet from Bald Eagles' Nests

- *This is a requirement of the Bald and Golden Eagle Protection Act*

The borrow area should not be forested and removing trees prior to proposing the site is not acceptable. This can easily be seen in aerial imagery.

- *Floodplain trees are relatively rare and provide habitat for an endangered species that may be in your area*

Removing 18" of material or less from LOW QUALITY wetlands or on ground enrolled in a conservation reserve program (WRP, CRP) may be acceptable but will require additional coordination which takes time.

- *Wetlands are protected by the Clean Water Act. Conservation reserve program lands have specific legal restrictions which usually only allow shallow excavation.*

### **Cultural Resources Branch:**

Areas where historic and Native American artifacts (arrowheads etc.) are found should not be used for borrow. The destruction of historic or prehistoric sites prior to consideration for borrow will automatically exclude the property from consideration forever.

- *The National Historic Preservation Act protects these sites.*

### **Regulatory Branch:**

Under Section 404 of the Clean Water Act, the Corps of Engineers regulates impacts to waters of the U.S., which could include streams, rivers, some lakes/ponds, and wetlands. Some borrow activities can be considered by the Corps to be impacts. If this is the case, these impacts require a Section 404 permit, even if the Corps is otherwise directing and/or approving the levee repair project. In addition, projects for which a Section 404 permit is required may also require review from state agencies through Section 401 of the CWA, as well as other Federal agencies as required by NEPA. Therefore, the avoidance or minimization of impacts to "waters of the United States" and/or wetlands can significantly reduce environmental review of levee repair projects. The following information is presented as a means of reducing environmental impacts and reducing the amount of time spent locating suitable borrow sites.

Levee districts should avoid potential wetlands or waterbodies as potential borrow sites. Various factors can indicate the presence of wetlands in an agricultural setting. **Levee districts should avoid:**

- Areas with poorly drained soils with natural vegetation
- Farmed areas (cropped) with frequent flooding – at least two weeks inundation
- Areas for which NRCS has made a farmed wetland (FW) determination
- Wooded/brushy areas
- Streams and riparian areas
- Areas on the riverward side of the levees

**Areas that are recommended to be considered for potential borrow sites include:**

- Fields for which NRCS has made a prior-converted wetland (PC) determination, and which are still in crop production
- Former borrow areas that have been utilized in the past 5 years
- Upland areas that are void of natural vegetation
- Soil stockpiles from prior-authorized ditch cleanouts
- Areas adjacent to existing wetlands that could be expanded or improved
- Sites in which borrow could be intended specifically for wetland creation
- Sites with silty clay loam or heavier soils

Various other considerations should be made when choosing potential borrow sites. If Section 404 permitting can not be avoided, mitigation may be required for impacts. This can add significant time and/or expense. Areas for mitigation may also be difficult for levee districts to acquire.

Our experience has been that areas selected by levee districts as high-priority borrow areas can be most prone for regulatory involvement. This is often due to levee districts selecting sites that are unsuitable or unused for agricultural production. However, unsuitability for agricultural production is typically due to frequent flooding or other factors that indicate a likelihood for jurisdictional wetlands. Areas that are not in production may be more likely to be jurisdictional due to the presence of natural vegetation. Levee districts should consider from the onset that borrow site selection is not always compatible with other land use priorities.

Coordination with NRCS is very important. Borrow activities may affect landowners' participation in other NRCS or FSA programs. Prior coordination with NRCS can help avoid program conflict. In addition, NRCS determinations such as farmed wetland, prior-converted wetlands, etc. can be used to determine which sites would likely require Regulatory involvement. If the landowner of a potential borrow site is a program participant, they should request a certified NRCS determination for the site. Because of NRCS regulations, levee districts cannot request this information from NRCS. The landowners themselves must do this.

Delays can be further avoided by coordinating borrow site selection in advance of emergency repairs. Potential borrow site locations should be provided to the Regulatory

Branch prior to site inspections, in order to allow time for natural resource map review. Resource map review may allow sites to be further prioritized based on known factors that predispose the site to regulatory involvement. Prioritization based on resource map review can also be done by levee districts or other Corps branches. Soils characterizations (flooding frequency, clay content, hydric rating, etc.) can be done using the NRCS Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>). Aerial photographs, the National Wetland Inventory map, and topographic maps can be found at <http://ims.missouri.edu/moims2008/> and <http://www.rmms.illinois.edu//website/rmms/viewer.htm> .

### **Real Estate -Acquisition and Management & Disposal Branch (RE-A:**

In order for the Corps' Borrow Team to enter a property, the land owner or their representative grants the Government permission, in writing, to enter the property and evaluate soil conditions for potential borrow material. This is typically done with the land owner signing a standard Right of Entry form provided by the RE-A representative of the borrow team. Under Public Law 84-99, the levee district is responsible for providing the selected borrow sites to the Government for the construction contract. Under PL84-99, the government cannot purchase borrow sites or material. RE-A works with the levee districts in acquiring the selected borrow sites or for other required right-of-way.

### **Environmental (HTRW) Quality Branch:**

The U.S. Army Corps of Engineers (USACE) regulations (ER-1165-132) and District policy requires procedures be established to facilitate early identification and appropriate consideration of potential hazardous, toxic, or radioactive waste (HTRW) in reconnaissance, feasibility, preconstruction engineering and design, land acquisition, construction, operations and maintenance, repairs, replacement, and rehabilitation phases of water resources studies or projects by conducting Phase I ESA. USACE specifies that these assessments follow the process/standard practices for conducting Phase I ESA's published by the American Society for Testing and Materials (ASTM).

Soils exhibiting hazardous waste characteristics (40 CFR 261.21- 261.24), even if naturally occurring, are not eligible as borrow material. Though extensive analysis is not mandated, to minimize inadvertent transfer of contamination, borrow material whether being brought onto USACE property or taken from USACE property shall be screened for environmental contaminants prior to transfer. Professional judgment shall be used to determine whether material is suitable. Generally soil with concentrations exceeding toxicity characteristic leaching procedure (TCLP) levels specified in 40 CFR 261.24 or significantly exceeding background levels are unsuitable as borrow material.

### **Conclusion:**

There are many aspects that must be considered when selecting a borrow site for levee repair. It is the levee districts responsibility to provide borrow materials to repair their respective levee. Levee districts are encouraged to be proactive and seek lands available for borrow prior to a flood event.

This guide is provided to assist levee districts with the selection of potential borrow areas for the Corps' Borrow Team to evaluate under PL84-99. Levee districts should have multiple borrow areas selected and ready for inspection when the borrow team visits. This will allow for a more efficient process and minimize the number of site visits required by the borrow team.