**[Levee System Name], [County Name], [State]**

Request for Approval of the System-wide Improvement Framework Letter of Intent (LOI)

Prepared by: [Levee District Name]

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: ­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[Please have one representative from each levee district sign this form.]

**INTRODUCTION**

The [Levee System Name] (levee sponsors) are requesting approval of the System-wide Improvement Framework Letter of Intent for continued rehabilitation eligibility for the [Levee System Name] under P.L. 84-99 while developing and implementing a system-wide improvement framework (SWIF) plan. This attachment describes levee system deficiencies and justifies how a system-wide approach will optimize flood risk reduction. The most recent periodic inspection, Periodic Inspection No. [X], was conducted in Month Year and the most recent continuing eligibility inspection was conducted in Month Year. All inspections rated the [Levee System Name] as **unacceptable**. The primary factors driving the unacceptable system rating were the following unacceptable inspection items: unwanted vegetation, slides, culvert joint failures, depressions, encroachments, erosion, rutting, sod cover, deteriorated relief wells, animal burrows, broken and missing gates, and a lack of installation procedures or maintenance records for closures gates and pump stations.

The [Levee System Name] is currently rated as unacceptable and has “inactive” status in the USACE P.L. 84-99 Program as a result of “unacceptable” inspection items that the Levee Sponsor was unable to repair within the USACE levee inspection specified timeframe. In an effort to regain rehabilitation assistance under P.L. 84-99, this SWIF Letter of Intent is submitted to demonstrate current progress and future plans to repair deficiencies, with the highest risk items set as priority.

Since Periodic Inspection No. [X], the [Insert Levee Districts] have addressed numerous deficiencies that were rated “unacceptable” including: repairing and replacing relief wells, and removing unwanted vegetation. Other deficiencies rated “unacceptable” are more complex to correct and involve interagency collaboration such as vegetation removal which requires collaboration and close coordination with other Federal agencies due to vegetation on Federal property. The levee sponsor is seeking to use a SWIF approach to resolve “unacceptable” items and restore the levee to current USACE O&M standards.

**DESCRIPTION OF LEVEE SYSTEM DEFICIENCIES AND JUSTIFICATION FOR SWIF APPROACH**

**1. Levee System Identification:**

The levee system to be covered by the system-wide improvement framework is the [Insert Levee System Name].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Levee System Name** | **System NLD Number** | **Segment/Sponsor Name** | **Segment NLD Number** | **Inspection Date, Type and Rating** |
|  |  |  |  |  |
|  |  |  |  |  |

The levee system is located along the east bank Mississippi River between river miles X and XX, and is just south of the confluence of the Mississippi and St. Mary’s Rivers and just north of the Big Muddy River. The Mississippi River bounds the system on the west. The majority of the county is in XX County, Illinois with one small area at Tower Island Chute that lies in Perry County, Missouri. The system is comprised of X miles of levee, Y railroad closure structure, Z highway closure structure, XX short lengths of sheet pile floodwalls, YY relief wells, and ZZ gravity drain culverts. The [Insert Levee System Name] was authorized by the [Flood Control Act Name]. [Insert Communities behind leveed area]. [Insert Population at Risk]. The system has multiple Critical Infrastructure and they are listed in the table below. A system map of the leveed areas can be found at the end of this Attachment.

|  |  |  |
| --- | --- | --- |
| **Critical Infrastructure** | **Quantity** | **Description** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**2. Description of Deficiencies and Justification of SWIF approach**

The most recent inspection reports document unwanted vegetation, slides, culvert joint failures, depressions, encroachments, erosion, rutting, sod cover, deteriorating relief wells, and a lack of installation procedures or maintenance records for closures gates and pump stations. The following table summarizes the XX unacceptable item ratings from Periodic Inspection No. X dated Month Year.

| **No. of “U” items** | **Feature/Item** | **Summary of Observation** | **Notes** |
| --- | --- | --- | --- |
| 5 | Encroachments | Farming on berm, deep cuts on berm, and tree stump |  |
| 41 | Depression/Rutting | Majority of ruts are along levee toe with some holding water; some are over pipelines | Potentially from farm equipment and/or construction equipment; some could be due to slope stability issues and culvert leakage |
| 70 | Drainage Structure/Channels | Most structures were submerged and could not be inspected | Gravity drains have not been inspected visually nor via cctv.; some culverts have leakage |
| 3 | Erosion/Bank Caving | Majority of instances occur at levee toe |  |
| 40 | Unwanted vegetation | Trees within 15-foot of the vegetation free zone | No trees noted on levee slope or crown |
| 20 | Pump Station | Maintenance and training records either did not exist or were not available; some features were submerged and not inspected |  |
| 2 | Sod Cover | One location at a slide repair; one location on levee slope | Areas need to be re-seeded |
| 4 | Closure Structures | Installation procedures not available or do not exist, post holes paved over |  |
| 63 | Underseepage System | Broken piezometers and damaged relief wells |  |
| 32 | Slope Stability | Numerous slides | Rectification of slides accomplished by 100% Federal funding |
| 1 | Animal Burrow | One large burrow |  |
| 2 | Fencing/Gates | Broken and missing gates |  |

Many of the XX unacceptably rated inspection items were due to a lack of inspection due to high water or the seepage cutoff trench construction project. The levee sponsors have aggressively initiated the correction of other deficiencies documented in Periodic Inspection No. X. All slope stability issues (slides) have been repaired as part of the [Insert Levee System Name] program. To date, the following actions have been taken by levee sponsors to correct deficiencies:

* Repaired and replaced relief wells
* Cleaned culverts and gates
* Removed trees and unwanted vegetation where permissible
* Cleaned relief wells and graded around vicinity for proper drainage
* Removed fence row
* Filled animal burrows
* Filled depressions
* Fixed eroded areas
* Fixed wave-wash area
* Operated all gravity drain gates for USACE during June 2013 flood
* Operated pump station and gates for USACE during June 2013 flood
* Made closure at highway and railroad during June 2013 flood and documented closure procedures

In addition to repairs already completed, the levee sponsors intend to continue tree and unwanted vegetation removal, additional relief well and repair gravity drain repairs, culvert slip-lining and/or replacing, and culvert inspections. Although much progress has been made, some deficiencies are more complex to correct and would lend themselves well to integration with larger deficiency correction initiatives under a SWIF approach. Some locations of vegetation removal require collaboration and close coordination with other Federal agencies due to the vegetation being on Federal property maintained by the U.S. Forest Service.

The levee sponsors have taken a “worst-first” prioritized approach to making repairs and are developing operational plans and making erosion repairs. The long-term SWIF will outline repair and interim risk reduction plans while holding life safety paramount.

**3. Demonstration of Funding Commitments for developing a SWIF and Necessary Repairs:**

The levee sponsor has coordinated closely with USACE and hopes to continue partnering with USACE St. Louis to correct design deficiencies identified in the Letter Report. Taxation through the levee district generates funding to maintain and operate the [Insert Levee System Name]. [County Name] County is also pursuing a bond issue that would generate up to $XXX,XXX for the local sponsors to remedy levee deficiencies. Additionally, potential funding assistance from [Entity Name], which invests in transportation and basic infrastructure to support job creation and retention, will be sought. The [Entity Name] is currently in the process of securing funds, nearing $XXX,XXX, to provide to the [Insert Levee System Name] to [list repairs] [Year] flood event. Volunteer contributions over the course of the last year have been generated totaling in excess of $XX,XXX for the levee district to use for operation and maintenance of the levee. The levee sponsor is currently researching and pursuing other non-Federal funding and/or volunteer assistance avenues; possible partners include the [list partners], including [state] Department of Transportation, [County] Highway Department, U.S. Forest Service, Township, the Park District, the City, privately owned companies such as [List], and the surrounding communities.

**4. Interim Risk Reduction Measures:**

The levee sponsors have committed to implementing interim risk reduction measures (IRRM) while the SWIF is being developed and continue these measures, as necessary, throughout rectification work. Anticipated IRRMs include stockpiling emergency supplies, establishing erosion control, renewing their former partnership with Union Pacific Railroad for the railroad closure, reinvigorating their partnership with the [State] Department of Transportation (DOT), and regularly communicating with the local 911 Officer. In addition, the levee sponsors are documenting their emergency operational plans to include trigger elevations for monitoring, closures, filling sand bags, and coordinating with local partners. The levee sponsors utilize the County Hazard Mitigation Plan that was approved by the State of [state] Emergency Management office in [2009]. The Mitigation Plan includes information on levees and flooding, photos of past floods and sandbagging efforts, mass and individual evacuation plans, and maps showing evacuation routes with bridges located. In [year], a news conference was held in the county to inform the public that the Mitigation Plan was underway. In [year] a public meeting was held to inform the public of all the hazards, including levees and flooding. A volunteer evacuation of the leveed area was conducted in [year].

**5. Interagency Collaboration:**

USACE, in close coordination with the levee sponsors, is providing technical assistance in the identification of deficiencies, prioritization of corrective measures, and development of coherent and integrated plans for rehabilitation of the levee system. This partnership will continue as deficiency correction project plans continue and as SWIF measures are implemented and funding is sought for future deficiency correction projects. During this time, progress on SWIF milestones will be monitored and evaluated by the USACE St. Louis District staff. Periodic and routine inspections of the levee system will also be jointly undertaken by USACE and the levee sponsors during the SWIF development and implementation timeline.

In addition to collaborating with the USACE, the levee sponsor anticipates the following coordination [examples below]:

* City;
* Illinois Department of Transportation (IDOT) on Hwy 3 closure impacts;
* Union Pacific Railroad (UPRR) on railroad closure impacts;
* U.S. Forest Service (USFS) on tree/vegetation removal and permits;
* U.S. Fish and Wildlife Service (USFWS) on wetlands, Middle Mississippi River National Wildlife Refuge, and Indiana bat population;
* Illinois Department of Natural Resources (IDNR) on water resources;
* USDA Natural Resources Conservation Service (NRCS)
* Ducks Unlimited

**6. Anticipated State and Federal Permit Requirements:**

The levee sponsors are responsible for continued operation, maintenance, and repair needs on the [Insert Levee System Name]. Special permitting may be required by the levee sponsors to perform these activities to ensure operational adequacy of the levee system. In general, rectification work will involve smaller repairs such as filling ruts and larger repairs such as potential levee rehabilitation and gravity drain rehabilitation. Permits including Sections 401 and 404 are anticipated for more significant rehabilitation. All modifications to the federal system will be coordinated through the Section 408 process with USACE. A permit exists with U.S. Forest Service (USFS) but needs to be updated; the existing permit states that all vegetation clearing in the vicinity of The National Forest needs clearance through USFS. Permits are anticipated with NRCS for activities related to vegetation and conservation.

**CONCLUSION**

Given the major expense and scope of necessary rehabilitation work, [Insert Levee District Name] respectfully request that the [Insert Levee System] be granted “active” status in the P.L. 84-99 Program while SWIF plans are developed and implemented. The [Levee District Name] ask that this initial request be granted for two years, to allow adequate time to develop and fund a successful long-term rectification plan. We believe that this temporary extension of P.L. 84-99 eligibility best serves the communities living and working behind the leveed areas by assuring that federal assistance will remain available should the levees be damaged in a future high-water event.

**[Insert Levee System Map]**