

## **ARRA Levee Periodic Inspections Questions and Answers:**

How much ARRA funding did the Los Angeles District receive for Periodic Inspections?

The Los Angeles District awarded \$4.1 million in ARRA contracts to capable engineering firms to conduct levee periodic inspections during the 2010 fiscal year. Those firms are: Tetra Tech, FFEB Joint Venture and URS Group.

What are some reasons these systems are being deactivated (removed) from the program?

Among the deficiencies found that could cause a levee to fail during a flood were insufficient slope protection (allows erosion of levee), erosion of riverbed/levee (instability), vegetation (inhibits ability to inspect for and identify signs of instability), settlement, animal control (rodent burrows can weaken levees), unpermitted encroachments and inadequate maintenance.

What is the difference between a routine inspection and periodic inspection?

A Routine Inspection, also called annual inspection or continuing eligibility inspection, is a visual inspection that verifies proper levee system operation and maintenance. These are conducted on an annual basis.

A Periodic Inspection verifies proper operation and maintenance, and provides a more rigorous level of assessment than the annual Routine Inspection. These inspections are conducted every five years. The Periodic Inspection consists of 3 key steps:

- 1) Collection of existing and available data on operation and maintenance, previous inspection reports, emergency action plans, and flood-fighting records;
- 2) A field inspection, similar to a Routine Inspection, but with more detail, performed by a multidisciplinary team and led by a professional engineer; and
- 3) An inspection report that includes a rating for operation and maintenance, and may include additional recommendations of items to monitor, deficiencies to repair, or areas that need further evaluation.

Both Routine and Periodic Inspections incorporate a consistent inspection checklist and will result in a levee system rating for operation and maintenance. This rating determines if a levee system is active in the USACE Levee Safety Program. Active levees are eligible for federal rehabilitation funds (authorized by Public Law 84-99) for damages caused by a flood event.

Why are you making the reports for official use only? We thought your process is supposed to be open and transparent.

We must constantly balance the information stakeholders use to make risk-informed decisions about their public safety and safeguarding information that could be used to threaten a project's security and increase risk of harm to residents. Knowing and understanding the system is unacceptable or minimally acceptable, without releasing specific vulnerability information in an uncontrolled manner still allows stakeholders and residents to make informed decisions about their personal safety. Examples include having an emergency evacuation plan and/or purchasing flood insurance to protect economic losses.

How will this rating affect FEMA's certification of the levee and the need to buy flood insurance?

Neither the Routine Inspection nor the Periodic Inspection results in a levee certification for the NFIP, which is required to accredit a levee system for National Flood Insurance Program purposes. Certification for the NFIP focuses only on the 1% flood. The USACE Levee Safety Program focuses on projects designed and built for multiple levels of flood events, not just the 1% flood, which is an insurance standard, not a safety standard. Certification to the 1% flood does not eliminate risk.

The Corps will provide periodic inspection results to the local project sponsor and FEMA. FEMA would then make the determination about the effect of the findings on its accreditation for the National Flood Insurance Program.

If the Corps certified or evaluated the levee system, it would review the certification in light of the inspection results. The Corps now has expiration on its previous certification letters.

What is risk?

Risk is the measure of the likelihood that a natural event will take place, the performance of the infrastructure during this event, and the consequences of failure or poor performance - loss of life being of paramount concern.

Why hasn't the Corps done periodic inspections on levees before?

The Corps has previously conducted periodic inspections on levees, but recognized it needed to be more consistent with all levee systems within the Corps program. An effective safety program is a shared responsibility among all levels of government and includes periodic inspections and evaluations, continuous monitoring of levee systems, and builds upon changes and improvements to the state of the art of professional engineering practice. This allows us to better assess risk and uncertainty and reduce public safety and economic risks.

The Corps has improved how it inspects and evaluates levees, which enables USACE to better communicate to the local sponsors and the public the overall condition and associated risks of levee systems. Improvements include a single, newly revised inspection checklist for inspections to be used on all levee systems within Corps authority.

If you're doing all of these at once, how will you establish a five year schedule?

The future inspection cycle for periodic inspections is still under development and depends on future funding levels and the number of inspections completed under ARRA of 2009. The findings may also affect the follow-up inspection schedule.

How will inspection results be used/communicated?

The periodic inspection will take the place of the USACE annual, or routine, inspection for that year. The inspection team will recommend a system rating, acceptable, minimally acceptable or unacceptable, based upon the inspection checklist, to the District Levee Safety Officer (LSO). The District LSO will determine the final rating and inform the project sponsor of the inspection results. Inspections determine a levee system's eligibility for federal rehabilitation assistance through the Corps' PL 84-99 program. In addition, the periodic inspection results may also include additional recommendations of items to monitor, identification of deficiencies, or areas that need further evaluation. This information will be communicated to the sponsor in order to decide next steps.

Why are you using contractors to inspect?

The American Reinvestment and Recovery Act of 2009 allows the Corps to accelerate the timetable of these inspections, provide employment for contractors and increase the knowledge about the state of the nation's critical infrastructure. The contractors will also provide an independent inspection and evaluation of the levees.

The inspection team will provide a recommended rating and findings and the District LSO is responsible for determining the final inspection rating and communicating the results to the local sponsor.

Will the Corps help fix the deficiencies it finds?

Operation, maintenance, repair, rehabilitation and replacement activities are local sponsor responsibilities. The periodic inspection identifies components and features that require monitoring over time, such as erosion, settlement, vegetation and seepage. The periodic inspection will yield a rating that is based upon the annual inspection checklist, which is the responsibility of the local sponsor. Subject to the findings and authorities, the local sponsors will decide on options to pursue, which may include a project in coordination with the Corps or other partners.

What about I-walls and flood walls?

Levee systems with I-walls or flood walls will be included in the periodic inspections.

What levees did the Corps inspect?

The first priority for periodic inspections will focus on federally authorized levees in the USACE program. These levee systems will be inspected regardless of their current status in the Levee Safety Program.

Why all of a sudden are we seeing so many unacceptable and minimally acceptable ratings?

The Corps has improved how it inspects and evaluates levees, which enables USACE to better communicate with the local sponsors and the public the overall expected operation and maintenance standards, the overall condition of the levee system and the associated risks of the system. Improvements include a single, newly revised inspection checklist for inspections to be used on all levee systems within Corps authority.

Additionally, our infrastructure is aging. In some cases, the purposes for which it was designed may no longer be valid, such as a levee built for agricultural purposes that may now have urban development behind it.

What does an unacceptable rating mean?

It means that one or more items that make up the levee system are rated as unacceptable and would prevent the system from performing as intended, or a serious deficiency noted in past inspections (which had previously resulted in a minimally acceptable system rating) has not been corrected within the established timeframe.

What's the process for regaining PL 84-99 active status for levees that have been removed from the program?

The local sponsor must reapply to the program. The Corps will complete an eligibility inspection under PL 84-99 when the maintaining agency has fixed the issues for which it was removed from the program. If rated unacceptable, the system is no longer eligible for federal rehabilitation assistance if it is damaged in a flood or storm event. Life safety is the Corps' top priority; therefore, the Corps will continue to provide flood fighting assistance for all systems, regardless of RIP status.