Summary of the Substantial Changes from the Second Draft Interim Levee Design Criteria for Urban and Urbanizing Area State-Federal Project Levees

The Third Draft Interim Levee Design Criteria for Urban and Urbanizing Area State-Federal Project Levees, dated May 15, 2009, contains the following substantial changes as compared to the Second Draft Interim Levee Design Criteria for Urban and Urbanizing Area State-federal Project Levees, dated August 22, 2008:

- Changed the hydraulic top of levee definition to include the expected 500-year water surface
- Extended the date of applicability from at least January 1, 2010 to at least January 1, 2011
- Added a requirement for the entire levee system to use one of the two optional approaches
- Removed the requirement to assume that urbanizing area levees will have 200-year protection
- Changed the required factor of safety for slope stability for water at the hydraulic top of levee from 1.3 to 1.2
- Added landside levee toe underseepage exit gradient criteria for new levees:
  - up to 0.3 for water at the design water surface elevation
  - up to 0.4 for water at the hydraulic top of levee
- Modified criteria for seepage berm design to:
  - extend the applicability of the exit gradient criteria to 300-400 feet from the levee toe
  - require sound engineering judgment in deciding whether exit gradients beyond 300-400 feet are acceptable
  - allow an exit gradient of up to 0.9, instead of 0.8, at the toe of a seepage berm for water at the hydraulic top of levee
  - provide allowable exit gradients for seepage through a seepage berm
  - clarify that linear interpolation is applicable for determining the allowable exit gradient through a seepage berm
  - provide the required factor of safety for uplift
- Set the minimum seismic performance and short-term post-earthquake recovery goal at 10-year flood protection based on levee geometry
- Clarified that relief well performance is measured midway between wells
- Clarified that ditches and depressions are to be analyzed as if they are empty unless they can be assured otherwise
- Clarified that linear interpolation is applicable for determining the allowable exit gradient in a ditch or depression
- Added requirements for inspection, monitoring (with instrumentation), and remediation of poor performance
- Added a list of references