Dx. #3 Platte City

PL 84-99 FLOOD CONTROL WORKS (FCW)
MAINTENANCE COMPLIANCE GUIDE

INSPECTION ITEM	(A) ACCEPTABLE PERFORMANCE LEVEL	(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL	(U) UNACCEPTABLE PERFORMANCE LEVEL
1. Depressions	Minimal depressions or potholes; proper drainage.	Some depressions that will not pond water.	Depressions 6" vertical or greater which endangers the integrity of the levee.
2. Erosion	No erosion of levee crown or slopes.	Erosion of levee crown or slopes that will not interrupt inspection or maintenance access. Erosion gullies less than 6" deep or deviation of 1 foot from designed grade or section.	Erosion of levee crown or slopes that has interrupted inspection or maintenance access. Erosion gullies greater than 6" or deviation of 1 foot or more from designed grade or section.
3. Slope Stability	No slides present, or erosion of slopes more than 4" deep.	Minor surfacial sliding that with deferred repair does not pose an immediate threat to FCW integrity. No displacement or bulges.	Evidence of deep seated sliding (2 ft. vertical or greater) requiring repairs to re-establish FCW integrity.
4. Cracking	No cracks in transverse or longitudinal direction observed in the FCW.	Longitudinal cracks are no longer than the levee height. No displacement and bulging. No transverse cracks observed.	Longitudinal cracks are greater than levee height with some bulging observed. Transverse cracks are evident.
5. Animal Burrows	Continuous animal burrow control program that eliminates any active burrowing in a short period of time.	Animal burrows present that will not result in seepage slope stability problems.	Animal burrows present that would result in possible seepage or slope stability problems.
6. Unwanted Growth	No large brush or trees exist in the FCW section. Grass cover well maintained. Channel capacity for designed flows is not affected.	Minimal tree (2" diameter or smaller) and brush cover present that will not threaten FCW integrity. (NOTE: Trees that have been cut and removed from the levee should have their roots excavated and the cavity filled and compacted with impervious material.) Channel for designed flows capacity is not adversely affected.	Tree, weed and brush cover exists in the FCW requiring removal to re-establish or ascertain FCW integrity. (NOTE: If significant growth on the levee exists, prohibiting rating of other inspection items, then the inspection should be ended until this item is corrected.) Channel obstructions have impaired the floodway capacity and hydraulic effectiveness.
7. Encroachments	No trash, debris, excavations, structures, or other obstructions present.	Trash, debris, excavations, structures, or other obstructions present or inappropriate activities occurring that will not inhibit levee operations and maintenance performance.	Trash, debris, excavations, structures or other obstructions present or inappropriate activities that would inhibit levee operations and maintenance performance.

Platte City Public Hearing Exhibit No. 3
Date 5-24-05 Case No. EO-2005-0329
Reporter Cross Reporting

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8. Riprap/ Revetment	Existing protection works which is properly maintained and undamaged.	No scouring activity that could undercut bank or erode levee or could restrict desired channel flows.	Meandering and/or scour activity that is undercutting bank or eroding embankment or levees or impairs channel flows by causing turbulence, meandering or shoaling.
9. Stability of Concrete Structures	Tilting, sliding or settling of structures, that has been secured which preserves the integrity or performance.	Uncorrected sliding or settlement of structures of a magnitude that doesn't affect performance.	Tilting or settlement of structures that has resulted with a threat to the structure's integrity and performance.
10. Concrete Surfaces	Negligible spalling or scaling. No cracks present that are not controlled by reinforcing steel or that cause integrity deterioration or result in inadequate structure performance.	Spalling, scaling and cracking present, but immediate integrity or performance of structure not threatened.	Surface deterioration or deep, controlled cracks present that result in an unreliable structure.
11. Structural Foundations	No scouring or undermining near the structures.	Scouring near the footing of the structure, but not close enough to impact structure stability during the next flood event.	Scouring or undermining at the foundation which has impacted structure integrity.
12. Culverts	a) No breaks, holes, cracks in the culvert that would result in any significant water leakage. No surface distress that could result in permanent damage.	a) Culvert integrity not threatened by spalls, scales (concrete) or surface rusting. Cracks are present but resulting leakage is not impacting the structure.	a) Culvert has deterioration such as surface distress and/or has significant leakage in quantity or degree to threaten integrity.
	b) Negligible debris or silt blocking culvert section. No or minimal debris or sediment present which have negligible effect on operations of the culvert.	b) Debris or sediment present, which is proposed to be removed prior to the next flood event, that minimally affects the operations of the culvert.	b) Accumulated debris or settlement which has not been annually removed and severely affects the operations of the culvert.
13. Gates	Gates open easily and close to a tight seal. Materials do not have permanent corrosion damage and appear to have historically been maintained adequately.	Gates operate but leak when closed; however, leakage quantity is not a threat to performance. All appurtenances of the facility are in satisfactory condition.	Gates leak significantly when closed or don't operate. Gates and appurtenances have damages which threaten integrity and/or appear not to have been maintained adequately.

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14. Closure Structures	Closure structure in good repair. Placing equipment readily available at all times		Closure structure in poor condition. Parts missing. Placing equipment may not be available within normal warning time.
15. Pumps and Motors	All pumps and motors are operational. Preventive maintenance is occurring and system is periodically subject to performance testing.	All pumps are operational and minor discrepancies are such that pumps could be expected to perform through the next projected period of usage.	Pumps are not operational, or noted discrepancies have not been corrected.
16. Power	Adequate, reliable, and enough quantity to meet demands.		Power source not considered reliable to sustain operations during next flood conditions.
17. Pump Control System	Operational and maintained free of damage, corrosion or other debris.	Operational with minor discrepancies.	Not operational, or uncorrected noted discrepancies.
18. Metallic Items	All metal parts in a plant/building protected from permanent damage from corrosion. Trash racks free from damage and debris and are capable of being cleared, if required, during operation. Gates operable.	Corrosion on metal parts appears maintainable. Trash racks free from damage and minimum debris present and are capable of being cleared before next flood event or during operation. Gates operable.	Metal parts need replacement. Trash racks damaged, have accumulated debris that have not been cleared annually or cannot be cleared during operation.
19. Sump	Clear of debris and obstructions, and mechanisms are in place to maintain this condition during operation.	Clear of large debris and minor obstructions present and mechanisms are in place to deter further accumulation during operation.	Large debris or major obstructions present in sump or no mechanism exists to prevent debris accumulation during operation.

PL 84-99 FLOOD CONTROL WORKS (FCW) ENGINEERING GUIDE			
INSPECTION ITEM	**(A) ACCEPTABLE PERFORMANCE LEVEL**	**(M) MINIMUM ACCEPTABLE PERFORMANCE LEVEL**	**(U) UNACCEPTABLE PERFORMANCE LEVEL**
LEVEL OF PROTECTION	The designed section is for an exceedance frequency greater than 10% chance (10 yr.) with minimum freeboard of 2 feet.	The designed section is for an exceedance frequency between 20% to 10% chance (5-10 yr.) with minimum freeboard of 1 foot.	The designed section is less than the minimum required for a minimum rating.
EROSION CONTROL	Erosion protection in active areas is capable of handling the designed flow velocity for the level of protection for the entire FCW.	Erosion protection is capable of handling the designed flow velocity for the level of protection 75% or more of the FCW.	Erosion protection measures protect less than 75% of the FCW, or if erosion protection was not provided and there is evidence indicating need for erosion protection.
EMBANKMENT	Fill material for embankment is suitable to prevent slides and seepage for the existing side slopes. Fill material is uniform and adequately compacted through the entire FCW.	Material is adequate and suitable to prevent major slides and capable of handling localized seepage for the existing side slopes. Fill material is uniform and adequately compacted in 75% or more of the FCW.	Material is unsuitable and likely to cause numerous slides and allow excessive uncontrolled seepage. Fill material is not uniform, or there is no compaction and evidence indicates a need for compaction.
FOUNDATIONS	Foundation materials will not cause piping, sand boils, seepage, or settlements which reduce the level of protection.	Foundation materials may show signs of excessive seepage, minor sand boils, and localized settlements.	Foundation materials are unsuitable and likely to cause excessive uncontrolled seepage, sand boils, and piping.
STRUCTURES	Structures are capable of performing their design functions and show no signs of failure.	Structures are performing their design functions, but show signs of overtopping and bypassing flows.	Structures are not performing their design functions or show signs of structural failure.