	Le	vee Inspection Report	
Name of System. <u>Oary</u>	т		
	1		2604000015
of Engineers ®	1005	NLD Segment ID.	2004000013
Segment Type: Locally Constructed, Locally Operated	and Maintained		
Levee Sponsor (Name and Organization): Little Calume	et River Basin Development Commission	n,INDOT	
Inspection Report Prepared by: Yuki Galisanao		Date(s) of Inspection: 04/10/2	2023 - 04/10/2023
Inspection Report Prepared by: Chris Schaal			
		Other Segments Within This System	
Segment Name	NLD Segment ID#	Segment Type	Segment Inspection Rating
NPS - Gary North Railroad Tieback	2604000017	Non-Federally Constructed, local O&M	Unacceptable
NPS - Martin Luther King Drive	2604000019	Non-Federally Constructed, local O&M	Unacceptable
Gary South	2604000004	USACE Constructed, Public sponsor O&M	Minimally Acceptable
Gary North	2604000003	USACE Constructed, Public sponsor O&M	Minimally Acceptable
Contents of Levee Inspection Report:	Type of Inspection: Purpose of Special In	Formal Inspection At local sponsor's request, inspecting levee to e	Special Inspection (mark this if purpose is Initial Eligibility Inspection) valuate current deficiencies and make recommendations.
 Interior Drainage System Pump Stations FRM Channels Public Sponsor Pre-Inspection Form National Flood Insurance Program - 44 CFR 65.10 Subset Criteria Evaluation Levee Inspection Reference Guide 	Approval Signature:	Malai Galisense	Date Approved:7/5/23
Photos			

Levee	Inspection	Team	Members	Levee S	nonsor.	USACE.	and Others	()
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Name	Organization	Discipline	Phone Number
Yuki Galisanao	USACE - Chicago District		
Richard R. Realeza	USACE - Chicago District		
Chris Schaal	USACE - Chicago District		
Mike Cook	USACE - Chicago District		
Kristine Gonzalez	USACE - Chicago District		
Brian Sweeney	USACE - Chicago District		
Cooper Coulter	INDOT		
Devon Banda	INDOT		
Colton Cox	INDOT		
Rick Biadouki	INDOT		
Sylvia Pimentel	USACE - Chicago District		
Doug Hines	INDOT		

Levee Segment Inspection Summary:

[Provide an Executive Summary of the segment inspection considering (1) the general condition of the segment, (2) the rationale for key Item ratings, categorized by Feature, and (3) the quantity or severity of notable observations/deficiencies and (4) notable changes in condition since the last inspection.]

A flap gate was missing at one of the gate wells which could prevent the segment from performing as intended. Additionally, there is a retaining wall showing minor movement, on the segment connecting I-65 to eastbound I-94, that should be inspected before further issues develop. There were large trees and significant vegetation near the floodwall and embankments, and minor issues with vegetation near the floodwall and embankment, and unknown condition of the culverts. This is a non-project segment that is not in the PL84-99 program.

Levee System Inspection Summary:

[Synthesize information from the Levee Segment Inspection Summaries for each segment within the levee system. For single-segment levee systems, see Levee Segment Inspection Summary above.]

The Sponsor is performing O&M on the federal segments. Gary North had minor issues with unwanted vegetation, encroachments/debris, rutting, sod cover, concrete cracking or spalling, holes or missing bolts in sheetpile, crooked alignment of floodwall cap, deteriorating joints, sluice and flap gates, and pump stations. There were significant issues with deep ruts in the crest west of Burr Street that were repaired immediately. Gary South had minor issues with unwanted vegetation, debris, erosion/rutting/depressions, sod cover, concrete cracking and spalling, deteriorating joints, sluice and flap gates, pump stations (including missing O&M manuals at some stations), and increased animal burrow activities along the levee slopes. The other 2 non-project segments were not looked at this year.

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification	
1. Unwanted Vegetation Growth	Μ	A	The levee has little or no unwanted vegetation (trees, bush, or undesirable weeds), except for vegetation that is properly contained and/or situated on overbuilt sections, such that the mandatory 3-foot root-free zone is preserved around the levee profile. The levee has been recently mowed. The vegetation-free zone extends 15 feet from both the landside and riverside toes of the levee to the centerline of the tree. If the levee access easement doesn't extend to the described limits, then the vegetation-free zone must be maintained to the easement limits. Reference EP 1110-2-18 and other relevant Corps policy.	2023-0004 : Vegetation on tie-in to levee embankment (M) 2023-0046 : 908: Tree near gate outlet - riverside (M) 2023-0070 : Tall vegetation and unwanted trees on landside and riverside (M) 2023-0076 : Unwanted vegetation on riverside slope (M) 2023-0088 : Trees on riverside slope (M)	
		Μ	Minimal vegetation growth (brush, weeds, or trees 2 inches in diameter or smaller) is present within the zones described above. This vegetation must be removed but does not currently threaten the operation or integrity of the levee.	2023-0091 : Tall vegetation on riverside slope (M) 2023-0094 : Trees on riverside slope (M) 2023-0100 : Vegetation along highway wall (riverside slope) (M)	
		U	Significant vegetation growth (brush, weeds, or any trees greater than 2 inches in diameter) is present within the zones described above and must be removed to reestablish or ascertain levee integrity.	Recommendation: Remove vegetation and trees within 15-foot vegetation free zone from levee toes.	
2. Sod Cover		Α	There is good coverage of sod over the levee.	Justification: No Issues Observed.	
	A	Α	Μ	Approximately 25% of the sod cover is missing or damaged over a significant portion or over significant portions of the levee embankment. This may be the result of over-grazing or feeding on the levee, unauthorized vehicular traffic, chemical or insect problems, or burning during inappropriate seasons.	
		U	Over 50% of the sod cover is missing or damaged over a significant portion or portions of the levee embankment.		
		NA	Surface protection is provided by other means.		
3. Encroachments	Μ	Α	No trash, debris, unauthorized farming activity, structures, excavations, or other obstructions present within the easement area. Encroachments have been previously reviewed by the Corps, and it was determined that they do not diminish proper functioning of the levee.	2023-0115 : Tree down on riverside slope (M) Recommendation: Remove downed tree from side of highway embankment.	
		Μ	Trash, debris, unauthorized farming activity, structures, excavations, or other obstructions present, or inappropriate activities noted that should be corrected but will not inhibit operations and maintenance or emergency operations. Encroachments have not been reviewed by the Corps.		
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the levee.		

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification	
4. Closure Structures	NA	A	Closure structure in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components are clearly marked and installation instructions/ procedures readily available. Trial erections have been accomplished in accordance with the O&M Manual.		
		U	Any of the following issues is cause for this rating: Closure structure in poor condition. Parts missing or corroded. Placing equipment may not be available within the anticipated warning time. The storage vaults cannot be opened during the time of inspection. Components of closure are not clearly marked and installation instructions/ procedures are not readily available. Trial erections have not been accomplished in accordance with the O&M Manual.		
		NA	There are no closure structures along this component of the levee segment / system.		
5. Slope Stability	A	Α	No slides, sloughs, tension cracking, slope depressions, or bulges are present.	2023-0109 : General view of riverside slope stability (A)	
		Μ	Minor slope stability problems that do not pose an immediate threat to the levee embankment.	stability. (A)	
		U	Major slope stability problems (ex. deep seated sliding) identified that must be repaired to reestablish the integrity of the levee embankment.		
6. Erosion/Bank Caving	Μ	Α	No erosion or bank caving is observed on the landward or riverward sides of the levee that might endanger its stability.	2023-0073 : Minor erosion on riverside slope (A) 2023-0106 : Drainage pipe is losing ground cover	
		Μ	There are areas where minor erosion is occurring or has occurred on or near the levee embankment, but levee integrity is not threatened.	on riverside slope (M) Recommendation: Restore topsoil and sod cover on drainage outlet. Eastbound L-65 embankment	
		U	Erosion or caving is occurring or has occurred that threatens the stability and integrity of the levee. The erosion or caving has progressed into the levee section or into the extended footprint of the levee foundation and has compromised the levee foundation stability.	For deep cuts into embankment, add compacted cla and restore topsoil and reseed.	
7. Settlement	A	A	No observed depressions in crown. Records exist and indicate no unexplained historical changes.	Justification: No Issues Observed	
		Μ	Minor irregularities that do not threaten integrity of levee. Records are incomplete or inclusive.		
		U	Obvious variations in elevation over significant reaches. No records exist or records indicate that design elevation is compromised.		

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification		
8. Depressions / Rutting	Α	A	There are scattered, shallow ruts, pot holes, or other depressions on the levee that are unrelated to levee settlement. The levee crown, embankments, and access road crowns are well established and drain properly without any ponded water.	Justification: No Issues Observed.		
		М	There are some infrequent minor depressions less than 6 inches deep in the levee crown, embankment, or access roads that will pond water.			
		U	There are depressions greater than 6 inches deep that will pond water.			
9. Cracking	Α	Α	Minor longitudinal, transverse, or desiccation cracks with no vertical movement along the crack. No cracks extend continuously through the levee crest.	Justification: No Issues Observed.		
				М	Longitudinal and/or transverse cracks up to 6 inches in depth with no vertical movement along the crack. No cracks extend continuously through the levee crest. Longitudinal cracks are no longer than the height of the levee.	
		U	Cracks exceed 6 inches in depth. Longitudinal cracks are longer than the height of the levee and/or exhibit vertical movement along the crack. Transverse cracks extend through the entire levee width.			
10. Animal Control	Μ	Α	Continuous animal burrow control program in place that includes the elimination of active burrowing and the filling in of existing burrows.	2023-0082 : Animal burrow on riverside slope (M) Recommendation: Perform regular animal control,		
		Μ	The existing animal burrow control program needs to be improved. Several burrows are present which may lead to seepage or slope stability problems, and they require immediate attention.	and backfill animal burrows with compacted clay.		
		U	Animal burrow control program is not effective or is nonexistent. Significant maintenance is required to fill existing burrows, and the levee will not provide reliable flood protection until this maintenance is complete.			

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
11. Culverts / Discharge Pipes (This item includes both concrete and corrugated metal pipes.)	М	A	There are no breaks, holes, cracks in the discharge pipes/ culverts that would result in significant water leakage. All joints appear to be closed and the soil tight. The interior condition of pipes has been verified using television camera videotaping or visual inspection methods within the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures. The exterior pipe conditions observed are in good condition.	Justification: Refer to Interior Drainage - Culverts/Discharge Pipes
		М	There are some defects noted that should be monitored. The interior condition of pipes has been verified using television camera videotaping or visual inspection methods at the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures. The exterior pipe conditions observed do not indicate a change in condition since the last condition assessment.	
		U	One or more significant defects exist. The exterior pipe conditions observed indicate there may be a change in pipe condition since the last condition assessment. The interior condition of pipes has not been verified using television camera videotaping or visual inspection methods at the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures.	
		NA	There are no discharge pipes / culverts.	
12. Riprap Revetments & Bank	М	Α	No riprap displacement or stone degradation that could pose an immediate threat to the integrity of channel bank. Riprap intact with no woody vegetation present.	2023-0097 : Vegetation along riverside slope in riprap (M) Recommendation: Remove vegetation from riprap
Protection		Μ	Minor riprap displacement or stone degradation that could pose an immediate threat to the integrity of the channel bank. Unwanted vegetation must be cleared or sprayed with an appropriate herbicide.	
		U	Significant riprap displacement, exposure of bedding, or stone degradation observed. Scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Rock protection is hidden by dense brush, trees, or grasses.	
		NA	There is no riprap protecting this feature of the system, or riprap is discussed in another section.	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
13. Revetments other than	М	Α	Existing revetment protection is properly maintained, undamaged, and clearly visible.	2023-0085 : Concrete spalling/cracking on landside of traffic barrier (M)
Кіргар		Μ	Minor revetment displacement or deterioration that does not pose an immediate threat to the integrity of the levee. Unwanted vegetation must be cleared or sprayed with an appropriate herbicide.	Recommendation: Inspect and stabilize wall along U-65 offramp to Eastbound I-94. Use Polyurethane
		U	Significant revetment displacement, deterioration, or exposure of bedding observed. Scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Revetment protection is hidden by dense brush and trees.	sealant to mitigate cracking on traffic barrier.
		NA	There are no such revetments protecting this feature of the system.	
14. Underseepage Relief Wells/ Toe Drainage Systems	NA	Α	Toe drainage systems and pressure relief wells necessary for maintaining levee segment / system stability during high water functioned properly during the last flood event and no sediment is observed in horizontal system (if applicable). Nothing is observed which would indicate that the drainage systems won't function properly during the next flood, and maintenance records indicate regular cleaning. Wells have been pumped tested within the past 5 years and documentation is provided.	
		М	Toe drainage systems or pressure relief wells are physically damaged or are experiencing some clogging or performance losses as evidenced by performance data, pumping tests, or observation. The performance losses are not expected to significantly affect levee performance during full loading. Wells have been pump tested, drainage systems have been inspected within the past 5 years, and documentation is provided. Maintenance records indicate some well rehabilitation is needed.	
		U	Toe drainage systems or pressure relief wells necessary for maintaining levee segment / system stability during flood events have fallen into disrepair or have become clogged. No maintenance records. No documentation of the required pump testing.	
		NA	There are no relief wells/ toe drainage systems along this component of the levee segment / system.	
15. Seepage	A	Α	No evidence or history of unrepaired seepage, saturated areas, or boils.	Justification: No Issues Observed.
	A	Μ	Evidence or history of minor unrepaired seepage or small saturated areas at or beyond the landside toe but not on the landward slope of levee. No evidence of soil transport.	
		U	Evidence or history of active seepage, extensive saturated areas, or boils.	Applicable

	Rated Item	Rating	Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
1.	Unwanted Vegetation Growth	Μ	 A grass-only or paved zone is maintained on both sides of free of all trees, brush, and undesirable weeds. The veget extends 15 feet from both the land and riverside of the floe level, to the centerline of the tree. Additionally, an 8- foo maintained around the entire structure, including the floo any toe-drains. If the floodwall access easement doesn't extended limits, then the vegetation-free zone must be measement limits. Reference EP 1110- 2-18 and other relevent M Minimal vegetation growth (brush, weeds, or trees 2 inch smaller) is present within the zones described above. This be removed but does not currently threaten the operation floodwall. U Significant vegetation growth (brush, weeds, or any trees inches in diameter) is present within the zones described vegetation threatens the operation or integrity of the flood removed. 	af the floodwall, ation-free zone bodwall, at ground- t root-free zone is dwall toe, heel, and extend to the vant Corps policy.2023-0001 : Phragmites along landslide and riverside walls (M) 2023-0013 : Vegetation within 15 feet of wall on riverside (M)
2.	Encroachments	М	 A No trash, debris, unauthorized structures, excavations, or present within the easement area. Encroachments have be reviewed by the Corps, and it was determined that they d proper functioning of the floodwall. M Trash, debris, unauthorized structures, excavations, or oth present, or inappropriate activities noted that should be const inhibit operations and maintenance or emergency oper Encroachments have not been reviewed by the Corps. U Unauthorized encroachments or inappropriate activities reinhibit operations and maintenance, emergency operation inhibit operations and maintenance, emergency operation 	Intermediationother obstructions een previously o not diminish2023-0010 : Graffiti on landslide face (M) 2023-0016 : Potential encroachment on riverside face. Check that it is Section 408 approved (A) 2023-0019 : Concrete debris on landside (M) 2023-0043 : Fencing and removed bollard may be encroachment on riverside (M) 2023-0055 : Debris on riverside (M) 2023-0055 : Debris on riverside (M) Recommendation: Remove debris from 15-foot encroachment free zone on either side of floodwall.

	Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification	
3.	Closure Structures (Stop Log Closures and Gates) (A or U only)			Closure structure in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components are clearly marked and installation instructions/ procedures readily available. Trial erections have been accomplished in accordance with the O&M Manual. Any of the following issues is cause for this rating: Closure structure in poor condition. Parts missing or corroded. Placing equipment may not be available within the anticipated warning time. The storage vaults cannot be		
			NA	opened during the time of inspection. Components of closure are not clearly marked and installation instructions/ procedures are not readily available. Trial erections have not been accomplished in accordance with the O&M Manual.		
				system.		
4.	Concrete Surfaces	М	Μ	Α	Negligible spalling, scaling or cracking. If the concrete surface is weathered or holds moisture, it is still satisfactory but should be seal coated to prevent freeze/ thaw damage.	2023-0007 : Minor spalling on landside face (M) 2023-0022 : Minor spalling on top and bottom of landside floodwall (M)
			Μ	Spalling, scaling, and open cracking present, but the immediate integrity or performance of the structure is not threatened. Reinforcing steel may be exposed. Repairs/ sealing is necessary to prevent additional damage during periods of thawing and freezing.	2023-0049 : Minor Cracks near joint of landside floodwall (M) 2023-0058 : Minor spalling on top of landside floodwall (M) 2023-0067 : Minor spalling on top of landside	
			U	Surface deterioration or deep cracks present that may result in an unreliable structure. Any surface deterioration that exposes the sheet piling or lies adjacent to monolith joints may indicate underlying reinforcement corrosion and is unacceptable.	floodwall (M) Recommendation: Monitor cracks and spalling for further degradation	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification	
5. Tilting, Sliding or Settlement	A	А	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.	Justification: No Issues Observed.	
Structures		Μ	There are areas of tilting, sliding, or settlement (either active or inactive) that need to be repaired. The maximum offset, either laterally or vertically, does not exceed 2 inches unless the movement can be shown to be no longer actively occurring. The integrity of the structure is not in danger.		
		U	There are areas of tilting, sliding, or settlement (either active or inactive) that threaten the structure's integrity and performance. Any movement that has resulted in failure of the waterstop (possibly identified by daylight visible through the joint) is unacceptable. Differential movement of greater than 2 inches between any two adjacent monoliths, either laterally or vertically, is unacceptable unless it can be shown that the movement is no longer active. Also, if the floodwall is of I-wall construction, then any visible or measurable tilting of the wall toward the protected side that has created an open horizontal crack on the riverside base of a monolith is unacceptable.		
6. Foundation of Concrete	Μ	Α	No active erosion, scouring, or bank caving that might endanger the structure's stability.	2023-0028 : Typical 32" deep animal burrows on riverside (M)	
Structures		-	Μ	There are areas where the ground is eroding towards the base of the structure. Efforts need to be taken to slow and repair this erosion, but it is not judged to be close enough to the structure or to be progressing rapidly enough to affect structural stability before the next inspection. For the purposes of inspection, the erosion or scour is not closer to the riverside face of the wall than twice the floodwall's underground base width if the wall is of L-wall or T-wall construction; or if the wall is of sheetpile or I-wall construction, the erosion is such that the wall is expected to remain stable until the next inspection.	2023-0031 : Animal burrow on riverside (M) 2023-0046 : Animal burrows 6 inch on riverside (M) Recommendation: Backfill animal burrows with compacted clay. Maintain animal control program.
		U	Erosion or bank caving observed that is closer to the wall than the limits described above, or is outside these limits but may lead to structural instabilities before the next inspection. Additionally, if the floodwall is of I-wall or sheetpile construction, the foundation is unacceptable if any turf, soil or pavement material got washed away from the landside of the I-wall as the result of a previous overtopping event.		

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
7. Monolith Joints	А	Α	The joint material is in good condition. The exterior joint sealant is intact and cracking/ desiccation is minimal. Joint filler material and/or waterstop is not visible at any point.	Justification: No issues Observed
		Μ	The joint material has appreciable deterioration to the point where joint filler material and/or waterstop is visible in some locations. This needs to be repaired or replaced to prevent spalling and cracking during freeze/ thaw cycles, and to ensure water tightness of the joint.	
		U	The joint material is severely deteriorated or the concrete adjacent to the monolith joints has spalled and cracked, damaging the waterstop; in either case damage has occurred to the point where it is apparent that the joint is no longer watertight and will not provide the intended level of protection during a flood.	
		NA	There are no monolith joints in the floodwall.	
8. Underseepage Relief Wells/Toe Drain Systems	NA	A	Toe drainage systems and pressure relief wells necessary for maintaining levee segment / system stability during high water functioned properly during the last flood event and no sediment is observed in horizontal system (if applicable). Nothing is observed which would indicate that the drainage systems won't function properly during the next flood, and maintenance records indicate regular cleaning. Wells have been pumped tested within the past 5 years and documentation is provided.	
		Μ	Toe drainage systems or pressure relief wells are damaged and may become clogged if they are not repaired. Maintenance records are incomplete or indicate irregular cleaning and pump testing.	
		U	Toe drainage systems or pressure relief wells necessary for maintaining levee segment / system stability during flood events have fallen into disrepair or have become clogged. No maintenance records. No documentation of the required pump testing.	
		NA	There are no relief wells/ toe drainage systems along this component of the levee segment / system.	
9. Seepage	A	Α	No evidence or history of unrepaired seepage, saturated areas, or boils.	Justification: No Issues Observed
	A	Μ	Evidence or history of minor unrepaired seepage or small saturated areas at or beyond the landside floodwall foundation.	
		U	Evidence or history of active seepage, extensive saturated areas, or boils.	

Key: A = Acceptable. M = Minimally Acceptable. U = Unacceptable. N/A = Not Applicable.

Levee Inspection Report

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
1. Vegetation and Obstructions	Μ	Α	No obstructions, vegetation, debris, or sediment accumulation noted within interior drainage channels or blocking the culverts, inlets, or discharge areas. Concrete joints and weep holes are free of grass and weeds.	2023-0052 : Phragmites encroaching on ditch (M) Recommendation: Remove vegetation from ditch
		Μ	Obstructions, vegetation, debris, or sediment are minor and have not impaired channel flow capacity or blocked more than 10% of any culvert openings, but should be removed. A limited volume of grass and weeds may be present in concrete channel joints and weep holes.	
		U	Obstructions, vegetation, debris, or sediment have impaired the channel flow capacity or blocked more than 10% of a culvert opening. Sediment and debris removal required to re-establish flow capacity.	
2. Encroachments	A	Α	No trash, debris, unauthorized structures, excavations, or other obstructions present within the easement area. Encroachments have been previously reviewed by the Corps, and it was determined that they do not diminish proper functioning of the interior drainage system.	2023-0024 : 910: Outlet is clear of debris (A) Justification: No Issues Observed.
		М	Trash, debris, unauthorized structures, excavations, or other obstructions present, or inappropriate activities noted that should be corrected but will not inhibit operations and maintenance or emergency operations. Encroachments have not been reviewed by the Corps.	
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of this component of the interior drainage system.	
3. Ponding Areas	NA	Α	No trash, debris, structures, or other obstructions present within the ponding areas. Sediment deposits do not exceed 10% of capacity.	
		Μ	Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit operations and maintenance. Sediment deposits do not exceed 30% of capacity.	
		U	Trash, debris, excavations, structures, or other obstructions, or other encroachments or activities noted that will inhibit operations, maintenance, or emergency work. Sediment deposits exceeds 30% of capacity.	
		NA	There are no ponding areas associated with the interior drainage system.	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
4. Fencing and Gates	Μ	A	Fencing is in good condition and provides protection against falling or unauthorized access. Gates open and close freely, locks are in place, and there is little corrosion on metal parts. Fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged.	2023-0015 : 910: Handrail is unsecure (M) Recommendation: Repair handrail on 910
		U NA	Fencing and gates are damaged or corroded to the point that replacement is required, or potentially dangerous features are not secured. There are no features noted that require safety fencing.	
5. Concrete Surfaces (Such as gatewells, outfalls, intakes, or culverts)	М	Α	Negligible spalling, scaling or cracking. If the concrete surface is weathered or holds moisture, it is still satisfactory but should be seal coated to prevent freeze/ thaw damage.	2023-0012 : 910: Concrete is cracked (M) Recommendation: Replace cracked concrete
		Μ	Spalling, scaling, and open cracking present, but the immediate integrity or performance of the structure is not threatened. Reinforcing steel may be exposed. Repairs/ sealing is necessary to prevent additional damage during periods of thawing and freezing.	
		U	Surface deterioration or deep cracks present that may result in an unreliable structure. Any surface deterioration that exposes the sheet piling or lies adjacent to monolith joints may indicate underlying reinforcement corrosion and is unacceptable.	
		NA	There are no concrete items in the interior drainage system.	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
6. Tilting, Sliding or Settlement of Concrete and Sheet Pile Structures (Such as gate wells, outfalls, intakes, or culverts)	Α	А	There are no significant areas of tilting, sliding, or settlement that would	Justification: No Issues Observed
		М	There are areas of tilting, sliding, or settlement (either active or inactive) that need to be repaired. The maximum offset, either laterally or vertically, does not exceed 2 inches unless the movement can be shown to be no longer actively occurring. The integrity of the structure is not in danger.	
		U	There are areas of tilting, sliding, or settlement (either active or inactive) that threaten the structure's integrity and performance. Any movement that has resulted in failure of the waterstop (possibly identified by daylight visible through the joint) is unacceptable. Differential movement of greater than 2 inches between any two adjacent monoliths, either laterally or vertically, is unacceptable unless it can be shown that the movement is no longer active. Also, if the floodwall is of I-wall construction, then any visible or measurable tilting of the wall toward the protected side that has created an open horizontal crack on the riverside base of a monolith is unacceptable.	
		NA	There are no concrete items in the interior drainage system.	
7. Foundation of Concrete	Α	Α	No active erosion, scouring, or bank caving that might endanger the structure's stability.	Justification: No Issues Observed.
Structures (Such as culverts, inlet and discharge structures, or gatewells.)		М	There are areas where the ground is eroding towards the base of the structure. Efforts need to be taken to slow and repair this erosion, but it is not judged to be close enough to the structure or to be progressing rapidly enough to affect structural stability before the next inspection. The rate of erosion is such that the structure is expected to remain stable until the next inspection.	
			U	Erosion or bank caving observed that may lead to structural instabilities before the next inspection.
		NA	There are no concrete items in the interior drainage system.	

	Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification	
	8. Monolith Joints	A	Α	The joint material is in good condition. The exterior joint sealant is intact and cracking/ desiccation is minimal. Joint filler material and/or waterstop is not visible at any point.	Justification: No Issues Observed.	
			Μ	The joint material has appreciable deterioration to the point where joint filler material and/or waterstop is visible in some locations. This needs to be repaired or replaced to prevent spalling and cracking during freeze/ thaw cycles, and to ensure water tightness of the joint.		
			U	The joint material is severely deteriorated or the concrete adjacent to the monolith joints has spalled and cracked, damaging the waterstop; in either case damage has occurred to the point where it is apparent that the joint is no longer watertight and will not provide the intended level of protection during a flood.		
			NA	There are no monolith joints in the interior drainage system.		
	9. Culverts/Discharge Pipes	Μ	Μ	A	There are no breaks, holes, cracks in the discharge pipes/ culverts that would result in significant water leakage. All joints appear to be closed and the soil tight. The interior condition of pipes has been verified using television camera videotaping or visual inspection methods within the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures. The exterior pipe conditions observed are in good condition.	Justification: Inspection videos in 2022 found minor longitudinal cracks and fine deposits in 910 culvert. Recommendation: Monitor cracks for progression. Clear sediment from culverts and inspect inlets for proper filtration.
			Μ	There are some defects noted that should be monitored. The interior condition of pipes has been verified using television camera videotaping or visual inspection methods at the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures. The exterior pipe conditions observed do not indicate a change in condition since the last condition assessment.		
			U	One or more significant defects exist. The exterior pipe conditions observed indicate there may be a change in pipe condition since the last condition assessment. The interior condition of pipes has not been verified using television camera videotaping or visual inspection methods at the frequency determined in accordance with Levee Inspections and Site Visits: Standard Operating Procedures.		
1			NA	There are no discharge pipes/ culverts.		

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
10. Sluice / Slide Gates	М	A	Gates open and close freely to a tight seal or minor leakage. Gate operators are in good working condition and are properly maintained. Sill is free of sediment and other obstructions. Gates and lifters have been maintained and are free of corrosion. Documentation provided during the inspection.	2023-0003 : 903: Gate operated and sealed well (A) 2023-0006 : 903: Concrete structure is good (A) 2023-0009 : 903: Some vegetation and debris in the gate inlet and outlet (M)
		Μ	Gates and/or operators have been damaged or have minor corrosion, and open and close with resistance or binding. Leakage quantity is controllable, but maintenance is required. Sill is free of sediment and other obstructions.	2023-0018 : 910: Gate opens fully (A) 2023-0021 : 910: Gate closes and seals (A) 2023-0027 : 902: Gate operated but could not see if
		U	Gates do not open or close and/or operators do not function. Gate, stem, lifter and/or guides may be damaged or have major corrosion.	2023-0030 : 901: Some vegetation blocking the inlet
		NA	There are no sluice/ slide gates.	2023-0033 : 901: Gauge is unreadable due to moisture (M) 2023-0036 : 901: Generator inoperable - Could not verify if gate fully opened and closed (M) 2023-0039 : 908: Gate squeaked badly. Generator inoperable - Could not verify if gate fully opened and closed (M) 2023-0042 : 908: Some sediment on sill (M) 2023-0045 : 908: Some vegetation blocking pipe (M) 2023-0048 : 906: Could not see if sediment in sill (water). Gate only partially opened and closed (inoperable generator) (A) 2023-0051 : 906: Some vegetation in inlet (M) 2023-0057 : 906: No vegetation blocking outlet (A) 2023-0057 : 906: Moisture prevented reading of gauge (M) Recommendation: Remove vegetation from inlets and outlets. Remove sediments from sills where necessary. Replace gauges on 901 and 906.
11. Flap Gates/ Flap Valves/ Pinch Valves	U	Α	Gates/ valves open and close easily with minimal leakage, have no corrosion damage, and have been exercised and lubricated as required.	2023-0079 : 117a: Gate missing. (U) Recommendation: Replace flap gate on 117a.
		Μ	Gates/ valves will not fully open or close because of obstructions that can be easily removed, or have minor corrosion damage that requires maintenance.	
		U	Gates/ valves are missing, have been damaged, or have deteriorated to the point that they need to be replaced.	
		NA	There are no flap gates.	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
12. Trash Racks		Α	Trash racks are fastened in place and properly maintained.	
(non- mechanical)	NA	M	Trash racks are in place but are unfastened or have bent bars that allow debris to enter into the pipe or pump station, bars are corroded to the point that up to 10% of the sectional area may be lost. Repair or replacement is required.	
		U	Trash racks are missing or damaged to the extent that they are no longer functional and must be replaced. (For example, more than 10% of the sectional area may be lost.)	
		NA	There are no trash racks, or they are covered in the pump stations section of the report.	
13. Other Metallic Items	A	Α	All metal parts are protected from corrosion damage and show no rust, damage, or deterioration that would cause a safety concern.	Justification: No Issues Observed
		Μ	Corrosion seen on metallic parts appears to be maintainable.	
		U	Metallic parts are severely corroded and require replacement to prevent failure, equipment damage, or safety issues.	
		NA	There are no other significant metallic items.	
14. Riprap Revetments of Inlet/ Discharge Areas	Μ	Α	No riprap displacement or stone degradation that could pose an immediate threat to the integrity of channel bank. Riprap intact with no woody vegetation present.	2023-0121 : Movement of riprap down stream (M) Recommendation: Restore riprap to original location, consider methods of stabilization.
		М	Minor riprap displacement or stone degradation that could pose an immediate threat to the integrity of the channel bank. Unwanted vegetation must be cleared or sprayed with an appropriate herbicide.	
		U	Significant riprap displacement, exposure of bedding, or stone degradation observed. Scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Rock protection is hidden by dense brush, trees, or grasses.	
		NA	There is no riprap protecting this feature of the system, or riprap is discussed in another section.	

Rated Item	Rating		Rating Guidelines	Observation Locations with Descriptions and Resulting Item Rating Justification
15. Revetments other than	NA	А	Existing revetment protection is properly maintained, undamaged, and clearly visible.	
Rıprap		Μ	Minor revetment displacement or deterioration that does not pose an immediate threat to the integrity of the levee. Unwanted vegetation must be cleared or sprayed with an appropriate herbicide.	
				U
		NA	There are no such revetments protecting this feature of the system.	

Key: A = Acceptable. M = Minimally Acceptable. U = Unacceptable. N/A = Not Applicable.

Inspect ID: 2023-0004 Title: 2604000015_CELRC_2023_A_2023- 0004_1_1681135963609.jpeg Rated Item: 1. Unwanted Vegetation Growth Caption: 0004 - Minimally Acceptable - Vegetation on tie-in to levee embankment
Inspect ID: 2023-0046 Title: 2604000015_CELRC_2023_A_2023- 0124_2_1681142730966.jpeg Rated Item: 1. Unwanted Vegetation Growth Caption: 0046 - Minimally Acceptable - 908: Tree near gate outlet - riverside





Inspect ID: 2023-0094 Title: 2604000015_CELRC_2023_A_2023- 0094_1_1681140839511.jpeg Rated Item: 1. Unwanted Vegetation Growth Caption: 0094 - Minimally Acceptable - Trees on riverside slope
Inspect ID: 2023-0100 Title: 2604000015_CELRC_2023_A_2023- 0100_1_1681141648720.jpeg Rated Item: 1. Unwanted Vegetation Growth Caption: 0100 - Minimally Acceptable - Vegetation along highway wall (riverside slope)































Inspect ID: 2023-0067 Title: 2604000015_CELRC_2023_A_2023- 0067_1_1681138512030.jpeg Rated Item: 4. Concrete Surfaces Caption: 0067 - Minimally Acceptable - Minor spalling on top of landside floodwall
Inspect ID: 2023-0028 Title: 2604000015_CELRC_2023_A_2023- 0028_1_1681137115677.jpeg Rated Item: 6. Foundation of Concrete Structures Caption: 0028 - Minimally Acceptable - Typical 32" deep animal burrows on riverside





















Inspect ID: 2023-0054 Title: 2604000015_CELRC_2023_A_2023- 0054_1_1681143662416.jpeg Rated Item: 10. Sluice / Slide Gates Caption: 0054 - Acceptable - 906: No vegetation blocking outlet
Inspect ID: 2023-0057 Title: 2604000015_CELRC_2023_A_2023- 0057_2_1681143791428.jpeg Rated Item: 10. Sluice / Slide Gates Caption: 0057 - Minimally Acceptable - 906: Moisture prevented reading of gauge





Levee System 2605000003 / Segment 2604000015 Levee Sponsor Pre-Inspection Form

Purpose: To collect the best and most recent information to ensure all maintenance activities, including any improvements or repair work, and any other changes in condition are appropriately noted and documented during this inspection. This information is important to help pre-plan locations for inspectors during the field inspection.

Directions: To be filled out directly by the levee sponsor/maintaining agency or by USACE through interviewing the levee sponsor/maintaining agency during coordination efforts in preparation for the inspection. If the requested information is contained in supplemental documentation that was provided to USACE separately then only referencing to that supplemental documentation or providing information different than what is in the supplemental documentation is required on this form.

Levee Sponsor/Maintaining Agency: Little Calumet River Basin Development Commission, INDOT

Date of last USACE Inspection: 07/07/2022

Date Levee Sponsor was notified of upcoming Inspection: 02/15/2023

1. Summary of maintenance/repairs/modifications performed since the last USACE inspection (if not captured in maintenance logs/documentation that has been provided separately):

2. Summary of planned actions/improvements/recommendations, but not yet accomplished:

3. Results from inspections conducted by the levee sponsor/maintaining agency (if inspection documentation has not been provided separately):

4. Description of any performance information observed, including successful performance, since the last USACE inspection. Include intervention measures taken, such as floodfighting or operational actions (e.g. operating pumps or closures) during high water events:

5. Identify any specific locations or components that you would like to be closely inspected or have planned testing scheduled (e.g. for pump stations/closures/relief wells) to correspond with the USACE inspection:

6. Provide any other information you want to note to have occurred since the last USACE inspection, such as any training/testing/emergency exercises or communication activities:

NFIP Finding			National Flood Insurance Program (NFIP) - 44 CFR 65.10 Sub-set Criteria Evaluation	CFR Section
Positive	Negative	No Closures		
			Operation plan for closures includes documentation of the flood warning system that will be used to trigger	65.10(c)(1)i
			emergency operation activities and demonstration that sufficient flood warning time exists for the completed	
			operation of all closure structures, including necessary sealing, before floodwaters reach the base of the closure.	
			(reference General Items, Rated Item 3. Flood Preparedness and Training)	
			Operation plan for closures includes specific actions and assignments of responsibility by individual name or title.	65.10(c)(1)ii
			(reference General Items, Rated Item 1, Operations and Maintenance Manuals and Rated Item 3. Flood	
			Preparedness and Training)	
			The maintenance plan specifies the maintenance activities to be performed to ensure that the stability, height, and	65.10(d)
			overall integrity of the levee and its associated structures and systems are maintained. (reference General Items,	
			Rated Item 1, Operations and Maintenance Manuals and Levee Sponsor Pre-Inspection Form or other available	
			levee sponsor maintenance records or plans.)	
			The maintenance plan specifies the frequency of the maintenance activities. (reference General Items, Rated Item 1,	65.10(d)
			Operations and Maintenance Manuals and Levee Sponsor Pre-Inspection Form or other available levee sponsor	
			maintenance records or plans.)	
			The maintenance plan specifies the person by name or title responsible for the maintenance activities. (reference	65.10(d)
			General Items, Rated Item 1, Operations and Maintenance Manuals and Levee Sponsor Pre-Inspection Form or	
			other available levee sponsor maintenance records or plans.)	



NLD

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Levee Segment

NLD Levee Segment ID 2604000015

Location Gary

Inspection Type Special

Start Date 10-Apr-2023

End Date 10-Apr-2023

Inspected By Chris Schaal, Mike Cook, Richard R.



SHEET INDEX

Levee: INDOT

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MAP ELEMENTS

2 Standard Sheets





1:500 Scale



1:500 Scale



1:500 Scale

SHEET INDEX

Levee: INDOT

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MAP ELEMENTS

1 Standard Sheets





1:250 Scale



1:250 Scale

Levee Inspection Reference Guide

The purpose of the Levee Inspection Reference Guide is to provide supporting direction for conducting formal and special levee inspections, determining item ratings and finalizing the results of the inspection. This Checklist is to be used with the Standard Operation Procedures (SOP) for Levee Inspections and Site Visits.

A. Definitions:

Approved Alteration - Any action that builds upon, alters, improves, moves, or occupies a levee system. For federally authorized levee systems, a USACE Section 408 permission has been issued. For non-federally constructed and locally maintained levee systems, the levee sponsor is aware of and has approved the alteration. Often, observations of approved alterations are handled under the Encroachment item in the Levee Inspection Checklist. These observations should be noted as such and details included in the observation descriptions.

Encroachment - A non-project item such as trash, debris, structures, obstructions or unauthorized/inappropriate activities within the easement/right-of-way of the levee. For federally authorized levee systems, no USACE Section 408 permission has been issued. For non-federally constructed and locally maintained levee systems, the levee sponsor is unaware of and/or has not approved the non-project item or activity.

Feature - A component of a levee segment/system (e.g. Embankment, Floodwall, Channel, etc.). Levee segments/systems may have multiple Features that function together to exclude water from a defined leveed area. Main Features have their own section in the Levee Inspection Checklist.

Formal Inspection - A pre-scheduled comprehensive levee inspection by a team of subject matter experts led by a professional engineer or professional geologist to (1) document levee condition, (2) assess progress of ongoing risk management activities, (3) inform risk assessments and new risk management recommendations, and (4) include specific evaluations or testing, such as exercising closures or performing relief well pump tests.

Item - A characteristic of a levee Feature (e.g. Encroachments, Sod Cover, Seepage, etc.) that is used to assess the condition of the levee, inform risk assessments, and/or evaluate adequacy of operations and maintenance.

Levee Segment - A levee segment is a discrete portion of a levee system that is operated and maintained by a single entity. A levee segment may be composed of one or more levee features.

Levee System or Levee - A man-made structure that does not cross a watercourse, usually an earthen embankment or floodwall, designed and constructed with the principle function of excluding flood waters for a limited range of flood events from a portion of the floodplain (referred to as "leveed area").

National Flood Insurance Program (NFIP) - A voluntary program administered by the Federal Emergency Management Agency (FEMA) to mitigate flood losses through community-enforced building and zoning ordinances and to provide property owners with access to federally-backed flood insurance.

Negative Finding - A conclusion that there is sufficient information to determine that a specific criteria of 44 CFR 65.10 for the NFIP has not been met as a result of a levee inspection.

Non-Project Segment - a form of manmade high ground which a levee system/segment ties into, whose existence and performance is necessary for excluding flood waters from the leveed area, but is not under any USACE authority.

Observation - A specific location (point or line) where an Item is evaluated and rated based on the rating guidelines (e.g. an area of levee that has less than 50% sod coverage). **Observation Location Description** - Information that further describes the observation location such as land or waterside of the levee or proximity along the slope or crown that provides the reader with sufficient information to find the observation during future maintenance activities or inspections. Observation location descriptions may include the following: landside toe, landside toe and slope, landside levee slope only, landside slope and crown, slopes and crown, slopes, toes, waterside toe, waterside toe and slope, waterside levee slope only, waterside slope and crown, other.

Observation Number - A numeric value that is used to identify a specific observation location during an inspection.

Positive Finding - A conclusion that there is sufficient information to determine that a specific criteria of 44 CFR 65.10 for the NFIP has been met as a result of a levee inspection. **Rating Guidelines -** Established parameters to assist an inspector in assessing the visual condition of a specific location (point or line) or multiple locations that serve as the rationale for a final Item rating.

Special Inspection - A formally documented visual inspection that is requested by the levee sponsor or required due to changed conditions or to document performance.

B. Use of the Levee Inspection Checklist:

General Notes:

- Each individual levee segment will have its own inspection results.
- Include only the feature sections of the Checklist that apply to the segment being inspected.

- The Levee Inspection Summary and the section labeled "General Items" is required for every formal and special inspection.
- Specific data fields have been included in the National Levee Database (NLD) to document frequency of inspection, testing or operation and condition for the following Features or Items: pipes, gates, relief wells, toe drains and closures. Applicable tables should be attached to the Levee Inspection Report (see Appendix G of the SOP for Levee Inspections and Site Visits. Specific corrective recommendations should not be included with the inspection results. Inspection results should be used to develop risk-informed recommendations as part of the Levee Risk Management Summary (See EC 1165-2-218).
- If there is a non-project segment as part of a levee system with a federally authorized segment that rights-of-entry could not be obtained, then visual observations should be documented in a Site Visit Summary.

Specific Levee Inspection Features Sections and Items:

- The items labeled "Culverts and Discharge Pipes" includes all gravity flow and pressurized pipes that pass over or through the levee and its foundation, as well as pipes away from the levee. Judgment and consistency should be exercised when determining if pipes should be rated under the Levee Embankment Feature or the Interior Drainage Feature "Culverts and Discharge Pipes" rated items. Pipe closures and drainage features should be rated in their respective items under the Interior Drainage System Feature. This includes all associated gates and drainage ditches, ponding areas and structures that are functioning as interior drainage components along the levee. The pump station feature has a separate item for intake and discharge pipes associated with those Features.
- The items labeled "Closure Structures" includes all closure structures, sandbag and earthen closures, stop logs and gates. Conduit and culvert closures are documented and rated in the appropriate items within the Interior Drainage System Feature.
- The starting and stopping location for embankments, floodwalls and closures shall be determined in a case-by-case basis.
- The section labeled "Flood Risk Management Channels" includes channels that have been constructed in association with the levee system. This section may also be used to inspect channels independent of levees. For "shoaling", the rating guidelines describing vegetation in a shoal are intended to document the permanence of the shoal and its likely impact on channel integrity or flow capacity.
- The Feature section labeled "Pump Stations" includes the structure of the pump station and all associated intake/discharge pipe, mechanical/electrical systems and equipment.
- For "Interior Drainage System", "Flood Risk Management Channels", and "Pump Stations", conditions of Items that impact levee embankments or floodwalls (e.g. ditches, ponding areas, bank stability or erosion) should also be rated under the appropriate Levee Embankments or Floodwalls section to reflect the impact on levee integrity.

C. Observation Ratings:

General Notes:

- For each Observation noted during the inspection, the inspector will apply a rating to the Observation based on the rating guidelines associated with the corresponding Item. Overall Item ratings are assigned based on summarizing all Observations for that Item.
- When an observation is associated with more than one feature (e.g. observed erosion identified in or near a levee embankment and a flood risk management channel), observations shall be recorded, described, and rated within each appropriate feature and item.
- Inspectors should document any observation/activity that can be visually seen from the levee that may adversely affect the integrity of the levee, even if the concern is beyond the limits of the easement/right- of-way, with documentation that the Observation is outside the easement/right-of-way. It is understood that resolution of these instances may be beyond the control of the levee sponsor.
- Observations associated with approved Section 408 permissions or levee sponsor permits for modifications should be rated under the corresponding Item and feature or under "Encroachments" and documented as such.
- Seepage Observation ratings should consider information collected during recent flood events.
- Most levee systems have components that may require testing or inspection to occur at a frequency that is outside of or more frequent than during pre-scheduled formal inspections to assess their internal condition or operability. These components usually are culverts and discharge pipes; relief wells and toe drains; closures, gates, and valves; and operational systems in pump stations. Requirements for testing/inspection of these components are typically prescribed in the levee's operations and maintenance manual. A field observation must be recorded of visible conditions of each component during an inspection. This will be used to supplement internal conditional assessments using PACP defect codes for culverts and discharge pipes and toe drains; internal conditional assessments from pump testing for relief wells; and operational adequacy from testing/installation records for closures, gates and valves, and operational systems in pump stations in the Item Rating determination.
- If Districts schedule a walk-through pipe inspection (in accordance with EM 1110-2-2902 and EM 385-1-1) in conjunction with a levee inspection, inspectors must document both the interior conditions by assigning a PACP defect code and the pipe's exterior conditions with an inspection Observation Rating.

General Guidelines for Assigning Observation Ratings:

Levee Inspection Report

Acceptable	Minimally Acceptable	Unacceptable
An "Acceptable" observation rating generally means that it has been operated and maintained in a way that meets the intent of the "Acceptable" rating guidelines herein, and is not expected to have a negative impact on performance	A "Minimally Acceptable" observation rating generally means that it has deficiencies that should be corrected, but are not currently expected to have a negative impact. If not corrected, these deficiencies could lead to a negative impact on performance	An "Unacceptable" observation rating generally means that it has serious deficiencies that require correction because these deficiencies are expected to have a negative impact on performance.

Documentation of the levee inspection observations should include, at a minimum:

- Observation number associated with the point or line
- • Observation rating of "Acceptable", "Minimally Acceptable" or "Unacceptable" based on rating guidelines for the Item
- Observation location description
- Levee station, river mile and/or GPS latitude/longitude associated with the point or line
- Description of the observation which is a detailed narrative that explains why an observation was documented and the rationale for the observation rating
- Photo associated with the observation point or line.
- Photo number related to a photograph of the observation point or line.

D. Item Ratings:

- Item ratings will be determined by considering all associated Observation ratings comprehensively. Rationale for overall Item ratings must be documented in the Levee Inspection Checklist.
- If the Item does not exist within the levee segment, the Item should be rated "N/A".

General Guidelines for Assigning Item Ratings:

Acceptable Item	Minimally Acceptable Item	Unacceptable Item
Observations are rated "Acceptable", or one or	One or more Observations are rated	One or more Observations are rated
more observations are rated "Minimally	"Minimally Acceptable" or one or more	"Unacceptable" and the number or severity of
Acceptable" but the number or severity of	Observations were rated "Unacceptable" but	Observations collectively has are expected to
"Minimally Acceptable" Observations	the number or severity of Observations	have a negative impact on performance.
collectively is not expected to have a negative	collectively are not currently expected to have	
impact on performance. No Observations were	a negative impact, but if not corrected	
rated as "Unacceptable."	deficiencies could lead to a negative impact on	
-	performance.	