MEMORANDUM FOR Chief, Operation Division (CEMVN-OD-W/Amy Powell)

SUBJECT: 2016 Annual (Operations and Maintenance) Compliance Inspection for Orleans Levee District – New Orleans East Bank (Orleans Metro Subbasin) (OLD1)

- 1. Please find Engineering Division's input for the subject routine levee inspection (Encl).
- 2. The supporting documentation from the limited field inspection has been assembled in a format that should accommodate your needs in preparing the Continuing Eligibility Inspection Report. This documentation is based upon the limited visual observations by experienced design personnel. Engineering analyses were not performed and project documents were not evaluated.
- 3. Based on team observations from the 2016 routine inspection, an overall rating of the levee systems and segments for which the Orleans Levee District (OLD) has maintenance responsibility has been classified as Minimally Acceptable. The deficiencies and recommendations presented in this report should be reviewed and utilized in scheduling OLD's routine maintenance activities and developing a plan to correct the deficiencies presented in this report. Failure to comply with the recommendations laid out in this inspection report and OLD's plan for corrective actions within the next year could result in an Unacceptable Rating in 2017.
- 4. The basis for the Minimally Acceptable (M) rating for this levee system/segment is due to "M" rating(s) for rated item(s) contained in this report and for rating deficiencies described in Section G of the general instructions for the Flood Damage Reduction Segment/System Inspection Report. The predominant deficiencies observed were sod cover, encroachments, erosion, depressions/rutting, seepage, concrete surfaces, and foundation of concrete structures.
- 5. This inspection rating represents the U.S. Army Corps of Engineers' (USACE) evaluation of operations and maintenance of this flood damage risk reduction system and may be used in conjunction with other information for a levee system evaluation for the National Flood Insurance Program (NFIP). Due to the Minimally Acceptable rating for this year's routine inspection, it is recommended that OLD evaluate the potential impacts of this rating to the levee system's FEMA accreditation, if applicable. A

CEMVN-ED-F

SUBJECT: 2016 Annual (Operations and Maintenance) Compliance Inspection for Orleans Levee District – New Orleans East Bank (Orleans Metro Subbasin) (OLD1)

Minimally Acceptable USACE inspection rating alone does not equate to an FEMA accredited levee for the NFIP.

6. POC is Kelly Danton, x1031.

Encl

MARK L. WOODWARD, P.E.

Geotechnical Branch

Levee Safety Program Manager

RICHARD B. PINNER, P.E. Chief, Geotechnical Branch Acting Levee Safety Officer

CEMVN-ED-F

MEMORANDUM FOR Chief, Operation Division (CEMVN-OD-W/Amy Powell)

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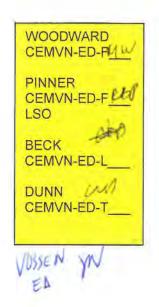
CEMVN-ED-F

SUBJECT: 2016 Annual (Operations and Maintenance) Compliance Inspection for Orleans Levee District – New Orleans East Bank (Orleans Metro Subbasin) (OLD1)

6. POC is Kelly Danton, x1031.

Encl as MARK L. WOODWARD, P.E. Geotechnical Branch Levee Safety Program Manager

RICHARD B. PINNER, P.E. Chief, Geotechnical Branch Acting Levee Safety Officer





US Army Corps of Engineers ®

Flood Damage Reduction Segment / System Inspection Report

Public Sponsor(s): Orlean:	Public Sponsor(s): Orleans Levee District		
Public Sponsor Representative:	sentative: Earl Kugelmann, Operations and Maintenance Director	Maintenance Director	
Sponsor Phone: 50	0		
Sponsor Email: el	ekugelmann@orleanslevee.com		
Corps of Engineers Inspector:	spector: Kodi Chambliss; Kelly Danton; Rachael Maltzahn; Ryan Kent;	achael Maltzahn; Ryan Kent;	Inspection Start Date: 03/01/2016
			Inspection End Date: 04/07/2016
Inspection Report Prepared By:	pared By: Steve Savage; Kelly Danton		
Internal Technical Revie	Internal Technical Review (For Periodic Inspection) Prepared By: Mark	Mark Woodward, P.E.	may Date of ITR: - 4/1/1/
Final Approved By:	Richard Pinner, P.E.		Date Approved: -4/15/14
ype of Inspection:	Initial Inspection Eligibility	Overall Segment/System	Acceptable
M	Continuing Eligibility Inspection (Routine)	Nathig	Minimally Acceptable
	Continuing Eligibility Inspection (Periodic)		Unacceptable
ontents of Report:	X Instructions	The annual Continuing Eligibility (Routine) Insper Subbasin) was conducted on Mar 1, 2016 and Ma	The annual Continuing Eligibility (Routine) Inspection for the Orleans Levee District - New Orleans East Bank (Orleans Metro Subbasin) was conducted on Mar 1, 2016 and Mar 15, 2016. The inspection included operation and inspection of the Scabrook
	Initial Eligibility Inspection	Closure Complex. Based on team observations fr and segments for which the Orleans Levee Distrie Acceptable	Closure Complex. Based on team observations from the 2016 routine inspection, an overall rating of the levee systems and segments for which the Orleans Levee District (OLD) has maintenance responsibility has been classified as Minimally Accentable.
	General Items for All Flood Control Works	The deficiencies and recommendations presented in this maintenance activities and developing a plan to correct	The deficiencies and recommendations presented in this report should be reviewed and utilized in scheduling OLD's rotatine maintenance activities and developing a plan to correct the deficiencies presented in this report. Failure to comply with the
	Levee Embankment	recommendations laid out in this inspection report Unacceptable rating in 2016. The basis for the Minimally Acceptable (M) rating	recommendations laid out in this inspection report and OLD's plan for corrective actions within the next year could result in an Unacceptable parting in 2016. The basis for the rating in 2016. The basis for the rating in 2016.
	Floodwalls	contained in this report and the rating deficiencies Reduction Segment/System Inspection Report. M	contained in this report and the rating deficiencies described in Section G of the general instructions for the Flood Damage Reduction Segment/System Inspection Report. Maps at the end of this report show the area covered and the inspection points
	Interior Drainage System	collected during the "Current Year" inspection T an "M" rating". The predominant deficiencies ob	collected during the "Current Year" inspection. The predominant deficiencies observed were "list rated items/issues receiving an "M" rating". The predominant deficiencies observed for the levee embankments were sod cover, encroachments, crossion,
	Pump Stations	depressions/rutting, seepage, concrete surfaces, and foundation of concrete structures. This inspection rating represents the U.S. Army Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers' (USACE) evaluations are supported by the Corps of Engineers	depressions/rutting, seepage, concrete surfaces, and foundation of concrete structures. This inspection rating represents the U.S. Anny Corps of Engineers' (USACE) evaluation of operations and maintenance of
	FDR System Channels	for the National Flood Insurance Program (NFIP), is recommended that OLD evaluate the potential if A Minimally Acceptable USACE inspection ratio	for the National Flood Insurance Program (NFIP). Due to the Minimally Acceptable rating for this year's routine inspection, it is recommended that OLD evaluate the potential impacts of this rating to the levee system's FEMA accreditation, if applicable A Minimally Acceptable USACE inspection rating alone does not equate to an FEMA accredited levee for the NFIP
Г		is recommended that OLD evaluate the potential in A Minimally Acceptable USACE inspection ratio	pacts

US Army	Corps
of Engin	eers ®

Flood Damage Reduction Segment / System Inspection Report

Name of Segment /	System:	Orleans LD - New Orleans East B	ank (Orleans Metro Subbasin) (OLI	D1)
Public Sponsor(s):	Orleans Le	vee District		
Public Sponsor Rep	oresentative:	Earl Kugelmann, Operations and	d Maintenance Director	
Sponsor Phone:	504-286-310	0		
Sponsor Email:	ekugelmann	@orleanslevee.com		
Corps of Engineers	Inspector:	Kodi Chambliss; Kelly Danton;	Rachael Maltzahn; Ryan Kent;	Inspection Start Date: 03/01/2016
		Steve Savage		Inspection End Date: 04/07/2016
Inspection Report P		Steve Savage; Kelly Danton		Date Report Prepared: -
Internal Technical Re			rk Woodward, P.E.	Date of ITR: -
Final Approved By	: Richar	d Pinner, P.E.		Date Approved:
Type of Inspection:	Initial In	spection Eligibility	Overall Segment/System	Acceptable
-			Rating:	
	Continui	ng Eligibility Inspection (Routine)		Minimally Acceptable
	Continui	ng Eligibility Inspection (Periodic)		Unacceptable
Contents of Report:	Instruction	ons		ion for the Orleans Levee District – New Orleans East Bank (Orleans Metr 15, 2016. The inspection included operation and inspection of the Seabroo
		igibility Inspection	Closure Complex. Based on team observations from	m the 2016 routine inspection, an overall rating of the levee systems (OLD) has maintenance responsibility has been classified as Minimally
	General	Items for All Flood Control Works		n this report should be reviewed and utilized in scheduling OLD's routine rect the deficiencies presented in this report. Failure to comply with the
	Levee En	nbankment	recommendations laid out in this inspection report a Unacceptable rating in 2016.	and OLD's plan for corrective actions within the next year could result in a for this levee system/segment is due to "M" rating(s) for rated item(s)
	Floodwal	lls	contained in this report and the rating deficiencies of Reduction Segment/System Inspection Report. Ma	described in Section G of the general instructions for the Flood Damage ups at the end of this report show the area covered and the inspection points
	Interior 1	Drainage System	an "M" rating". The predominant deficiencies obse	e predominant deficiencies observed were "list rated items/issues receiving erved for the levee embankments were sod cover, encroachments, erosion,
	Pump Sta	ations		I foundation of concrete structures. rps of Engineers' (USACE) evaluation of operations and maintenance of e used in conjunction with other information for a levee system evaluation
	FDR Sys	tem Channels	for the National Flood Insurance Program (NFIP). is recommended that OLD evaluate the potential in	Due to the Minimally Acceptable rating for this year's routine inspection, pacts of this rating to the levee system's FEMA accreditation, if applicable alone does not equate to an FEMA accredited levee for the NFIP.

FREEBOARD Version 1.17g - Revision: 12290.201604151345

General Instructions for the Inspection of Flood Damage Reduction Segments / Systems

A. Purpose of USACE Inspections:

The primary purpose of these inspections is to prevent loss of life and catastrophic damages; preserve the value of Federal investments, and to encourage non-Federal sponsors to bear responsibility for their own protection. Inspections should assure that Flood Damage Reduction structures and facilities are continually maintained and operated as necessary to obtain the maximum benefits. Inspections are also conducted to determine eligibility for Rehabilitation Assistance under authority of PL 84-99 for Federal and non-Federal systems. (ER 1130-2-530, ER 500-1-1)

B. Types of Inspections:

The Corps conducts several types of inspections of Flood Damage Reduction systems, as outlined below:

Initial Eligibility Inspections	Continuing Eligibility Inspections		
	Routine Inspections	Periodic Inspections	
IEIs are conducted to determine whether a non- Federally constructed Flood Damage Reduction system meets the minimum criteria and standards set forth by the Corps for initial inclusion into the Rehabilitation and Inspection Program.	RIs are intended to verify proper maintenance, owner preparedness, and component operation.	PIs are intended to verify proper maintenance and component operation and to evaluate operational adequacy, structural stability, and safety of the system. Periodic Inspections evaluate the system's original design criteria vs. current design criteria to determine potential performance impacts, evaluate the current conditions, and compare the design loads and design analysis used against current design standards. This is to be done to identify components and features for the sponsor that need to be monitored more closely over time or corrected as needed. (Periodic Inspections are used as the basis of risk assessments.)	

C. Inspection Boundaries:

Inspections should be conducted so as to rate each Flood Damage Reduction "Segment" of the system. The overall system rating will be the lowest segment rating in the system.

Project	System	Segment
A flood damage reduction project is made up of one or more flood damage reduction systems which were under the same authorization.	A flood damage reduction system is made up of one or more flood damage reduction segments which collectively provide flood damage reduction to a defined area. Failure of one segment within a system constitutes failure of the entire system. Failure of one system does not affect another system.	A flood damage reduction segment is defined as a discrete portion of a flood damage reduction system that is operated and maintained by a single entity. A flood damage reduction segment can be made up of one or more features (levee, floodwall, pump stations, etc).

D. Land Use Definitions:

The following three definitions are intended for use in determining minimum required inspection intervals and initial requirements for inclusion into the Rehabilitation and Inspection Program. Inspections should be considered for all systems that would result in significant environmental or economic impact upon failure regardless of specific land use.

	Agricultural	Rural	Urban
- 1	Protected population in the range of zero to 5 households per square mile protected.	Protected population in the range of 6 to 20 households per square mile protected.	Greater than 20 households per square mile; major industrial areas with significant infrastructure investment. Some protected urban areas have no permanent population but may be industrial areas with high value infrastructure with no overnight population.



E. Use of the Inspection Report Template:

The report template is intended for use in all Army Corps of Engineers inspections of levee and floodwall systems and flood damage reduction channels. The section of the template labeled "Initial Eligibility" only needs to be completed during Initial Eligibility Inspections of Non-Federally constructed Flood Damage Reduction Systems. The section labeled "General Items" needs to be completed with every inspection, along with all other sections that correspond to features in the system. The section labeled "Public Sponsor Pre-Inspection Report" is intended for completion before the inspection, if possible.

F. Individual Item / Component Ratings:

Assessment of individual components rated during the inspection should be based on the criteria provided in the inspection report template, though inspectors may incorporate additional items into the report based on the characteristics of the system. The assessment of individual components should be based on the following definitions.

Acceptable Item	Minimally Acceptable Item	Unacceptable Item
The inspected item is in satisfactory condition, with no deficiencies, and will function as intended during the next flood event.	The inspected item has one or more minor deficiencies that need to be corrected. The minor deficiency or deficiencies will not seriously impair the functioning of the item as intended during the next flood event.	The inspected item has one or more serious deficiencies that need to be corrected. The serious deficiency or deficiencies will seriously impair the functioning of the item as intended during the next flood event.

G. Overall Segment / System Ratings:

Determination of the overall system rating is based on the definitions below. Note that an Unacceptable System Rating may be either based on an engineering determination that concluded that noted deficiencies would prevent the system from functioning as intended during the next flood event, or based on the sponsor's demonstrated lack of commitment or inability to correct serious deficiencies in a timely manner.

Acceptable System	Minimally Acceptable System	Unacceptable System
All items or components are rated as Acceptable.	One or more items are rated as Minimally Acceptable or one or more items are rated as Unacceptable and an engineering determination concludes that the Unacceptable items would not prevent the segment / system from performing as intended during the next flood event.	One or more items are rated as Unacceptable and would prevent the segment / 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, not to exceed two years

H. Eligibility for PL84-99 Rehabilitation Assistance:

Inspected systems that are not operated and maintained by the Federal government may be Active in the Corps' Rehabilitation and Inspection Program (RIP) and eligible for rehabilitation assistance from the Corps as defined below:

If the Overall System Rating is Acceptable	If the Overall System Rating is Minimally Acceptable	If the Overall System Rating is Unacceptable
The system is active in the RIP and eligible for PL84-99 rehabilitation assistance.	The system is Active in the RIP during the time that it takes to make needed corrections. Active systems are eligible for rehabilitation assistance. However, if the sponsor does not present USACE with proof that serious deficiencies (which had previously resulted in a minimally acceptable system rating) were corrected within the established timeframe, then the system will become Inactive in the RIP.	The system is Inactive in the RIP, and the status will remain Inactive until the sponsor presents USACE with proof that all items rated Unacceptable have been corrected. Inactive systems are ineligible for rehabilitation assistance.



I. Reporting:

After the inspection, the Corps is responsible for assembling an inspection report (or a summary report if it was a Periodic Inspection) including the following information:

- a. All sections of the report template used during the inspection, including the cover and pre-inspection materials. (Supplemental data collected, and any sections of the template that weren't used during the inspection do not need to be included with the report.)
- b. Photos of the general system condition and noted deficiencies.
- c. A plan view drawing of the system, with stationing, to reference locations of items rated less than acceptable.
- d. The relative importance of the identified maintenance issues should be specified in the transmittal letter.
- e. If the Overall System Rating is Minimally Acceptable, the report needs to establish a timeframe for correction of serious deficiencies noted (not to exceed two years) and indicate that if these items are not corrected within the required timeframe, the system will be rated as Unacceptable and made Inactive in the Rehabilitation Inspection Program.

J. Notification:

Reports are to be disseminated as follows within 30 days of the inspection date.

If the Overall System Rating is Acceptable	If the Overall System Rating is Minimally Acceptable	If the Overall System Rating is Unacceptable
Reports need to be provided to the local sponsor and the county emergency management agency.	Reports need to be provided to the local sponsor, state emergency management agency, county emergency management agency, and to the FEMA region.	Reports need to be provided to the local sponsor, state emergency management agency, county emergency management agency, FEMA region, and to the Congressional delegation within 30 days of the inspection.



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations	
01. Unwanted Vegetation Growth ¹		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 EM 1110-2-301 or Corps policy for regional vegetation variance.		
		М	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.		
		U	Significant vegetation growth (brush, weeds, or any trees greater than 2 inches in diameter) is present within the zones described above and must to be removed to reestablish or ascertain levee integrity.		
02. Sod Cover	M	Α	There is good coverage of sod over the levee.	USACE_CEMVN_OLD1_2016_a_0030: Station_1 13+62: Poor sod cover under a cat walk on the landside levee	
		М	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.	slope. OLD shall fertilize and seed areas until adequate sod cover is achieved. (M)	
		U	Over 50% of the sod cover is missing or damaged over a significant portion or portions of the levee embankment.		
		N/A	Surface protection is provided by other means.		
03. Encroachments	M	A	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.	USACE_CEMVN_OLD1_2016_a_0025: Station_1 109+83: Utility pole is in the landside levee slope. OLD is responsible for verifying that a permit was obtained for the utility, or remove it if not permitted.	
		М	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.	((1)	
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the levee.		
04. Closure Structures (Stop Log, Earthen	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/		

Key: A = Acceptable. M = Minimally Acceptable; Maintenance is required. U = Unacceptable. N/A = Not Applicable. FDR = Flood Damage Reduction



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
Closures, Gates, or Sandbag Closures)			procedures readily available. Trial erections have been accomplished in accordance with the O&M Manual.	
(A or U only)		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.	
	Ī	N/A	There are no closure structures along this component of the FDR system.	
05. Slope Stability	A	A	No slides, sloughs, tension cracking, slope depressions, or bulges are present.	
		М	Minor slope stability problems that do not pose an immediate threat to the levee embankment.	
		U	Major slope stability problems (ex. deep seated sliding) identified that must be repaired to reestablish the integrity of the levee embankment.	
06. Erosion/ Bank Caving	M	A	No erosion or bank caving is observed on the landward or riverward sides of the levee that might endanger its stability.	USACE_CEMVN_OLD1_2016_a_0026: Station_1 82+88: Erosion at the landside levee toe. OLD shall repair eroded
		М	There are areas where minor erosion is occurring or has occurred on or near the levee embankment, but levee integrity is not threatened.	areas with compacted clay fill. The areas shall then be fertilized and seeded. (M)
		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.	USACE_CEMVN_OLD1_2016_a_0032: Station_1 122+75: Erosion around southeast end of the 17th Steet Outfall Canal pumpstation wingwall. OLD should monitor the erosion and make corrective actions as required. (M)
07. Settlement ²	A	A	No observed depressions in crown. Records exist and indicate no unexplained historical changes.	
		М	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.	
08. Depressions/ Rutting	M	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.	USACE_CEMVN_OLD1_2016_a_0027: Station_1 110+57: Rutting from mowers. OLD shall repair depressed or rutted areas with compacted clay fill. The areas shall then be fertilized and seeded. (M)



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
		М	There are some infrequent minor depressions less than 6 inches deep in the levee crown, embankment, or access roads that will pond water.	USACE_CEMVN_OLD1_2016_a_0031: Station_1 39+66: Rutting on the landside levee slope below the floodwall. OLD shall repair depressed or rutted areas with compacted
		U	There are depressions greater than 6 inches deep that will pond water.	clay fill. The areas shall then be fertilized and seeded. (M)
09. Cracking	A	A	Minor longitudinal, transverse, or desiccation cracks with no vertical movement along the crack. No cracks extend continuously through the levee crest.	
		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	A	A	Continuous animal burrow control program in place that includes the elimination of active burrowing and the filling in of existing burrows.	
		М	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.	
		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.	
11. Culverts/ Discharge Pipes (This item includes both concrete and corrugated metal pipes.) ³	NA	A	There are no breaks, holes, cracks in the discharge pipes/culverts that would result in significant water leakage. The pipe shape is still essentially circular. All joints appear to be closed and the soil tight. Corrugated metal pipes, if present, are in good condition with 100% of the original coating still in place (either asphalt or galvanizing) or have been relined with appropriate material, which is still in good condition. Condition of pipes has been verified using television camera video taping or visual inspection methods within the past five years, and the report for every pipe is available for review by the inspector.	
		М	There are a small number of corrosion pinholes or cracks that could leak water and need to be repaired, but the entire length of pipe is still structurally sound and is not in danger of collapsing. Pipe shape may be ovalized in some locations but does not appear to be approaching a curvature reversal. A limited number of joints may have opened and soil loss may be beginning. Any open joints should be repaired prior to the next inspection. Corrugated metal pipes, if present, may be showing corrosion and pinholes but there are no areas with total section loss. Condition of pipes has been verified using television	



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
			camera video taping or visual inspection methods within the past five years, and the report for every pipe is available for review by the inspector.	
		U	Culvert has deterioration and/or has significant leakage; it is in danger of collapsing or as already begun to collapse. Corrugated metal pipes have suffered 100% section loss in the invert. HOWEVER: Even if pipes appear to be in good condition, as judged by an external visual inspection, an Unacceptable Rating will be assigned if the condition of pipes has not been verified using television camera video taping or visual inspection methods within the past five years, and reports for all pipes are not available for review by the inspector.	
		N/A	There are no discharge pipes/ culverts.	
12. Riprap Revetments &	A	A	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.	
Bank Protection		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.	
		N/A	There is no riprap protecting this feature of the system, or riprap is discussed in another section.	
13. Revetments other than Riprap	A	A	Existing revetment protection is properly maintained, undamaged, and clearly visible.	
		M	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	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.	
		N/A	There are no such revetments protecting this feature of the system.	
14. Underseepage Relief Wells/ Toe Drainage Systems	A	A	Toe drainage systems and pressure relief wells necessary for maintaining FDR 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	



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
			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 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 FDR system stability during flood events have fallen into disrepair or have become clogged. No maintenance records. No documentation of the required pump testing.	
		N/A	There are no relief wells/ toe drainage systems along this component of the FDR system.	
15. Seepage	M	A	No evidence or history of unrepaired seepage, saturated areas, or boils.	
		М	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.	

¹ If there is significant growth on the levee that inhibits the inspection of animal burrows or other items, the inspection should be ended until this item is corrected.



² Detailed survey elevations are normally required during Periodic Inspections, and whenever there are obvious visual settlements.

³ The decision on whether or not USACE inspectors should enter a pipe to perform a detailed inspection must be made at the USACE District level. This decision should be made in conjunction with the District Safety Office, as pipes may be considered confined spaces. This decision should record observations with a video camera in order that the condition of the entire pipe, including all joints can later be assessed. Additionally, the video record provides a baseline to which future inspections can be compared.

For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0030 Title: USACE_CEMVN_OLD1_2016_a_0030_1.jpg

Rated Item: 02. Sod Cover

Rating: M

Inspection Remarks: Poor sod cover under a cat walk on the landside levee slope. **Recommended Action:** OLD shall fertilize and seed areas until adequate sod cover is

achieved. **Caption:**

Station 1: 13+62 (OCW)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0025
Title: USACE_CEMVN_OLD1_2016_a_0025_1.jpg

Rated Item: 03. Encroachments

Rating: M

Inspection Remarks: Utility pole is in the landside levee slope.

Recommended Action: OLD is responsible for verifying that a permit was obtained for the

utility, or remove it if not permitted.

Caption:

Station 1: 109+83 (OCE)



For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0026 **Title:** USACE_CEMVN_OLD1_2016_a_0026_1.jpg

Rated Item: 06. Erosion/ Bank Caving

Rating: M

Inspection Remarks: Erosion at the landside levee toe.

Recommended Action: OLD shall repair eroded areas with compacted clay fill. The areas

shall then be fertilized and seeded.

Caption:

Station 1: 82+88 (LCE)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0026 Title: USACE_CEMVN_OLD1_2016_a_0026_2.jpg

Rated Item: 06. Erosion/Bank Caving

Rating: M

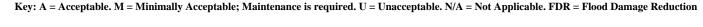
Inspection Remarks: Erosion at the landside levee toe.

Recommended Action: OLD shall repair eroded areas with compacted clay fill. The areas

shall then be fertilized and seeded.

Caption:

Station 1: 82+88 (LCE)





For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0032 **Title:** USACE_CEMVN_OLD1_2016_a_0032_1.jpg

Rated Item: 06. Erosion/ Bank Caving

Rating: M

Inspection Remarks: Erosion around southeast end of the 17th Steet Outfall Canal

pumpstation wingwall.

Recommended Action: OLD should monitor the erosion and make corrective actions as

required. **Caption:**

Station 1: 122+75 (17E)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0027 **Title:** USACE_CEMVN_OLD1_2016_a_0027_1.jpg

Rated Item: 08. Depressions/ Rutting

Rating: M

Inspection Remarks: Rutting from mowers.

Recommended Action: OLD shall repair depressed or rutted areas with compacted clay fill.

The areas shall then be fertilized and seeded.

Caption:

Station 1: 110+57 (OCE)



For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0031 **Title:** USACE_CEMVN_OLD1_2016_a_0031_2.jpg

Rated Item: 08. Depressions/ Rutting

Rating: M

Inspection Remarks: Rutting on the landside levee slope below the floodwall.

Recommended Action: OLD shall repair depressed or rutted areas with compacted clay fill.

The areas shall then be fertilized and seeded.

Caption:

Station 1: 39+66 (17E)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0031 Title: USACE_CEMVN_OLD1_2016_a_0031_3.jpg

Rated Item: 08. Depressions/ Rutting

Rating: M

Inspection Remarks: Rutting on the landside levee slope below the floodwall.

Recommended Action: OLD shall repair depressed or rutted areas with compacted clay fill.

The areas shall then be fertilized and seeded.

Caption:

Station 1: 39+66 (17E)



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
01. Unwanted Vegetation Growth ¹	A	A	A grass-only or paved zone is maintained on both sides of the floodwall, free of all trees, brush, and undesirable weeds. The vegetation-free zone extends 15 feet from both the land and riverside of the floodwall, at ground-level, to the centerline of the tree. Additionally, an 8-foot root-free zone is maintained around the entire structure, including the floodwall toe, heel, and any toe-drains. If the floodwall access easement doesn't extend to the described limits, then the vegetation-free zone must be maintained to the easement limits. Reference EM 1110-2-301 and/or Corps policy for regional vegetation variance.	
		М	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 floodwall.	
		U	Significant vegetation growth (brush, weeds, or any trees greater than 2 inches in diameter) is present within the zones described above. This vegetation threatens the operation or integrity of the floodwall and must be removed.	
02. Encroachments	M	A	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 floodwall.	USACE_CEMVN_OLD1_2016_a_0008: Station_1 535+92: Water main leak on the landside of the floodwall. OLD should coordinate with the Sewerage and Water Board to make corrective action. (M)
		M	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.	Board to make corrective actions (w)
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the floodwall.	
03. Closure Structures (Stop Log Closures and Gates) (A or U only)	and	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.	USACE_CEMVN_OLD1_2016_a_0012: Station_1 422+68: Paint chipping on vertical lift gate at Seabrook complex. Contract has been awarded to remove corrosion and repaint. Work scheduled for April 2016. (A)
		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.	USACE_CEMVN_OLD1_2016_a_0034: Both sector gate (SG) leaves were fully cycled. Bronze bushings for hinge and pintle assemblies are not visible, but grease ports leading to these working surfaces showed signs of lubrication. Gear teeth on both the drive gear and rack were well greased. Floodgate operation was smooth, vibration and noise free. Limit switches operated
		N/A	There are no closure structures along this component of the FDR system.	adequately in both directions of travel. Gate seals mitered properly. Operating pressures maxed at 3,000 psi, with no signs of siltation or obstructions encountered. NFS Operator was familiar with means of operation via push



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
				buttons, and operation occurs monthly as directed by USACE. All OEM periodic maintenance is occurring on a regular basis. Gear teeth greasing had occurred within the last quarter requiring slight limit switch adjustments. (A) USACE_CEMVN_OLD1_2016_a_0035: The west vertical lift gate (VLG) was inoperable due to field work pertaining to USACE construction contract IHNC-01-P to repaint both VLGs. The east VLG was fully cycled. Operating pressures maxed at 2,200 psi. Operation occurred with vibration and noise. These symptoms have been sporadically appearing since the 2014 incident where a piece of grout was dislodged and pulled up by a gate foot. USACE is using the reference contract to repair foot and investigate the vibrations. Recent findings point to both hydraulic cylinder requiring replacement seals. Limit switches operated adequately in both directions of travel. All 10 gate wheels appear to rotate freely when contact is made; bearings are greaseless. NFS Operator was familiar with means of operation via selector switches, and operation occurs monthly as directed by USACE. All OEM periodic maintenance appears to be taking place on a regular basis. (A) USACE_CEMVN_OLD1_2016_a_0036: Diesel generator-set 1 was not operated. Diesel generator-set 2 operated under the load of the SG and East VLG. Generator engine ran without excessive vibration or noise. Load banks are installed in line with gen-set and are used to provide full load on an annual basis. NFS Operator was familiar with means of operation via control panel, and operation occurs monthly as directed by USACE. All OEM periodic maintenance is occurring on a regular basis. (A)
04. Concrete Surfaces	M	A	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.	USACE_CEMVN_OLD1_2016_a_0002: Station_1 430+09: Spalling/cracking of the flood side of floodwall. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M)



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
		U	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.	USACE_CEMVN_OLD1_2016_a_0005: Station_1 502+28: Crack on the land side of floodwall. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M) USACE_CEMVN_OLD1_2016_a_0006: Station_1 535+96: Spalling concrete land side of floodwall in three locations. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M) USACE_CEMVN_OLD1_2016_a_0007: Station_1 574+39: Spalling concrete on the flood side of floodwall. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M) USACE_CEMVN_OLD1_2016_a_0033: Station_1 40+62: Station_2 47+32: Exposed rebar on the landside retaining wall below the floodwall at Orleans Canal. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M)
			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.	
05. Tilting, Sliding or Settlement	A	A	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.	
of Concrete Structures		M	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.	



Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations		
06. Foundation	M	А	No active erosion, scouring, or bank caving that might endanger the structure's stability.	USACE_CEMVN_OLD1_2016_a_0010: Station_1		
of Concrete Structures		M	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 not closer than twice the wall's visible height. Additionally, rate of erosion is such that the wall is expected to remain stabile until the next inspection.	414+78: Settlement of the flood wall transition to gate on both sides of service road on the landside of floodwall. Old shall repair in accordance with Volume 2 OMRR&R Manual. (M) USACE_CEMVN_OLD1_2016_a_0011: Station_1 408+20: Spalling of on concrete scour protection. OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete. (M)		
		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.	USACE_CEMVN_OLD1_2016_a_0013: Station_1 422+33: Settlement and deterioration of the scour protection sealant. Old shall repair in accordance with Volume 2 OMRR&R Manual. (M) USACE_CEMVN_OLD1_2016_a_0014: Station_1 430+09: Sealant deterioation at the floodwall and scour protection on the protected side. OLD shall make corrective actions as required. Clean concrete surface. Sea cracks. Patch concrete. Seal concrete. (M)		
07. Monolith Joints	A	A	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.			
					or waterstop is visible in some locations. This needs to be	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.			
		N/A	There are no monolith joints in the floodwall.			
08. Underseepage Relief Wells/ Toe Drainage Systems	A	A	Toe drainage systems and pressure relief wells necessary for maintaining FDR 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			



For use during Initial and Continuing Eligibility Inspections of levee segments / systems

Rated Item	Rating	Rating	Guidelines	Locations/Remarks/Recommendations
			records indicate regular cleaning. Wells have been pumped tested within the past 5 years and documentation is provided.	
		M	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.	
		Ū	Toe drainage systems or pressure relief wells necessary for maintaining FDR system stability during flood events have fallen into disrepair or have become clogged. No maintenance records. No documentation of the required pump testing.	
		N/A	There are no relief wells/ toe drainage systems along this component of the FDR system.	
09. Seepage	M	A	No evidence or history of unrepaired seepage, saturated areas, or boils.	USACE_CEMVN_OLD1_2016_a_0022: Station_1 116+47: Wet spot behind the houses nearest the landside levee toe on the East Bank of London Avenue Canal. MVN conducted several separate site visits to this site.
		M	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.	No evidence of soil transport was found. MVN evaluation determined wet spot to be a result of either leakage between floodwall monolith joints at high tides and pump station operation, or a result of heavy rainfall at the time wet spot was noted. OLD shall monitor location. (M)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0008 Title: USACE_CEMVN_OLD1_2016_a_0008_1.jpg

Rated Item: 02. Encroachments

Rating: M

Inspection Remarks: Water main leak on the landside of the floodwall.

Recommended Action: OLD should coordinate with the Sewerage and Water Board to make

corrective action. **Caption:**

Station 1: 535+92 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0008
Title: USACE_CEMVN_OLD1_2016_a_0008_2.jpg

Rated Item: 02. Encroachments

Rating: M

Inspection Remarks: Water main leak on the landside of the floodwall.

Recommended Action: OLD should coordinate with the Sewerage and Water Board to make

corrective action.

Caption:

Station 1: 535+92 (OLD)



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Inspect ID: USACE_CEMVN_OLD1_2016_a_0012 Title: USACE_CEMVN_OLD1_2016_a_0012_1.jpg

Rated Item: 03. Closure Structures (Stop Log Closures and Gates) (A or U only)

Rating: A

Inspection Remarks: Paint chipping on vertical lift gate at Seabrook complex.

Recommended Action: Contract has been awarded to remove corrosion and repaint. Work

scheduled for April 2016.

Caption:

Station 1: 422+68 (OP)



Inspect ID: USACE_CEMVN_OLD1_2016_a_0034
Title: USACE_CEMVN_OLD1_2016_a_0034_1.jpg

Rated Item: 03. Closure Structures (Stop Log Closures and Gates) (A or U only)

Rating: A

Inspection Remarks: Both sector gate (SG) leaves were fully cycled. Bronze bushings for hinge and pintle assemblies are not visible, but grease ports leading to these working surfaces showed signs of lubrication. Gear teeth on both the drive gear and rack were well greased. Floodgate operation was smooth, vibration and noise free. Limit switches operated adequately in both directions of travel. Gate seals mitered properly. Operating pressures maxed at 3,000 psi, with no signs of siltation or obstructions encountered. NFS Operator was familiar with means of operation via push buttons, and operation occurs monthly as directed by USACE. All OEM periodic maintenance is occurring on a regular basis. Gear teeth greasing had occurred within the last quarter requiring slight limit switch adjustments.

Recommended Action:

Caption:



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Inspect ID: USACE_CEMVN_OLD1_2016_a_0035 **Title:** USACE_CEMVN_OLD1_2016_a_0035_1.jpg

Rated Item: 03. Closure Structures (Stop Log Closures and Gates) (A or U only)

Rating: A

Inspection Remarks: The west vertical lift gate (VLG) was inoperable due to field work pertaining to USACE construction contract IHNC-01-P to repaint both VLGs. The east VLG was fully cycled. Operating pressures maxed at 2,200 psi. Operation occurred with vibration and noise. These symptoms have been sporadically appearing since the 2014 incident where a piece of grout was dislodged and pulled up by a gate foot. USACE is using the reference contract to repair foot and investigate the vibrations. Recent findings point to both hydraulic cylinder requiring replacement seals. Limit switches operated adequately in both directions of travel. All 10 gate wheels appear to rotate freely when contact is made; bearings are greaseless. NFS Operator was familiar with means of operation via selector switches, and operation occurs monthly as directed by USACE. All OEM periodic maintenance appears to be taking place on a regular basis.

Recommended Action:

Caption:

Inspect ID: USACE_CEMVN_OLD1_2016_a_0036 **Title:** USACE_CEMVN_OLD1_2016_a_0036_1.jpg

Rated Item: 03. Closure Structures (Stop Log Closures and Gates) (A or U only)

Rating: A

Inspection Remarks: Diesel generator-set 1 was not operated. Diesel generator-set 2 operated under the load of the SG and East VLG. Generator engine ran without excessive vibration or noise. Load banks are installed in line with gen-set and are used to provide full load on an annual basis. NFS Operator was familiar with means of operation via control panel, and operation occurs monthly as directed by USACE. All OEM periodic maintenance is occurring on a regular basis.

Recommended Action:

Caption:



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Inspect ID: USACE_CEMVN_OLD1_2016_a_0002 **Title:** USACE_CEMVN_OLD1_2016_a_0002_1.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling/cracking of the flood side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0002 Title: USACE_CEMVN_OLD1_2016_a_0002_2.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling/cracking of the flood side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OLD)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0002 Title: USACE_CEMVN_OLD1_2016_a_0002_3.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling/cracking of the flood side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0005
Title: USACE_CEMVN_OLD1_2016_a_0005_1.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Crack on the land side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 502+28 (OLD)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0005 Title: USACE_CEMVN_OLD1_2016_a_0005_2.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Crack on the land side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 502+28 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0006 **Title:** USACE_CEMVN_OLD1_2016_a_0006_1.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete land side of floodwall in three locations. **Recommended Action:** OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 535+96 (OLD)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0006 Title: USACE_CEMVN_OLD1_2016_a_0006_2.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete land side of floodwall in three locations. **Recommended Action:** OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 535+96 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0006
Title: USACE_CEMVN_OLD1_2016_a_0006_3.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete land side of floodwall in three locations. **Recommended Action:** OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 535+96 (OLD)



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Inspect ID: USACE_CEMVN_OLD1_2016_a_0006 **Title:** USACE_CEMVN_OLD1_2016_a_0006_4.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete land side of floodwall in three locations. **Recommended Action:** OLD shall make corrective actions as required. Clean concrete surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 535+96 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0007 Title: USACE_CEMVN_OLD1_2016_a_0007_1.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete on the flood side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 574+39 (OLD)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0007 **Title:** USACE_CEMVN_OLD1_2016_a_0007_3.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Spalling concrete on the flood side of floodwall.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 574+39 (OLD)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0033 **Title:** USACE_CEMVN_OLD1_2016_a_0033_1.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Exposed rebar on the landside retaining wall below the floodwall at

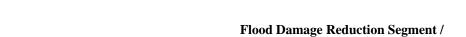
Orleans Canal.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 40+62 (OCW) **Station 2:** 47+32 (OCW)



System Inspection Report
Inspection Report





Inspect ID: USACE_CEMVN_OLD1_2016_a_0033 **Title:** USACE_CEMVN_OLD1_2016_a_0033_2.jpg

Rated Item: 04. Concrete Surfaces

Rating: M

Inspection Remarks: Exposed rebar on the landside retaining wall below the floodwall at

Orleans Canal.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 40+62 (OCW) **Station 2:** 47+32 (OCW)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0010 Title: USACE_CEMVN_OLD1_2016_a_0010_1.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement of the flood wall transition to gate on both sides of service

road on the landside of floodwall.

Recommended Action: Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 414+78 (OP)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0010 Title: USACE_CEMVN_OLD1_2016_a_0010_2.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement of the flood wall transition to gate on both sides of service

road on the landside of floodwall.

Recommended Action: Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 414+78 (OP)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0010 Title: USACE_CEMVN_OLD1_2016_a_0010_4.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement of the flood wall transition to gate on both sides of service

road on the landside of floodwall.

Recommended Action: Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 414+78 (OP)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0010 Title: USACE_CEMVN_OLD1_2016_a_0010_5.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement of the flood wall transition to gate on both sides of service

road on the landside of floodwall.

Recommended Action: Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 414+78 (OP)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0011 Title: USACE_CEMVN_OLD1_2016_a_0011_1.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Spalling of on concrete scour protection.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 408+20 (OP)







Inspect ID: USACE_CEMVN_OLD1_2016_a_0013 Title: USACE_CEMVN_OLD1_2016_a_0013_1.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement and deterioration of the scour protection sealant. **Recommended Action:** Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 422+33 (OP)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0013 Title: USACE_CEMVN_OLD1_2016_a_0013_3.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement and deterioration of the scour protection sealant. **Recommended Action:** Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 422+33 (OP)



Flood Damage Reduction Segment System Inspection Report Inspection Report



Floodwalls

For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0013 Title: USACE_CEMVN_OLD1_2016_a_0013_4.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Settlement and deterioration of the scour protection sealant. **Recommended Action:** Old shall repair in accordance with Volume 2 OMRR&R Manual.

Caption:

Station 1: 422+33 (OP)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0014 Title: USACE_CEMVN_OLD1_2016_a_0014_1.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Sealant deterioation at the floodwall and scour protection on the

protected side.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OP)



Floodwalls

US Army Corps of Engineers ®

For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0014 Title: USACE_CEMVN_OLD1_2016_a_0014_2.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Sealant deterioation at the floodwall and scour protection on the

protected side.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OP)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0014 Title: USACE_CEMVN_OLD1_2016_a_0014_4.jpg Rated Item: 06. Foundation of Concrete Structures

Rating: M

Inspection Remarks: Sealant deterioation at the floodwall and scour protection on the

protected side.

Recommended Action: OLD shall make corrective actions as required. Clean concrete

surface. Seal cracks. Patch concrete. Seal concrete.

Caption:

Station 1: 430+09 (OP)



Inspection Report

Floodwalls For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0022
Title: USACE_CEMVN_OLD1_2016_a_0022_1.jpg

Rated Item: 09. Seepage

Rating: M

Inspection Remarks: Wet spot behind the houses nearest the landside levee toe on the East Bank of London Avenue Canal. MVN conducted several separate site visits to this site. No evidence of soil transport was found. MVN evaluation determined wet spot to be a result of either leakage between floodwall monolith joints at high tides and pump station operation, or a result of heavy rainfall at the time wet spot was noted.

Recommended Action: OLD shall monitor location.

Caption:

Station 1: 116+47 (LCE)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0022 **Title:** USACE_CEMVN_OLD1_2016_a_0022_2.jpg

Rated Item: 09. Seepage

Rating: M

Inspection Remarks: Wet spot behind the houses nearest the landside levee toe on the East Bank of London Avenue Canal. MVN conducted several separate site visits to this site. No evidence of soil transport was found. MVN evaluation determined wet spot to be a result of either leakage between floodwall monolith joints at high tides and pump station operation, or a

result of heavy rainfall at the time wet spot was noted. **Recommended Action:** OLD shall monitor location.

Caption:

Station 1: 116+47 (LCE)



Floodwalls

For use during Initial and Continuing Eligibility Inspections of levee segments / systems





Inspect ID: USACE_CEMVN_OLD1_2016_a_0022 **Title:** USACE_CEMVN_OLD1_2016_a_0022_3.jpg

Rated Item: 09. Seepage

Rating: M

Inspection Remarks: Wet spot behind the houses nearest the landside levee toe on the East Bank of London Avenue Canal. MVN conducted several separate site visits to this site. No evidence of soil transport was found. MVN evaluation determined wet spot to be a result of either leakage between floodwall monolith joints at high tides and pump station operation, or a result of heavy rainfall at the time wet spot was noted.

Recommended Action: OLD shall monitor location.

Caption:

Station 1: 116+47 (LCE)

Inspect ID: USACE_CEMVN_OLD1_2016_a_0022 **Title:** USACE_CEMVN_OLD1_2016_a_0022_4.jpg

Rated Item: 09. Seepage

Rating: M

Inspection Remarks: Wet spot behind the houses nearest the landside levee toe on the East Bank of London Avenue Canal. MVN conducted several separate site visits to this site. No evidence of soil transport was found. MVN evaluation determined wet spot to be a result of either leakage between floodwall monolith joints at high tides and pump station operation, or a result of heavy rainfall at the time wet spot was noted.

Recommended Action: OLD shall monitor location.

Caption:

Station 1: 116+47 (LCE)



