



**US Army Corps
of Engineers** ®

Levee Inspection Report

Name of System: Alameda Zone 03A, Line B - Ward Creek (wDCR)
 Name of Segment: Alameda Zone 03A, Line B - Ward Creek (wDCR)
 NLD System ID: 5305001100 NLD Segment ID: 5304001100

Segment Type: Non-Federally Constructed, local O&M
 Levee Sponsor (Name and Organization): Alameda County Flood Control and Conservation District
 Inspection Report Prepared by: Patrick Sing, PE Date(s) of Inspection: 09/03/2020 - 09/03/2020

Other Segments Within This System

Segment Name	NLD Segment ID#	Segment Type	Segment Inspection Rating

Contents of Inspection Report:

- Levee Inspection Summary
- Inspection Checklist**
 - General Items
 - Levee Embankment
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 - Pump Stations
 - FDR System Channels
- Public Sponsor Pre-Inspection Form
- National Flood Insurance Program (NFIP) - 44 CFR 65.10 Provision Evaluation
- General Instructions
- Maps

Type of Inspection: Routine Inspection Periodic Inspection Special Inspection

Purpose of Special Inspection: _____

Ratings:

Segment Rating: Acceptable Minimally Acceptable Unacceptable No Verdict

System Rating: Acceptable Minimally Acceptable Unacceptable No Verdict

LSPM Signature: _____ Date Approved: _____

LSO Signature: _____ Date Approved: _____

 SPN Levee Safety Program Manager
 Approval Signature

 SPN Levee Safety Officer
 Approval Signature

San Francisco District
 450 Golden Gate Ave.
 San Francisco, CA 94102

Levee Inspection Team Members (Levee Sponsor, USACE, and Others)

Name	Organization	Discipline	Phone Number
John Conway	USACE - San Francisco District	Geosciences	415-503-6735
Patrick Sing	USACE - San Francisco District	Hydraulics	415-503-6950
Fanny Chan	USACE - San Francisco District	Civil Design	No Number Assigned Yet (New Employee)
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Segment Rating Rationale:

[Describe the basis of the Segment rating considering (1) the general condition of the segment, (2) the rationale for Item ratings, categorized by Feature that contributed to the Segment rating, and (3) the number or severity of notable observations/deficiencies. The summary may also include information related to the condition of the levee, not otherwise captured in the Levee Inspection Checklist, if applicable.]

The segment contains two pump stations that are regularly maintained and inspected by the sponsor. The segment contains two levee embankments that are defined in the O&M manual that was compiled by the sponsor in 2016: one approximately 400-ft long embankment that is just upstream of the confluence with Line 3A-F on the left bank, and one from approximately the area adjacent to Ameron Pump Station to the downstream end of the segment on the left bank. It is uncertain if a levee embankment also exists in the area adjacent to Ameron Pump Station to the downstream end of the segment on the right bank (see level checklist for further explanation); this is not defined in the O&M manual but has been under discussion between the Levee Safety Program Manager and the sponsor. The segment also contains a flood wall on the right bank from Folsom Avenue to Pacheco Way. The exact location of the levee embankments and flood wall are shown in Figure 1-3 of the O&M manual. There are some minor deficiencies in the segment that were observed and noted in this report. The initial findings of the inspection were presented to the sponsor's representative, Mr. Nathan Rose, in the field. Mr. Brian Munsell, a bridge & pump supervisor for the sponsor, was also present for the portion of the inspection that required access to the two pump stations. The inspection team did not observe any significant deficiencies that would not allow the segment to perform as designed. Therefore, a "Minimally Acceptable" rating has been recommended. This report was compiled by Patrick Sing, (415) 503-6950. All creek station numbering referenced in this inspection report is based on stationing shown in the O&M Manual. It should be noted the inspections of this segment in previous years failed to include observations of the above mentioned flood wall; therefore, future inspection teams should ensure the flood wall is covered in their reports. Furthermore, two separate reports for this segment will be necessary in the future (one for the left bank and one for right bank) since the flood wall on the right bank would represent a particular consequence area and the levees on the left bank represent another consequence area.

System Rating Rationale:

[Synthesize information from the Segment rating rationales for each Segment within the System. For single-segment systems, see segment rating rationale above.]

General Items for All Flood Damage Reduction Segments / Systems
For use during all inspections of all Flood Damage Reduction Segments / Systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Operations and Maintenance Manuals	A	A	Levee Owner's Manual, O&M Manuals, and/or manufacturer's operating instructions are present.	Justification: An O&M manual of the segment was compiled by Wood Rogers in April 2016. The manual includes general information, as-built drawings, and an emergency action plan. A copy of the manual was provided to the inspection team for review.
		M	Sponsor manuals are lost or missing or out of date; however, sponsor will obtain manuals prior to next scheduled inspection.	
		U	Sponsor has not obtained lost or missing manuals identified during previous inspection.	
2. Emergency Supplies and Equipment (A or M only)	A	A	The sponsor maintains a stockpile of sandbags, shovels, and other flood fight supplies which will adequately supply all needs for the initial days of a flood fight. Sponsor determines required quantity of supplies after consulting with inspector.	Justification: The sponsor has shovels, sandbags, trucks, and other equipment and supplies available for use in this segment in their supply yard in Hayward, CA.
		M	The sponsor does not maintain an adequate supply of flood fighting materials as part of their preparedness activities.	
3. Flood Preparedness and Training (A or M only)	A	A	Sponsor has a written system-specific flood response plan and a solid understanding of how to operate, maintain, and staff the FDR system during a flood. Sponsor maintains a list of emergency contact information for appropriate personnel and other emergency response agencies.	Justification: The sponsor has developed a segment specific emergency action plan. Additionally, the sponsor has staff that attends flood training conducted by the California Department of Water Resources (DWR).
		M	The sponsor maintains a good working knowledge of flood response activities, but documentation of system-specific emergency procedures and emergency contact personnel is insufficient or out of date.	

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

Levee Embankments

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

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Unwanted Vegetation Growth	A	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.	<p>Justification: As noted in the inspection report summary, the segment contains two levee embankments that are defined in the O&M manual: one approximately 400-ft long embankment that is just upstream of the confluence with Line 3A-F on the left bank, and one from approximately the Ameron Pump Station to the downstream end of the segment on the left bank. These two levee sections did not have unwanted vegetation. Also noted in the inspection report summary: it is uncertain if a levee embankment also exists in the area adjacent to Ameron Pump Station to the downstream end of the segment on the right bank; the O&M manual currently shows that no such levee exists. However, it is not typical to have a levee embankment on only one side of a reach of a channel. The Levee Safety Program Manager, as of the writing of this report, is in communication with the sponsor to verify if such a levee at this downstream end does exist on the right bank. When the inspection team attempted to walk the right bank at this downstream end, it appeared it tied into high ground of Interstate 880, and from a visual perspective it was hard to ascertain if a levee did exist there.</p>
		M	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 be removed to reestablish or ascertain levee integrity.	
2. Sod Cover	A	A	There is good coverage of sod over the levee.	<p>Justification: Adequate sod coverage was observed.</p>
		M	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.	
		N/A	Surface protection is provided by other means.	
3. 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.	<p>Justification: There is an electrified fence for the Manheim San Francisco Bay car lot on the land side of the levee section of the segment. The fence could restrict the ability of the sponsor to access the levee section during an emergency event.</p>
		M	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.	
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.	
		N/A	There are no closure structures along this component of the FDR segment / system.	

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Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
5. Slope Stability	A	A	No slides, sloughs, tension cracking, slope depressions, or bulges are present.	Justification: No slope stability issues were observed for the levee section of the system.
		M	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.	
6. Erosion/ Bank Caving	A	A	No erosion or bank caving is observed on the landward or riverward sides of the levee that might endanger its stability.	Justification: No erosion was observed for the levee section of the segment.
		M	There are areas where minor erosion is occurring or has occurred on or near the levee embankment, but levee integrity is not threatened.	
		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.	
7. Settlement	A	A	No observed depressions in crown. Records exist and indicate no unexplained historical changes.	Justification: No observed depressions were observed in the crown for the levee section of the segment.
		M	Minor irregularities that do not threaten integrity of levee. Records are incomplete or inclusive.	
		U	Obyious variations in elevation over significant reaches. No records exist or records indicate that design elevation is compromised.	
8. Depressions/ Rutting	A	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 ruts were observed in the levee section of the segment.
		M	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	A	A	Minor longitudinal, transverse, or desiccation cracks with no vertical movement along the crack. No cracks extend continuously through the levee crest.	Justification: No significant cracks were observed in the levee section of the segment.
		M	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.	Justification: No animal burrows were observed in the levee section of the segment.
		M	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.	

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Levee Embankments

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

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
11. Culverts/ Discharge Pipes (This item includes both concrete and corrugated metal pipes.)	A	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.	Justification: There are no known issues, nor were there any observations made on the inspection, regarding the condition of the culvert that penetrates the levee section of the segment for Ameron Pump Station.
		M	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 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 & Bank Protection	NA	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.	
		M	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 segment / system, or riprap is discussed in another section.	
13. Revetments other than Riprap	NA	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 segment / system.	

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Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
14. Underseepage Relief Wells/ Toe Drainage Systems	NA	A	Toe drainage systems and pressure relief wells necessary for maintaining FDR 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.	
		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.	
		U	Toe drainage systems or pressure relief wells necessary for maintaining FDR segment / 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 segment / system.	
15. Seepage	A	A	No evidence or history of unrepaired seepage, saturated areas, or boils.	Justification: There was no evidence of seepage in the levee section of the segment.
		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.	

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Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations	
1. Unwanted Vegetation Growth	M	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.	Justification: As noted in the report summary: the segment contains a flood wall on the right bank from Folsom Avenue to Pacheco Way. The presence of trees within 15 ft of the land side of the flood wall (as shown in points #30, 33, and 34) could potentially restrict access to said flood wall during emergency events.
		M	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.	
2. 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.	2020-0030 : Units of the mobile home park and an electricity pole are within 15 ft of the land side of the flood wall. (O&M Manual Station 36+00) (M) 2020-0033 : Units of the mobile home park are within 15 ft of the land side of the flood wall. (O&M Manual Station 42+00) (M) 2020-0034 : Units of the mobile home park are within 15 ft of the land side of the flood wall. (O&M Manual Station 38+00) (M) Justification: The presence of units of the mobile home park (throughout the entire length) and electricity poles (at select locations) within 15 ft of the land side of the flood wall could potentially restrict access to said flood wall during emergency events.
		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.	
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the floodwall.	
3. Closure Structures (Stop Log Closures and Gates) (A or U only)	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.	
		N/A	There are no closure structures along this component of the FDR segment / system.	
4. Concrete Surfaces	A	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.	2020-0031 : Minor cracking was observed in the water side of the flood wall at this location. (O&M Manual Station 31+00) (A) Justification: The minor cracking shown in point #31 is representative of other cracks that were observed through the entire flood wall. Sponsor should monitor the cracks and apply seal when necessary.
		M	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.	

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Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations
5. Tilting, Sliding or Settlement of Concrete Structures	A	A	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.
		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.
6. Foundation of Concrete Structures	A	A	No active erosion, scouring, or bank caving that might endanger the structure's stability.
		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 stable until the next inspection.
		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.
7. 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.
		M	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.

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Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
8. Underseepage Relief Wells/ Toe Drainage Systems	NA	A	Toe drainage systems and pressure relief wells necessary for maintaining FDR 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.	
		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.	
		U	Toe drainage systems or pressure relief wells necessary for maintaining FDR segment / 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 segment / system.	
9. Seepage	A	A	No evidence or history of unrepaired seepage, saturated areas, or boils.	Justification: There was no observed seepage during the inspection.
		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.	

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Pump Stations

For use during Initial and Continuing Eligibility Inspections of pump stations

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Pump Stations Operating, Maintenance, Training, & Inspection Records	A	A	Operation, maintenance and inspection records are present at the pump station and are being used and updated, and personnel have been trained in pump station operations. Names and last training date shown in the record book.	Justification: Records are present at both pump station buildings. Sponsor indicated that one of the representatives visit each of the pump stations at least once every other week.
		M	Operation, maintenance and inspection records are present but not adequately used and updated.	
		U	No operation, maintenance and inspection records are present, or refresher training for personnel has not been conducted.	
2. Pump Station Operations and Maintenance Equipment Manuals	A	A	Operation and Maintenance Equipment Manuals and/or posted operating instructions are present and updated as required, and adequately cover all pertinent pump station features. O&M manuals include points of contact for manufacturers and suppliers of major equipment used in the facility.	Justification: Manuals are present at both pump station buildings.
		M	Operation and Maintenance Equipment Manuals and/or posted operating instructions are present and adequately cover all pertinent pump station features. However, they are incomplete and the necessary updates have not been made.	
		U	Operation and Maintenance Equipment Manuals are not available.	
3. Safety Compliance	A	A	Safety compliance inspection reports by applicable local, state, or federal agencies available for review.	Justification: The sponsor indicated that the Hayward Fire Department does Hazardous Business Plan and fire code inspections annually at both pump stations.
		M	No safety compliance inspection reports are available for review.	
4. Communications (A or M only)	A	A	A telephone, cellular phone, two-way radio, or similar device is available to pump station operator and maintenance personnel.	Justification: Each pump station building has a land line telephone. Additionally, all vehicles used by personnel who operate these stations have two-way radios that can be used to contact other personnel.
		M	A telephone, cellular phone, two-way radio, or similar device is not available to pump station operator and maintenance personnel.	
5. Plant Building	A	A	The building is in good structural condition with no major foundation settlement problems. The roof is not leaking, intake & exhaust louvers are clear of debris, fans are operational, etc.	2020-0025 : The building for the Ameron Pump Station was observed to be in good condition. (O&M Manual Station 16+00) (A) 2020-0026 : The building for the Stratford Pump Station was observed to be in good condition. (O&M Manual Station 22+00) (A)
		M	There are minor structural defects, minimal foundation settlement, leaks, or other conditions noted that need repair. Defects do not threaten the structural integrity or stability of the building, and will not impact pumping operations.	
		U	The structural integrity or stability of the building is threatened, or there is damage to the building that threatens safety of the operator or impacts pumping operations.	
6. Fencing and Gates	A	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.	Justification: Fencing for the two pump stations were observed to be in good condition. Locks were in place.
		M	Fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged.	
		U	Fencing and gates are damaged or corroded to the point that replacement is required, or potentially dangerous features are not secured.	
		N/A	There are no features noted that require safety fencing.	

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Pump Stations

For use during Initial and Continuing Eligibility Inspections of pump stations

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
7. Pumps	A	A	All pumps are properly maintained and lubricated. Systems are periodically tested and documented for review. No vibration, cavitation noises or unusual sounds are noted when the pump is operated. Bearing temperature sensor records don't indicate any problems.	2020-0028 : Pumps for Ameron Pump Station were observed to be in good condition. (O&M Manual Station 16+00) (A)
		M	Minor deficiencies noted that need to be closely monitored or repaired, such as the presence of slight vibrations, leakage of packing gland, bearing temperature sensors are inoperable or no record is present. However, the pumps are operational and are expected to perform through the next period of usage.	
		U	Major deficiencies identified that may significantly reduce pumping operations. For example, bearing sensor records indicate problems, excessive vibration noted, impellers are badly corroded, or there are eroded or missing blades.	
8. Motors, Engines, Fans, Gear Reducers, Back Stop Devices, etc.	A	A	All items are operational. Preventative maintenance and lubrication is being performed and the system is periodically subjected to performance testing. Instrumentation, alarms, bearing sensors and auto shutdowns are operational.	Justification: The sponsor conducts bi-weekly and monthly preventative maintenance. On a bi-weekly basis, the Sponsor checks all fluids, looks for leaks, checks for bad wires and hoses, and checks the starting batteries. On a monthly basis, the sponsor runs them under load.
		M	Systems have minor deficiencies, but are operational and will function adequately through the next flood. Bearing sensors are not operational.	
		U	One or more of the primary motors or systems is not operational, or noted deficiencies have not been corrected.	
9. Sumps / Wet well	A	A	Clear of debris, sediment, or other obstructions. Procedures are in place to remove debris accumulation during operation.	
		M	Debris, sediment, or other obstructions may be present and must be removed, but the sump/ wet well will function as intended during the next flood. Procedures are in place to remove debris accumulation during operation.	
		U	Large debris or excessive silt present which will hinder or damage pumps during operation, or no procedures established to remove debris accumulation during operation.	
10. Mechanical Operating Trash Rakes	NA	A	Drive chain, bearing, gear reducers, and other components are in good operating condition and are being properly maintained.	
		M	The trash rake is in need of maintenance, but is still operational.	
		U	Trash rake not operational or deficiencies will inhibit operations during the next flood event.	
		N/A	There are no mechanical trash rakes.	
11. Non-Mechanical Trash Racks	A	A	Trash racks are fastened in place and properly maintained.	2020-0009 : Trash rack for the inlet of Ameron Pump Station is properly fastened in place. Trash that has accumulated on the rack should be removed by the sponsor. (O&M Manual Station 16+00) (A) 2020-0027 : The trash rack for the outlet of Ameron Pump Station is properly fastened in place and free of any visible trash. (O&M Manual Station 16+00) (A)
		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.)	
		N/A	There are no trash racks, or they are covered in the pump stations section of the report.	

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Pump Stations

For use during Initial and Continuing Eligibility Inspections of pump stations

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
12. Fuel System for Pump Engines	A	A	Fuel system is operational, day tank present and operational, fuel fresh and rotated regularly.	2020-0008 : Fuel System for Stratford Pump Station was observed to be in good condition. (O&M Manual Station 16+00) (A) Justification: The fuel systems are operational at both pump stations. Sponsor indicated that fuel is filtered annually by a fuel filtering company.
		M	Fuel system is operational and of adequate capacity, but day tank is missing or fuel is not fresh and rotated regularly.	
		U	Fuel system not functional.	
		N/A	No fuel system.	
13. Power Source	A	A	The normal power source and backup generators, if installed, are operational, properly exercised and well maintained. Surge protection, grounding, lightning protection, transformers, and automatic/manual transfer of main power to backup system is working.	
		M	Normal power source and backup units, if applicable, are operational with minor discrepancies or maintenance, inspection and exercising record is present but not up to date. Preventative maintenance or repairs are required.	
		U	Normal power source or generators are not operational and must be repaired; or generator, if required, is not on site.	
14. Electrical Systems	A	A	Operational and maintained free of damage, corrosion, and debris. Preventative maintenance and system testing is being performed periodically.	Justification: The electrical systems are operational at both pump stations. Sponsor indicated that the electrical systems are inspected as part of a bi-weekly preventative maintenance schedule.
		M	Operational with minor discrepancies. Preventative maintenance or repairs are required, but the components are expected to function adequately during the next flood event.	
		U	Components of the electrical system will not function adequately during the next flood event and must be replaced.	
15. Megger Testing on Pump Motors and Critical Power Cables	A	A	Results of megger tests on pump motors or critical power cables show that the insulation meets manufacturer's or industry standards. Tested within the last year.	Justification: Sponsor indicated that megger testing occurs annually.
		M	Megger testing not conducted within the past year. If megger tests on pump motors indicate that insulation resistance is below the manufacturer's or industry standard, but the resistance can be corrected with proper application of heat, this is minimally acceptable. (The application of heat does not relate to critical power cables.)	
		U	Megger tests not conducted within past two years, or tests indicate that insulation resistance is low enough that the equipment will not be able to meet design standards of operation; or evidence of arcing or shorting is detected visually.	
16. Enclosures, Panels, Conduit and Ducts	A	A	All enclosures, panels, conduits, and ducts are protected from corrosion damage and show no rust, damage, or deterioration that would cause a safety concern.	
		M	Minor surface corrosion which appears to be maintainable. Cleaning and painting required.	
		U	Severely corroded and must be replaced to prevent failure, equipment damage, or safety issues.	
17. Intake and Discharge Pipelines	A	A	Intake and discharge pipelines have no corrosion and paint is intact, except for minor touch up required. Pipe couplings and anchors have no leakage or corrosion.	
		M	Intake and discharge pipelines have minor corrosion and repair and painting is required. Pipe coupling with anchors have minor leakage, corrosion and require bolts to be tightened.	
		U	Intake and discharge pipelines have major corrosion and replacement is required. Pipe coupling with anchors have major leakage and is heavily corroded and requires replacement.	

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Pump Stations

For use during Initial and Continuing Eligibility Inspections of pump stations

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations
18. Sluice/ Slide Gates	A	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.
		M	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.
		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.
		N/A	There are no sluice/ slide gates.
19. Flap Gates/ Flap Valves/ Pinch Valves	A	A	Gates/ valves open and close easily with minimal leakage, have no corrosion damage, and have been exercised and lubricated as required.
		M	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.
		N/A	There are no gates on discharge lines from pump station.
20. Cranes	NA	A	Cranes operational and have been inspected and load tested in accordance with applicable standards within the last year. Documentation is on hand.
		M	Cranes have not been inspected or operationally tested within the past year, or there are visible signs of corrosion, oil leakage, etc, requiring maintenance.
		U	Cranes are not operational, and this may prevent the pump station from functioning as required. No documentation available on cranes.
		N/A	There are no cranes.
21. Other Metallic Items (Equipment, Ladders, Platform Anchors, etc)	NA	A	All metal parts are protected from corrosion damage and show no rust, damage, or deterioration that would cause a safety concern.
		M	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.
		N/A	There are no other significant metallic items.

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Flood Damage Reduction Channels

For use during Initial and Continuing Eligibility Inspections of flood damage reduction channels

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Vegetation and Obstructions	M	A	No obstructions, vegetation, debris, or sediment accumulation within the channel. Concrete channel joints and weep holes are free of grass and weeds.	2020-0001 : The channel bottom at this location is free of any significant obstructions. There are some trees that overhang the channel. Sponsor should monitor the growth of the trees to ensure their branches do not grow in size and become barriers to flow within the channel. (O&M Manual Station 129+29) (A) 2020-0013 : The channel bottom at this location is free of any significant obstructions. Photo is downstream of Folsom Avenue. (O&M Manual Station 46+00) (A) 2020-0018 : The channel bottom at this location is free of any significant obstructions. There are some trees that overhang the channel. Sponsor should monitor the growth of the trees to ensure their branches do not grow in size and become barriers to flow within the channel. (O&M Manual Station 72+00) (A) 2020-0032 : A large bush exists on the right channel slope at this location. This bush should be removed before it grows further in size and causes a significant reduction in channel capacity. (O&M Manual Station 38+00) (M) Justification: Most of the concrete sections of channel were free of any significant obstructions due to vegetation - several photos are included as inspection points (#1, 13, and 18) to illustrate this observation. There are some shoals that are in the channel that are noted in Item 2 of this checklist. There was a bush on the right channel slope between Folsom Avenue and Pacheco Way that should be removed before it grows further in size and causes a significant reduction in channel capacity.
		M	Obstructions (including log jams), vegetation, debris, or sediment are minor and have not impaired channel flow capacity, but should be removed. Sediment shoals have not developed to the extent that they can support vegetation other than non-aquatic grasses. A limited volume of grass and weeds may be present in concrete channel joints and weep holes.	
		U	Obstructions (including log jams), vegetation, debris or sediment have impaired the channel flow capacity. Sediment shoals are well established and support woody and/or brushy vegetation. Sediment and debris removal required to re-establish flow capacity.	
2. Shoaling (sediment deposition)	M	A	No shoaling or minor, non-vegetated shoaling is present.	2020-0002 : A shoal is in the middle of the channel, just downstream of the four bay culvert (Pacheco Way). The sponsor should remove the shoal before it grows in size and becomes a serious impediment to flow within the channel. (O&M Manual Station 24+00) (M) 2020-0029 : Algae and minor shoaling was observed within the channel adjacent to the levee embankment at the downstream end of the segment. The sponsor should remove the shoal before it grows in size and becomes a serious impediment to flow within the channel. (O&M Manual Station 0+79) (M)
		M	More widespread vegetated and non-vegetated shoaling is present. Non-aquatic grasses are present on shoal. No trees or brush is present on shoal, and channel flow is not significantly reduced. Sediment and debris removal recommended.	
		U	Shoaling is well established, stabilized by saplings, brush, or other vegetation. Shoals are diverting flow to channel walls. Channel flow capacity is reduced and maintenance is required.	

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Flood Damage Reduction Channels

For use during Initial and Continuing Eligibility Inspections of flood damage reduction channels

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations
3. 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 channel.
		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.
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the channel.
4. Erosion	A	A	No head cutting or horizontal deviation observed.
		M	Head cutting and horizontal deviation evident, but is less than 1 foot from the designed grade or cross section.
		U	Head cutting and horizontal deviation of more than 1 foot from the designed grade or cross section. Corrective actions required to stop or slow erosion.
5. 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.
		M	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.
		N/A	There are no concrete items in the channel.

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Flood Damage Reduction Channels

For use during Initial and Continuing Eligibility Inspections of flood damage reduction channels

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
6. Tilting, Sliding or Settlement of Concrete Structures	A	A	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.	
		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.	
		N/A	There are no concrete items in the channel.	
7. Foundation of Concrete Structures	A	A	No active erosion, scouring, or bank caving that might endanger the structure's stability.	
		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 stable until the next inspection.	
		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.	
		N/A	There are no concrete items in the channel.	
8. Slab and 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.	
		M	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 concrete items in the channel.	

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Flood Damage Reduction Channels


For use during Initial and Continuing Eligibility Inspections of flood damage reduction channels

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations
9. Flap Gates/ Flap Valves/ Pinch Valves	M	A Gates/ valves open and close easily with minimal leakage, have no corrosion damage, and have been exercised and lubricated as required.	2020-0003 : Flap gates for culverts on the right channel slope at this location within the system were free of obstructions. (O&M Manual Station 22+00) (M) 2020-0010 : Dense grass is growing near the bottom half of the flap gate at this location within the system. The grass should be trimmed or mowed in this area to ensure the flap gate can function as designed. (O&M Manual Station 0+79) (M) 2020-0016 : Flap gate at this location within the system was free of obstructions. (O&M Manual Station 42+00) (A) Justification: Note that additional rating for flap gates are included for the outlet of pump stations on the "Pump Stations" checklist of this report.
		M 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.	
		N/A There are no flap gates.	
10. Riprap Revetments & Banks	NA	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.	
		M 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 segment / system, or riprap is discussed in another section.	
11. Revetments other than Riprap	A	A Existing revetment protection is properly maintained, undamaged, and clearly visible.	Justification: The sack concrete revetment near Folsom Avenue was observed to be in good condition.
		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 segment / system.	

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Photos

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

	<p>Inspect ID: 2020-0030 Title: 5304001100_CESPN_2020_A_0030_1_20201218T212257.jpg Rated Item: 2. Encroachments Caption: Minimally Acceptable - Units of the mobile home park and an electricity pole are within 15 ft of the land side of the flood wall. Looking upstream in the photo. (O&M Manual Station 36+00)</p>
	<p>Inspect ID: 2020-0033 Title: 5304001100_CESPN_2020_A_0033_1_20201219T003835.jpg Rated Item: 2. Encroachments Caption: Minimally Acceptable - Units of the mobile home park are within 15 ft of the land side of the flood wall. Looking downstream in the photo. (O&M Manual Station 42+00)</p>



Photos

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

	<p>Inspect ID: 2020-0034 Title: 5304001100_CESPN_2020_A_0034_1_20201221T213740.jpg Rated Item: 2. Encroachments Caption: Minimally Acceptable - Units of the mobile home park are within 15 ft of the land side of the flood wall. Looking upstream in the photo. (O&M Manual Station 38+00)</p>
	<p>Inspect ID: 2020-0031 Title: 5304001100_CESPN_2020_A_0031_1_20201219T000921.jpg Rated Item: 4. Concrete Surfaces Caption: Acceptable - Minor cracking was observed in the water side of the flood wall at this location. (O&M Manual Station 31+00)</p>

Photos

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

	<p>Inspect ID: 2020-0025 Title: 5304001100_CESPN_2020_A_0025_1_20200924T223146.jpg Rated Item: 5. Plant Building Caption: Acceptable - The building for the Ameron Pump Station was observed to be in good condition. (O&M Manual Station 16+00)</p>
	<p>Inspect ID: 2020-0026 Title: 5304001100_CESPN_2020_A_0026_1_20201001T000049.jpg Rated Item: 5. Plant Building Caption: Acceptable - The building for the Stratford Pump Station was observed to be in good condition. (O&M Manual Station 22+00)</p>

Photos

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



Inspect ID: 2020-0028 **Title:** 5304001100_CESPN_2020_A_0028_1_20201120T212917.jpg **Rated Item:** 7. Pumps **Caption:** Acceptable - Pumps for Ameron Pump Station were observed to be in good condition. (O&M Manual Station 16+00)



Inspect ID: 2020-0009 **Title:** 5304001100_CESPN_2020_A_0009_1_20200903T180538.jpg **Rated Item:** 11. Non-Mechanical Trash Racks **Caption:** Acceptable - Trash rack for the inlet of Ameron Pump Station is properly fastened in place. Trash that has accumulated on the rack should be removed by the sponsor. (O&M Manual Station 16+00)

Photos

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



Inspect ID: 2020-0027 **Title:** 5304001100_CESPN_2020_A_0027_1_20201001T000205.jpg **Rated Item:** 11. Non-Mechanical Trash Racks **Caption:** Acceptable - The trash rack for the outlet of Ameron Pump Station is properly fastened in place and free of any visible trash. (O&M Manual Station 16+00)



Inspect ID: 2020-0008 **Title:** 5304001100_CESPN_2020_A_0008_1_20200903T180206.jpg **Rated Item:** 12. Fuel System for Pump Engines **Caption:** Acceptable - Fuel System for Stratford Pump Station was observed to be in good condition. (O&M Manual Station 16+00)

Photos

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





Inspect ID: 2020-0004 **Title:** 5304001100_CESPN_2020_A_0004_1_20200903T174644.jpg **Rated Item:** 19. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Acceptable - Flap gates for all of the outlets from the Stratford Pump Station were free of obstructions. (O&M Manual Station 22+00)



Inspect ID: 2020-0001 **Title:** 5304001100_CESPN_2020_A_0001_2_20200903T172634.jpg **Rated Item:** 1. Vegetation and Obstructions **Caption:** Acceptable - The channel bottom at this location is free of any significant obstructions. There are some trees that overhang the channel. Sponsor should monitor the growth of the trees to ensure their branches do not grow in size and become barriers to flow within the channel. (O&M Manual Station 129+29)

Photos

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	<p>Inspect ID: 2020-0013 Title: 5304001100_CESPN_2020_A_0013_1_20200903T184904.jpg Rated Item: 1. Vegetation and Obstructions Caption: Acceptable - The channel bottom at this location is free of any significant obstructions. Photo is downstream of Folsom Avenue. (O&M Manual Station 46+00)</p>
	<p>Inspect ID: 2020-0018 Title: 5304001100_CESPN_2020_A_0018_1_20200903T191239.jpg Rated Item: 1. Vegetation and Obstructions Caption: Acceptable - The channel bottom at this location is free of any significant obstructions. There are some trees that overhang the channel. Sponsor should monitor the growth of the trees to ensure their branches do not grow in size and become barriers to flow within the channel. (O&M Manual Station 72+00)</p>

Photos

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



Inspect ID: 2020-0032 **Title:**

5304001100_CESPN_2020_A_0032_1_20201219T002327.jpg **Rated**

Item: 1. Vegetation and Obstructions **Caption:** Minimally Acceptable - A large bush exists on the right channel slope at this location. This bush should be removed before it grows further in size and causes a significant reduction in channel capacity. Looking downstream in the photo. (O&M Manual Station 38+00)





Inspect ID: 2020-0002 **Title:**

5304001100_CESPN_2020_A_0002_1_20200903T173950.jpg **Rated**

Item: 2. Shoaling (sediment deposition) **Caption:** Minimally Acceptable - A shoal is in the middle of the channel, just downstream of the four bay culvert (Pacheco Way). The sponsor should remove the shoal before it grows in size and becomes a serious impediment to flow within the channel. (O&M Manual Station 24+00)



Photos

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

	<p>Inspect ID: 2020-0029 Title: 5304001100_CESPN_2020_A_0029_1_20201204T164128.jpg Rated Item: 2. Shoaling (sediment deposition) Caption: Minimally Acceptable - Algae and minor shoaling was observed within the channel adjacent to the levee embankment at the downstream end of the segment. The sponsor should remove the shoal before it grows in size and becomes a serious impediment to flow within the channel. (O&M Manual Station 0+79)</p>
	<p>Inspect ID: 2020-0014 Title: 5304001100_CESPN_2020_A_0014_1_20200903T185233.jpg Rated Item: 3. Encroachments Caption: Acceptable - The sponsor representative noted that the City of Hayward may have been depositing tree trimmings on the top of the left channel slope in this location. The collective size and location of the observed trimmings would not cause a problem for channel performance. However, the sponsor should continue to monitor in the event that City of Hayward were to continue to deposit tree trimmings in the vicinity of the channel and request removal. Looking downstream in the photo. (O&M Manual Station 40+00)</p>

Photos

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

	<p>Inspect ID: 2020-0021 Title: 5304001100_CESPN_2020_A_0021_1_20200903T192646.jpg Rated Item: 3. Encroachments Caption: Minimally Acceptable - Damaged inflatable swimming pool was observed in the middle of the channel at this location. This swimming pool should be removed before it collects other floating debris and becomes an impediment to flow within the channel.</p>
	<p>Inspect ID: 2020-0017 Title: 5304001100_CESPN_2020_A_0017_1_20200903T185921.jpg Rated Item: 5. Concrete Surfaces Caption: Minimally Acceptable - Concrete apron in the middle of the channel at this location within the segment was free of any obstructions. (O&M Manual Station 38+00)</p>

Photos

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



Inspect ID: 2020-0019 **Title:** 5304001100_CESPN_2020_A_0019_1_20200903T191635.jpg **Rated Item:** 5. Concrete Surfaces **Caption:** Minimally Acceptable - Looking at the bottom of the left channel slope at this location. Deteriorated concrete and exposed rebar was observed. (O&M Manual Station 77+00)



Inspect ID: 2020-0003 **Title:** 5304001100_CESPN_2020_A_0003_1_20200903T174407.jpg **Rated Item:** 9. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Minimally Acceptable - Flap gates for culverts on the right channel slope at this location within the system were free of obstructions. (O&M Manual Station 22+00)

Photos

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



Inspect ID: 2020-0010 **Title:** 5304001100_CESPN_2020_A_0010_1_20200903T182037.jpg **Rated Item:** 9. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Minimally Acceptable - Dense grass is growing near the bottom half of the flap gate at this location within the system. The grass should be trimmed or mowed in this area to ensure the flap gate can function as designed. (O&M Manual Station 0+79)



Inspect ID: 2020-0016 **Title:** 5304001100_CESPN_2020_A_0016_1_20200903T185516.jpg **Rated Item:** 9. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Acceptable - Flap gate at this location within the system was free of obstructions. (O&M Manual Station 42+00)



**US Army Corps
of Engineers ®**

Flood Damage Reduction System 5305001100 / Segment 5304001100 Public Sponsor Pre-Inspection Form

The following information is to be provided by the levee district sponsor prior to an inspection. This information will be used to help evaluate the organizational capability of the levee district to manage the levee segment / system maintenance program.

1. Levee segment / system and sponsor: (name of the segment / system and levee sponsor) System 5305001100 / Segment 5304001100 CESP
2. Reporting period: (month/day/year to month/day/year) 09/03/2020 to 09/03/2020
3. Summary of maintenance required by last inspection report: Sponsor did not receive a recent inspection report from USACE.
4. Summary of maintenance performed this reporting period: Routine vegetation maintenance and debris removal.
5. Summary of maintenance planned next reporting period: Routine vegetation maintenance and debris removal.
6. Summary of changes to segment / system since last inspection: None to report.
7. Problems/ issues requiring the assistance of the US Army Corps of Engineers: None to report.

National Flood Insurance Program (NFIP) - 44 CFR 65.10 Provision Evaluation

<u>FINDING</u>		44 CFR 65.10 Criterion	CFR Section
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	All closure devices, whether manual or automatic, are operated in accordance with an officially adopted operation manual.	65.10(c)
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	Manuals document a flood warning system that will be used to trigger emergency operation activities and demonstration that sufficient flood warning time exists for the completed operation of all closure structures.	65.10(c)(1)i
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	Manuals identify specific actions and assignments of responsibility by individual name or title.	65.10(c)(1)ii
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	Manuals identify provisions for periodic operation of closure structures for testing and training purposes, in accordance with the adopted operation manual.	65.10(c)(1)iii
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	Officially adopted maintenance plans documents the formal procedure that ensures that the stability, height, & overall integrity of the levee and its associated structures and systems are maintained.	65.10(d)
<input type="checkbox"/> POSITIVE	<input type="checkbox"/> NEGATIVE	Maintenance plans specify the maintenance activities to be performed, the frequency of their performance, and the person by name or title responsible for their performance.	65.10(d)

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
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:

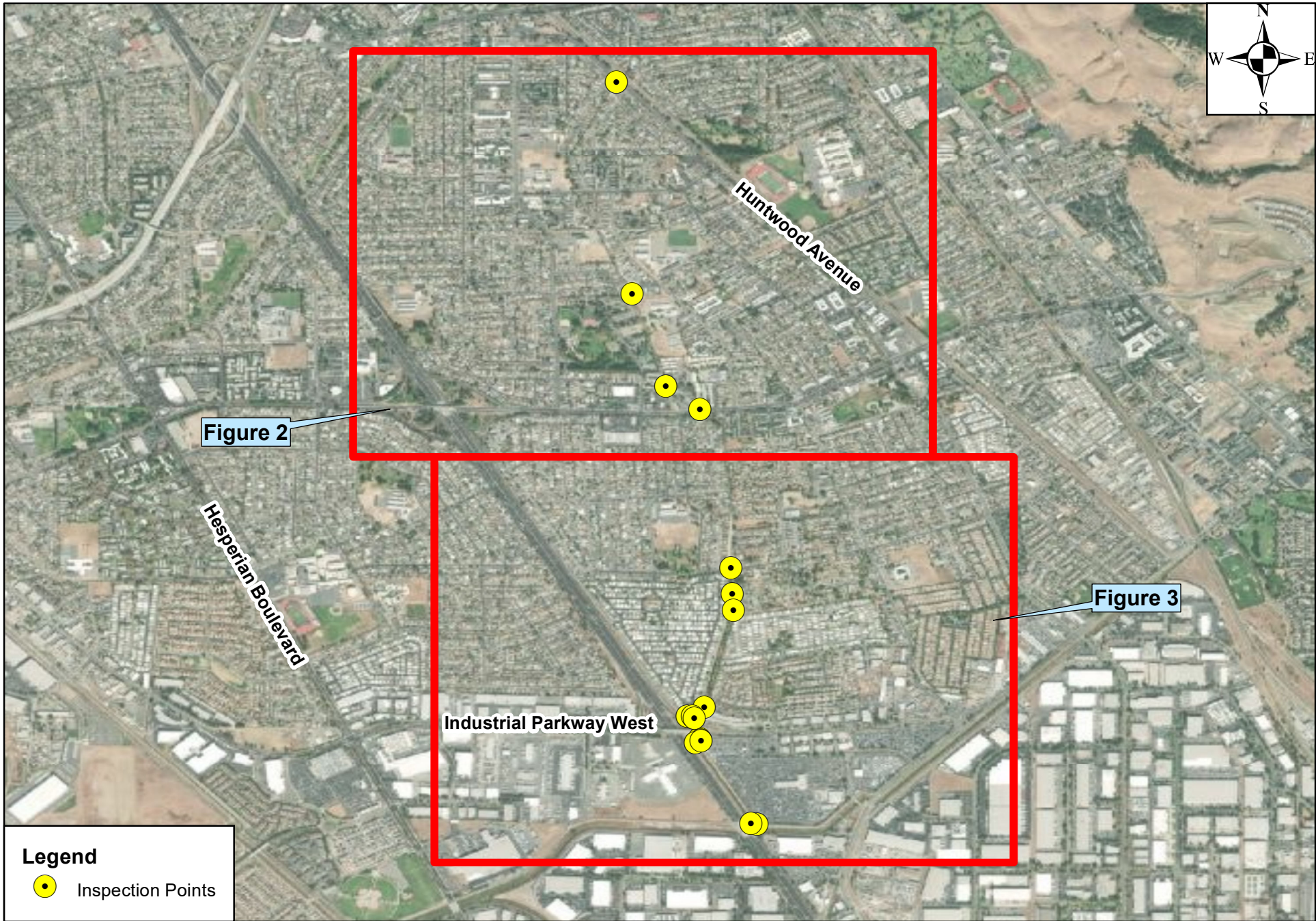
After the inspection, the Corps is responsible for assembling an inspection report (or a summary report if it was a Periodic Inspection) including the following information:

- 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.



Project Vicinity Map

FIGURE 1

3,400 1,700 0 3,400 Feet



Inspection Point Map

FIGURE 2





Inspection Point Map

FIGURE 3

