US Army Corps of Engineers®

Flood Damage Reduction Segment / System Inspection Report

Name of Segment/ System: Seminary Creek, SMNR (Zone 12, Line E)

Public Sponsor(s): Alameda County Flood Control & Water Conservation District

Public Sponsor Representative: Jesus Espinoza

Sponsor Phone: (510)670-6694

Sponsor Email: jesus@acpwa.org

Corps of Engineers Inspector: George Fong, PE; Joshua Miller

Inspection Start Date: 8/09/2020

Inspection End Date: 8/09/2020

Inspection Report Prepared By: George Fong, PE

Date Report Prepared: 10/20/2020

Internal Technical Review (for Periodic Inspections) By: John Conway, PG, SPN Levee Safety Program Manager

Date of ITR:

Final Approved By: Susan Kelly, PE. SPN Levee Safety Officer

Date Approved:

Type of Inspection:

- ☐ **Initial Eligibility Inspection**
- ☒ **Continuing Eligibility Inspection (Routine)**
- ☐ **Continuing Eligibility Inspection (Periodic)**

Overall Segment/ System Rating:

- ☐ **Acceptable**
- ☒ **Minimally Acceptable**
- ☐ **Unacceptable**

Contents of Report:

- ☒ **Instructions**
- ☐ **Initial Eligibility Inspection**
- ☒ **General Items for All Flood Control Works**
- ☐ **Levee Embankment**
- ☐ **Concrete Floodwalls**
- ☐ **Sheet Pile and Concrete I-walls**
- ☐ **Interior Drainage System**
- ☐ **Pump Stations**
- ☒ **FDR System Channels**

Note: In addition to the report contents indicated here, a plan view drawing of the system, with stationing, should be included with this report to reference locations of items rated less than acceptable. Photos of general system condition and any noted deficiencies should also be attached.

Note: This inspection rating represents the Corps evaluation of operations and maintenance of the flood damage reduction system and may be used in conjunction with other information for a levee certification determination for National Flood Insurance Program (NFIP) purposes if applicable. An Acceptable Corps inspection rating, alone, does not equate to a certifiable levee for the NFIP. It is recommended for levee systems currently accredited by the Federal Emergency Management Agency (FEMA) for NFIP purposes receiving a Corps Minimally Acceptable or Unacceptable rating, be evaluated by the levee owner to determine the potential impacts to the certification for FEMA.

CONWAY.JOHN.M.1232164324 Digitally signed by CONWAY.JOHN.M.1232164324 Date: 2021.04.29 17:35:55 -04'00'

SPN Levee Program Manager
Aproval Signature

KELLY.SUSAN.JANE.1458989652 Digitally signed by KELLY.SUSAN.JANE.1458989652 Date: 2021.05.04 14:29:52 -07'00'

SPN Levee Safety Officer
Approval Signature

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.

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Flood Damage Reduction Segment / System 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.

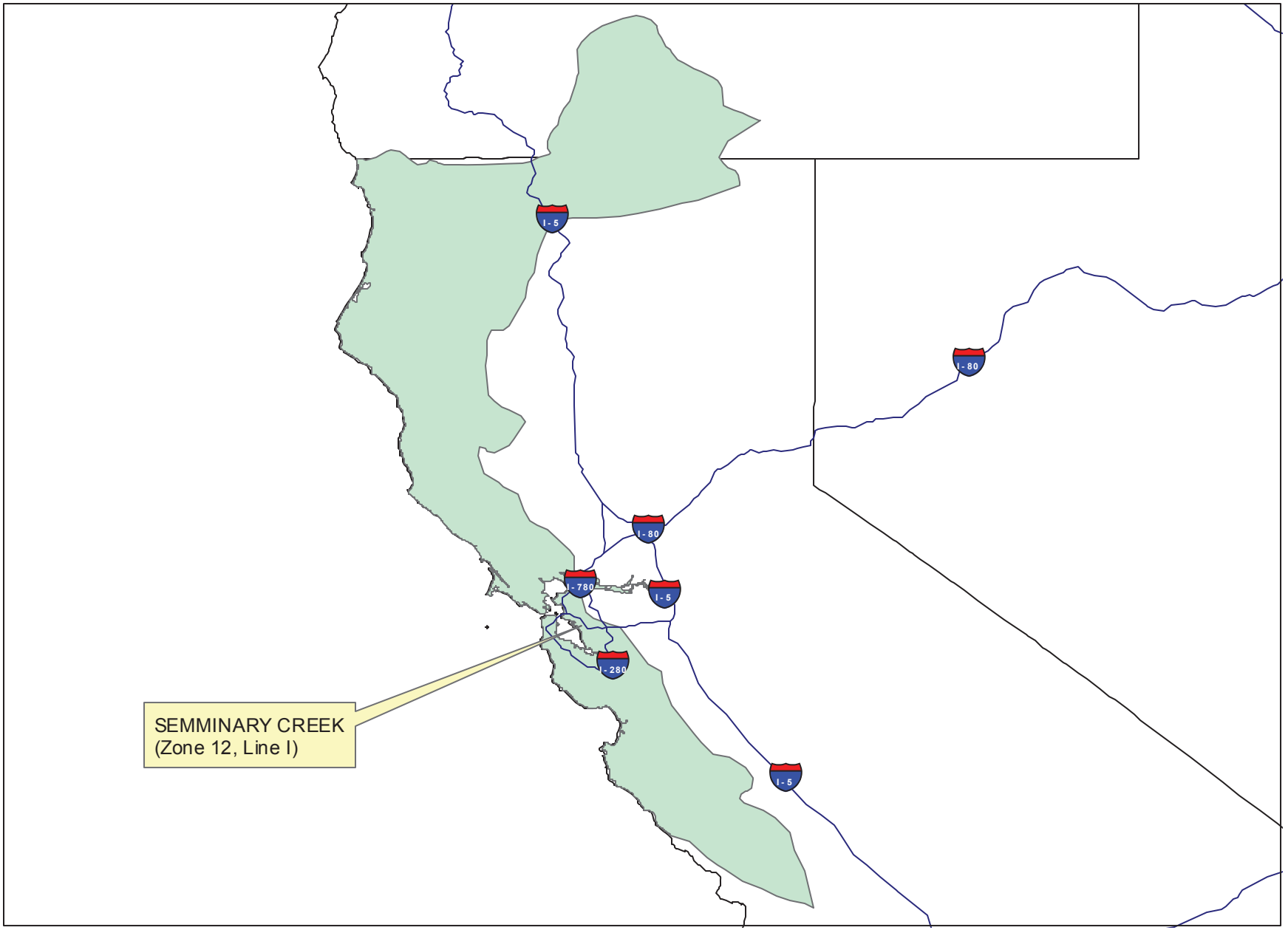
1. Levee segment / system and district: (name of the segment / system and levee district) Seminary Creek (Zone 12, Line I), Alameda County, SPN
2. Reporting period: (month/day/year to month/day/year) 06/05/18 through 06/30/20
3. Summary of maintenance required by last inspection report: Remove grassy vegetation and debris within the creek and sediment deposition near and under the Amtrak Railroad bridge
4. Summary of maintenance performed this reporting period: Removal of vegetation and debris
5. Summary of maintenance planned next reporting period: Removal of grassy vegetation and debris within the creek and sediment near and under the Amtrak RR bridge
6. Summary of changes to segment / system since last inspection: None.
7. Problems/ issues requiring the assistance of the US Army Corps of Engineers: None.

Public Sponsor Pre-Inspection Report

The following information is to be provided by the levee district sponsor prior to an inspection

8. Levee district organization: (elected or appointed levee district officials and key employees)

Name	Position	Mailing Address	Phone Number	Email Address
Daniel Woldesenbet	Director of Public Works	399 Elmhurst Street, Hayward, CA 94544	(510) 670-5455	danielw@acpwa.org
Rick Ruiz	Deputy Director of Public Works, Maintenance and Operations	951 Turner Court, Hayward, CA 94545	(510) 670-5504	rickr@acpwa.org
Mike Dutra	Flood Control Superintendent; Maintenance and Operations	951 Turner Court, Hayward, CA 94545	(510) 670-5528	miked@acpwa.org
Gene Mazza	Pump Station Supervisor, Maintenance and Operations	951 Turner Court, Hayward, CA 94545	(510) 670-5516	gene@acpwa.org
Arthur Valderrama	Supervising Civil Engineer, Flood Control Maintenance Engineer	951 Turner Court, Hayward, CA 94545	(510) 670-5260	arthur@acpwa.org
Stanley Fung	Construction Program Manager	951 Turner Court, Hayward, CA 94545	(510) 670-5513	stanley@acpwa.org
George Bolton	Construction Manager - Inspection	951 Turner Court, Hayward, CA 94545	(510) 670-5594	georgeb@acpwa.org
Hank Ackerman	Principal Civil Engineer, Flood Control Program Manager	399 Elmhurst Street, Hayward, CA 94544	(510) 670-5553	hank@acpwa.org
Jesus Espinoza	Assistant Civil Engineer, Flood Control Design	399 Elmhurst Street, Hayward, CA 94544	(510) 670-6694	jesus@acpwa.org
Moses Tsang	Supervising Civil Engineer, Flood Control Design, Corps Primary Contact	399 Elmhurst Street, Hayward, CA 94544	(510) 670-6549	moses@acpwa.org



Project Location Map

FIGURE 1

Inspection Map

Seminary Creek (SMNR)

FIGURE 2

Inspection and photos are referred to as "X-Y" in the checklists and photo description. "X" is the inspection point number. "Y" is the number of the photo taken at the inspection point.

Legend

- Station
- Station Centerline
- Inspection Point

Feet

0 125 250 500 750 1,000

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.	The sponsor has an 2017 update project specific O&M Manual. The site specific O&M manual covers project specific items and requirements that are needed for operation and maintenance, such as maintenance schedules, inspection schedules, emergency operating procedures and protocols, names and telephone numbers of key personnel, project plan and sections, etc. and an Emergency Action Plan.
		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.	Another Corps inspection team visited the County earlier in August 2020 for work on other inspections. The team verified the availability of several types of emergency supplies located at the sponsor's maintenance facility at 951 Turner Ct., Hayward, CA 94545. These supplies include sandbags, hand/power tools, stockpile borrow material, wheel loaders, and several dump trucks.
		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.	The Local Sponsor regularly provides flood fighting training to the Public Works staff on their roles and responsibilities during a flood emergency. The local sponsor has a county-wide emergency action plan and site specific emergency action plan for the project in conjunction with the O&M Manual.
		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.	

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.	SMNR_2020_a_0003_1.jpg Photo is looking downstream at the channel. A vegetated shoal that spanned approximately 30% of the channel width was observed.(M); Action: The shoal should be removed if it reduces channel capacity and flooding may result in a high flow event.; Station: 21+00
		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[1] (sediment deposition)	**M**	**A**	No shoaling or minor, non-vegetated shoaling is present.	SMNR_2020_a_0001_1.jpg A shoal that spanned approximately 50% of the channel width under the railroad bridge was observed (M); Action: The Sponsor should remove the sediment and trash in the channel if it reduces channel capacity and may cause a flood in a high flow event.; Station: 25+00 Shoaling was observed throughout the project reaches. The photos and rating are the same as Rated Item 1 of the Table. The impacts of shoaling and vegetation on channel hydraulics are unknowns. Shoals should be monitored and surveyed, and the channel capacity should be checked.
		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.	
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.	SMNR_2020_a_0007_1.jpg Trash and debris such as plastics, bottles. etc. were found scattered along the channel (M).; Action: The Sponsor should clean the channel periodically; Station: 13+00 However, it would not impact to the channel capacity at this point.
		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	**M**	**A**	No head cutting or horizontal deviation observed.	SMNR_2020_a_0005_2.jpg Minor erosion was observed on the bridge wingwalls (M); Station: 19+00 SMNR_2020_a_0006_1.jpg A broken concrete swale drain that extended from adjacent parking lot to the channel is causing erosion on the channel slope (M); Action: The Sponsor should repair before the erosion getting larger. Station: 16+00 SMNR_2020_a_0008_1.jpg Looking upstream. Eroded areas varied in size from 4 feet long by 3 feet wide to 12 feet long by 3 feet wide (M).; Station: 2+00
		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.	

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
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.	SMNR_2020_a_0005_1.jpg Photo is looking downstream at concrete culvert, Concrete spalling and exposed rebar was observed on the culvert entrance (M). Action: The Sponsor should initiate the repair as soon as possible to prevent further deterioration.; Station: 19+00
		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.	
6. Tilting, Sliding or Settlement of Concrete Structures[2]	**A**	**A**	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.	No signs of significant movement of the concrete structures in the channel were observed
		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	**A**	**A**	No active erosion, scouring, or bank caving that might endanger the structure's stability.	No erosion, bank caving or scour in the vicinity of

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
Concrete Structures[3]		**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.	foundation issues was observed in the channel.
		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.	The joint filler material is in good condition.
		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.	
9. Flap Gates/ Flap Valves/ Pinch Valves[4]	**A**	**A**	Gates/ valves open and close easily with minimal leakage, have no corrosion damage, and have been exercised and lubricated as required.	SMNR_2020_a_0004_1.jpg The culvert flap gate was observed to be in good condition (A) ; Action: The Sponsor should periodically check for minimal leakage over time; Station: 19+50
		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	**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.	SMNR_2020_a_0002_1.jpg Photo shows the upstream of project, looking downstream at the banks, no displaced riprap on side slopes was observed. ; Station: 23+00
		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.	

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
		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	**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.	

[1] If weather and flow conditions allow, inspectors should walk in the channel and probe shoal areas in order to estimate extent of blockage of the cross-sectional area where shoaling is present.
[2] The sponsor should be monitoring any observed movement to verify whether the movement is active or inactive.
[3] Inspectors must have as-built drawings available during the inspection so that the lateral distance to the heel and toe of the floodwalls can be determined in the field.
[4] Proper operation of this item must be demonstrated during the inspection.

	**Inspect ID: SMNR**_2020_a_0017 **Title:** USACE_CESPN_SMNR_2020_a_0008_1.jpg **Rated Item:** 2. Emergency Supplies and Equipment (A or M only) **Caption:** Rating: Acceptable; Remarks: Emergency supplies and equipment are stored at the Sponsor's maintenance yard at 951 Turner Ct., Hayward, CA 94545. Equipment includes, but not limited to dozers, water tank, and trucks.; Action: NA; Station_1:
	**Inspect ID:** SMNR_2020_a_0017 **Title:** USACE_CESPN_SMNR_2020_a_0008_2.jpg **Rated Item:** 2. Emergency Supplies and Equipment (A or M only) **Caption:** Rating: Acceptable; Remarks: Emergency supplies and equipment are stored at the Sponsor's maintenance yard at 951 Turner Ct., Hayward, CA 94545. Supplies includes, but not limited to sand, base rock, and riprap; Action: NA; Station_1:

Inspect ID: SMNR_2020_a_0017 **Title:** USACE_CESPN_SMNR_2020_a_0017_3.jpg **Rated Item:** 2. Emergency Supplies and Equipment (A or M only) **Caption:** Rating: Acceptable; Remarks: Emergency supplies and equipment are stored at the Sponsor's maintenance yard at 951 Turner Ct., Hayward, CA 94545 . Supplies includes, but not limited to wood stacks, polyethylene sheeting, and haybales; Action: NA; Station_1:

Inspect ID: SMNR_2020_a_0017 **Title:** USACE_CESPN_SMNR_2020_a_0017_4.jpg **Rated Item:** 2. Emergency Supplies and Equipment (A or M only) **Caption:** Rating: Acceptable; Remarks: Emergency supplies and equipment are stored at the Sponsor's maintenance yard at 951 Turner Ct., Hayward, CA 94545. Equipment includes, but not limited to ladders, wheelbarrows, and construction signs.; Action: NA; Station_1:

	**Inspect ID:** SMNR_2020_a_0001 **Title:** USACE_CESPN_SMNR_2020_a_0001_1.jpg **Rated Item:** 2. Shoaling (sediment deposition) **Caption:** Rating: Minimally acceptable; Remarks: A shoal that spanned approximately 50% of the channel width under the railroad bridge was observed; Action: The Sponsor should remove if the sediment and trash in the channel reduce channel capacity and may cause a flood in a high flow event.; Station: 25+00
	**Inspect ID:** SMNR_2020_a_0002 **Title:** USACE_CESPN_SMNR_2020_a_0002_1.jpg **Rated Item:** 10 Riprap Revetments & Banks **Caption:** Rating: Acceptable; Remarks: Photo shows the upstream of project, looking downstream at the banks, no displaced riprap on side slopes was observed. ; Station: 23+00

	**Inspect ID:** SMNR_2020_a_0003 **Title:** USACE_CESPN_SMNR_2020_a_0003_1.jpg **Rated Item:** 1. Vegetation and Obstructions **Caption:** Rating: Minimally Acceptable; Remarks: Photo is looking downstream at the channel. A vegetated shoal that spanned approximately 30% of the channel width was observed.; Action: The shoal should be removed if it reduces channel capacity resulting in flood in a high flow event.; Station: 21+00
	**Inspect ID:** SMNR_2020_a_0004 **Title:** USACE_CESPN_SMNR_2020_a_0004_1.jpg **Rated Item:** 11. Culverts / Discharge Pipes **Caption:** Rating: Acceptable; Remarks: The culvert flap gate was observed to be in good condition ; Action: The Sponsor should perform a video inspection for the culverts every 5 years. At this time the video inspection is not overdue; however, this item should be followed up in next inspection; Station: 19+50

	**Inspect ID:** SMNR_2020_a_0005 **Title:** USACE_CESPN_SMNR_2020_a_0005_1.jpg **Rated Item: 5**. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: Photo is looking downstream at concrete culvert, Concrete spalling and exposed rebar was observed on the culvert entrance. Action: The Sponsor should initiate the repair as soon as possible to prevent further deterioration.; Station: 19+00
	**Inspect ID:** SMNR_2020_a_0005 **Title:** USACE_CESPN_SMNR_2020_a_0005_2.jpg **Rated Item:** 4. Erosion **Caption:** Rating: Minimally Acceptable; Remarks: minor erosion was observed on the bridge wingwalls; Station: 19+00

Inspect ID: SMNR_2020_a_0006 **Title:** USACE_CESPN_SMNR_2020_a_0006_1.jpg **Rated Item:** 4. Erosion **Caption:** Rating: Minimally Acceptable; Remarks: A broken concrete swale drain that extended from adjacent parking lot to the channel is causing erosion on the channel slope; Action: The Sponsor should repair before the erosion getting larger. Station: 16+00

Inspect ID: SMNR_2020_a_0007 **Title:** USACE_CESPN_SMNR_2020_a_0007_1.jpg **Rated Item:** 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Trash and debris such as plastics, bottles. etc. were found scattered along the channel.; Action: The Sponsor should clean the channel periodically; Station: 13+00

	**Inspect ID:** SMNR_2020_a_0008 **Title:** USACE_CESPN_SMNR_2020_a_0008_1.jpg **Rated Item:** 4. Erosion **Caption:** Rating: Minimally Acceptable; Remarks: Looking upstream from STA 02+00. Erosion can be sporadically observed on the side slope. Eroded areas varied in size from 4 feet long by 3 feet wide to 12 feet long by 3 feet wide.; Station: 2+00. Repairs should be done to prevent expansion of erosion pockets on slope.

Flood Damage Reduction Segment / System
Supplemental Data Sheet

This form is intended for the Corps' internal use and may not need to be updated with every inspection.

Name of Segment / System: Seminary Creek (Zone 12, Line I)
Sponsor: Alameda County Flood Control and Water Conservation District
Location: Oakland, CA
River Basin: Seminary Creek (Zone 12, Line I)
Project Description: Approximately 2,500 feet of incised, earthen channel with one street crossing culvert, carrying runoff to Peralta Creek, San Leandro Bay, and then to the San Francisco Bay.
Authority that Project was Constructed Under: District Act (Act 205) and subsequent approval of each project by the Board of Supervisors (sitting as the Alameda County Flood Control and Water Conservation District)
Date of Construction: See attached table on page 2
Approximate Annual Maintenance Costs: $45,750

Construction: ☐ Federally Constructed ☒ Non-Federally Constructed
Maintenance: ☐ Federally Maintained ☒ Non-Federally Maintained

National Flood Insurance Program:

a. Is the project currently NFIP? ☐ Yes ☒ No

b. If in the NFIP, Date of Certification (per 44 CFR 65.10): N/A

Datum Information:

a. Datum used for the design and construction of this project is: NGVD29

b. Current recommended datum for this project is: NAVD 88

c. Has the Project been converted to the current recommended datum? ☐ Yes ☒ No New Datum (NAVD88) to be used on current improvement projects.

Levee Embankment Data: N/A

a. Levee Designed Gage Function Reading/Station:
b. Level of Protection Provided: Greater than 100-year event
c. Average Height of Levee: N/A
d. Average Crown Width: N/A
e. Average Side Slope: N/A

Protected Features (For use in preparing estimates and PIRs):

a. Total acres protected:
b. Total agriculture production acres protected:
c. Towns:
d. Businesses:
e. Residences:
f. Roads:
g. Utilities:
h. Barns:
i. Machine Sheds:
j. Outbuildings:
k. Irrigation Systems:
l. Grain Bins:
m. Other Facilities:
n.