



**US Army Corps
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Flood Damage Reduction Segment / System Inspection Report

Name of Segment / System: Ardsley Flood Control Project

Public Sponsor(s): NYSDEC/Village of Ardsley, NY

Public Sponsor Representative: John Harrington (NYSDEC) & LJ Kohn (Village of Ardsley Stormwater)

Sponsor Phone: 845-256-3065 & 914-693-1550

Sponsor Email: john.harrington@dec.ny.gov & stormwater@ardsleyvillage.com

Corps of Engineers Inspector: Joseph Diehl

Inspection Start Date: 7/16/2019

Inspection End Date: 7/16/2019

Inspection Report Prepared By: B. Keith Gottberg

Date Report Prepared: 7/17/2019

Internal Technical Review (for Periodic Inspections) By: [Signature]

Date of ITR: 7/23/19

Final Approved By: [Signature]

Date Approved: 7/23/19

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.



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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) Ardsley Flood Control Project for CENAN
2. Reporting period: (month/day/year to month/day/year) 11/15/2016-7/16/2019
3. Summary of maintenance required by last inspection report:
4. Summary of maintenance performed this reporting period:
5. Summary of maintenance planned next reporting period:
6. Summary of changes to segment / system since last inspection:
7. Problems/ issues requiring the assistance of the US Army Corps of Engineers:



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**Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)**

**Pre-Inspection Form
Page 1 of 2**

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
Joseph Diehl	USACE		917-790-8218	joseph.diehl@usace.army.mil
Berhanu Gonfa	NYSDEC		914-803-8143	berhanu.gonfa@dec.ny.gov
LJ Kohn	Village of Ardsley Stormwater		914-6931550	stormwater@ardsleyvillage.com
Anna Servidone	NYSDEC		518-402-8147	anna.servidone@dec.ny.gov
Lynn Meeker	NYSDEC		845-256-3065	lynn.meeker@dec.ny.gov
Robert Wootten	Ardsley DPW		914-693-0117	rwoott10@gmail.com
John Harrington	NYSDEC		845-256-3055	john.harrington@dec.ny.gov
Keith Gottberg	USACE		917-790-8106	brian.k.gottberg@usace.army.mil



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Pre-Inspection Form
Page 2 of 2

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.



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.	The local sponsor has a copy of the 1989 USACE O&M Manual. The NYSDEC made a supplement to the USACE manual in 2004.
		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.	NYSDEC maintains a complete supply of flood fighting supplies and equipment at the Region 3 Headquarters in New Paltz. This includes sand bags, a front end loader, a twin axle dump truck, and two trailer mounted diesel powered stormwater pumps.
		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.	NYSDEC staff have personal knowledge of the Ardsley FRMP. They have trained state employees on the operation of the system and the necessary response to flooding. The Village DPW has developed an Emergency Action Plan.
		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



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

General Items for All Flood Damage Reduction
Segments / Systems
Page 1 of 1

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Unwanted Vegetation Growth ¹	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.	NAR1_2019_a_0007: Station_1 4+45B: Vegetation growth in joints of masonry facade of monolith 59/60. According to NYSDEC, the masonry structure belongs to New York City DEP.: Clean and repoint masonry. (M) NAR1_2019_a_0021: Station_1 3+55B: Vines in fence along top of wall from monolith 53-55: Maintain vegetation in accordance with USACE guidelines. (M)
		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.	NAR1_2019_a_0042: Station_1 5+40U: Overgrown vegetation along protected side of monoliths 26-30, north of DS#3.: Maintain vegetation in accordance with USACE guidelines. (M)
		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.	NAR1_2019_a_0045: Station_1 4+65U: Village of Ardsley has successfully removed most of the vegetation behind the floodwall south of DS#3 but a small stand of trees remains.: Remove vegetation in accordance with USACE guidelines. (M) NAR1_2019_a_0054: Station_1 2+50U: Vegetation on top of floodwall at monolith 12.: Remove vegetation in accordance with USACE guidelines. (M)
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.	NAR1_2019_a_0004: Station_1 2+20B: Station_2 4+45B: Fence on top of floodwall running from monolith 47-60 not in the original plans.: Seek authorization from USACE for the encroachment to remain. (M)
		M	Trash, debris, unauthorized structures, excavations, or other obstructions present, or inappropriate activities noted that should be corrected but will not inhibit operations and maintenance or emergency operations. Encroachments have not been reviewed by the Corps.	NAR1_2019_a_0018: Station_1 3+30B: Utility pole and guy wire within 4 ft of floodwall on protected side. NYSDEC indicated that there are plans to move the pole and wire across the drive during a future upgrade.: Proceed with the plan to move the pole during the next upgrade. (M)
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the floodwall.	NAR1_2019_a_0025: Station_1 2+70B: Chain link fence encroaching on protected side of floodwall. Extends 6 ft out from floodwall.: Investigate easement agreement and dispose of encroachment accordingly. (M) NAR1_2019_a_0031: Station_1 8+00 U: Animal burrow at the base of the protected side of monolith 41. 1 ft deep. 2 ft wide.: Fill the burrow and establish a program to control animal activity near the floodwall. (M) NAR1_2019_a_0036: Station_1 6+10U: Stumps and tree limbs adjacent to exposed face of floodwall. Could not access in 2019.: Remove debris and stumps. (M) NAR1_2019_a_0040: Station_1 5+80U: Animal burrow on the protected side at the base of monolith 29. 1 ft deep. 1.5 ft wide.: Fill burrow and establish a program to control animal

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Floodwalls
Page 1 of 6

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
				activity near the flood wall. (M) NAR1_2019_a_0050: Station_1 3+75U: Unauthorized ductile iron pipe through floodwall monolith 18 not on approved plans. Has flap gate but it was found open in 2016.: Maintain flap gate. Investigate easement agreement and dispose of encroachment accordingly. (M) NAR1_2019_a_0052: Station_1 3+75U: Unauthorized flap gate in monolith 18 is connected to 8" IDP noted in observation #50. Flap gate found in open position in 2016.: Maintain flap gate. Investigate easement agreement and dispose of encroachment accordingly. (M) NAR1_2019_a_0060: Station_1 1+80U: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.: Investigate missing concrete and fill and replace in accordance with the project plans. (M)
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	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.	NAR1_2019_a_0006: Station_1 4+45B: 1/4" crack across the top of monolith 59 associated with a piece of wood in the concrete.: Remove wood blocking and patch concrete. (M) NAR1_2019_a_0010: Station_1 4+45B: Hairline crack at the top of monolith 59, associated with missing stone facade.: Monitor to ensure that crack does not widen and repair concrete as necessary. (M) NAR1_2019_a_0011: Station_1 4+45B: The headwall adjacent to the NYCDEP blow off tunnel (monolith 59) is visibly deteriorated. Stones are missing above drainage outlet pipe.: The public sponsor must determine which municipal entity is responsible for the headwall and have the damage repaired. (M)
		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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Flood Damage Reduction Segment / System Inspection Report Ardsley Flood Control Project (NAR1)

Floodwalls
Page 2 of 6

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines	Location/Remarks/Recommendations
			<p>NAR1_2019_a_0012: Station_1 4+25B: Gouging of the protected side of monoliths 57 and 58, may be the result of improper snow removal practices.: The local sponsor should contact the property owner and advise them that the wall cannot be used as a push wall. Repair concrete surfaces in accordance with USACE guidelines. (M)</p> <p>NAR1_2019_a_0015: Station_1 4+05B: Minor cracking and efflorescence at the top of monolith 57.: Monitor cracking and efflorescence to ensure they do not worsen. Repair concrete in accordance with USACE guidelines as necessary. (M)</p> <p>NAR1_2019_a_0017: Station_1 3+50B: Gouging of the protected side of monoliths 54-56, may be the result of improper snow removal practices.: The local sponsor should contact the property owner and advise them that the wall cannot be used as a push wall. (M)</p> <p>NAR1_2019_a_0022: Station_1 2+80B: Crack with efflorescence near the top of the protected side of monolith 51 at the joint with monolith 50.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0023: Station_1 2+80B: Spall with efflorescence at top of monolith 51 on the unprotected side. Could not access in 2019.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0026: Station_1 2+20B: Minor spalling on the protected side of monolith 47 near joint.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0027: Station_1 2+15B: Exposed rebar near base of monolith 47.: Repair concrete surface in accordance with USACE guidelines. (M)</p> <p>NAR1_2019_a_0029: Station_1 0+30B: Concrete spalling on recently repaired areas on the protected side of the floodwall at the base of monoliths 39-42. Exposed rebar on 42. Heavy efflorescence on 41.: Fill cracks and repair spalling in accordance with USACE guidelines. (M)</p> <p>NAR1_2019_a_0030: Station_1 7+70U: Spalling near the top of the protected side of monolith 39, near joint with monolith 38.: Fill cracks and repair spalling in accordance with USACE guidelines. (M)</p> <p>NAR1_2019_a_0032: Station_1 7+80U: Apparent construction joint has opened along the top of the protected side of monoliths 39 and 40.: Fill the crack and repair concrete surface in accordance with USACE guidelines. (M)</p>

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Floodwalls
Page 3 of 6

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
				<p>NAR1_2019_a_0037: Station_1 5+90U: Small spall on protected side of monolith 30 at joint with monolith 29.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0039: Station_1 5+65U: Small spall on the protected side of monolith 28 at the joint with monolith 29.: Repair concrete surface in accordance with USACE guidelines. (M)</p> <p>NAR1_2019_a_0049: Station_1 4+70U: Minor spall with exposed rebar on the protected side of monolith 24 near the joint with monolith 23.: NA (M)</p> <p>NAR1_2019_a_0051: Station_1 3+85U: Spalling on the unprotected side of flood wall near joint between monoliths 21 and 20. Could not access in 2019.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0066: Station_1 0+85U: Spalling at joint between monoliths 5 and 4. Could not access in 2019.: Repair concrete surface in accordance with USACE Guidelines. (M)</p> <p>NAR1_2019_a_0071: Station_1 1+05U: Spalling at monolith 5 near joint of monolith 6. Could not access in 2019.: Repair concrete surface in accordance with USACE Guidelines. (M)</p>
5. 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 issues 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.	
6. Foundation of	M	A	No active erosion, scouring, or bank caving that might endanger the structure's stability.	NAR1_2019_a_0003: Station_1 4+45B: Erosion at headwall

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US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Floodwalls
Page 4 of 6

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
Concrete Structures ¹		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.	on the north side of monolith 60. Vegetation prevented observation in 2019.: Determine source of erosion and repair. (M) NAR1_2019_a_0038: Station_1 6+30U: Animal burrow at base of protected side of monolith 32. 1 ft deep. 1 ft wide.: Fill burrow and establish a program to control animal activity near the floodwall. (M)
		U	Erosion or bank caving observed that is closer to the wall than the limits described above, or is outside these limits but may lead to structural instabilities before the next inspection. Additionally, if the floodwall is of I-wall or sheetpile construction, the foundation is unacceptable if any turf, soil or pavement material got washed away from the landside of the I-wall as the result of a previous overtopping event.	
7. Monolith Joints	M	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.	NAR1_2019_a_0016: Station_1 0+00U: Station_2 4+45B: The gap sealant has cracked and separated in numerous joints along the entire length of the floodwall.: Explore alternative joint stop material that can withstand the area's unique conditions. Clean joint and apply fresh sealant. (M)
		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.	
8. Underseepage Relief Wells/ Toe Drainage Systems	A	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.	No issues were observed.
		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.	

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Floodwalls
Page 5 of 6

Floodwalls

For use during Initial and Continuing Eligibility Inspections of all floodwalls

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
9. Seepage	A	A	No evidence or history of unrepaired seepage, saturated areas, or boils.	No issues were observed.
		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.	

¹ 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.

² The sponsor should be monitoring any observed movement to verify whether the movement is active or inactive.

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Floodwalls
Page 6 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
1. Vegetation and Obstructions	U	A	No obstructions, vegetation, debris, or sediment accumulation noted within interior drainage channels or blocking the culverts, inlets, or discharge areas. Concrete joints and weep holes are free of grass and weeds.	NAR1_2019_a_0001: Station_1 4+45B: Outflow from Junction Chamber # 1 partially blocked with debris and vegetation.: Remove debris and sediment from outlet pipe. (M)
		M	Obstructions, vegetation, debris, or sediment are minor and have not impaired channel flow capacity or blocked more than 10% of any culvert openings, but should be removed. A limited volume of grass and weeds may be present in concrete channel joints and weep holes.	NAR1_2019_a_0047: Station_1 5+15U: Inlet to Ponding Area #2 (Outlet Structure #1) partially obstructed by sediment. Safety rails have been added to the top of the outlet structure to comply with new OSHA guidelines.: Remove sediment from outlet. Seek authorization for railing from USACE. (M)
		U	Obstructions, vegetation, debris, or sediment have impaired the channel flow capacity or blocked more than 10% of a culvert opening. Sediment and debris removal required to re-establish flow capacity.	NAR1_2019_a_0055: Station_1 2+50U: Overland drainage on the protected side of the floodwall at monolith 12/13 blocked with debris and sediment.: Restore overland drainage. (M) NAR1_2019_a_0074: Station_1 0+25U: Vegetation in Ponding Area #1 is 3 ft high and blocks access for inspection.: NA (U) NAR1_2019_a_0080: Station_1 0+00C: Sediment and vegetation partially blocking flow of the lower portion of interceptor ditch #2 at the blow-off tunnel connection. Sedimentation appeared improved over 2016 and the Village of Ardsley noted that they have cleaned it out before.: Remove sediment in accordance with USACE guidelines. (M) NAR1_2019_a_0084: Station_1 5+00A: Minor sediment buildup at outlet structure #2.: Remove sediment in accordance with USACE guidelines. (M) NAR1_2019_a_0086: Station_1 0+00A: Station_2 5+00A: Sediment and vegetation obstructing flow in Interceptor Ditch #1.: Remove sediment and vegetation in accordance with USACE guidelines. (M)
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 interior drainage system.	NAR1_2019_a_0009: Station_1 4+25B: Safety railing installed on the top of Junction Chamber #1 to comply with new OSHA regulations.: Seek authorization for the new railing from USACE. (M)
		M	Trash, debris, unauthorized structures, excavations, or other obstructions present, or inappropriate activities noted that should be corrected but will not inhibit operations and maintenance or emergency operations. Encroachments have not been reviewed by the Corps.	NAR1_2019_a_0033: Station_1 7+10U: The two existing Westchester County Sewer manholes (SMH) in ponding area #2 were to be lowered 2 ft and hydrostatically sealed. The manhole cover on the southern most SMH has open vent and pick holes. The northern SMH unobservable in 2019.: Investigate that the SMH's were modified according to the project plans. (M)
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of this component of the interior drainage system.	

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 1 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
				<p>NAR1_2019_a_0046: Station_1 5+15U: Two 8" PVC pipes that discharge in ponding area #2 are not shown on the project plans. Some erosion has occurred below the southernmost pipe: Local sponsor should investigate and document the encroachments. (M)</p> <p>NAR1_2019_a_0065: Station_1 0+90U: Access way to Ponding Area #1 has deteriorated. A large portion of the lower deck was recently replaced, but missing and warped floorboards remain in the upper walkway. It is believed that the deck is privately owned.: Encourage the owner to continue deck repairs so inspectors and emergency personnel maintain access to the ponding area and floodwall. (M)</p> <p>NAR1_2019_a_0090: Station_1 5+05A: Safety railing installed on top of outlet structure to comply with new OSHA regulations.: Seek authorization from USACE for encroachment. (M)</p> <p>NAR1_2019_a_0091: Station_1 1+00C: Safety railing installed on top of outlet structure to comply with new OSHA regulations. Minor sediment build up.: Seek authorization from USACE for encroachment. Remove debris and sediment from outlet. (M)</p> <p>NAR1_2019_a_0092: Station_1 2+70C: Safety railing installed on top of inlet structure to comply with new OSHA regulations.: Seek authorization from USACE for encroachment. (M)</p>
3. Ponding Areas	A	A	No trash, debris, structures, or other obstructions present within the ponding areas. Sediment deposits do not exceed 10% of capacity.	No issues were observed.
		M	Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit operations and maintenance. Sediment deposits do not exceed 30% of capacity.	
		U	Trash, debris, excavations, structures, or other obstructions, or other encroachments or activities noted that will inhibit operations, maintenance, or emergency work. Sediment deposits exceeds 30% of capacity.	
		N/A	There are no ponding areas associated with the interior drainage system.	
4. Fencing and Gates ¹	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.	No issues were observed.
		M	Fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged.	

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 2 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
		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.	
5. Concrete Surfaces (Such as gate wells, outfalls, intakes, or culverts)	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.	No issues were observed.
		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 interior drainage system.	
6. Tilting, Sliding or Settlement of Concrete and Sheet Pile Structures ² (Such as gate wells, outfalls, intakes, or culverts)	A	A	There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the structure.	No issues 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 interior drainage system.	
7. Foundation of Concrete Structures ³ (Such as culverts, inlet and discharge structures, or gatewells.)	U	A	No active erosion, scouring, or bank caving that might endanger the structure's stability.	NAR1_2019_a_0082: Station_1 6+05A: Small sinkhole above 30 inch drainage culvert at drop inlet #4.: Video inspection conducted in 2013 did not include this pipe section. Perform crawler type video inspection for possible leaks. Repair as needed and restore backfill around drainage culvert to finished grade. (U) NAR1_2019_a_0083: Station_1 5+05A: Minor erosion behind headwall of outlet structure #2.: Repair erosion and restore according to USACE guidelines. (M)
		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. The rate of erosion is such that the structure is expected to remain stable until the next inspection.	
		U	Erosion or bank caving observed that may lead to structural instabilities before the next inspection.	
		N/A	There are no concrete items in the interior drainage system.	

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 3 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
8. Monolith Joints	NA	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 interior drainage system.	
9. Culverts/ Discharge Pipes ⁴	U	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.	NAR1_2019_a_0085: Station_1 5+05A: Alignment of 36" CMP underneath the Saw Mill River Road (interceptor ditch #1) is warped between drop inlet #3 and outlet structure #2. No video inspection has been conducted within the last five years. Could not inspect in 2019.: Video inspection conducted in 2013 did not include this pipe section. Perform crawler type video inspection for details of damage and remediate accordingly. (U)
		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.	
10. Sluice / Slide Gates ⁵	U	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.	NAR1_2019_a_0034: Station_1 6+85U: DS # 4 sluice gate operated during 2016 inspection. Cannot fully close due to sediment at bottom of structure. NYSDEC plans to replace the crank with an electric motor.: Remove sediment and

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 4 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

Rated Item	Rating	Rating Guidelines		Location/Remarks/Recommendations
		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.	debris. (M) NAR1_2019_a_0043: Station_1 5+15U: DS#3 valve riser is out of plumb and gate unable to close or operate properly. NYSDEC plans to replace the crank with an electric motor and straighten the gate.: Repair/replace damaged valve riser and restore operation as planned. (U)
		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.	
11. Flap Gates/ Flap Valves/ Pinch Valves ¹	M	A	Gates/ valves open and close easily with minimal leakage, have no corrosion damage, and have been exercised and lubricated as required.	NAR1_2019_a_0035: Station_1 6+85U: Flap gate of drainage structure #4 is partially blocked by sediment deposition. Could not access in 2019.: Remove sediment in accordance with USACE guidelines. (M) NAR1_2019_a_0041: Station_1 5+15U: Flap gate of DS#3 is blocked by sediment deposition. Could not access in 2019.: Remove sediment in accordance with USACE guidelines. (M) NAR1_2019_a_0069: Station_1 0+40U: DS#1. Flap gate operated in 2016, but stiffly. Sediment in the way. Could not access in 2019.: Clean DS#1 and lubricate flap gate. (M)
		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.	
12. Trash Racks (non-mechanical)	A	A	Trash racks are fastened in place and properly maintained.	NAR1_2019_a_0081: Station_1 5+55A: Drop inlet #3 appears operable.: Monitor conditions at the drop inlet. (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.	
13. Other Metallic Items	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.	
14. Riprap Revetments of Inlet/ Discharge Areas	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.	No issues observed.
		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.	

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US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 5 of 6

Interior Drainage System

For use during Initial and Continuing Eligibility Inspections of interior drainage systems

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.	
15. Revetments other than Riprap	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 are no such revetments protecting this feature of the segment / system.	

¹ Proper operation of this item must be demonstrated during the inspection.

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

⁵ Proper operation of the gates (full open and closed) must be demonstrated during the inspection if no documentation is available. Be aware of both manual and electrical operators.

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Interior Drainage System
Page 6 of 6

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.	NAR1_2019_a_0057: Station_1 2+10U: Station_2 4+35U: Vegetation encroaching along right bank on top of drainage channel wall.: Coordinate with NYS Thruway Authority to remove vegetation. (M) NAR1_2019_a_0073: Station_1 0+55U: Weep hole blocked with sediment. Could not access in 2019.: Public sponsor should clear vegetation from weep hole. (M) NAR1_2019_a_0075: Station_1 0+00U: Immediately downstream of the project a large pile of debris (3 ft high) obstructing more than half of the channel, downstream of concrete channel. Could not observe in 2019.: Remove debris from channel to ensure maximum flow capacity. (M) NAR1_2019_a_0078: Station_1 10+40U: Station_2 3+10U: Excessive vegetation and trees on right bank riprap. It is difficult to inspect with shrubs and trees over riprap. Could not access in 2019.: Remove vegetation in accordance with USACE guidelines. (M) NAR1_2019_a_0094: Station_1 1+00D: Vegetation on embankment of riprap channel below: Remove vegetation in accordance with USACE guidelines. (M)
		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.	NAR1_2019_a_0008: Station_1 4+40B: Some light sediment at outlet of NYCDEP blow off tunnel.: Remove sediment in accordance with USACE guidelines. (M) NAR1_2019_a_0064: Station_1 1+35U: Shoaling at bottom of channel at south side of old bridge. Could not observe through high water in 2019.: Remove sediment from channel to ensure maximum flow capacity. (M) NAR1_2019_a_0067: Station_1 0+55U: Shoaling at DS#1 in flood reduction channel.: Remove sediment from channel to ensure maximum flow capacity. (M) NAR1_2019_a_0076: Station_1 3+15U: Shoaling in channel between monoliths 13 and 14. Could not access in 2019.: Remove sediment in accordance with USACE guidelines. (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.	
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.	NAR1_2019_a_0058: Station_1 1+80U: Old drainage inlets at Ardsley Square may not have been properly abandoned. 20" pipe from channel wall remains open. Could not access in 2019.: Confirm that pre-project catch basins were abandoned according to the approved plan. (M) NAR1_2019_a_0059: Station_1 1+45U: Steel guy wire
		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.	

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Flood Damage Reduction Channels
Page 1 of 5

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
		U	Unauthorized encroachments or inappropriate activities noted are likely to inhibit operations and maintenance, emergency operations, or negatively impact the integrity of the channel.	coming off of building and extending over channel.: Investigate easement agreement and dispose of encroachment accordingly. (M) NAR1_2019_a_0062: Station_1 1+35U: Bricks of the vaulted ceiling, beneath the old bridge, are about to fall due to corroded and broken tie rods. Falling debris could obstruct the channel. Could not observe in 2019.: Shoring is needed to prevent failure of the vaulted ceiling and original bridge structure. (M) NAR1_2019_a_0063: Station_1 1+35U: Conduits running along right side of channel are broken under bridge. Could not observe in 2019.: Investigate authorization and have utility owner repair or remove. (M) NAR1_2019_a_0068: Station_1 0+55U: A chain metal fence on the wall of the right bank is not on as-built plans.: Investigate easement agreement and dispose of fence encroachment accordingly. (M) NAR1_2019_a_0072: Station_1 0+90U: Metal conduits (pipes) on right wall of concrete channel.: Investigate easement agreement and dispose of encroachment accordingly. (M) NAR1_2019_a_0079: Station_1 3+35B: NYCDEC plans to install over the wall piping at monolith 53 for pumps in Ponding Area #2. They have already installed new riprap at the planned outfall to prevent erosion.: Ensure that NYSDEC has authorization from USACE to make these alterations. (M) NAR1_2019_a_0088: Station_1 2+55A: 8" HDPE pipe found encroaching interceptor ditch #1.: Investigate easement agreement, remove encroachment or document as project modification. (M) NAR1_2019_a_0089: Station_1 0+25A: 6" PVC outlet pipe found encroaching on interceptor ditch #1.: Local sponsor should investigate the source and authorization for the encroachment. (M) NAR1_2019_a_0093: Station_1 0+50D: Pedestrian bridge over Saw Mill River replaced the railroad bridge that was to be removed. It is not on the project plans.: Document bridge and verify hydraulics of the river are unaffected. (M)
4. Erosion	M	A	No head cutting or horizontal deviation observed.	NAR1_2019_a_0002: Station_1 4+25B: Partial erosion of

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Flood Damage Reduction Channels
Page 2 of 5

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
5. Concrete Surfaces	M	M	Head cutting and horizontal deviation evident, but is less than 1 foot from the designed grade or cross section.	riprap below outlet of Junction Structure #1.: Restore swale to design condition and line unprotected areas with riprap. (M) NAR1_2019_a_0087: Station_1 2+55A: Erosion of the embankment of interceptor ditch #1 at 8" pipe.: Repair eroded embankment. (M)
		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.	
		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.	
6. Tilting, Sliding or Settlement of Concrete Structures ²	M	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.	NAR1_2019_a_0056: Station_1 2+80U: Spalling near joint between monoliths 13 and 14 on the right bank channel wall. Could not access in 2019.: Repair concrete surface in accordance with USACE guidelines. (M) NAR1_2019_a_0061: Station_1 1+45U: Scour hole at bottom of concrete channel. Could not access in 2019.: Repair concrete surfaces in accordance with USACE guidelines. (M) NAR1_2019_a_0070: Station_1 0+00U: Concrete of Ashford Avenue bridge on left side is severely deteriorated and its failure could compromise integrity of concrete channel. Could not access in 2019 due to overgrown vegetation.: Request NYSDOT to repair bridge abutment in order to protect the concrete channel. (M)
		N/A	There are no concrete items in the channel.	
		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.	
7. Foundation of	M	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.	NAR1_2019_a_0077: Station_1 4+35U: Right channel wall tilting toward channel 1/4" over 4', between monolith 21 and 22. Could not access in 2019.: Monitor displacement of the concrete monoliths to determine if movement is active. (M)
		N/A	There are no concrete items in the channel.	
		A	No active erosion, scouring, or bank caving that might endanger the structure's stability.	
		M		

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Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Flood Damage Reduction Channels
Page 3 of 5

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
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 stable until the next inspection.	slope on the exposed side has a depression 5 ft from floodwall, 6 ft wide and 3 ft deep. It may be the result of removing a tree. Could not access in 2019.: Regrade to approved line and grade, reseed and mulch in accordance with USACE guidelines. (M) NAR1_2019_a_0020: Station_1 3+30B: Two large animal burrows on unprotected side of floodwall, 1-2 ft deep. Did not access in 2019.: Eliminate burrowing animals; completely fill in burrows in accordance with USACE guidelines. (M)
		U	Erosion or bank caving observed that is closer to the wall than the limits described above, or is outside these limits but may lead to structural instabilities before the next inspection. Additionally, if the floodwall is of I-wall or sheetpile construction, the foundation is unacceptable if any turf, soil or pavement material got washed away from the landside of the I-wall as the result of a previous overtopping event.	
		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.	No issues were observed.
		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.	No issues were observed.
		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.	No issues were observed.
		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.	

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Flood Damage Reduction Channels
Page 4 of 5

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
		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.

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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Flood Damage Reduction Channels
Page 5 of 5

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: Ardsley Flood Control Project Sponsor: NYSDEC/Village of Ardsley Location: Ardsley, NY River Basin: Saw Mill River Project Description: The project has been divided into three reaches, Downstream Reach, Middle Reach, and Upstream Reach. Due to the changes in elevation across the project site, the closure elevations vary accordingly. Authority that Project was Constructed Under: Flood Control Act of 1965, Section 201 (Public Law 89-298 89th Congress) Date of Construction: 11/28/1989 Approximate Annual Maintenance Costs: Construction: <input checked="" type="checkbox"/> Federally Constructed <input type="checkbox"/> Non-Federally Constructed Maintenance: <input type="checkbox"/> Federally Maintained <input checked="" type="checkbox"/> Non-Federally Maintained	
National Flood Insurance Program: a. Is the project currently NFIP? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No b. If in the NFIP, Date of Certification (per 44 CFR 65.10):	
Datum Information: a. Datum used for the design and construction of this project is: NGVD 1929 b. Current recommended datum for this project is: NAVD 1988 c. Has the Project been converted to the current recommended datum? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Levee Embankment Data: a. Levee Designed Gage Function Reading/Station: b. Level of Protection Provided: 1850 cfs (57% SPF), return period of 167 years c. Average Height of Levee: d. Average Crown Width: e. Average Side Slope: 1:2 and 1:2.5	Protected Features (For use in preparing estimates and PIRs): a. Total acres protected: 6 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:



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**Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)**

**Supplemental Data Sheet
Page 1 of 1**

Photos

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Inspect ID: NAR1_2019_a_0007 **Title:** USACE_CENAN_NAR1_2019_a_0007_1.jpg
Rated Item: 1. Unwanted Vegetation Growth **Caption:** Rating: Minimally Acceptable;
Remarks: Vegetation growth in joints of masonry facade of monolith 59/60. According to NYSDEC, the masonry structure belongs to New York City DEP.; Action: Clean and repoint masonry.; Station_1: 4+45B



Inspect ID: NAR1_2019_a_0021 **Title:** USACE_CENAN_NAR1_2019_a_0021_1.jpg
Rated Item: 1. Unwanted Vegetation Growth **Caption:** Rating: Minimally Acceptable;
Remarks: Vines in fence along top of wall from monolith 53-55; Action: Maintain vegetation in accordance with USACE guidelines.; Station_1: 3+55B





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 1 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0042 Title: USACE_CENAN_NAR1_2019_a_0042_1.jpg Rated Item: 1. Unwanted Vegetation Growth Caption: Rating: Minimally Acceptable; Remarks: Overgrown vegetation along protected side of monoliths 26-30, north of DS#3.; Action: Maintain vegetation in accordance with USACE guidelines.; Station_1: 5+40U</p>
	<p>Inspect ID: NAR1_2019_a_0045 Title: USACE_CENAN_NAR1_2019_a_0045_1.jpg Rated Item: 1. Unwanted Vegetation Growth Caption: Rating: Minimally Acceptable; Remarks: Village of Ardsley has successfully removed most of the vegetation behind the floodwall south of DS#3 but a small stand of trees remains.; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 4+65U</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 2 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0054 Title: USACE_CENAN_NAR1_2019_a_0054_1.jpg Rated Item: 1. Unwanted Vegetation Growth Caption: Rating: Minimally Acceptable; Remarks: Vegetation on top of floodwall at monolith 12.; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 2+50U</p>
	<p>Inspect ID: NAR1_2019_a_0004 Title: USACE_CENAN_NAR1_2019_a_0004_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Fence on top of floodwall running from monolith 47-60 not in the original plans.; Action: Seek authorization from USACE for the encroachment to remain.; Station_1: 2+20B; Station_2: 4+45B</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 3 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0004 Title: USACE_CENAN_NAR1_2019_a_0004_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Fence on top of floodwall running from monolith 47-60 not in the original plans.; Action: Seek authorization from USACE for the encroachment to remain.; Station_1: 2+20B; Station_2: 4+45B</p>
	<p>Inspect ID: NAR1_2019_a_0018 Title: USACE_CENAN_NAR1_2019_a_0018_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Utility pole and guy wire within 4 ft of floodwall on protected side. NYSDEC indicated that there are plans to move the pole and wire across the drive during a future upgrade.; Action: Proceed with the plan to move the pole during the next upgrade.; Station_1: 3+30B</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 4 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0025 Title: USACE_CENAN_NAR1_2019_a_0025_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Chain link fence encroaching on protected side of floodwall. Extends 6 ft out from floodwall.; Action: Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 2+70B</p>
	<p>Inspect ID: NAR1_2019_a_0031 Title: USACE_CENAN_NAR1_2019_a_0031_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Animal burrow at the base of the protected side of monolith 41. 1 ft deep. 2 ft wide.; Action: Fill the burrow and establish a program to control animal activity near the floodwall.; Station_1: 8+00 U</p>



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 5 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0031 Title: USACE_CENAN_NAR1_2019_a_0031_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Animal burrow at the base of the protected side of monolith 41. 1 ft deep. 2 ft wide.; Action: Fill the burrow and establish a program to control animal activity near the floodwall.; Station_1: 8+00 U</p>
	<p>Inspect ID: NAR1_2019_a_0036 Title: USACE_CENAN_NAR1_2019_a_0036_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Stumps and tree limbs adjacent to exposed face of floodwall. Could not access in 2019.; Action: Remove debris and stumps.; Station_1: 6+10U; Photo taken prior to the 2019 inspection.</p>



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 6 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0040 Title: USACE_CENAN_NAR1_2019_a_0040_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Animal burrow on the protected side at the base of monolith 29. 1 ft deep. 1.5 ft wide.; Action: Fill burrow and establish a program to control animal activity near the flood wall.; Station_1: 5+80U</p>
	<p>Inspect ID: NAR1_2019_a_0050 Title: USACE_CENAN_NAR1_2019_a_0050_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Unauthorized ductile iron pipe through floodwall monolith 18 not on approved plans. Has flap gate but it was found open in 2016.; Action: Maintain flap gate. Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 3+75U</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 7 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0052 Title: USACE_CENAN_NAR1_2019_a_0052_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Unauthorized flap gate in monolith 18 is connected to 8" IDP noted in observation #50. Flap gate found in open position in 2016.; Action: Maintian flap gate. Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 3+75U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0052 Title: USACE_CENAN_NAR1_2019_a_0052_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Unauthorized flap gate in monolith 18 is connected to 8" IDP noted in observation #50. Flap gate found in open position in 2016.; Action: Maintian flap gate. Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 3+75U; Photo taken prior to the 2019 inspection.</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 8 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0052 Title: USACE_CENAN_NAR1_2019_a_0052_3.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Unauthorized flap gate in monolith 18 is connected to 8" IDP noted in observation #50. Flap gate found in open position in 2016.; Action: Maintian flap gate. Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 3+75U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0052 Title: USACE_CENAN_NAR1_2019_a_0052_4.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Unauthorized flap gate in monolith 18 is connected to 8" IDP noted in observation #50. Flap gate found in open position in 2016.; Action: Maintian flap gate. Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 3+75U; Photo taken prior to the 2019 inspection.</p>





US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 9 of 63

Photos

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

		<p>Inspect ID: NAR1_2019_a_0060 Title: USACE_CENAN_NAR1_2019_a_0060_4.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.; Action: Investigate missing concrete and fill and replace in accordance with the project plans.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>
		<p>Inspect ID: NAR1_2019_a_0060 Title: USACE_CENAN_NAR1_2019_a_0060_5.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.; Action: Investigate missing concrete and fill and replace in accordance with the project plans.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 10 of 63

Photos

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

		<p>Inspect ID: NAR1_2019_a_0060 Title: USACE_CENAN_NAR1_2019_a_0060_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.; Action: Investigate missing concrete and fill and replace in accordance with the project plans.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>
		<p>Inspect ID: NAR1_2019_a_0060 Title: USACE_CENAN_NAR1_2019_a_0060_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.; Action: Investigate missing concrete and fill and replace in accordance with the project plans.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 11 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0060 Title: USACE_CENAN_NAR1_2019_a_0060_3.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Gaps between arched deck of old Ashford Ave Bridge and top of floodwall need to be sealed. Common fill that is shown on section STA 2+18U between concrete channel and old bridge abutment is missing.; Action: Investigate missing concrete and fill and replace in accordance with the project plans.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0006 Title: USACE_CENAN_NAR1_2019_a_0006_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: 1/4" crack across the top of monolith 59 associated with a piece of wood in the concrete.; Action: Remove wood blocking and patch concrete.; Station_1: 4+45B</p>





US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 12 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0010 Title: USACE_CENAN_NAR1_2019_a_0010_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Hairline crack at the top of monolith 59, associated with missing stone facade.; Action: Monitor to ensure that crack does not widen and repair concrete as necessary.; Station_1: 4+45B</p>
	<p>Inspect ID: NAR1_2019_a_0010 Title: USACE_CENAN_NAR1_2019_a_0010_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Hairline crack at the top of monolith 59, associated with missing stone facade.; Action: Monitor to ensure that crack does not widen and repair concrete as necessary.; Station_1: 4+45B</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 13 of 63

Photos

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



Inspect ID: NAR1_2019_a_0011 **Title:** USACE_CENAN_NAR1_2019_a_0011_1.jpg
Rated Item: 4. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: The headwall adjacent to the NYCDEP blow off tunnel (monolith 59) is visibly deteriorated. Stones are missing above drainage outlet pipe.; Action: The public sponsor must determine which municipal entity is responsible for the headwall and have the damage repaired.; Station_1: 4+45B; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0011 **Title:** USACE_CENAN_NAR1_2019_a_0011_2.jpg
Rated Item: 4. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: The headwall adjacent to the NYCDEP blow off tunnel (monolith 59) is visibly deteriorated. Stones are missing above drainage outlet pipe.; Action: The public sponsor must determine which municipal entity is responsible for the headwall and have the damage repaired.; Station_1: 4+45B; Photo taken prior to the 2019 inspection.



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 14 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0012 Title: USACE_CENAN_NAR1_2019_a_0012_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Gouging of the protected side of monoliths 57 and 58, may be the result of improper snow removal practices.; Action: The local sponsor should contact the property owner and advise them that the wall cannot be used as a push wall. Repair concrete surfaces in accordance with USACE guidelines.; Station_1: 4+25B</p>
	<p>Inspect ID: NAR1_2019_a_0012 Title: USACE_CENAN_NAR1_2019_a_0012_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Gouging of the protected side of monoliths 57 and 58, may be the result of improper snow removal practices.; Action: The local sponsor should contact the property owner and advise them that the wall cannot be used as a push wall. Repair concrete surfaces in accordance with USACE guidelines.; Station_1: 4+25B; Photo taken prior to 2019 inspection.</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 15 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0015 Title: USACE_CENAN_NAR1_2019_a_0015_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Minor cracking and efflorescence at the top of monolith 57.; Action: Monitor cracking and efflorescence to ensure they do not worsen. Repair concrete in accordance with USACE guidelines as necessary.; Station_1: 4+05B</p>
	<p>Inspect ID: NAR1_2019_a_0015 Title: USACE_CENAN_NAR1_2019_a_0015_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Minor cracking and efflorescence at the top of monolith 57.; Action: Monitor cracking and efflorescence to ensure they do not worsen. Repair concrete in accordance with USACE guidelines as necessary.; Station_1: 4+05B</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 16 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0017 Title: USACE_CENAN_NAR1_2019_a_0017_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Gouging of the protected side of monoliths 54-56, may be the result of improper snow removal practices.; Action: The local sponsor should contact the property owner and advise them that the wall cannot be used as a push wall.; Station_1: 3+50B</p>
	<p>Inspect ID: NAR1_2019_a_0022 Title: USACE_CENAN_NAR1_2019_a_0022_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Crack with efflorescence near the top of the protected side of monolith 51 at the joint with monolith 50. ; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 2+80B</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 17 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0023 Title: USACE_CENAN_NAR1_2019_a_0023_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Spall with efflorescence at top of monolith 51 on the unprotected side. Could not access in 2019.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 2+80B; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0026 Title: USACE_CENAN_NAR1_2019_a_0026_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Minor spalling on the protected side of monolith 47 near joint.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 2+20B</p>




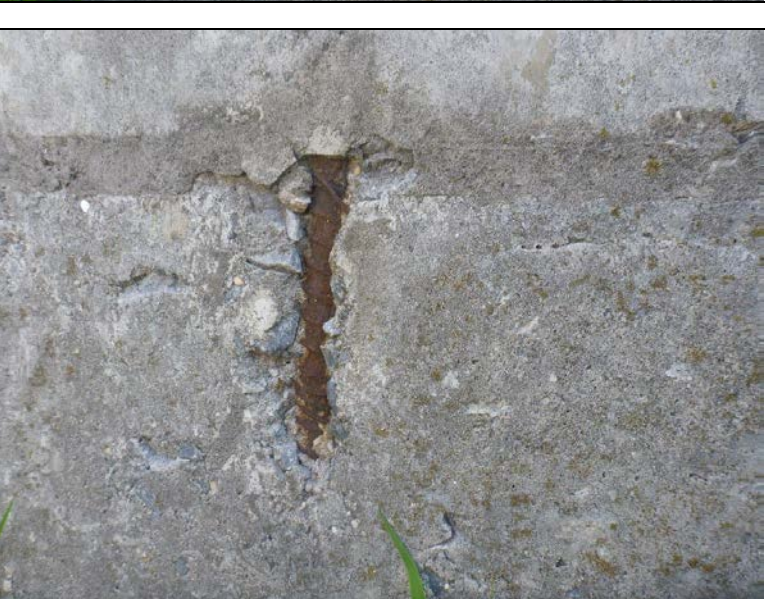
US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 18 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0027 Title: USACE_CENAN_NAR1_2019_a_0027_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Exposed rebar near base of monolith 47.; Action: Repair concrete surface in accordance with USACE guidelines.; Station_1: 2+15B</p>
	<p>Inspect ID: NAR1_2019_a_0027 Title: USACE_CENAN_NAR1_2019_a_0027_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Exposed rebar near base of monolith 47.; Action: Repair concrete surface in accordance with USACE guidelines.; Station_1: 2+15B</p>



Photos

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

	<p>Inspect ID: NAR1_2019_a_0029 Title: USACE_CENAN_NAR1_2019_a_0029_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Concrete spalling on recently repaired areas on the protected side of the floodwall at the base of monoliths 39-42. Exposed rebar on 42. Heavy efflorescence on 41.; Action: Fill cracks and repair spalling in accordance with USACE guidelines.; Station_1: 0+30B</p>
	<p>Inspect ID: NAR1_2019_a_0029 Title: USACE_CENAN_NAR1_2019_a_0029_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Concrete spalling on recently repaired areas on the protected side of the floodwall at the base of monoliths 39-42. Exposed rebar on 42. Heavy efflorescence on 41.; Action: Fill cracks and repair spalling in accordance with USACE guidelines.; Station_1: 0+30B</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 20 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0029 Title: USACE_CENAN_NAR1_2019_a_0029_3.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Concrete spalling on recently repaired areas on the protected side of the floodwall at the base of monoliths 39-42. Exposed rebar on 42. Heavy efflorescence on 41.; Action: Fill cracks and repair spalling in accordance with USACE guidelines.; Station_1: 0+30B</p>
	<p>Inspect ID: NAR1_2019_a_0030 Title: USACE_CENAN_NAR1_2019_a_0030_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Spalling near the top of the protected side of monolith 39, near joint with monolith 38.; Action: Fill cracks and repair spalling in accordance with USACE guidelines.; Station_1: 7+70U; ; ;</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 21 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0032 Title: USACE_CENAN_NAR1_2019_a_0032_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Apparent construction joint has opened along the top of the protected side of monoliths 39 and 40.; Action: Fill the crack and repair concrete surface in accordance with USACE guidelines.; Station_1: 7+80U</p>
	<p>Inspect ID: NAR1_2019_a_0032 Title: USACE_CENAN_NAR1_2019_a_0032_2.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Apparent construction joint has opened along the top of the protected side of monoliths 39 and 40.; Action: Fill the crack and repair concrete surface in accordance with USACE guidelines.; Station_1: 7+80U</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 22 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0032 Title: USACE_CENAN_NAR1_2019_a_0032_3.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Apparent construction joint has opened along the top of the protected side of monoliths 39 and 40.; Action: Fill the crack and repair concrete surface in accordance with USACE guidelines.; Station_1: 7+80U</p>
	<p>Inspect ID: NAR1_2019_a_0037 Title: USACE_CENAN_NAR1_2019_a_0037_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Small spall on protected side of monolith 30 at joint with monolith 29.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 5+90U</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 23 of 63

Photos

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

		<p>Inspect ID: NAR1_2019_a_0039 Title: USACE_CENAN_NAR1_2019_a_0039_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Small spall on the protected side of monolith 28 at the joint with monolith 29.; Action: Repair concrete surface in accordance with USACE guidelines.; Station_1: 5+65U</p>
		<p>Inspect ID: NAR1_2019_a_0049 Title: USACE_CENAN_NAR1_2019_a_0049_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Minor spall with exposed rebar on the protected side of monolith 24 near the joint with monolith 23.; Action: NA; Station_1: 4+70U</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 24 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0051 Title: USACE_CENAN_NAR1_2019_a_0051_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Spalling on the unprotected side of flood wall near joint between monoliths 21 and 20. Could not access in 2019.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 3+85U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0066 Title: USACE_CENAN_NAR1_2019_a_0066_1.jpg Rated Item: 4. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Spalling at joint between monoliths 5 and 4. Could not access in 2019.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 0+85U; Photo taken prior to the 2019 inspection.</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 25 of 63

Photos

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



Inspect ID: NAR1_2019_a_0071 **Title:** USACE_CENAN_NAR1_2019_a_0071_1.jpg
Rated Item: 4. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: Spalling at monolith 5 near joint of monolith 6. Could not access in 2019.; Action: Repair concrete surface in accordance with USACE Guidelines.; Station_1: 1+05U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0003 **Title:** USACE_CENAN_NAR1_2019_a_0003_2.jpg
Rated Item: 6. Foundation of Concrete Structures **Caption:** Rating: Minimally Acceptable; Remarks: Erosion at headwall on the north side of monolith 60. Vegetation prevented observation in 2019.; Action: Determine source of erosion and repair.; Station_1: 4+45B; Photo taken prior to 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 26 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0003 Title: USACE_CENAN_NAR1_2019_a_0003_1.jpg Rated Item: 6. Foundation of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Erosion at headwall on the north side of monolith 60. Vegetation prevented observation in 2019.; Action: Determine source of erosion and repair.; Station_1: 4+45B</p>
	<p>Inspect ID: NAR1_2019_a_0038 Title: USACE_CENAN_NAR1_2019_a_0038_1.jpg Rated Item: 6. Foundation of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Animal burrow at base of protected side of monolith 32. 1 ft deep. 1 ft wide.; Action: Fill burrow and establish a program to control animal activity near the floodwall.; Station_1: 6+30U</p>





US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 27 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0038 Title: USACE_CENAN_NAR1_2019_a_0038_2.jpg Rated Item: 6. Foundation of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Animal burrow at base of protected side of monolith 32. 1 ft deep. 1 ft wide.; Action: Fill burrow and establish a program to control animal activity near the floodwall.; Station_1: 6+30U</p>
	<p>Inspect ID: NAR1_2019_a_0016 Title: USACE_CENAN_NAR1_2019_a_0016_1.jpg Rated Item: 7. Monolith Joints Caption: Rating: Minimally Acceptable; Remarks: The gap sealant has cracked and separated in numerous joints along the entire length of the floodwall.; Action: Explore alternative joint stop material that can withstand the area's unique conditions. Clean joint and apply fresh sealant.; Station_1: 0+00U; Station_2: 4+45B</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 28 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0016 Title: USACE_CENAN_NAR1_2019_a_0016_2.jpg Rated Item: 7. Monolith Joints Caption: Rating: Minimally Acceptable; Remarks: The gap sealant has cracked and separated in numerous joints along the entire length of the floodwall.; Action: Explore alternative joint stop material that can withstand the area's unique conditions. Clean joint and apply fresh sealant.; Station_1: 0+00U; Station_2: 4+45B</p>
	<p>Inspect ID: NAR1_2019_a_0016 Title: USACE_CENAN_NAR1_2019_a_0016_3.jpg Rated Item: 7. Monolith Joints Caption: Rating: Minimally Acceptable; Remarks: The gap sealant has cracked and separated in numerous joints along the entire length of the floodwall.; Action: Explore alternative joint stop material that can withstand the area's unique conditions. Clean joint and apply fresh sealant.; Station_1: 0+00U; Station_2: 4+45B</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 29 of 63

Photos

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



Inspect ID: NAR1_2019_a_0016 **Title:** USACE_CENAN_NAR1_2019_a_0016_4.jpg
Rated Item: 7. Monolith Joints **Caption:** Rating: Minimally Acceptable; Remarks: The gap sealant has cracked and separated in numerous joints along the entire length of the floodwall.; Action: Explore alternative joint stop material that can withstand the area's unique conditions. Clean joint and apply fresh sealant.; Station_1: 0+00U; Station_2: 4+45B



Inspect ID: NAR1_2019_a_0001 **Title:** USACE_CENAN_NAR1_2019_a_0001_1.jpg
Rated Item: 1. Vegetation and Obstructions **Caption:** Rating: Minimally Acceptable; Remarks: Outflow from Junction Chamber # 1 partially blocked with debris and vegetation.; Action: Remove debris and sediment from outlet pipe.; Station_1: 4+45B



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 30 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0047 Title: USACE_CENAN_NAR1_2019_a_0047_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Inlet to Ponding Area #2 (Outlet Structure #1) partially obstructed by sediment. Safety rails have been added to the top of the outlet structure to comply with new OSHA guidelines.; Action: Remove sediment from outlet. Seek authorization for railing from USACE.; Station_1: 5+15U</p>
	<p>Inspect ID: NAR1_2019_a_0055 Title: USACE_CENAN_NAR1_2019_a_0055_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Overland drainage on the protected side of the floodwall at monolith 12/13 blocked with debris and sediment.; Action: Restore overland drainage.; Station_1: 2+50U</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 31 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0055 Title: USACE_CENAN_NAR1_2019_a_0055_2.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Overland drainage on the protected side of the floodwall at monolith 12/13 blocked with debris and sediment.; Action: Restore overland drainage.; Station_1: 2+50U</p>
	<p>Inspect ID: NAR1_2019_a_0074 Title: USACE_CENAN_NAR1_2019_a_0074_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Unacceptable; Remarks: Vegetation in Ponding Area #1 is 3 ft high and blocks access for inspection.; Action: NA; Station_1: 0+25U</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 32 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0080 Title: USACE_CENAN_NAR1_2019_a_0080_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Sediment and vegetation partially blocking flow of the lower portion of interceptor ditch #2 at the blow-off tunnel connection. Sedimentation appeared improved over 2016 and the Village of Ardsley noted that they have cleaned it out before.; Action: Remove sediment in accordance with USACE guidelines.; Station_1: 0+00C</p>
	<p>Inspect ID: NAR1_2019_a_0084 Title: USACE_CENAN_NAR1_2019_a_0084_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Minor sediment buildup at outlet structure #2.; Action: Remove sediment in accordance with USACE guidelines. ; Station_1: 5+00A; ;</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 33 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0086 Title: USACE_CENAN_NAR1_2019_a_0086_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Sediment and vegetation obstructing flow in Interceptor Ditch #1.; Action: Remove sediment and vegetation in accordance with USACE guidelines.; Station_1: 0+00A; Station_2: 5+00A</p>
	<p>Inspect ID: NAR1_2019_a_0009 Title: USACE_CENAN_NAR1_2019_a_0009_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Safety railing installed on the top of Junction Chamber #1 to comply with new OSHA regulations.; Action: Seek authorization for the new railing from USACE.; Station_1: 4+25B</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 34 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0033 Title: USACE_CENAN_NAR1_2019_a_0033_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: The two existing Westchester County Sewer manholes (SMH) in ponding area #2 were to be lowered 2 ft and hydrostatically sealed. The manhole cover on the southern most SMH has open vent and pick holes. The northern SMH unobservable in 2019. ; Action: Investigate that the SMH's were modified according to the project plans.; Station_1: 7+10U; ; ; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0033 Title: USACE_CENAN_NAR1_2019_a_0033_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: The two existing Westchester County Sewer manholes (SMH) in ponding area #2 were to be lowered 2 ft and hydrostatically sealed. The manhole cover on the southern most SMH has open vent and pick holes. The northern SMH unobservable in 2019. ; Action: Investigate that the SMH's were modified according to the project plans.; Station_1: 7+10U; ; ; Photo taken prior to the 2019 inspection.</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 35 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0046 Title: USACE_CENAN_NAR1_2019_a_0046_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Two 8" PVC pipes that discharge in ponding area #2 are not shown on the project plans. Some erosion has occurred below the southernmost pipe; Action: Local sponsor should investigate and document the encroachments. ; Station_1: 5+15U; ;</p>
	<p>Inspect ID: NAR1_2019_a_0046 Title: USACE_CENAN_NAR1_2019_a_0046_2.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Two 8" PVC pipes that discharge in ponding area #2 are not shown on the project plans. Some erosion has occurred below the southernmost pipe; Action: Local sponsor should investigate and document the encroachments. ; Station_1: 5+15U; ;</p>



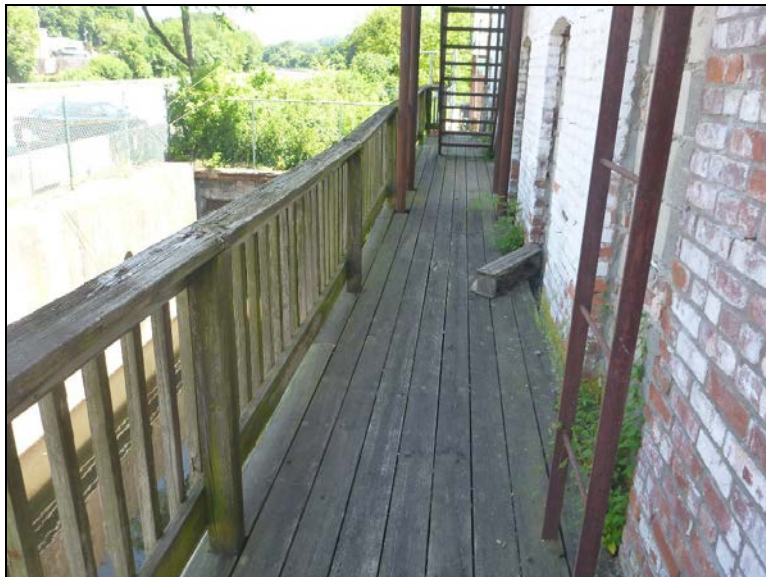
US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 36 of 63

Photos

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



Inspect ID: NAR1_2019_a_0065 **Title:** USACE_CENAN_NAR1_2019_a_0065_1.jpg
Rated Item: 2. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks:
 Access way to Ponding Area #1 has deteriorated. A large portion of the lower deck was recently replaced, but missing and warped floorboards remain in the upper walkway. It is believed that the deck is privately owned.; Action: Encourage the owner to continue deck repairs so inspectors and emergency personnel maintain access to the ponding area and floodwall.; Station_1: 0+90U



Inspect ID: NAR1_2019_a_0065 **Title:** USACE_CENAN_NAR1_2019_a_0065_2.jpg
Rated Item: 2. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks:
 Access way to Ponding Area #1 has deteriorated. A large portion of the lower deck was recently replaced, but missing and warped floorboards remain in the upper walkway. It is believed that the deck is privately owned.; Action: Encourage the owner to continue deck repairs so inspectors and emergency personnel maintain access to the ponding area and floodwall.; Station_1: 0+90U



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
 Inspection Report
 Ardsley Flood Control Project (NAR1)

Photos
 Page 37 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0090 Title: USACE_CENAN_NAR1_2019_a_0090_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Safety railing installed on top of outlet structure to comply with new OSHA regulations.; Action: Seek authorization from USACE for encroachment.; Station_1: 5+05A</p>
	<p>Inspect ID: NAR1_2019_a_0091 Title: USACE_CENAN_NAR1_2019_a_0091_1.jpg Rated Item: 2. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Safety railing installed on top of outlet structure to comply with new OSHA regulations. Minor sediment build up.; Action: Seek authorization from USACE for encroachment. Remove debris and sediment from outlet.; Station_1: 1+00C</p>



US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 38 of 63

Photos

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



Inspect ID: NAR1_2019_a_0092 **Title:** USACE_CENAN_NAR1_2019_a_0092_1.jpg
Rated Item: 2. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Safety railing installed on top of inlet structure to comply with new OSHA regulations.; Action: Seek authorization from USACE for encroachment.; Station_1: 2+70C



Inspect ID: NAR1_2019_a_0082 **Title:** USACE_CENAN_NAR1_2019_a_0082_1.jpg
Rated Item: 7. Foundation of Concrete Structures (Such as culverts, inlet and discharge structures, or gatewells.) **Caption:** Rating: Unacceptable; Remarks: Small sinkhole above 30 inch drainage culvert at drop inlet #4. ; Action: Video inspection conducted in 2013 did not include this pipe section. Perform crawler type video inspection for possible leaks. Repair as needed and restore backfill around drainage culvert to finished grade.; Station_1: 6+05A; ; ;





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 39 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0083 Title: USACE_CENAN_NAR1_2019_a_0083_1.jpg Rated Item: 7. Foundation of Concrete Structures (Such as culverts, inlet and discharge structures, or gatewells.) Caption: Rating: Minimally Acceptable; Remarks: Minor erosion behind headwall of outlet structure #2.; Action: Repair erosion and restore according to USACE guidelines.; Station_1: 5+05A</p>
	<p>Inspect ID: NAR1_2019_a_0085 Title: USACE_CENAN_NAR1_2019_a_0085_1.jpg Rated Item: 9. Culverts/ Discharge Pipes Caption: Rating: Unacceptable; Remarks: Alignment of 36" CMP underneath the Saw Mill River Road (interceptor ditch #1) is warped between drop inlet #3 and outlet structure #2. No video inspection has been conducted within the last five years. Could not inspect in 2019.; Action: Video inspection conducted in 2013 did not include this pipe section. Perform crawler type video inspection for details of damage and remediate accordingly.; Station_1: 5+05A; Photo taken prior to the 2019 inspection.</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 40 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0085 Title: USACE_CENAN_NAR1_2019_a_0085_2.jpg Rated Item: 9. Culverts/ Discharge Pipes Caption: Rating: Unacceptable; Remarks: Alignment of 36" CMP underneath the Saw Mill River Road (interceptor ditch #1) is warped between drop inlet #3 and outlet structure #2. No video inspection has been conducted within the last five years. Could not inspect in 2019.; Action: Video inspection conducted in 2013 did not include this pipe section. Perform crawler type video inspection for details of damage and remediate accordingly.; Station_1: 5+05A; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0034 Title: USACE_CENAN_NAR1_2019_a_0034_1.jpg Rated Item: 10. Sluice/ Slide Gates Caption: Rating: Minimally Acceptable; Remarks: DS # 4 sluice gate operated during 2016 inspection. Cannot fully close due to sediment at bottom of structure. NYSDEC plans to replace the crank with an electric motor. ; Action: Remove sediment and debris.; Station_1: 6+85U; ; ;</p>





US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 41 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0034 Title: USACE_CENAN_NAR1_2019_a_0034_2.jpg Rated Item: 10. Sluice/ Slide Gates Caption: Rating: Minimally Acceptable; Remarks: DS # 4 sluice gate operated during 2016 inspection. Cannot fully close due to sediment at bottom of structure. NYSDEC plans to replace the crank with an electric motor. ; Action: Remove sediment and debris.; Station_1: 6+85U; ; ; Photo taken prior to 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0034 Title: USACE_CENAN_NAR1_2019_a_0034_3.jpg Rated Item: 10. Sluice/ Slide Gates Caption: Rating: Minimally Acceptable; Remarks: DS # 4 sluice gate operated during 2016 inspection. Cannot fully close due to sediment at bottom of structure. NYSDEC plans to replace the crank with an electric motor. ; Action: Remove sediment and debris.; Station_1: 6+85U; ; ; Photo taken prior to 2019 inspection.</p>



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 42 of 63

Photos

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



Inspect ID: NAR1_2019_a_0043 **Title:** USACE_CENAN_NAR1_2019_a_0043_1.jpg
Rated Item: 10. Sluice/ Slide Gates **Caption:** Rating: Unacceptable; Remarks: DS#3 valve riser is out of plumb and gate unable to close or operate properly. NYSDEC plans to replace the crank with an electric motor and straighten the gate.; Action: Repair/replace damaged valve riser and restore operation as planned.; Station_1: 5+15U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0043 **Title:** USACE_CENAN_NAR1_2019_a_0043_2.jpg
Rated Item: 10. Sluice/ Slide Gates **Caption:** Rating: Unacceptable; Remarks: DS#3 valve riser is out of plumb and gate unable to close or operate properly. NYSDEC plans to replace the crank with an electric motor and straighten the gate.; Action: Repair/replace damaged valve riser and restore operation as planned.; Station_1: 5+15U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 43 of 63

Photos

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



Inspect ID: NAR1_2019_a_0035 **Title:** USACE_CENAN_NAR1_2019_a_0035_1.jpg
Rated Item: 11. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Rating: Minimally Acceptable; Remarks: Flap gate of drainage structure #4 is partially blocked by sediment deposition. Could not access in 2019.; Action: Remove sediment in accordance with USACE guidelines.; Station_1: 6+85U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0041 **Title:** USACE_CENAN_NAR1_2019_a_0041_1.jpg
Rated Item: 11. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Rating: Minimally Acceptable; Remarks: Flap gate of DS#3 is blocked by sediment deposition. Could not access in 2019.; Action: Remove sediment in accordance with USACE guidelines.; Station_1: 5+15U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 44 of 63

Photos

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



Inspect ID: NAR1_2019_a_0069 **Title:** USACE_CENAN_NAR1_2019_a_0069_1.jpg
Rated Item: 11. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Rating: Minimally Acceptable; Remarks: DS#1. Flap gate operated in 2016, but stiffly. Sediment in the way. Could not access in 2019.; Action: Clean DS#1 and lubricate flap gate.; Station_1: 0+40U



Inspect ID: NAR1_2019_a_0069 **Title:** USACE_CENAN_NAR1_2019_a_0069_2.jpg
Rated Item: 11. Flap Gates/ Flap Valves/ Pinch Valves **Caption:** Rating: Minimally Acceptable; Remarks: DS#1. Flap gate operated in 2016, but stiffly. Sediment in the way. Could not access in 2019.; Action: Clean DS#1 and lubricate flap gate.; Station_1: 0+40U; Photo taken prior to 2019 inspection.





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 45 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0081 Title: USACE_CENAN_NAR1_2019_a_0081_1.jpg Rated Item: 12. Trash Racks (non-mechanical) Caption: Rating: Acceptable; Remarks: Drop inlet #3 appears operable.; Action: Monitor conditions at the drop inlet.; Station_1: 5+55A</p>
	<p>Inspect ID: NAR1_2019_a_0057 Title: USACE_CENAN_NAR1_2019_a_0057_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Vegetation encroaching along right bank on top of drainage channel wall.; Action: Coordinate with NYS Thruway Authority to remove vegetation.; Station_1: 2+10U; Station_2: 4+35U</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsey Flood Control Project (NAR1)

Photos
Page 46 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0073 Title: USACE_CENAN_NAR1_2019_a_0073_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Weep hole blocked with sediment. Could not access in 2019.; Action: Public sponsor should clear vegetation from weep hole.; Station_1: 0+55U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0075 Title: USACE_CENAN_NAR1_2019_a_0075_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Immediately downstream of the project a large pile of debris (3 ft high) obstructing more then half of the channel, downstream of concrete channel. Could not oserve in 2019.; Action: Remove debris from channel to ensure maximum flow capacity.; Station_1: 0+00U; Photo taken prior to the 2019 inspection.</p>





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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 47 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0078 Title: USACE_CENAN_NAR1_2019_a_0078_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Excessive vegetation and trees on right bank riprap. It is difficult to inspect with shrubs and trees over riprap. Could not access in 2019.; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 10+40U; Station_2: 3+10U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0078 Title: USACE_CENAN_NAR1_2019_a_0078_2.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Excessive vegetation and trees on right bank riprap. It is difficult to inspect with shrubs and trees over riprap. Could not access in 2019.; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 10+40U; Station_2: 3+10U; Photo taken prior to the 2019 inspection.</p>





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of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 48 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0078 Title: USACE_CENAN_NAR1_2019_a_0078_3.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Excessive vegetation and trees on right bank riprap. It is difficult to inspect with shrubs and trees over riprap. Could not access in 2019.; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 10+40U; Station_2: 3+10U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0094 Title: USACE_CENAN_NAR1_2019_a_0094_1.jpg Rated Item: 1. Vegetation and Obstructions Caption: Rating: Minimally Acceptable; Remarks: Vegetation on embankment of riprap channel below ; Action: Remove vegetation in accordance with USACE guidelines.; Station_1: 1+00D; ; ;</p>



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 49 of 63

Photos

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



Inspect ID: NAR1_2019_a_0008 **Title:** USACE_CENAN_NAR1_2019_a_0008_1.jpg
Rated Item: 2. Shoaling (sediment deposition) **Caption:** Rating: Minimally Acceptable;
Remarks: Some light sediment at outlet of NYCDEP blow off tunnel.; **Action:** Remove sediment in accordance with USACE guidelines.; **Station_1:** 4+40B



Inspect ID: NAR1_2019_a_0064 **Title:** USACE_CENAN_NAR1_2019_a_0064_1.jpg
Rated Item: 2. Shoaling (sediment deposition) **Caption:** Rating: Minimally Acceptable;
Remarks: Shoaling at bottom of channel at south side of old bridge. Could not observe through high water in 2019.; **Action:** Remove sediment from channel to ensure maximum flow capacity.; **Station_1:** 1+35U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 50 of 63

Photos

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



Inspect ID: NAR1_2019_a_0067 **Title:** USACE_CENAN_NAR1_2019_a_0067_1.jpg
Rated Item: 2. Shoaling (sediment deposition) **Caption:** Rating: Minimally Acceptable;
Remarks: Shoaling at DS#1 in flood reduction channel. ; **Action:** Remove sediment from channel to ensure maximum flow capacity.; **Station_1:** 0+55U; ; ;



Inspect ID: NAR1_2019_a_0067 **Title:** USACE_CENAN_NAR1_2019_a_0067_2.jpg
Rated Item: 2. Shoaling (sediment deposition) **Caption:** Rating: Minimally Acceptable;
Remarks: Shoaling at DS#1 in flood reduction channel. ; **Action:** Remove sediment from channel to ensure maximum flow capacity.; **Station_1:** 0+55U; ; ; **Photo taken prior to 2019 inspection.**




US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 51 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0076 Title: USACE_CENAN_NAR1_2019_a_0076_1.jpg Rated Item: 2. Shoaling (sediment deposition) Caption: Rating: Minimally Acceptable; Remarks: Shoaling in channel between monoliths 13 and 14. Could not access in 2019.; Action: Remove sediment in accordance with USACE guidelines.; Station_1: 3+15U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0058 Title: USACE_CENAN_NAR1_2019_a_0058_1.jpg Rated Item: 3. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Old drainage inlets at Ardsley Square may not have been properly abandoned. 20" pipe from channel wall remains open. Could not access in 2019.; Action: Confirm that pre-project catch basins were abandoned according to the approved plan.; Station_1: 1+80U; Photo taken prior to the 2019 inspection.</p>



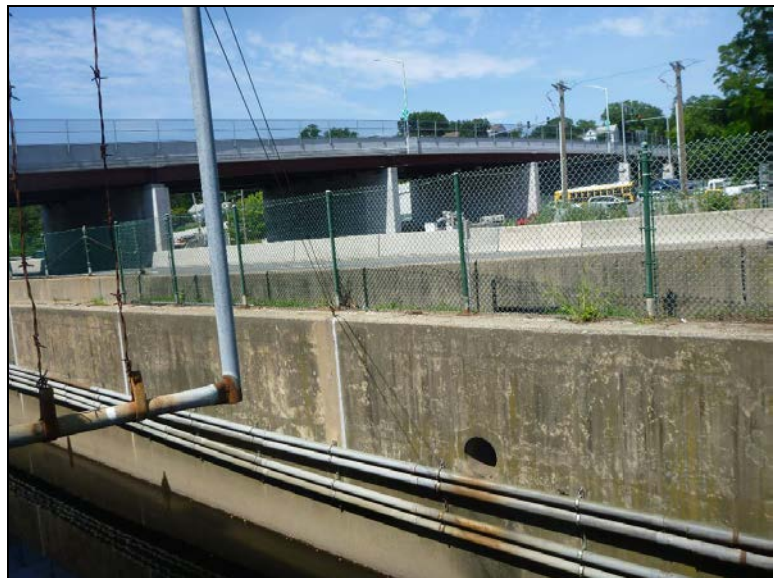
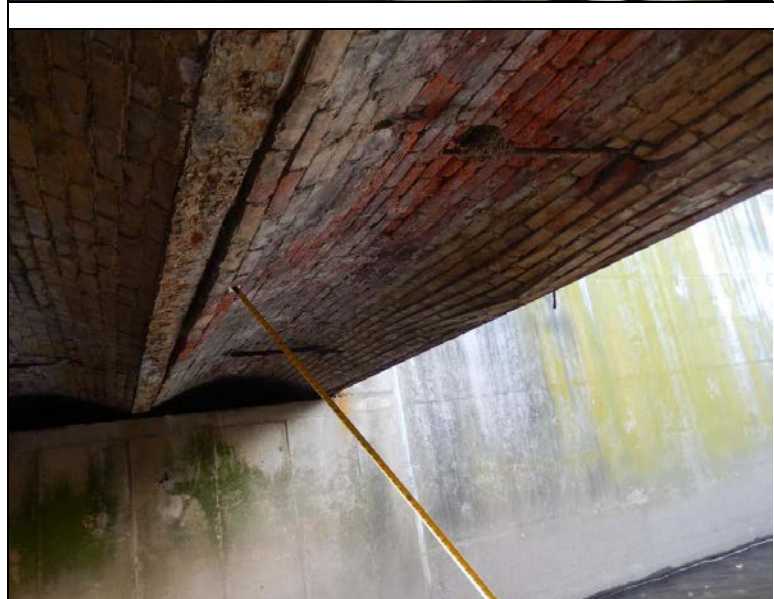
US Army Corps
of Engineers®

Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 52 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0059 Title: USACE_CENAN_NAR1_2019_a_0059_1.jpg Rated Item: 3. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Steel guy wire coming off of building and extending over channel.; Action: Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 1+45U</p>
	<p>Inspect ID: NAR1_2019_a_0062 Title: USACE_CENAN_NAR1_2019_a_0062_1.jpg Rated Item: 3. Encroachments Caption: Rating: Minimally Acceptable; Remarks: Bricks of the vaulted ceiling, beneath the old bridge, are about to fall due to corroded and broken tie rods. Falling debris could obstruct the channel. Could not observe in 2019.; Action: Shoring is needed to prevent failure of the vaulted ceiling and original bridge structure.; Station_1: 1+35U; Photo taken prior to the 2019 inspection.</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 53 of 63

Photos

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



Inspect ID: NAR1_2019_a_0062 **Title:** USACE_CENAN_NAR1_2019_a_0062_2.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Bricks of the vaulted ceiling, beneath the old bridge, are about to fall due to corroded and broken tie rods. Falling debris could obstruct the channel. Could not observe in 2019.; Action: Shoring is needed to prevent failure of the vaulted ceiling and original bridge structure.; Station_1: 1+35U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0062 **Title:** USACE_CENAN_NAR1_2019_a_0062_3.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Bricks of the vaulted ceiling, beneath the old bridge, are about to fall due to corroded and broken tie rods. Falling debris could obstruct the channel. Could not observe in 2019.; Action: Shoring is needed to prevent failure of the vaulted ceiling and original bridge structure.; Station_1: 1+35U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

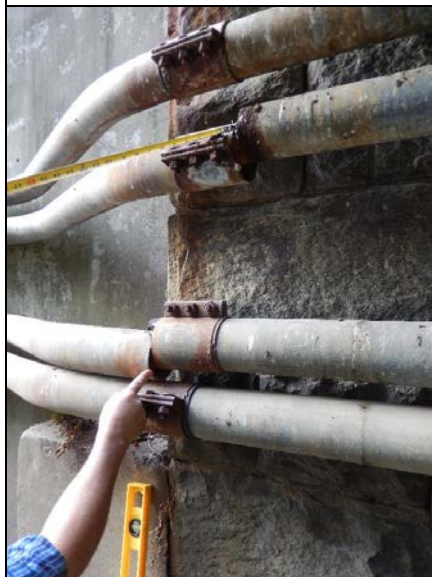
Photos
Page 54 of 63

Photos

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



Inspect ID: NAR1_2019_a_0062 **Title:** USACE_CENAN_NAR1_2019_a_0062_4.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Bricks of the vaulted ceiling, beneath the old bridge, are about to fall due to corroded and broken tie rods. Falling debris could obstruct the channel. Could not observe in 2019.; Action: Shoring is needed to prevent failure of the vaulted ceiling and original bridge structure.; Station_1: 1+35U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0063 **Title:** USACE_CENAN_NAR1_2019_a_0063_1.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Conduits running along right side of channel are broken under bridge. Could not observe in 2019.; Action: Investigate authorization and have utility owner repair or remove.; Station_1: 1+35U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 55 of 63

Photos

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



Inspect ID: NAR1_2019_a_0068 **Title:** USACE_CENAN_NAR1_2019_a_0068_1.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: A chain metal fence on the wall of the right bank is not on as-built plans.; Action: Investigate easement agreement and dispose of fence encroachment accordingly.; Station_1: 0+55U



Inspect ID: NAR1_2019_a_0072 **Title:** USACE_CENAN_NAR1_2019_a_0072_1.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Metal conduits (pipes) on right wall of concrete channel.; Action: Investigate easement agreement and dispose of encroachment accordingly.; Station_1: 0+90U



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 56 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0079 Title: USACE_CENAN_NAR1_2019_a_0079_1.jpg Rated Item: 3. Encroachments Caption: Rating: Minimally Acceptable; Remarks: NYCDEC plans to install over the wall piping at monolith 53 for pumps in Ponding Area #2. They have already installed new riprap at the planned outfall to prevent erosion.; Action: Ensure that NYSDEC has authorization from USACE to make these alterations.; Station_1: 3+35B</p>
	<p>Inspect ID: NAR1_2019_a_0088 Title: USACE_CENAN_NAR1_2019_a_0088_1.jpg Rated Item: 3. Encroachments Caption: Rating: Minimally Acceptable; Remarks: 8" HDPE pipe found encroaching interceptor ditch #1.; Action: Investigate easement agreement, remove encroachment or document as project modification.; Station_1: 2+55A</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 57 of 63

Photos

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



Inspect ID: NAR1_2019_a_0089 **Title:** USACE_CENAN_NAR1_2019_a_0089_1.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: 6" PVC outlet pipe found encroaching on interceptor ditch #1.; Action: Local sponsor should investigate the source and authorization for the encroachment.; Station_1: 0+25A



Inspect ID: NAR1_2019_a_0093 **Title:** USACE_CENAN_NAR1_2019_a_0093_1.jpg
Rated Item: 3. Encroachments **Caption:** Rating: Minimally Acceptable; Remarks: Pedestrian bridge over Saw Mill River replaced the railroad bridge that was to be removed. It is not on the project plans.; Action: Document bridge and verify hydraulics of the river are unaffected. ; Station_1: 0+50D; Photo taken prior to the 2019 inspection.





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Flood Damage Reduction Segment / System
Inspection Report
Ardley Flood Control Project (NAR1)

Photos
Page 58 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0002 Title: USACE_CENAN_NAR1_2019_a_0002_1.jpg Rated Item: 4. Erosion Caption: Rating: Minimally Acceptable; Remarks: Partial erosion of riprap below outlet of Junction Structure #1.; Action: Restore swale to design condition and line unprotected areas with riprap.; Station_1: 4+25B</p>
	<p>Inspect ID: NAR1_2019_a_0087 Title: USACE_CENAN_NAR1_2019_a_0087_1.jpg Rated Item: 4. Erosion Caption: Rating: Minimally Acceptable; Remarks: Erosion of the embankment of interceptor ditch #1 at 8" pipe.; Action: Repair eroded embankment.; Station_1: 2+55A</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 59 of 63

Photos

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



Inspect ID: NAR1_2019_a_0056 **Title:** USACE_CENAN_NAR1_2019_a_0056_1.jpg
Rated Item: 5. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: Spalling near joint between monoliths 13 and 14 on the right bank channel wall. Could not access in 2019.; Action: Repair concrete surface in accordance with USACE guidelines.; Station_1: 2+80U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0061 **Title:** USACE_CENAN_NAR1_2019_a_0061_1.jpg
Rated Item: 5. Concrete Surfaces **Caption:** Rating: Minimally Acceptable; Remarks: Scour hole at bottom of concrete channel. Could not access in 2019.; Action: Repair concrete surfaces in accordance with USACE guidelines.; Station_1: 1+45U; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
 Inspection Report
 Ardsley Flood Control Project (NAR1)

Photos
 Page 60 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0070 Title: USACE_CENAN_NAR1_2019_a_0070_1.jpg Rated Item: 5. Concrete Surfaces Caption: Rating: Minimally Acceptable; Remarks: Concrete of Ashford Avenue bridge on left side is severely deteriorated and its failure could compromise integrity of concrete channel. Could not access in 2019 due to overgrown vegetation.; Action: Request NYSDOT to repair bridge abutment in order to protect the concrete channel.; Station_1: 0+00U; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0077 Title: USACE_CENAN_NAR1_2019_a_0077_1.jpg Rated Item: 6. Tilting, Sliding or Settlement of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Right channel wall tilting toward channel 1/4" over 4', between monolith 21 and 22. Could not access in 2019.; Action: Monitor displacement of the concrete monoliths to determine if movement is active.; Station_1: 4+35U; Photo taken prior to the 2019 inspection.</p>



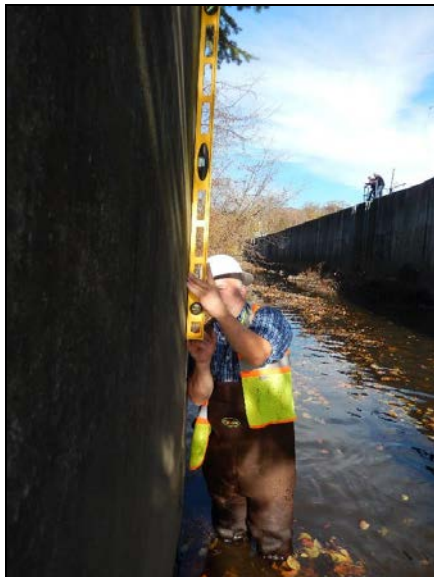
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 61 of 63

Photos

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



Inspect ID: NAR1_2019_a_0077 **Title:** USACE_CENAN_NAR1_2019_a_0077_2.jpg
Rated Item: 6. Tilting, Sliding or Settlement of Concrete Structures **Caption:** Rating: Minimally Acceptable; Remarks: Right channel wall tilting toward channel 1/4" over 4', between monolith 21 and 22. Could not access in 2019.; Action: Monitor displacement of the concrete monoliths to determine if movement is active.; Station_1: 4+35U; Photo taken prior to the 2019 inspection.



Inspect ID: NAR1_2019_a_0019 **Title:** USACE_CENAN_NAR1_2019_a_0019_1.jpg
Rated Item: 7. Foundation of Concrete Structures **Caption:** Rating: Minimally Acceptable; Remarks: The embankment slope on the exposed side has a depression 5 ft from floodwall, 6 ft wide and 3 ft deep. It may be the result of removing a tree. Could not access in 2019.; Action: Regrade to approved line and grade, reseed and mulch in accordance with USACE guidelines.; Station_1: 3+30B; Photo taken prior to the 2019 inspection.



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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 62 of 63

Photos

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

	<p>Inspect ID: NAR1_2019_a_0020 Title: USACE_CENAN_NAR1_2019_a_0020_1.jpg Rated Item: 7. Foundation of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Two large animal burrows on unprotected side of floodwall, 1-2 ft deep. Did not access in 2019.; Action: Eliminate burrowing animals; completely fill in burrows in accordance with USACE guidelines.; Station_1: 3+30B; Photo taken prior to the 2019 inspection.</p>
	<p>Inspect ID: NAR1_2019_a_0020 Title: USACE_CENAN_NAR1_2019_a_0020_2.jpg Rated Item: 7. Foundation of Concrete Structures Caption: Rating: Minimally Acceptable; Remarks: Two large animal burrows on unprotected side of floodwall, 1-2 ft deep. Did not access in 2019.; Action: Eliminate burrowing animals; completely fill in burrows in accordance with USACE guidelines.; Station_1: 3+30B; Photo taken prior to the 2019 inspection.</p>



US Army Corps
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Flood Damage Reduction Segment / System
Inspection Report
Ardsley Flood Control Project (NAR1)

Photos
Page 63 of 63



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

30 JULY 2019

SUBJECT: Ardsley (NAR1), Saw Mill River Left Bank, New York, Flood Risk Management Project – Continued Eligibility Determination for Rehabilitation Assistance Under Public Law 84-99

Mr. Alan Fuchs
New York State Department of
Environmental Conservation
Division of Water, 4th Floor
625 Broadway
Albany, New York 12233-3504

Dear Mr. Fuchs:

Further to the results of the enclosed Annual Inspection report, approved July 29, 2019, for a July 16, 2019 field inspection; the subject Flood Risk Management Project continues to be eligible to request Federal Rehabilitation Assistance should it be damaged by an extraordinary storm/event as provided for in Public Law (P.L.) 84-99 and Engineer Regulation 500-1-1.

The enclosed inspection report, produced in accordance with United States Army Corps of Engineers guidelines, concludes that the overall condition of Ardsley (NAR1), Saw Mill River Left Bank, New York, Flood Risk Management Project is MINIMALLY ACCEPTABLE. Therefore, the subject Flood Risk Management Project continues to be ACTIVE in the U.S. Army Corps of Engineers P.L. 84-99 Rehabilitation Program.

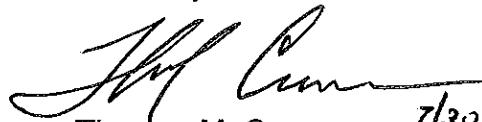
The specific corrective items and recommendations for ongoing operation and maintenance work by your agency are listed in the enclosed Inspection Summary and discussed in detail in the enclosed inspection report. We ask your agency to assess current operation and maintenance efforts in order to possibly receive an ACCEPTABLE rating at the next field inspection.

The FY2020 field inspection of the subject project is currently programmed for summer 2020. The New York State Department of Environmental Conservation's continued cooperation in the inspections of this important storm damage reduction project is appreciated.

SUBJECT: Ardsley (NAR1), Saw Mill River Left Bank, New York, Flood Risk
Management Project – Continued Eligibility Determination for Rehabilitation Assistance
Under Public Law 84-99

If you have any questions or comments concerning this matter, please contact
Mr. Sean O'Donnell at Sean.B.O'Donnell@usace.army.mil or 917-790-8501.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Creamer", with a date "7/30" written to the right.

Thomas M. Creamer
Chief, Operations, Readiness,
and Regulatory Functions Division

Enclosure

Inspection Summary

The overall condition of Ardsley (NAR1), Saw Mill River Left Bank, New York, is considered to be MINIMALLY ACCEPTABLE. The following recommendations are based upon a visual inspection and review of the available archives for the project provided by the New York District Army Corps of Engineers.

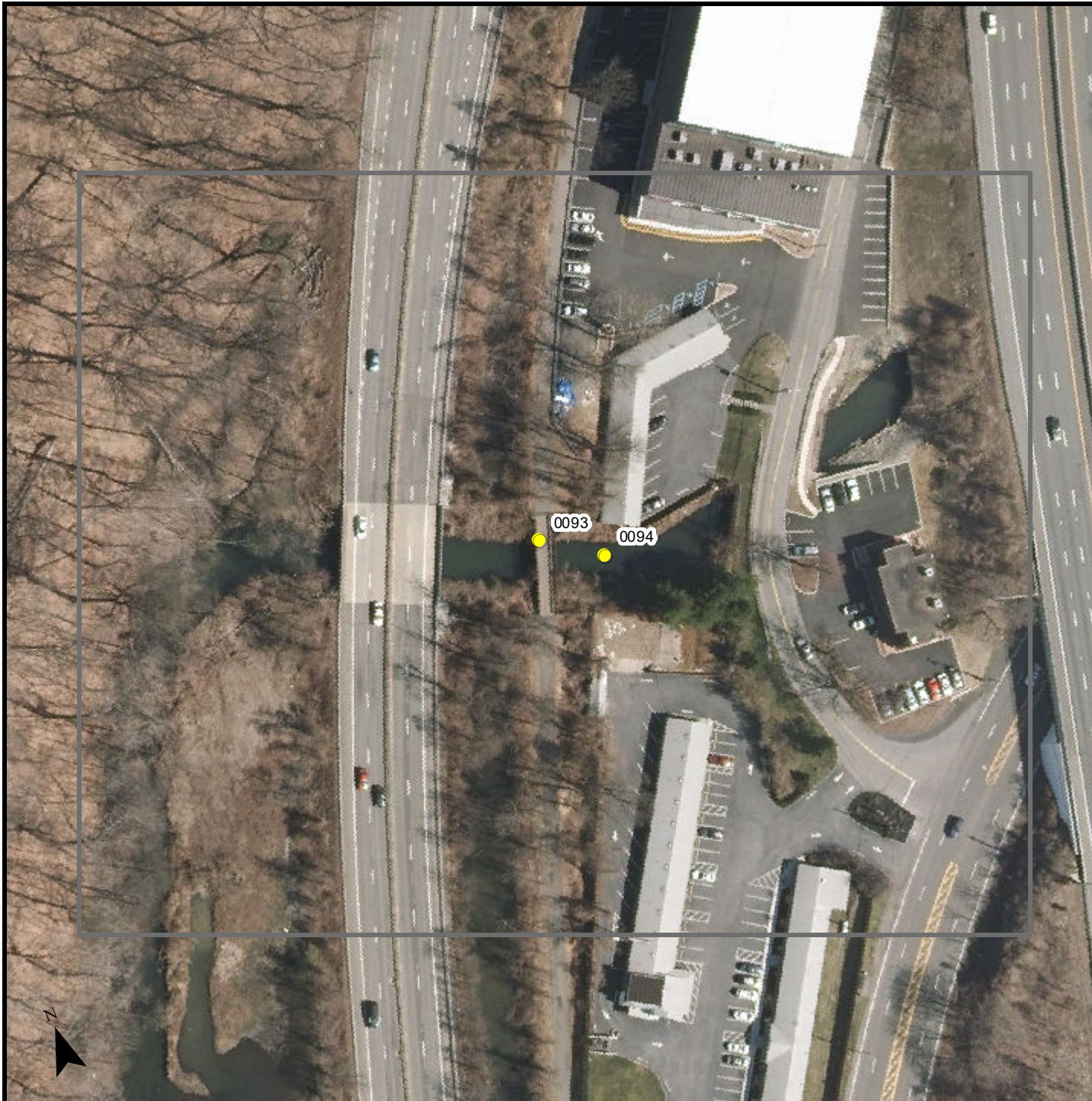
Primary Concerns:

It is highly recommended that the non-federal sponsor address the old Ashford Avenue Bridge.

1. Old Ashford Avenue Bridge is failing; without intervention it will soon fall into the river.
2. Gaps remain between the vaulted ceiling of the Old Ashford Avenue Bridge deck and the top of floodwall.
3. The drainage structure #3 valve riser is out of plumb and the sluice gate is stuck open.
4. An 8-inch flap gate was found open – this was not constructed by USACE.
5. The access way to ponding area #1 has deteriorated. Its condition poses a potential hazard to maintenance crew, emergency responders and the public.

The following personnel participated in the inspection:

Name	Agency
Joseph Diehl	United States Army Corps of Engineers
Keith Gottberg	United States Army Corps of Engineers
John Harrington	New York State Department of Environmental Conservation
Anna Servidone	New York State Department of Environmental Conservation
Berhanu Gonfa	New York State Department of Environmental Conservation
Lynn Meeker	New York State Department of Environmental Conservation
Robert Wootten	Ardsley DPW
LJ Kohn	Village of Ardsley Stormwater



Levee Inspection Map

Ardsley Flood Control Project

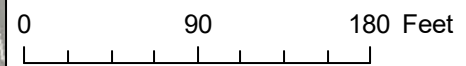
Location: Ardsley, NY
Year/cycle: 2019 a
Inspection type: Routine
Inspected by: Joseph Diehl
Inspection date(s): 16 July 2019
Observation ID prefix:
USACE_CENAN_NAR1_2019_a
Map created: 22 July 2019

Observation Points

- Acceptable
- Minimally Acceptable
- Unacceptable
- Not Applicable

Observation Lines

- Acceptable
- Minimally Acceptable
- Unacceptable
- Not Applicable





Levee Inspection Map

Ardsley Flood Control Project

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0 90 180 Feet



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Page 2 of 5





Levee Inspection Map

Ardsley Flood Control Project

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0 90 180 Feet

US Army Corps of Engineers

Page 3 of 5

Westchester New York

Levee Inspection Map

Ardsley Flood Control Project

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 Year/cycle: 2019 a
 Inspection type: Routine
 Inspected by: Joseph Diehl
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 Observation ID prefix:
 USACE_CENAN_NAR1_2019_a
 Map created: 22 July 2019

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Observation Lines

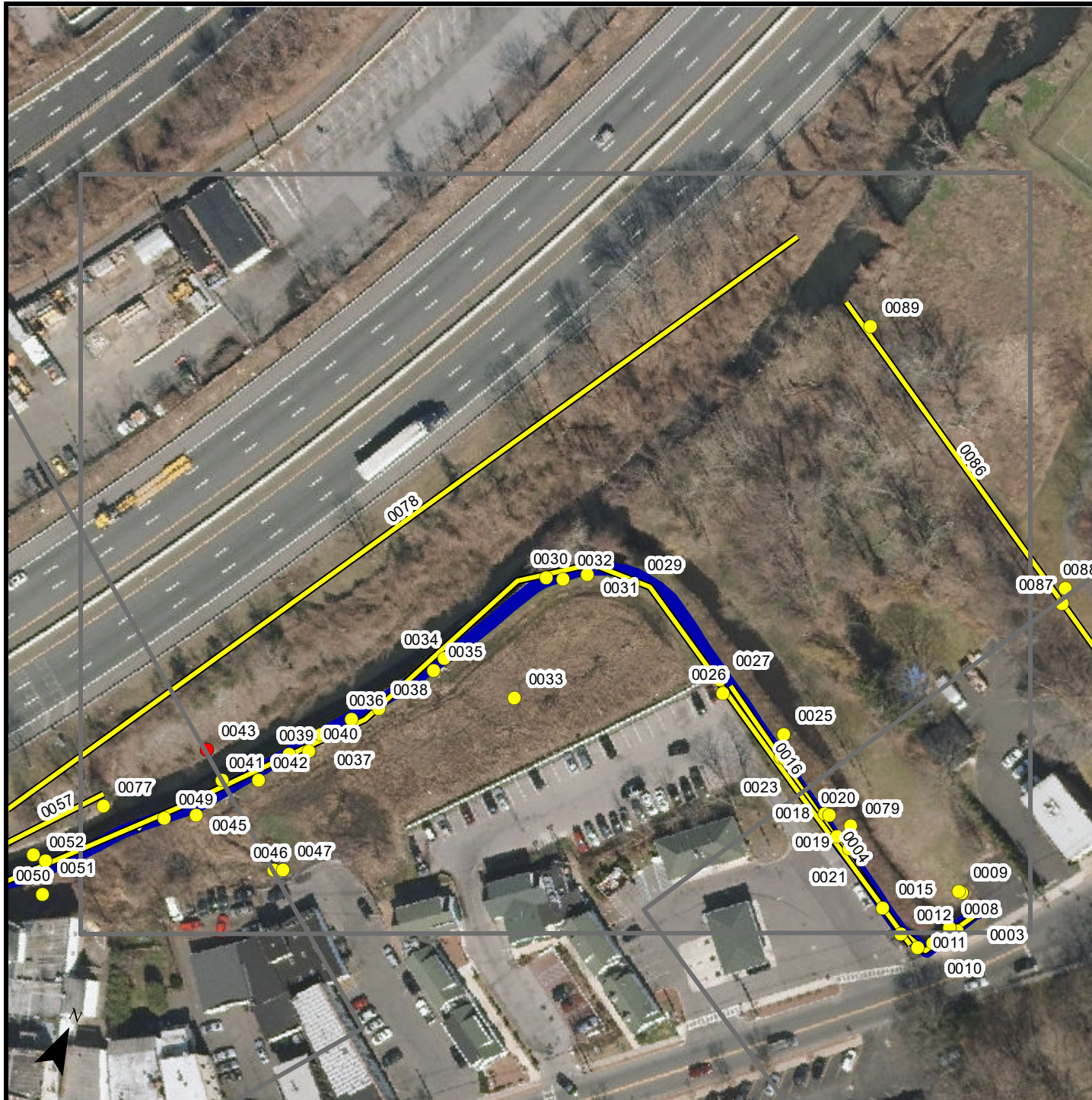
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0 90 180 Feet



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Page 4 of 5





Levee Inspection Map Ardsley Flood Control Project

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Page 5 of 5

