

November 6, 2006

Readiness Branch

Subject: Inspection of Bolivar, Allegany County, New York Flood Protection Project

New York State - Department of Environmental Conservation  
Attn: Mr. Ted Meyers  
270 Michigan Ave.  
Buffalo, New York 14203-2999

Dear Mr. Meyers:

We recently completed the bi-annual inspection of your flood protection project along Root Creek. The inspection assessed the current condition of your project and is an indicator of the commitment made to the monitoring, operation, maintenance and repair of your project. The enclosed inspection report provides you with a condition rating for each of your project's features as well as an overall project rating. Please review the results of this inspection and include all identified maintenance and repair items on your work schedule for completion.

Your project has earned a **MINIMALLY ACCEPTABLE** rating for 2006. Please refer to the inspection report for additional maintenance work which should be completed prior to our next inspection. Your community's flood protection relies on your commitment to a strong operation and maintenance program.

Should you have any questions or concerns in this regard, feel free to contact Mr. Richard Oleniacz, our Local Projects Manager, at (412) 395-7430.

Sincerely,



Thomas J. Fichera  
Chief, Readiness Branch

CF:  
Allegany County Emergency Management  
New York Emergency Management  
FEMA Region III

# U.S. Army Corps of Engineers Inspection Guide for Flood Control Works

<p>Name of Project: Bolivar LFPP</p> <p>Date Inspected: October 5, 2006</p> <p>Public Sponsor: New York State Department of Environmental Conservation</p> <p>Sponsor Phone/ Email: (716) 851-7070</p> <p>Corps of Engineers Inspector: Richard Oleniacz, P.E.</p> <p>Public Sponsor Representative: Ted Myers, P.E.</p>	
<p>Type of Inspection (Check One):</p> <p><input type="checkbox"/> Initial</p> <p><input checked="" type="checkbox"/> Continuing</p>	<p>Overall Project Rating (Check One):</p> <p><input type="checkbox"/> Acceptable</p> <p><input checked="" type="checkbox"/> Minimally Acceptable (Maintenance is required)</p> <p><input type="checkbox"/> Unacceptable</p>
<p><b>INSPECTOR'S OBSERVATIONS:</b></p> <p>I gave Mr Myers a copy of the 2006 USACE Levee Owners Manual for his use.</p> <p>The inspection was performed and the following maintenance items were identified for the sponsor to address:</p> <ol style="list-style-type: none"> <li>1. Cut the unwanted growth and remove the sediment bars in the channel.</li> <li>2. Remove the 2 fallen trees in the stream behind the school (upstream end of project).</li> </ol> <p>I would like to thank Mr. Myers for his assistance and cooperation during the inspection.</p>	
<p><b>Contents of this Inspection Report:</b></p> <p><input type="checkbox"/> Basic Eligibility (IEI specific)</p> <p><input type="checkbox"/> FCW Engineering (IEI specific)</p> <p><input checked="" type="checkbox"/> General Items for All Flood Control Works</p> <p><input type="checkbox"/> Levees</p> <p><input type="checkbox"/> Concrete Floodwalls</p> <p><input type="checkbox"/> Interior Drainage System</p> <p><input type="checkbox"/> Pump Stations</p> <p><input checked="" type="checkbox"/> Earthen Flood Control Channels</p> <p><input type="checkbox"/> Concrete Lined Channels</p> <p><input checked="" type="checkbox"/> Instructions</p> <p>Note: A plan view drawing of the Flood Control Works, with stationing, should be attached to this report to reference locations of items rated less than acceptable. Photos should be taken of general project condition and any noted deficiencies.</p>	

# General Items for All Flood Control Works

For use during Initial and Continuing Eligibility Inspections of all Flood Control Works

ITEM	A	M	U	N/A	EVALUATION	REMARKS/RECOMMENDATIONS
1. Project Operations and Maintenance Manual (A or U only)	X				A Levee Owner's Manual, ICW O&M Manuals, and/or manufacturer's operating instructions are present. U These manuals are lost or missing.	Levee Owners Manual given to the local sponsor at the inspection.
2. Emergency Supplies and Equipment	X				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. 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)	X				A Sponsor has a solid understanding of how to operate, maintain, and staff the FCW during a flood, and has written plans that include information such as low spots or sand boils. The sponsor also has plans that cover short term situations. (For instance, if a culvert through the levee is being replaced, then the sponsor knows how to respond to a flood while the levee integrity is lacking due to the construction.) M The sponsor maintains a good working knowledge of flood response activities, but there are insufficient plans to address project specific features or short term situations, or the knowledge of flood response activities is maintained by a very small number of individuals within the community. Additional planning or training is required to ensure the success of the FCW during a flood event.	

Key: A = Acceptable. M = Minimally Acceptable; Maintenance is required. U = Unacceptable. N/A = Not Applicable. RODI = Requires Operation During Inspection

# **Earthen (Excavated) Flood Control Channels** For use during all Initial and Continuing Eligibility Inspections of excavated flood control channels

RATED ITEM				EVALUATION				EXCAVATION REMARKS/RECOMMENDATIONS			
1. Vegetation and Obstructions	A	M	U	N/A							
					A There are minimal obstructions or vegetation blocking the FCW.						
					M The channel is obstructed by minor log jams, snags, or vegetation. Less than 20% of the channel is obstructed.						
2. Shoaling					U Obstructions or vegetation growth have obstructed over 20% of the river or channel.						
					A No shoaling present.						
					M Non-aquatic grasses present on shoal. No trees or brush is present on shoal, and channel flow is not impeded.						
					U Shoaling is well established, stabilized by trees, brush, or other vegetation. Shoals are diverting flow to channel bank causing bank erosion and undercutting.						
3. Encroachments					A No trash, debris, excavations, structures, or other obstructions present within the project easement area. Encroachments which do not diminish proper functioning of the project have been previously approved by the Corps.						
					M Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit project operations and maintenance or emergency operations. Encroachments have not been approved by the Corps.						
					U Trash, debris, excavation, structures, or other obstructions present, or inappropriate activities that will inhibit project operations and maintenance or emergency operations.						
					A Existing riprap protection is properly maintained and is undamaged. Riprap clearly visible.						
4. Riprap Revetments & Banks					M No riprap displacement or scouring activity that could undercut banks, erode embankments, or restrict desired flow. Unwanted vegetation must be cleared and sprayed with an appropriate herbicide.						
					U Dense brush, trees, or grasses hide the rock protection, or meandering and/or scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling.						
5. Erosion					N/A There is no riprap protecting the channel.						
					A No head cutting or horizontal deviation observed.						
					M Head cutting and horizontal deviation evident, but is less than 30 cm (1 foot) from the designed grade or cross section.						
					U Apparent head cutting and horizontal deviation of more than 30 cm (1 foot) from the designed grade or cross section. Corrective actions required to stop or slow erosion.						

Key: A = Acceptable. M = Minimally Acceptable; Maintenance is required. U = Unacceptable. N/A = Not Applicable. RODI = Requires Operation During Inspection

# Earthen (Excavated) Flood Control Channels (continued)

For use during all Initial and Continuing Eligibility Inspections of excavated flood control channels

RATED ITEM		A	M	U	N/A	EVALUATION	LOCATIONS, REMARKS, AND RECOMMENDATIONS
6. Concrete Surfaces						A Negligible spalling, scaling or cracking. If the concrete surface is weathered, rough to the touch, or holds moisture, it is still satisfactory but should be seal coated to prevent freeze/ thaw damage.	
						M Spalling, scaling, and open cracking present, but the immediate integrity or performance of the structure is not threatened. Reinforcing steel may be exposed. Repairs/ sealing is necessary to prevent additional damage during periods of thawing and freezing.	
						U Surface deterioration or deep, controlled cracks present that result in an unreliable structure.	
				X	N/A	There are no concrete structures associated with the flood control channel.	
7. Tilting, Sliding or Settlement of Concrete Structures						A There are no significant areas of tilting, sliding, or settlement that would endanger the integrity of the project.	
						M There are areas of tilting, sliding, or settlement (either active or inactive) that need to be repaired. 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.	
				X	N/A	There are no concrete structures associated with the flood control channel.	
8. Foundation of Concrete Structures						A No scouring / erosion, or undermining near the structure.	
						M Scouring / erosion near the footing of the structure but not close enough to affect structure stability during the next flood.	
						U Scouring or undermining at the foundation that has affected structural integrity.	
				X	N/A	There are no concrete structures associated with the flood control channel.	
9. Flap Gates/Flap Valves/ Pinch Valves RODI						A Flap gates open and close easily with minimal leakage.	
						M Gate will not fully open or close because of obstructions that can be easily removed, or has corrosion damage that requires maintenance.	
						U Gate is missing, has been damaged, or has deteriorated and needs repair.	
				X	N/A	There are no flap gates.	

Key: A = Acceptable. M = Minimally Acceptable; Maintenance is required. U = Unacceptable. N/A = Not Applicable. RODI = Requires Operation During Inspection

Additional issues noted during the inspection:

# Instructions for the Inspection Guide

## GENERAL INSTRUCTIONS.

1. The sections of this report labeled "Basic Eligibility" and "FCW Engineering" only need to be completed during Initial Eligibility Inspections.
2. Determination of Minimum Elevation for Levees and Floodwalls (#1 under FCW Engineering): Depending on available data and local Corps policy, the minimum elevation required may be calculated using traditional methods, with the addition of 1 foot of freeboard in agricultural areas and 2 feet of freeboard in urban areas, or using annual exceedance probability, which numerically accounts for the natural variation and uncertainty when estimating discharge-probability and stage-discharge functions so that additional requirements for elevation are based on the level of risk in the data.
3. All other sections of this guide that correspond to project features in the Flood Control Work must be fully completed during every Continuing and Initial Eligibility Inspection.
4. RODI stands for "Requires Operation During Inspection". Items marked "RODI" will be rated based on the way they work during the inspection.
5. Additional areas for inspection will be incorporated by the inspector into this guide if the layout or physical characteristics of the project warrant this. Appropriate entries will be made in the REMARKS block.

## RATINGS OF INDIVIDUAL ITEMS:

The following terms and definitions are used when determining the rating for each item and/or component in the flood control work.

- A - Acceptable:** The rated item is in satisfactory condition, with no deficiencies, and will function as designed and intended during the next flood event.
- M - Minimally Acceptable:** This rated item has minor deficiencies that need to be corrected. The minor deficiencies will not seriously impair the functioning of the item during the next flood event. The overall reliability of the project will be lowered because of the minor deficiency.
- U - Unacceptable:** The deficiencies are serious enough that the rated item will not adequately function during the next flood event, compromising the project's ability to provide reliable flood protection.

## DETERMINATION OF OVERALL PROJECT CONDITION CODE:

The lowest single rating given for a rated item will determine the overall condition of the project:

1. If all items are rated as Acceptable, the overall project condition will be rated as Acceptable.
2. If one or more items are rated as Minimally Acceptable, the overall project condition will be rated Minimally Acceptable.
3. If one or more item is rated as Unacceptable, the overall project condition will be rated as Unacceptable.

## PROJECT CONDITION AND ELIGIBILITY FOR PL84-99 ASSISTANCE:

1. Projects rated as Acceptable are considered "Active" and eligible for PL84-99 post flood or storm damage rehabilitation assistance from the U.S. Army Corps of Engineers.
2. Projects rated Minimally Acceptable are considered "Active" and eligible for PL84-99 rehabilitation assistance during the time that it takes to make needed corrections. This timeframe will be agreed upon between the project sponsor and Corps inspector at the time of the inspection (or shortly thereafter). If the project sponsor does not present the Corps with proof of completion of the repairs/maintenance by the end of this timeframe, then the project will be "Inactive" and will be ineligible for PL84-99 rehabilitation assistance.
3. Projects rated as Unacceptable are immediately put in an "Inactive" status and are not eligible for PL84-99 post flood or storm damage rehabilitation assistance from the Corps of Engineers. The project will remain in an inactive status until the project sponsor presents the Corps with proof that all of the required repairs/maintenance has been completed. (This includes any repairs/ maintenance required for project features rated minimally Acceptable, as well as those rated Unacceptable.)

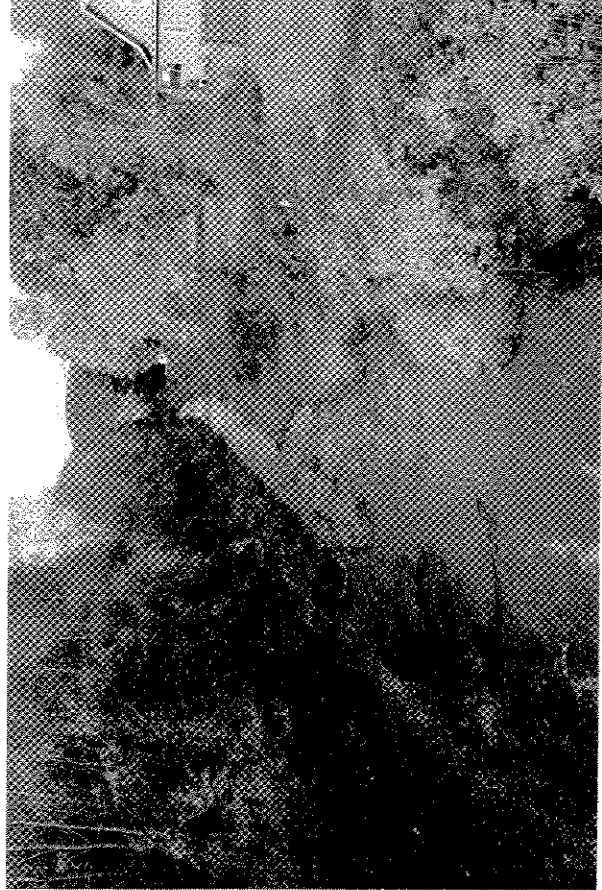
**Bolivar LFPP  
ICW - 10/5/06**



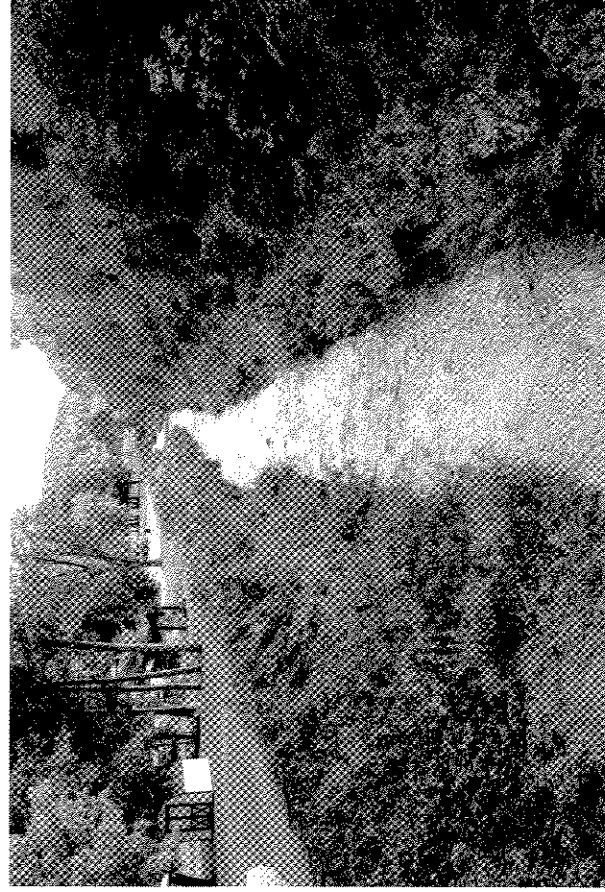
1. Looking D/S from the Main St Bridge. Cut vegetation in channel.



2. Looking U/S from the Main St Bridge. Cut vegetation on banks.



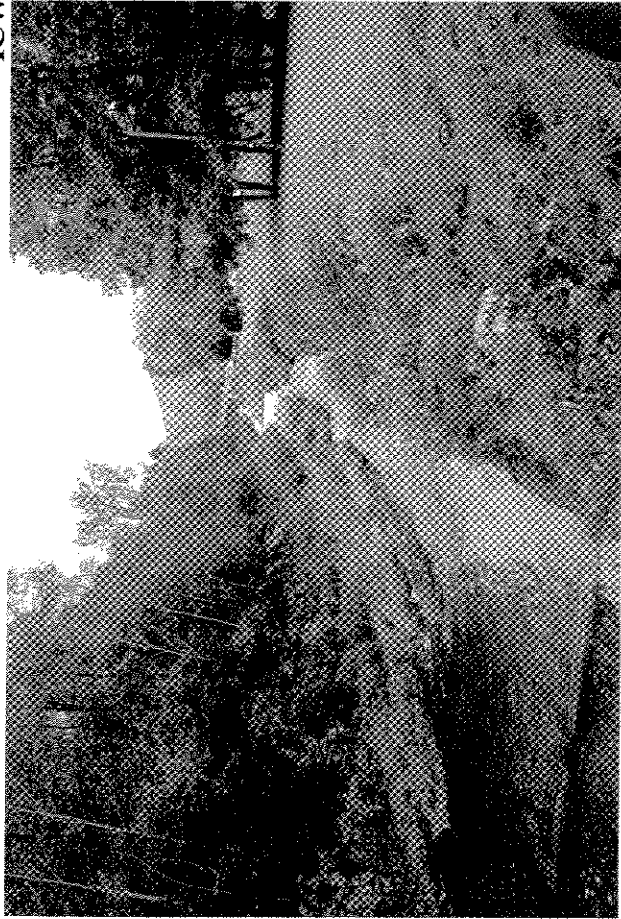
3. Looking D/S from Davis St Bridge. Cut vegetation on banks.  
Remove sediment bars forming in the channel.



4. Looking U/S from the Davis St Bridge. Cut vegetation.



**Bolivar LFPP**  
**ICW -- 10/5/06**



5. Looking D/S from the drop structure. Remove the sediment bars in the channel.