



**US Army Corps  
of Engineers ®**

## Site Visit Summary

Name of System: Munster

Name of Segment: Munster

NLD System ID: 2605000006

NLD Segment ID: 2604000009

Segment Type: USACE Federally constructed, turned over to public sponsor for operations and maintenance

Levee Sponsor (Name and Organization): Little Calumet River Basin Development Commission

Field Trip Report Prepared by: Chris Schaal

Date of Site Visit: 06/05/2023 - 06/05/2023

### Other Segments Within This System

Segment Name	NLD Segment ID#	Segment Type
NPS - Borman	2604000018	Non-Federally Constructed, local O&M

### Site Visit - Team Members (Levee Sponsor, USACE, and others)

Name	Organization	Discipline	Phone Number
Yuki Galisanao	USACE - Chicago District	Geotech	
Chris Schaal	USACE - Chicago District	Geotech	
Mike Cook	USACE - Chicago District	Geotech	
Chris Spolnik	Town of Munster		
Ricky Wilcox	Hammond Sanitary District		
Phillip Pierce	Town of Munster		
Jessie Wells	Town of Munster		
Lucas Beasley	USACE	Geotechnical	
Kevin Nickias	Town of Munster		
Brandon Chocholek	Town of Munster		
Kristine Gonzalez	USACE	Structural	
Alan Jaski	USACE	Electrical	

Dan Repay	LCRBDC		
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**Summary of Site Visit:** *[Summarize pertinent discussions with sponsor regarding levee conditions, O&M activities, etc. and describe notable observations or changed conditions since the last site visit or inspection]*

The sponsor and community are performing O&M. There were minor issues noted on the Munster segment including: unwanted vegetation within the buffer zone; debris, downed trees, and other encroachments; settlement; minor rutting; animal activity; concrete cracks/spalling; deteriorating joint sealant on the floodwall; missing confined space entry warning signs and outdated arc flash labels in the pump stations; minor structural defects in the pump stations; a broken fence at a pump station; a mechanical trash rack out of service (parts ordered to repair); and a traffic barrier blocking one of the street closures. New control systems/panels were located throughout the pump stations.

## Observations and Photos



Category:	General Items	Item:	Emergency Supplies a
Observation ID:	2023-0054		
Description:	New battery powered drills to operate gates		
Caption:	0054 - No User Rating (Site Visit) - New battery powered drills to operate gates		
Lat/Long:	41.57296/-87.51828		



Category:	General Items	Item:	Emergency Supplies a
Observation ID:	2023-0110		
Description:	Emergency supply inventory includes: 8 full pallets of sandbags, 1 sandbag machine, 9 open pallets of sandbags, concrete blocks, and equipment. Post and panel materials for the Northcote closure is stored in a grey trailer in the parking lot. Twenty pallets of sandbags and 12 super bags formerly located at the Calumet facility have been relocated to 2 grey trailers at 508 Fisher St.		
Caption:	0110 - No User Rating (Site Visit) - Emergency supply inventory includes: 8 full pallets of sandbags, 1 sandbag machine, 9 open pallets of sandbags, concrete blocks, and equipment. Post and panel materials for the Northcote closure is stored in a grey trailer in the parking lot. Twenty pallets of sandbags and 12 super bags formerly located at the Calumet facility have been relocated to 2 grey trailers at 508 Fisher St.		
Lat/Long:	41.55103/-87.51679		





Category:	Levee Embankments	Item:	Unwanted Vegetation
Observation ID:	2023-0019		
Description:	Unwanted vegetation along riverside toe - typical		
Caption:	0019 - No User Rating (Site Visit) - Unwanted vegetation along riverside toe - typical		
Lat/Long:	41.56329/-87.48132		



Category:	Levee Embankments	Item:	Unwanted Vegetation
Observation ID:	2023-0023		
Description:	Unwanted trees along landside toe		
Caption:	0023 - No User Rating (Site Visit) - Unwanted trees along landside toe		
Lat/Long:	41.56595/-87.48210		



Category:	Levee Embankments	Item:	Unwanted Vegetation
Observation ID:	2023-0080		
Description:	Unwanted trees along landside toe		
Caption:	0080 - No User Rating (Site Visit) - Unwanted trees along landside toe		
Lat/Long:	41.57122/-87.51097		



Category:	Levee Embankments	Item:	Unwanted Vegetation
Observation ID:	2023-0103		
Description:	Unwanted vegetation and debris on landside toe		
Caption:	0103 - No User Rating (Site Visit) - Unwanted vegetation and debris on landside toe		
Lat/Long:	41.57148/-87.51230		



Category:	Levee Embankments	Item:	Unwanted Vegetation
Observation ID:	2023-0155		
Description:	Unwanted vegetation along riverside slope and toe		
Caption:	0155 - No User Rating (Site Visit) - Unwanted vegetation along riverside slope and toe		
Lat/Long:	41.57489/-87.51958		



Category:	Levee Embankments	Item:	Encroachments
Observation ID:	2023-0107		
Description:	Fence encroachments on landside toe		
Caption:	0107 - No User Rating (Site Visit) - Fence encroachments on landside toe		
Lat/Long:	41.57147/-87.51260		



Category:	Levee Embankments	Item:	Encroachments
Observation ID:	2023-0151		
Description:	Silt fence dug into the crest		
Caption:	0151 - No User Rating (Site Visit) - Silt fence dug into the crest		
Lat/Long:	41.57394/-87.51911		



Category:	Levee Embankments	Item:	Encroachments
Observation ID:	2023-0163		
Description:	Sign on crest		
Caption:	0163 - No User Rating (Site Visit) - Sign on crest		
Lat/Long:	41.57702/-87.52222		





Category:	Levee Embankments	Item:	Depressions/ Rutting
Observation ID:	2023-0020		
Description:	Rutting on riverside slope		
Caption:	0020 - No User Rating (Site Visit) - Rutting on riverside slope		
Lat/Long:	41.56558/-87.48129		



Category:	Levee Embankments	Item:	Depressions/ Rutting
Observation ID:	2023-0024		
Description:	Rutting on riverside toe		
Caption:	0024 - No User Rating (Site Visit) - Rutting on riverside toe		
Lat/Long:	41.56618/-87.48216		



Category:	Levee Embankments	Item:	Depressions/ Rutting
Observation ID:	2023-0127		
Description:	Large rut at curve on riverside toe		
Caption:	0127 - No User Rating (Site Visit) - Large rut at curve on riverside toe		
Lat/Long:	41.57301/-87.51453		



Category:	Levee Embankments	Item:	Animal Control
Observation ID:	2023-0096		
Description:	Animal burrow on landside slope		
Caption:	0096 - No User Rating (Site Visit) - Animal burrow on landside slope		
Lat/Long:	41.57251/-87.51504		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0003		
Description:	Unwanted vegetation on riverside floodwall		
Caption:	0003 - No User Rating (Site Visit) - Unwanted vegetation on riverside floodwall		
Lat/Long:	41.56012/-87.48119		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0016		
Description:	Unwanted vegetation on riverside of floodwall		
Caption:	0016 - No User Rating (Site Visit) - Unwanted vegetation on riverside of floodwall		
Lat/Long:	41.56200/-87.48112		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0026		
Description:	Small tree on riverside floodwall		
Caption:	0026 - No User Rating (Site Visit) - Small tree on riverside floodwall		
Lat/Long:	41.57242/-87.51409		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0031		
Description:	Tree on landside floodwall		
Caption:	0031 - No User Rating (Site Visit) - Tree on landside floodwall		
Lat/Long:	41.56627/-87.48414		





Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0044		
Description:	Unwanted vegetation on landside of floodwall		
Caption:	0044 - No User Rating (Site Visit) - Unwanted vegetation on landside of floodwall		
Lat/Long:	41.56902/-87.49482		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0051		
Description:	Unwanted vegetation on riverside of floodwall		
Caption:	0051 - No User Rating (Site Visit) - Unwanted vegetation on riverside of floodwall		
Lat/Long:	41.56647/-87.48967		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0055		
Description:	Six-foot vegetation free buffer on riverside floodwall - typical		
Caption:	0055 - No User Rating (Site Visit) - Six-foot vegetation free buffer on riverside floodwall - typical		
Lat/Long:	41.56638/-87.48981		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0119		
Description:	Unwanted vegetation on riverside floodwall		
Caption:	0119 - No User Rating (Site Visit) - Unwanted vegetation on riverside floodwall		
Lat/Long:	41.57174/-87.51374		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0131		
Description:	Vegetation against landside floodwall		
Caption:	0131 - No User Rating (Site Visit) - Vegetation against landside floodwall		
Lat/Long:	41.57146/-87.51622		



Category:	Floodwalls	Item:	Unwanted Vegetation
Observation ID:	2023-0135		
Description:	Vegetation in riprap against riverside floodwall		
Caption:	0135 - No User Rating (Site Visit) - Vegetation in riprap against riverside floodwall		
Lat/Long:	41.57115/-87.51665		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0011		
Description:	Concrete against riverside floodwall		
Caption:	0011 - No User Rating (Site Visit) - Concrete against riverside floodwall		
Lat/Long:	41.56263/-87.48128		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0032		
Description:	Pole on landside floodwall		
Caption:	0032 - No User Rating (Site Visit) - Pole on landside floodwall		
Lat/Long:	41.56634/-87.48953		





Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0036		
Description:	Graffiti on riverside floodwall		
Caption:	0036 - No User Rating (Site Visit) - Graffiti on riverside floodwall		
Lat/Long:	41.56612/-87.49095		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0048		
Description:	Small statue and rod on landside floodwall		
Caption:	0048 - No User Rating (Site Visit) - Small statue and rod on landside floodwall		
Lat/Long:	41.56953/-87.49661		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0063		
Description:	Discarded table on riverside floodwall		
Caption:	0063 - No User Rating (Site Visit) - Discarded table on riverside floodwall		
Lat/Long:	41.56901/-87.49399		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0064		
Description:	Various debris on landside floodwall		
Caption:	0064 - No User Rating (Site Visit) - Various debris on landside floodwall		
Lat/Long:	41.56974/-87.50452		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0072		
Description:	Tree debris on landside floodwall - near Calumet Ave		
Caption:	0072 - No User Rating (Site Visit) - Tree debris on landside floodwall - near Calumet Ave		
Lat/Long:	41.57103/-87.50891		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0075		
Description:	Debris against landside floodwall and unwanted wood platform on top of floodwall		
Caption:	0075 - No User Rating (Site Visit) - Debris against landside floodwall and unwanted wood platform on top of floodwall		
Lat/Long:	41.56992/-87.50478		



Category:	Floodwalls	Item:	Encroachments
Observation ID:	2023-0100		
Description:	Utility pole anchors on landside floodwall		
Caption:	0100 - No User Rating (Site Visit) - Utility pole anchors on landside floodwall		
Lat/Long:	41.57133/-87.51729		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0004		
Description:	Floodwall cracks on landside		
Caption:	0004 - No User Rating (Site Visit) - Floodwall cracks on landside		
Lat/Long:	41.56092/-87.48126		





Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0007		
Description:	Exposed rebar on landside floodwall		
Caption:	0007 - No User Rating (Site Visit) - Exposed rebar on landside floodwall		
Lat/Long:	41.56230/-87.48122		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0012		
Description:	Cracking and spalling on riverside floodwall		
Caption:	0012 - No User Rating (Site Visit) - Cracking and spalling on riverside floodwall		
Lat/Long:	41.56295/-87.48139		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0035		
Description:	Cracking of abutment on east side of Northcote Ave		
Caption:	0035 - No User Rating (Site Visit) - Cracking of abutment on east side of Northcote Ave		
Lat/Long:	41.56646/-87.48574		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0052		
Description:	Exposed rebar on landside cap		
Caption:	0052 - No User Rating (Site Visit) - Exposed rebar on landside cap		
Lat/Long:	41.56992/-87.49706		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0091		
Description:	Crack in landside cap near joint		
Caption:	0091 - No User Rating (Site Visit) - Crack in landside cap near joint		
Lat/Long:	41.57112/-87.50995		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0095		
Description:	Landside floodwall spalling/chipping		
Caption:	0095 - No User Rating (Site Visit) - Landside floodwall spalling/chipping		
Lat/Long:	41.57119/-87.51057		



Category:	Floodwalls	Item:	Concrete Surfaces
Observation ID:	2023-0099		
Description:	Chipped cap		
Caption:	0099 - No User Rating (Site Visit) - Chipped cap		
Lat/Long:	41.57127/-87.51082		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0056		
Description:	Depression along riverside floodwall foundation		
Caption:	0056 - No User Rating (Site Visit) - Depression along riverside floodwall foundation		
Lat/Long:	41.56859/-87.50081		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0060		
Description:	Two-ft deep animal burrows on landside floodwall foundation		
Caption:	0060 - No User Rating (Site Visit) - Two-ft deep animal burrows on landside floodwall foundation		
Lat/Long:	41.56848/-87.50139		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0067		
Description:	Animal burrow under abutment on east side of Columbia Ave		
Caption:	0067 - No User Rating (Site Visit) - Animal burrow under abutment on east side of Columbia Ave		
Lat/Long:	41.56886/-87.50009		





Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0068		
Description:	Depression under landside floodwall foundation - typical		
Caption:	0068 - No User Rating (Site Visit) - Depression under landside floodwall foundation - typical		
Lat/Long:	41.57074/-87.50625		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0076		
Description:	Erosion under floodwall cap on riverside		
Caption:	0076 - No User Rating (Site Visit) - Erosion under floodwall cap on riverside		
Lat/Long:	41.57130/-87.51083		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0079		
Description:	Erosion under landside floodwall facade - typical to Calumet Ave		
Caption:	0079 - No User Rating (Site Visit) - Erosion under landside floodwall facade - typical to Calumet Ave		
Lat/Long:	41.57066/-87.50617		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0084		
Description:	Erosion under landside floodwall cap		
Caption:	0084 - No User Rating (Site Visit) - Erosion under landside floodwall cap		
Lat/Long:	41.57234/-87.51390		



Category:	Floodwalls	Item:	Foundation of Concre
Observation ID:	2023-0092		
Description:	Landside floodwall cap misalignment over sheetpile		
Caption:	0092 - No User Rating (Site Visit) - Landside floodwall cap misalignment over sheetpile		
Lat/Long:	41.57287/-87.51458		



Category:	Floodwalls	Item:	Monolith Joints
Observation ID:	2023-0008		
Description:	Deteriorating joint sealant on landside floodwall		
Caption:	0008 - No User Rating (Site Visit) - Deteriorating joint sealant on landside floodwall		
Lat/Long:	41.56198/-87.48118		





Category:	Floodwalls	Item:	Monolith Joints
Observation ID:	2023-0047		
Description:	Repaired joint caulking on landside floodwall		
Caption:	0047 - No User Rating (Site Visit) - Repaired joint caulking on landside floodwall		
Lat/Long:	41.56685/-87.48685		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0022		
Description:	MU-08: Vegetation around outlet		
Caption:	0022 - No User Rating (Site Visit) - MU-08: Vegetation around outlet		
Lat/Long:	41.57243/-87.51392		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0038		
Description:	MU-06: Sediment in outlet		
Caption:	0038 - No User Rating (Site Visit) - MU-06: Sediment in outlet		
Lat/Long:	41.57298/-87.51815		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0058		
Description:	MU-04: Vegetation around gatewell		
Caption:	0058 - No User Rating (Site Visit) - MU-04: Vegetation around gatewell		
Lat/Long:	41.57518/-87.51973		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0066		
Description:	MU-04: Sediment and vegetation at outlet		
Caption:	0066 - No User Rating (Site Visit) - MU-04: Sediment and vegetation at outlet		
Lat/Long:	41.57522/-87.51957		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0082		
Description:	MU-02: Vegetation around outlet headwall		
Caption:	0082 - No User Rating (Site Visit) - MU-02: Vegetation around outlet headwall		
Lat/Long:	41.57720/-87.52171		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0086		
Description:	MU-02: Debris on outlet grate		
Caption:	0086 - No User Rating (Site Visit) - MU-02: Debris on outlet grate		
Lat/Long:	41.57727/-87.52171		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0090		
Description:	MU-01: Vegetation and sediment around outlet structure		
Caption:	0090 - No User Rating (Site Visit) - MU-01: Vegetation and sediment around outlet structure		
Lat/Long:	41.57745/-87.52262		





Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0106		
Description:	MU-03: Trees and vegetation around inlet		
Caption:	0106 - No User Rating (Site Visit) - MU-03: Trees and vegetation around inlet		
Lat/Long:	41.57607/-87.52022		



Category:	Interior Drainage System	Item:	Vegetation and Obstr
Observation ID:	2023-0159		
Description:	Vegetation in ditch - near MU-03		
Caption:	0159 - No User Rating (Site Visit) - Vegetation in ditch - near MU-03		
Lat/Long:	41.57611/-87.52008		



Category:	Interior Drainage System	Item:	Encroachments
Observation ID:	2023-0062		
Description:	MU-04: Debris in riprap at outlet structure		
Caption:	0062 - No User Rating (Site Visit) - MU-04: Debris in riprap at outlet structure		
Lat/Long:	41.57519/-87.51962		



Category:	Interior Drainage System	Item:	Encroachments
Observation ID:	2023-0087		
Description:	MU-09: Debris around duckbill valve		
Caption:	0087 - No User Rating (Site Visit) - MU-09: Debris around duckbill valve		
Lat/Long:	41.57106/-87.50886		



Category:	Interior Drainage System	Item:	Concrete Surfaces (S
Observation ID:	2023-0014		
Description:	MU-11: Outlet headwall buried under shifted riprap		
Caption:	0014 - No User Rating (Site Visit) - MU-11: Outlet headwall buried under shifted riprap		
Lat/Long:	41.56649/-87.48504		



Category:	Interior Drainage System	Item:	Foundation of Concre
Observation ID:	2023-0143		
Description:	MU-07: Erosion at corners of gatewell		
Caption:	0143 - No User Rating (Site Visit) - MU-07: Erosion at corners of gatewell		
Lat/Long:	41.57200/-87.51771		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:	2023-0018		
Description:	MU-11: Sluice gate back in open position. No issues		
Caption:	0018 - No User Rating (Site Visit) - MU-11: Sluice gate back in open position. No issues		
Lat/Long:	41.56647/-87.48505		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:	2023-0034		
Description:	MU-08: Sluice gate fully closed. Water backed up, potential blockage at outlet		
Caption:	0034 - No User Rating (Site Visit) - MU-08: Sluice gate fully closed. Water backed up, potential blockage at outlet		
Lat/Long:	41.57243/-87.51404		





Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:	2023-0046		
Description:	MU-06: Sluice gate fully closed. No issues		
Caption:	0046 - No User Rating (Site Visit) - MU-06: Sluice gate fully closed. No issues		
Lat/Long:	41.57295/-87.51830		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:	2023-0074		
Description:	MU-04: Sluice gate fully closed. No issues		
Caption:	0074 - No User Rating (Site Visit) - MU-04: Sluice gate fully closed. No issues		
Lat/Long:	41.57522/-87.51969		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:		2023-0078	
Description:	MU-02: Sluice gate fully open. Some debris in the gatewell. Gate closed with no issues. Water build up could indicate outlet blockage		
Caption:	0078 - No User Rating (Site Visit) - MU-02: Sluice gate fully open. Some debris in the gatewell. Gate closed with no issues. Water build up could indicate outlet blockage		
Lat/Long:	41.57718/-87.52168		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:		2023-0094	
Description:	MU-01: Sluice gate fully closed. No issues. Some water build up		
Caption:	0094 - No User Rating (Site Visit) - MU-01: Sluice gate fully closed. No issues. Some water build up		
Lat/Long:	41.57725/-87.52247		



Category:	Interior Drainage System	Item:	Sluice / Slide Gates
Observation ID:	2023-0147		
Description:	MU-05: In active construction zone, could not inspect		
Caption:	0147 - No User Rating (Site Visit) - MU-05: In active construction zone, could not inspect		
Lat/Long:	41.57343/-87.51866		



Category:	Interior Drainage System	Item:	Flap Gates/ Flap Val
Observation ID:	2023-0010		
Description:	MU-11: Flap gate underwater		
Caption:	0010 - No User Rating (Site Visit) - MU-11: Flap gate underwater		
Lat/Long:	41.56649/-87.48504		



Category:	Interior Drainage System	Item:	Flap Gates/ Flap Val
Observation ID:	2023-0015		
Description:	MU-12: Duckbill valve stuck open		
Caption:	0015 - No User Rating (Site Visit) - MU-12: Duckbill valve stuck open		
Lat/Long:	41.56168/-87.48114		



Category:	Interior Drainage System	Item:	Flap Gates/ Flap Val
Observation ID:	2023-0098		
Description:	MU-03: Flap gate, no issues		
Caption:	0098 - No User Rating (Site Visit) - MU-03: Flap gate, no issues		
Lat/Long:	41.57614/-87.52015		



Category:	Interior Drainage System	Item:	Trash Racks (non-mec
Observation ID:		2023-0102	
Description:	MU-03: Missing trash rack		
Caption:	0102 - No User Rating (Site Visit) - MU-03: Missing trash rack		
Lat/Long:	41.57609/-87.52016		



Category:	Pump Stations	Item:	Pump Station Operati
Observation ID:	2023-0001		
Description:	PS-BA: Operations manuals onsite		
Caption:	0001 - No User Rating (Site Visit) - PS-BA: Operations manuals onsite		
Lat/Long:	41.56638/-87.48510		





Category:	Pump Stations	Item:	Pump Station Operati
Observation ID:	2023-0061		
Description:	PS-CA: Operations manuals onsite		
Caption:	0061 - No User Rating (Site Visit) - PS-CA: Operations manuals onsite		
Lat/Long:	41.57082/-87.50776		



Category:	Pump Stations	Item:	Pump Station Operati
Observation ID:	2023-0109		
Description:	PS-OA: Operations manuals onsite		
Caption:	0109 - No User Rating (Site Visit) - PS-OA: Operations manuals onsite		
Lat/Long:	41.57189/-87.51806		



Category:	Pump Stations	Item:	Pump Station Operati
Observation ID:	2023-0157		
Description:	PS-HM: Operations manuals onsite		
Caption:	0157 - No User Rating (Site Visit) - PS-HM: Operations manuals onsite		
Lat/Long:	41.57709/-87.52173		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0013		
Description:	PS-BA: Missing confined space entry label		
Caption:	0013 - No User Rating (Site Visit) - PS-BA: Missing confined space entry label		
Lat/Long:	41.56640/-87.48514		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0057		
Description:	PS-CA: Metal grate near intake of trash rake has no clips. Potential safety hazard.		
Caption:	0057 - No User Rating (Site Visit) - PS-CA: Metal grate near intake of trash rake has no clips. Potential safety hazard		
Lat/Long:	41.57082/-87.50775		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0065		
Description:	PS-CA: Outdated arc flash labels		
Caption:	0065 - No User Rating (Site Visit) - PS-CA: Outdated arc flash labels		
Lat/Long:	41.57077/-87.50793		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0105		
Description:	PS-CA: Crack in concrete near front door to station. Potential trip hazard		
Caption:	0105 - No User Rating (Site Visit) - PS-CA: Crack in concrete near front door to station. Potential trip hazard		
Lat/Long:	41.57073/-87.50785		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0121		
Description:	PS-OA: Outdated arc flash labels		
Caption:	0121 - No User Rating (Site Visit) - PS-OA: Outdated arc flash labels		
Lat/Long:	41.57190/-87.51812		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0125		
Description:	PS-OA: Confined space labels missing throughout interior pump station. Typical shown		
Caption:	0125 - No User Rating (Site Visit) - PS-OA: Confined space labels missing throughout interior pump station. Typical shown		
Lat/Long:	41.57191/-87.51812		



Category:	Pump Stations	Item:	Safety Compliance
Observation ID:	2023-0177		
Description:	PS-HM: Arc flash labels are outdated		
Caption:	0177 - No User Rating (Site Visit) - PS-HM: Arc flash labels are outdated		
Lat/Long:	41.57711/-87.52184		





Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0025		
Description:	PS-BA: Crack in building exterior wall		
Caption:	0025 - No User Rating (Site Visit) - PS-BA: Crack in building exterior wall		
Lat/Long:	41.56632/-87.48512		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0029		
Description:	PS-BA: Exterior wall cracks/spalling		
Caption:	0029 - No User Rating (Site Visit) - PS-BA: Exterior wall cracks/spalling		
Lat/Long:	41.56633/-87.48514		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0033		
Description:	PS-BA: Erosion around generator concrete pad		
Caption:	0033 - No User Rating (Site Visit) - PS-BA: Erosion around generator concrete pad		
Lat/Long:	41.56642/-87.48512		




Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0037		
Description:	PS-BA: Minor depression near EF-02		
Caption:	0037 - No User Rating (Site Visit) - PS-BA: Minor depression near EF-02		
Lat/Long:	41.56636/-87.48516		




Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0049		
Description:	PS-CA: Crack in skylight		
Caption:	0049 - No User Rating (Site Visit) - PS-CA: Crack in skylight		
Lat/Long:	41.57084/-87.50796		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0053		
Description:	PS-CA: Crack located next to back door. Typical of cracks found on masonry inside station		
Caption:	0053 - No User Rating (Site Visit) - PS-CA: Crack located next to back door. Typical of cracks found on masonry inside station		
Lat/Long:	41.57084/-87.50796		

			
Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0073		
Description:	PS-CA: Spalling on building exterior wall		
Caption:	0073 - No User Rating (Site Visit) - PS-CA: Spalling on building exterior wall		
Lat/Long:	41.57090/-87.50773		

			
Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0077		
Description:	PS-CA: Crack on foundation of building exterior		
Caption:	0077 - No User Rating (Site Visit) - PS-CA: Crack on foundation of building exterior		
Lat/Long:	41.57090/-87.50776		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0089		
Description:	PS-CA: Exterior concrete surface is cracked		
Caption:	0089 - No User Rating (Site Visit) - PS-CA: Exterior concrete surface is cracked		
Lat/Long:	41.57074/-87.50772		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0097		
Description:	PS-CA: Vertical crack on generator concrete pad		
Caption:	0097 - No User Rating (Site Visit) - PS-CA: Vertical crack on generator concrete pad		
Lat/Long:	41.57061/-87.50798		





Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0101		
Description:	PS-CA: Exposed rebar on exterior wall		
Caption:	0101 - No User Rating (Site Visit) - PS-CA: Exposed rebar on exterior wall		
Lat/Long:	41.57076/-87.50801		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0129		
Description:	PS-OA: Crack along interior building corner		
Caption:	0129 - No User Rating (Site Visit) - PS-OA: Crack along interior building corner		
Lat/Long:	41.57189/-87.51817		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0137		
Description:	PS-OA: Typical interior vertical cracks inside building. Some recently sealed		
Caption:	0137 - No User Rating (Site Visit) - PS-OA: Typical interior vertical cracks inside building. Some recently sealed		
Lat/Long:	41.57189/-87.51816		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0141		
Description:	PS-OA: Exterior masonry crack along length of building		
Caption:	0141 - No User Rating (Site Visit) - PS-OA: Exterior masonry crack along length of building		
Lat/Long:	41.57193/-87.51830		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0145		
Description:	PS-OA: Deteriorating joint sealant on exterior masonry		
Caption:	0145 - No User Rating (Site Visit) - PS-OA: Deteriorating joint sealant on exterior masonry		
Lat/Long:	41.57189/-87.51826		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0161		
Description:	PS-HM: Cracks in masonry above window		
Caption:	0161 - No User Rating (Site Visit) - PS-HM: Cracks in masonry above window		
Lat/Long:	41.57709/-87.52173		



Category:	Pump Stations	Item:	Plant Building
Observation ID:	2023-0165		
Description:	PS-HM: Minor spalling on concrete corner on exterior of building		
Caption:	0165 - No User Rating (Site Visit) - PS-HM: Minor spalling on concrete corner on exterior of building		
Lat/Long:	41.57718/-87.52179		



Category:	Pump Stations	Item:	Fencing and Gates
Observation ID:	2023-0085		
Description:	PS-CA: Damaged fence		
Caption:	0085 - No User Rating (Site Visit) - PS-CA: Damaged fence		
Lat/Long:	41.57077/-87.50769		



Category:	Pump Stations	Item:	Pumps
Observation ID:	2023-0045		
Description:	PS-CA: Exposed pump shaft on pump 2 looks to be more corroded than the other pumps		
Caption:	0045 - No User Rating (Site Visit) - PS-CA: Exposed pump shaft on pump 2 looks to be more corroded than the other pumps		
Lat/Long:	41.57084/-87.50796		



Category:	Pump Stations	Item:	Mechanical Operating
Observation ID:	2023-0041		
Description:	PS-CA: North mechanical trash rake out of service - parts ordered to repair		
Caption:	0041 - No User Rating (Site Visit) - PS-CA: North mechanical trash rake out of service - parts ordered to repair		
Lat/Long:	41.57080/-87.50768		





Category:	Pump Stations	Item:	Power Source
Observation ID:	2023-0017		
Description:	PS-BA: Exterior backup generator runtime (291 hrs 21 min)		
Caption:	No User Rating (Site Visit) - PS-BA: Exterior backup generator runtime (291 hrs 21 min)		
Lat/Long:	41.56641/-87.48518		



Category:	Pump Stations	Item:	Power Source
Observation ID:	2023-0021		
Description:	PS-BA: Wasp nest located inside upper corners of generator enclosure		
Caption:	0021 - No User Rating (Site Visit) - PS-BA: Wasp nest located inside upper corners of generator enclosure		
Lat/Long:	41.56641/-87.48518		



Category:	Pump Stations	Item:	Power Source
Observation ID:	2023-0093		
Description:	PS-CA: Generator in good condition. Has 398 runtime hours		
Caption:	0093 - No User Rating (Site Visit) - PS-CA: Generator in good condition. Has 398 runtime hours		
Lat/Long:	41.57067/-87.50797		



Category:	Pump Stations	Item:	Power Source
Observation ID:	2023-0149		
Description:	PS-OA: Generator 1 runtime is 141.1 hours. Generator 2 runtime is 172 hours. Generator 3 runtime is 167.4 hours		
Caption:	0149 - No User Rating (Site Visit) - PS-OA: Generator 1 runtime is 141.1 hours. Generator 2 runtime is 172 hours. Generator 3 runtime is 167.4 hours		
Lat/Long:	41.57184/-87.51824		



Category:	Pump Stations	Item:	Power Source
Observation ID:	2023-0173		
Description:	PS-HM: Generator runtime is 761.3 hours		
Caption:	0173 - No User Rating (Site Visit) - PS-HM: Generator runtime is 761.3 hours		
Lat/Long:	41.57701/-87.52176		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0005		
Description:	PS-BA: New control system and display monitor installed within the last year		
Caption:	0005 - No User Rating (Site Visit) - PS-BA: New control system and display monitor installed within the last year		
Lat/Long:	41.56638/-87.48508		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0009		
Description:	PS-BA: New wet well transducer installed within last year to monitor water level		
Caption:	0009 - No User Rating (Site Visit) - PS-BA: New wet well transducer installed within last year to monitor water level		
Lat/Long:	41.56637/-87.48511		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0069		
Description:	PS-CA: New levee monitoring and control system installed within the last year		
Caption:	0069 - No User Rating (Site Visit) - PS-CA: New levee monitoring and control system installed within the last year		
Lat/Long:	41.57064/-87.50789		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0081		
Description:	PS-CA: Corroded duct louver screen		
Caption:	0081 - No User Rating (Site Visit) - PS-CA: Corroded duct louver screen		
Lat/Long:	41.57091/-87.50788		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0117		
Description:	PS-OA: New float level system installed within the last year		
Caption:	0117 - No User Rating (Site Visit) - PS-OA: New float level system installed within the last year		
Lat/Long:	41.57190/-87.51812		





Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0133		
Description:	PS-OA: Corroded ceiling drainage pipe		
Caption:	0133 - No User Rating (Site Visit) - PS-OA: Corroded ceiling drainage pipe		
Lat/Long:	41.57189/-87.51816		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0153		
Description:	PS-HM: New level transducer and control system installed within the last year		
Caption:	0153 - No User Rating (Site Visit) - PS-HM: New level transducer and control system installed within the last year		
Lat/Long:	41.57709/-87.52178		



Category:	Pump Stations	Item:	Enclosures, Panels,
Observation ID:	2023-0169		
Description:	PS-HM: Broken louver screen		
Caption:	0169 - No User Rating (Site Visit) - PS-HM: Broken louver screen		
Lat/Long:	41.57703/-87.52171		



Category:	Pump Stations	Item:	Sluice/ Slide Gates
Observation ID:	2023-0113		
Description:	PS-OA: Sluice gate gear housing leaking		
Caption:	0113 - No User Rating (Site Visit) - PS-OA: Sluice gate gear housing leaking		
Lat/Long:	41.57197/-87.51816		



# National Levee Database

NLD

For Official Use Only

LEVEE INSPECTION MAPBOOK

## Levee Segment Munster

NLD Levee Segment ID  
2604000009

Location  
Munster

Inspection Type  
Site Visit

Start Date  
05-Jun-2023

End Date  
05-Jun-2023

Inspected By  
Chris Schaal, Mike Cook



US Army Corps  
of Engineers



SHEET INDEX

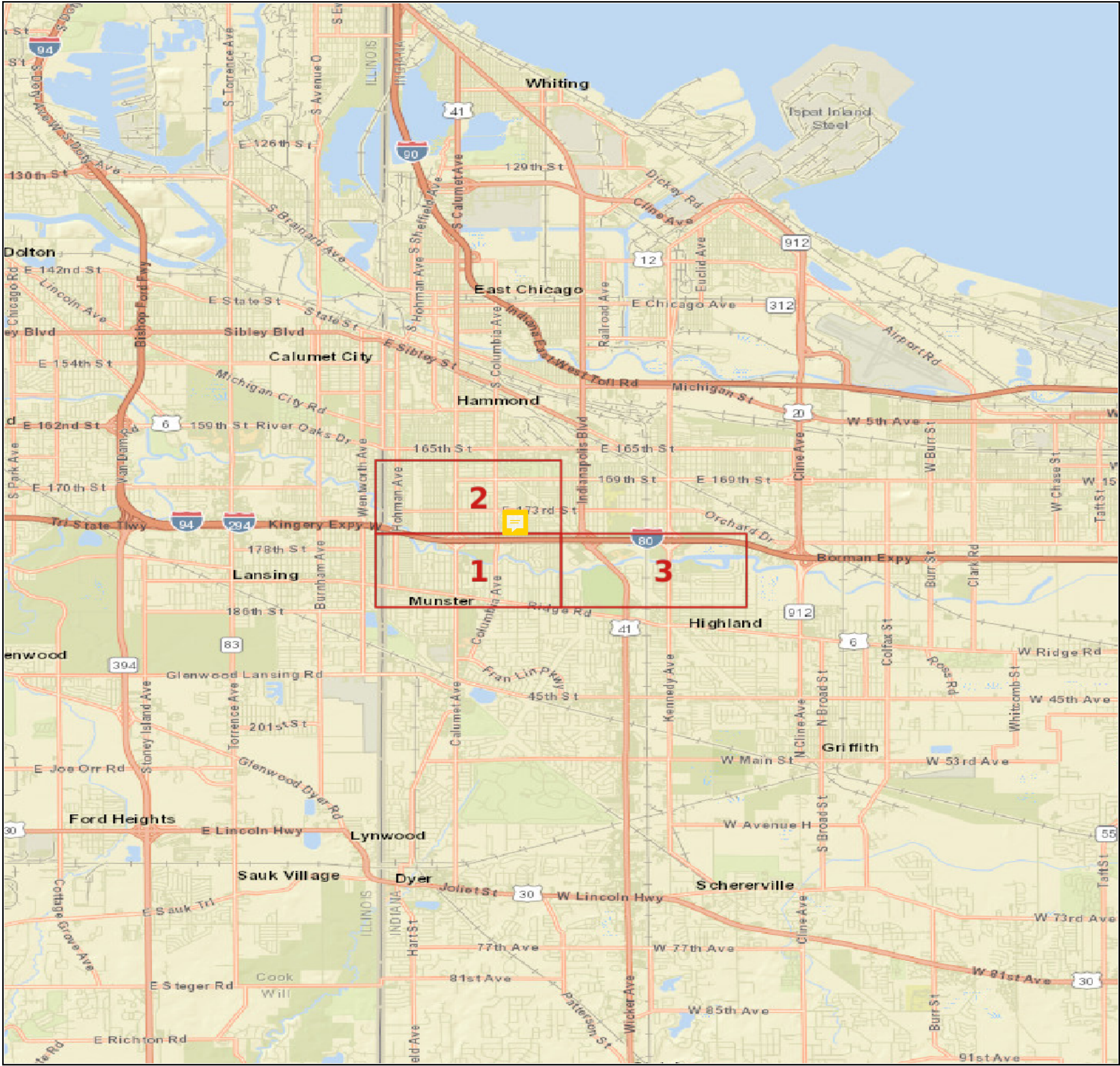
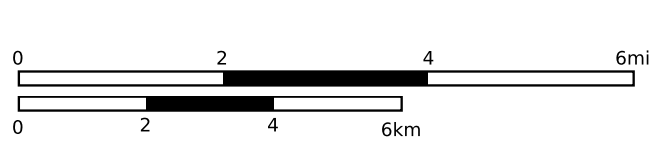
Levee: Munster

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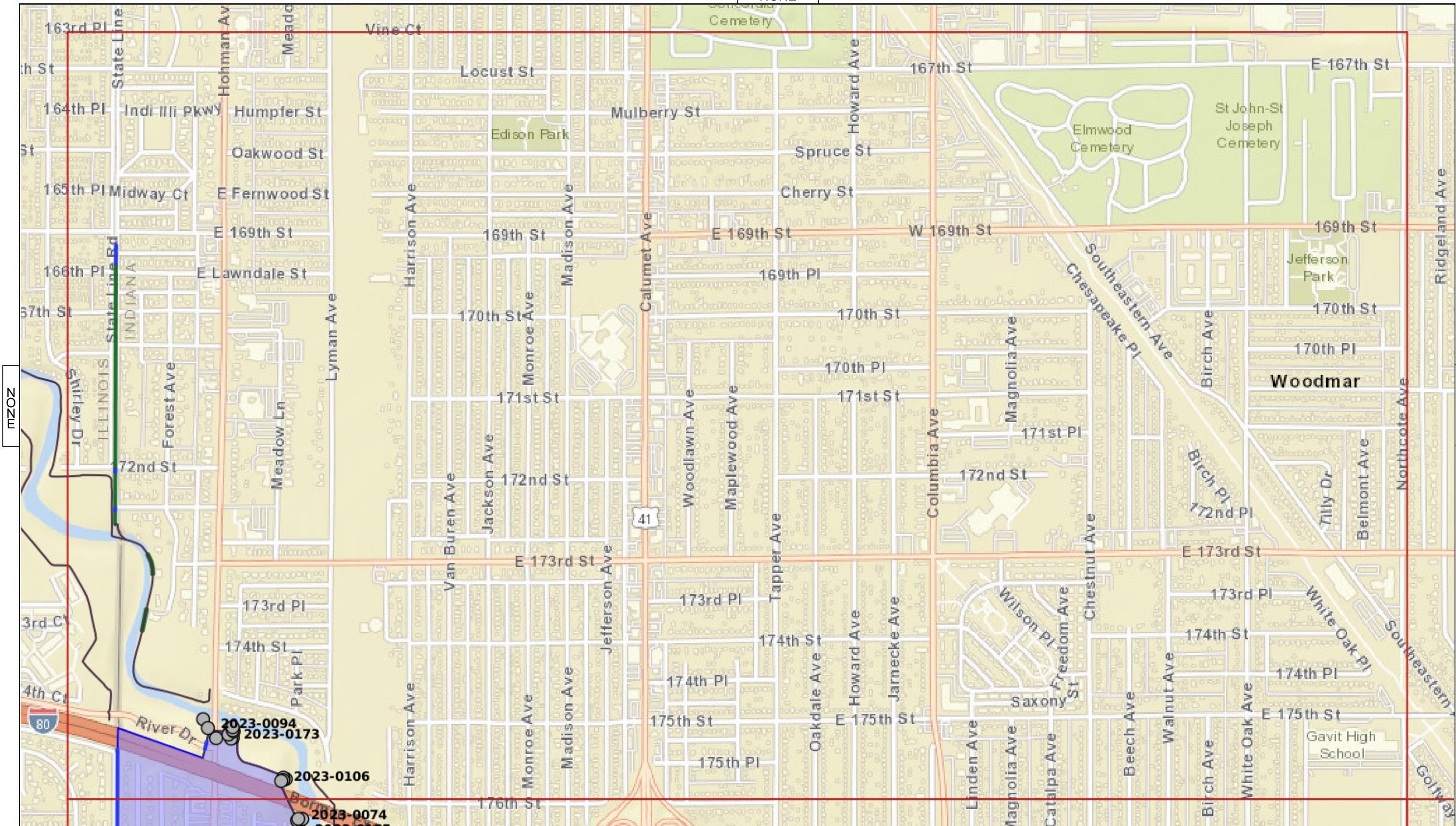
MAP ELEMENTS

3 Standard Sheets





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7202

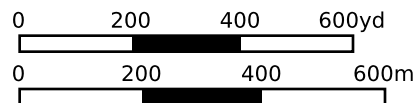
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OBSERVATIONS

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- Minimally Acceptable
- Unacceptable
- Not Applicable

Scale = 1:12000



1

Sheet: 2

05-Jun-2023

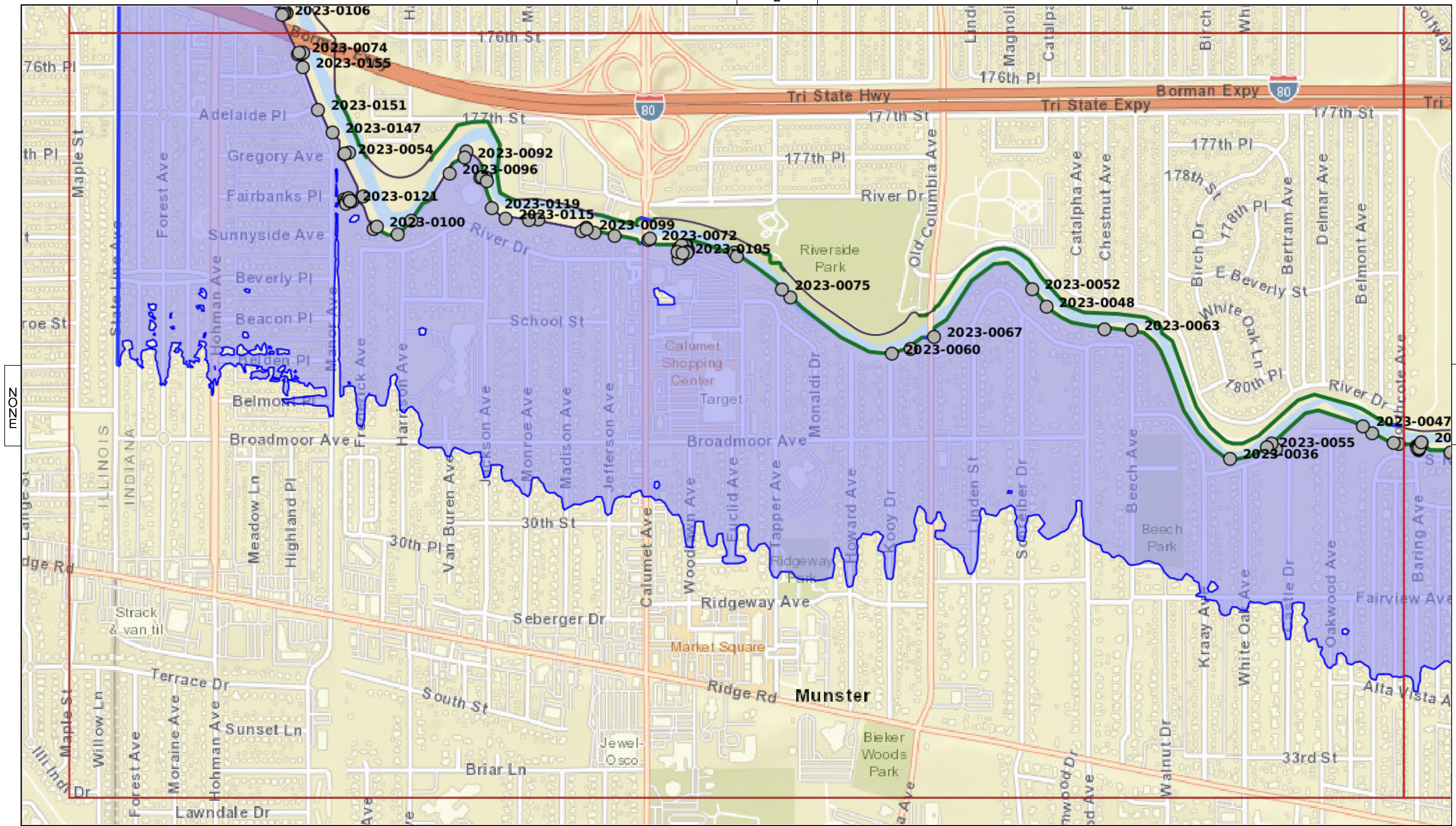
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Type: Site Visit

05-Jun-2023

NLD





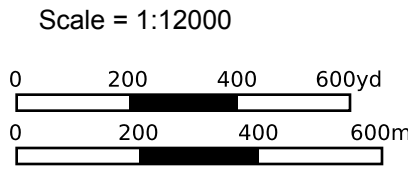
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3

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- OBSERVATIONS**
- Acceptable
  - Minimally Acceptable
  - Unacceptable
  - Not Applicable



NLD

Sheet: 1

Munster

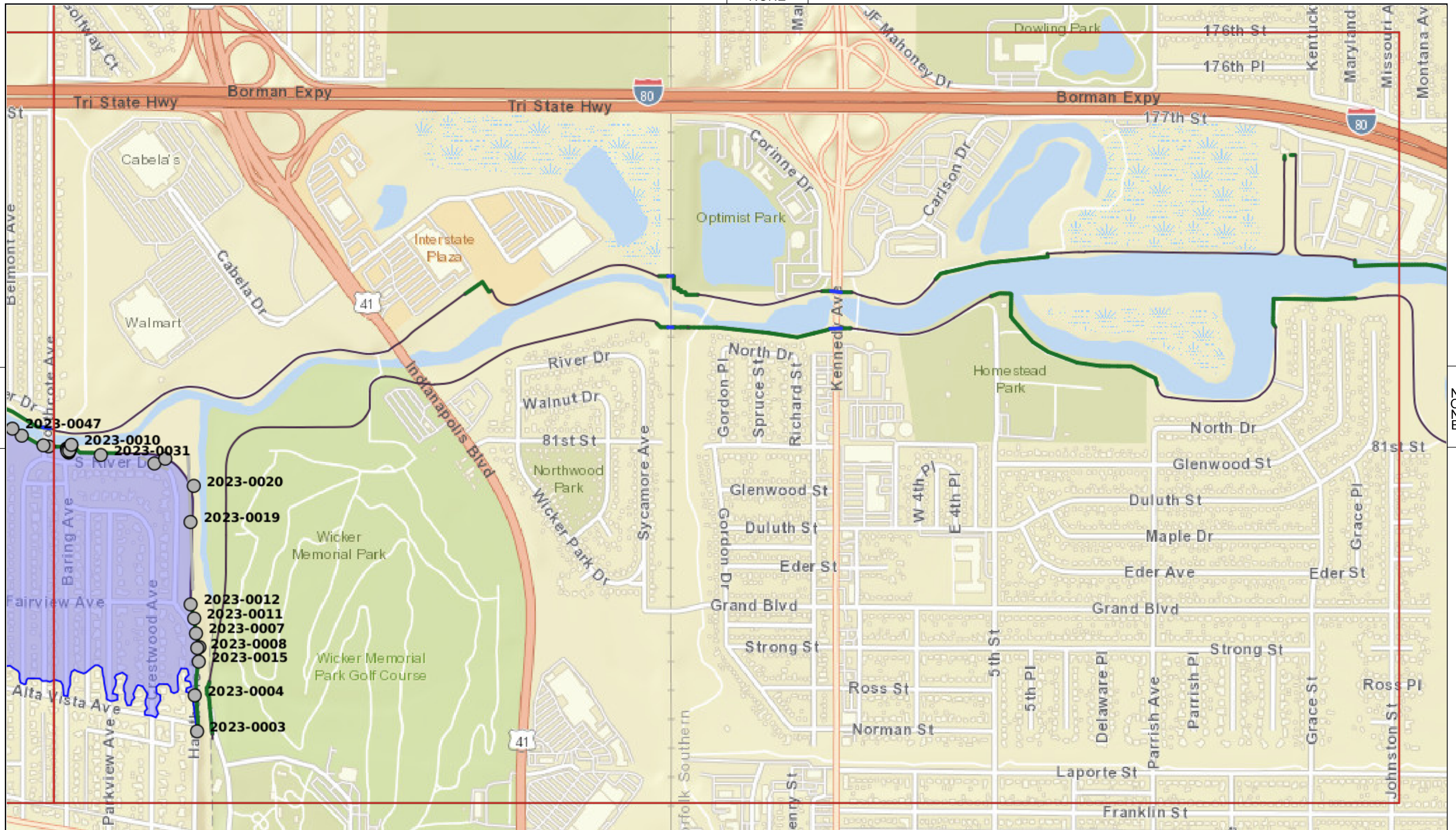
Type: Site Visit

05-Jun-2023

05-Jun-2023



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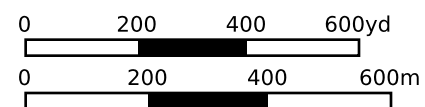
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OBSERVATIONS

- Acceptable
- Minimally Acceptable
- Unacceptable
- Not Applicable

Scale = 1:12000



NLD	Sheet: 3	05-Jun-2023
	Munster	
	Type: Site Visit	05-Jun-2023





## Levee Sponsor Pre-Inspection Form

US Army Corps of Engineers ®

Purpose: To collect the best and most recent information to ensure all maintenance activities, including any improvements or repair work, and any other changes in condition are appropriately noted and documented during this inspection. This information is important to help pre-plan locations for inspectors during the field inspection.

Directions: To be filled out directly by the levee sponsor/maintaining agency or by USACE through interviewing the levee sponsor/maintaining agency during coordination efforts in preparation for the inspection. If the requested information is contained in supplemental documentation that was provided to USACE separately then only referencing to that supplemental documentation or providing information different than what is in the supplemental documentation is required on this form.

Levee Sponsor/Maintaining Agency:

Date of last USACE Inspection:

<b>1. Summary of maintenance/repairs/modifications performed since the last USACE inspection (if not captured in maintenance logs/documentation that has been provided separately):</b>
<b>2. Summary of planned actions/improvements/recommendations, but not yet accomplished:</b>
<b>3. Results from inspections conducted by the levee sponsor/maintaining agency (if inspection documentation has not been provided separately):</b>
<b>4. Description of any performance information observed, including successful performance, since the last USACE inspection. Include intervention measures taken, such as floodfighting or operational actions (e.g. operating pumps or closures) during high water events:</b>
<b>5. Identify any specific locations or components that you would like to be closely inspected or have planned testing scheduled (e.g. for pump stations/closures/relief wells) to correspond with the USACE inspection:</b>
<b>6. Provide any other information you want to note to have occurred since the last USACE inspection, such as any training/testing/emergency exercises or communication activities:</b>

### Subset of Inspection Items for Rehabilitation Program Eligibility Determination

In order to be eligible, all of the following items must be rated A, M, N/A or Yes.

Note: Item numbers listed below refer to their placement in the Inspection Checklist for the Munster Levee.

Rehabilitation Program Eligibility Determination		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Public sponsor provided maintenance information per the Public Sponsor Pre-Inspection Form.
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Non-federal levee system meets Initial Eligibility criteria.
N/A <input checked="" type="checkbox"/>		
If either of the above items is marked "No" the levee system is not eligible.		
Rating	Rated Item	
Levee Embankments		
A <input type="checkbox"/> M <input checked="" type="checkbox"/> U <input type="checkbox"/>	3. Encroachments	
A <input checked="" type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	4. Closure Structures (Stop Log, Earthen Closures, Gates, or Sandbag Closures)	
A <input checked="" type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/>	5. Slope Stability	
A <input checked="" type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/>	6. Erosion/ Bank Caving	
A <input type="checkbox"/> M <input checked="" type="checkbox"/> U <input type="checkbox"/>	10. Animal Control	
A <input checked="" type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	11. Culverts/Discharge Pipes (This item includes both concrete and corrugated metal pipes.)	
A <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	14. Underseepage Relief Wells/Toe Drainage Systems	
Floodwalls		
A <input type="checkbox"/> M <input checked="" type="checkbox"/> U <input type="checkbox"/>	2. Encroachments	
A <input checked="" type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	3. Closure Structures (Stop Log Closures and Gates)	
A <input checked="" type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/>	5. Tilting, Sliding, or Settlement of Concrete Structures	
A <input type="checkbox"/> M <input checked="" type="checkbox"/> U <input type="checkbox"/>	6. Foundation of Concrete Structures	

A	<input type="checkbox"/>	8. Underseepage Relief Wells/Toe Drainage Systems
M	<input type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input checked="" type="checkbox"/>	
<b>Interior Drainage System</b>		
A	<input checked="" type="checkbox"/>	9. Culverts/Discharge Pipes
M	<input type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input type="checkbox"/>	
A	<input type="checkbox"/>	10. Sluice/Slide Gates
M	<input checked="" type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input type="checkbox"/>	
A	<input type="checkbox"/>	11. Flap Gates/Flap Valves/Pinch Valves
M	<input checked="" type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input type="checkbox"/>	
<b>Pump Stations</b>		
A	<input checked="" type="checkbox"/>	17. Intake and Discharge Pipelines
M	<input type="checkbox"/>	
U	<input type="checkbox"/>	
A	<input checked="" type="checkbox"/>	18. Sluice/Slide Gates
M	<input type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input type="checkbox"/>	
A	<input checked="" type="checkbox"/>	19. Flap Gates/Flap Valves/Pinch Valves
M	<input type="checkbox"/>	
U	<input type="checkbox"/>	
N/A	<input type="checkbox"/>	
<b>Rehabilitation Program Status</b>		
Active	<input checked="" type="checkbox"/>	System meets all interim eligibility criteria, including having received a rating of A, M, N/A or Yes for all subset items and is therefore eligible for rehabilitation assistance.
Inactive	<input type="checkbox"/>	System does not meet interim eligibility requirements.
Comments:  Only minor issues noted for the system.		