MONITORING YEAR 3 ANNUAL REPORT
FINAL

February 2024

MCCLENNY ACRES MITIGATION SITE
Wayne County, NC
Neuse River Basin
HUC 03020201
DMS Project No. 100038
NCDEQ Contract No. 7423
DWR Project No. 2018-0197
USACE Action ID No. 2018-02042

Data Collection Dates: March-November 2023
DMS RFP No. 16-007279
June 21, 2017

PREPARED FOR:

NC Department of Environmental Quality
Division of Mitigation Services
1652 Mail Service Center
Raleigh, NC 27699-1652

February 12, 2024

Jeremiah Dow
Eastern Regional Supervisor
North Carolina DEQ- Division of Mitigation Services
217 West Jones Street, Raleigh, NC 27603

Subject: McClenny Acres Mitigation Site – Monitoring Year 3 Report
Neuse River Basin – HUC 03020201
Wayne County
DMS Project ID No. 100038
Contract # 7423

Dear Mr. Dow:

On February 1, 2024 Wildlands Engineering received comments from the North Carolina Division of Mitigation Services (DMS) regarding the Draft Monitoring Year 3 Report for the McClenny Acres Mitigation Site. DMS comments pertaining to the stream and wetland report are reprinted below with Wildlands' responses in italics.

1. Table 2 reports UT3 as having 104 consecutive days of stream flow but the hydrograph says 107 days. Please correct.

   Response: Table 2 was updated to indicate the correct value of 107 consecutive days of stream flow.

2. On Figures 1 & 1b, GW5 is mistakenly shown as not meeting success criteria.

   Response: Figures were updated to correctly indicate GW 5 is meeting the success criteria.

3. DMS appreciates that wetlands at-risk were proactively identified by Wildlands. For some at-risk boundary areas (south of GW16 and near VP19) it is not discussed how these boundaries were determined. Please briefly discuss how the extent of at-risk area was determined where nearby gauge data is not available.

   Response: Text was added to section 2.6 Wetland Assessment to explain our approach in determining the wetland credit at risk boundaries and plans for further investigation.

4. If GW 8 does not meet in MY4, the surrounding area may need to be reassessed as at-risk.

   Response: Noted.

Thank you for your review and providing comments on this submittal. If you have any further questions, please contact me at (919) 851-9986, or by email (jlorch@wildlandseng.com).

Sincerely,

Jason Lorch, *Monitoring Coordinator*

PREPARED BY:

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MCCLENNY ACRES MITIGATION SITE

Monitoring Year 3 Annual Report

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Section 1: PROJECT OVERVIEW

The McClenny Acres Mitigation Site (Site) is located in Wayne County, approximately four miles west of Goldsboro. The Site is within a new targeted local watershed (TLW) which was not described in the 2010 Neuse River Basin Restoration Priorities (RBRP) plan (Breeding, 2010). Table 3 presents information related to the project attributes.

1.1 Project Quantities and Credits

Mitigation work within the Site included restoration, enhancement II, and preservation of perennial and intermittent stream channels, along with re-establishment and enhancement of wetlands. Table 1 below shows stream credits by reach, wetland credits by approach, and credit totals expected at closeout.

Table 1: Project Quantities and Credits

PROJECT MITIGATION QUANTITIES							
Project Component	**Mitigation Plan Footage/ Acreage**	**As-Built Footage/ Acreage**	**Mitigation Category**	**Restoration Level**	**Mitigation Ratio (X:1)**	**Credits**	**Comments**
STREAMS							
UT1	1,263	1,286	Warm	R	1	1,263.000	Full Channel Restoration, Planted Buffer
	20	20	N/A	N/A	N/A	N/A	Utility R.O.W., Not for Credit
	1,471	1,497	Warm	R	1	1,471.000	Full Channel Restoration, Planted Buffer
UT2 Reach 1	95	89	Warm	P	10	8.900	Conservation Easement
UT2 Reach 2	574	574	Warm	R	1	574.000	Full Channel Restoration, Planted Buffer
	21	21	N/A	N/A	N/A	N/A	Utility R.O.W., Not for Credit
	314	311	Warm	R	1	314.000	Full Channel Restoration, Planted Buffer
UT3 Reach 1	472	472	Warm	R	1	472.000	Full Channel Restoration, Buffer Planting
UT3 Reach 2	170	153	Warm	R	1	145.000	Full Channel Restoration, Buffer Planting
	89	163	N/A	N/A	N/A	N/A	Utility R.O.W., Not for Credit
	1,117	1,082	Warm	R	1	1068.000	Full Channel Restoration
UT4 Reach 1	3,824	3,862	Warm	R	1	3,824.000	Full Channel Restoration
UT4 Reach 2	174	167	Warm	EII	2.5	69.600	Floodplain Berm Removed
					Total	**9,209.500**	
Blue = **Restoration**			Orange = **Enhancement II**		Green = **Preservation**		
WETLANDS							
Wetland Re-establishment	36.795	22.918	Riparian	Re-establishment	1	22.918	Restored Hydrology, Planted
Wetland Re-establishment at Risk	N/A	13.410	Riparian	Re-establishment	1	13.410	Restored Hydrology, Planted, At Risk
Wetland Enhancement	0.588	0.560	Riparian	Enhancement	2	0.280	Enhanced Hydrology
					Total	**36.608**	

Restoration Level	Stream	Riparian Wetland
	Warm	Riverine
Restoration	9,131.000	
Enhancement II	69.600	
Preservation	8.900	
Re-establishment		22.918
Re-establishment at Risk		13.410
Enhancement		0.280
Total Stream Credit	**9,209.500**	
Total Wetland Credit		**36.608**

1.2 Project Goals and Objectives

The project is intended to provide numerous ecological benefits within the Neuse River Basin. Table 2 below describes expected outcomes to water quality and ecological processes and provides project goals and objectives.

Table 2: Goals, Performance Criteria, and Functional Improvements

Goal	Objective/ Treatment	Likely Functional Uplift	Performance Criteria	Measurement	Cumulative Monitoring Results
Improve the stability of stream channels.	Construct stream channels that will maintain a stable pattern and profile considering hydrologic and sediment inputs to the system, the landscape setting, and the watershed conditions.	Reduce and control sediment inputs and contribute to protection of or improvement to a Water Supply and Nutrient-Sensitive Water.	ER stays over 2.2 and BHR below 1.2 with visual assessments showing progression towards stability.	Cross-section monitoring and visual inspections.	All stream channels are stable and performing as designed.
Reconnect channels with floodplains and riparian wetlands.	Reconstruct stream channels with appropriate bankfull dimensions and depth relative to the existing floodplain.	Reduce shear stress on channel; hydrate adjacent wetland areas; and filter pollutants out of overbank flows.	Four bankfull events in separate monitoring years. 30 consecutive days of flow for the intermittent channel.	Crest gauges and/or pressure transducers recording flow elevations.	Bankfull events were recorded on UT1 and UT3 during MY2. 107 consecutive days of stream flow were recorded on UT3.
Improve in-stream habitat.	Install habitat features such as cover logs, log sills, and brush toes into restored/enhanced streams. Add woody materials to channel beds. Construct pools of varying depth.	Support biological communities and processes; and provide aquatic habitats for diverse populations of aquatic organisms.	There is no required performance standard for this metric.	N/A	N/A

Goal	Objective/ Treatment	Likely Functional Uplift	Performance Criteria	Measurement	Cumulative Monitoring Results
Restore wetland hydrology, soils, and plant communities.	Restore and enhance riparian wetlands by raising stream beds, plugging existing ditches, removing berm material over relic hydric soils, and planting native wetland species.	Improve terrestrial habitat; and contribute to protection of or improvement of a Water Supply and Nutrient-Sensitive Water.	Free groundwater surface within 12 inches of the ground surface for 10-14% of the growing season under normal precipitation conditions.	Groundwater wells equipped with transducers recording depth to water table.	11 out of 23 groundwater gauges indicated successful criterion attainment during MY3.
Restore and enhance native floodplain vegetation.	Plant native tree species in riparian zone where insufficient.	Reduce and control sediment inputs; reduce and manage nutrient inputs; provide a canopy to shade streams and reduce thermal loadings; and contribute to protection of or improvement of a Water Supply and Nutrient-Sensitive Water.	Survival rate of 320 stems per acre at MY3, 260 planted stems per acre at MY5, and 210 stems per acre at MY7. Height requirement is 7 feet at MY5 and 10 feet at MY7.	One hundred square meter vegetation plots are placed on 2% of the planted area of the Site and monitored annually.	24 out of 25 vegetation plots have a planted stem density greater than 320 stems per acre.
Permanently protect the project site from harmful uses.	Establish conservation easements on the Site.	Ensure that development and agricultural uses that would damage the Site or reduce the benefits of the project are prevented.	Prevent easement encroachment.	Visually inspect the perimeter of the Site to ensure no easement encroachment is occurring.	No easement encroachments.

1.3 Project Attributes

The Site was restored by Wildlands through a full delivery contract with DMS. Table 3 provides detailed information regarding the project information and attributes.

Table 3: Project Attributes

PROJECT INFORMATION			
Project Name	McClenny Acres Mitigation Site	County	Wayne County
Project Area (acres)	52.08	Project Coordinates	35° 23’ 25” N, 78° 03’ 15” W
PROJECT WATERSHED SUMMARY INFORMATION			
Physiographic Province	Coastal Plain	River Basin	Neuse
USGS HUC 8-digit	03020201	USGS HUC 14-digit	03020201200030
DWR Sub-basin	03-04-12	Land Use Classification	38% cultivated crops; 21% forest; 17% shrub herbaceous; 15% wetland; 9% residential
Project Drainage Area (acres)	828	Percentage of Impervious Area	2.1%

RESTORATION TRIBUTARY SUMMARY INFORMATION				
Parameters	**UT1**	**UT2**	**UT3**	**UT4**
Pre-project length (feet)	2,986	1,254	2,610	2,826
Post-project (feet)	2,783	974	1,707	4,029
Valley confinement	Unconfined			
Drainage area (acres)	423	40	222	784
Perennial, Intermittent, Ephemeral	Perennial	Perennial	Intermittent/ Perennial	Perennial
DWR Water Quality Classification	WS-IV (NSW)			
Dominant Stream Classification (existing)	E5/G5	F5		E5/G5
Dominant Stream Classification (proposed)	C5	C5	C5	C5
Dominant Evolutionary class (Simon) if applicable	Stage III/IV	Stage III		Stage IV

REGULATORY CONSIDERATIONS			
Parameters	**Applicable?**	**Resolved?**	**Supporting Documentation**
Water of the United States - Section 404	Yes	Yes	USACE Nationwide Permit No. 27 and DWQ 401 Water Quality Certification No. 4134.
Water of the United States - Section 401	Yes	Yes	
Endangered Species Act	Yes	Yes	Categorical Exclusion in Mitigation Plan (Wildlands, 2020)
Historic Preservation Act	Yes	Yes	
Coastal Zone Management Act (CZMA or CAMA)	N/A	N/A	N/A
Essential Fisheries Habitat	No	N/A	N/A

Section 2: MONITORING YEAR 3 DATA ASSESSMENT

Annual monitoring and site visits were conducted during MY3 to assess the condition of the project. The vegetation and stream success criteria for the Site follow the approved success criteria presented in the Mitigation Plan (Wildlands, 2020). Performance criteria for vegetation, stream, and hydrologic assessment are located in Section 1.2 Table 2: Goals, Performance Criteria, and Functional Improvements. Methodology for annual monitoring is presented in the MY0 Annual Report (Wildlands, 2021).

2.1 Vegetative Assessment

The MY3 vegetation survey was completed in September 2023. Twenty-four out of the 25 plots exceeded the MY3 interim success criterion of 320 planted stems per acre. Individual plot stem density ranged from 121 to 729 planted stems per acre. Vegetation plot 15 did not meet the interim density requirement due to mortality of unknown cause. Low stem density does not appear to be a problem in the general surrounding area. Overall tree survival and growth is excellent and on track to develop into an early successional ecosystem. Herbaceous vegetation is well established and includes native pollinator-friendly species. Refer to Appendix A for Vegetation Plot Photographs and the Vegetation Condition Assessment Table and Appendix B for Vegetation Plot Data.

2.2 Vegetation Areas of Concern

Chinese privet (*Ligustrum sinense*) was previously treated within a 0.19 acre forested area during December 2022 (Table 14). Scattered stems of privet have resprouted in this area (Figure 1a) but it is low growing and treatable with a foliar spray.

2.3 Stream Assessment

Morphological surveys for MY3 were conducted in March 2023. All streams within the Site are stable and functioning as designed. Surveyed cross-sections at the Site show little to no change in the bankfull area and width-to-depth ratio and bank height ratios are less than 1.2. Refer to Appendix A for the Visual Stream Morphology Stability Assessment Table and Stream Photographs. Refer to Appendix C for Stream Geomorphology Data.

2.4 Stream Areas of Concern

Beaver activity was observed during November of MY3. A small beaver dam is located just below the confluence of UT1 and UT3 (Figure 1a). The top of the dam and the backwater are below bankfull elevation. Impacts to vegetation area minimal and full vegetation recovery is likely. Coordination for beaver removal is currently ongoing.

2.5 Stream Hydrology Assessment

Four bankfull events during separate monitoring years must occur on each of the project channels. Bankfull events were recorded on UT1, UT2, and UT3 during MY3 (Table 10). UT4 has experienced bankfull events during one of the three monitoring years. This stream will be further assessed to determine if overbank flows are occurring at locations upstream or downstream of the crest gauge.

In addition, the presence of baseflow must be documented on the restored intermittent reach (UT3 Reach 1) for a minimum of 30 consecutive days during a calendar year with normal precipitation. UT3 Reach 1 maintained baseflow for 107 consecutive days and 181 total days during MY3. Refer to Appendix 5 for hydrologic data.

2.6 Wetland Assessment

The performance criterion for groundwater gauges (GW) 1 and 5 is a free groundwater surface within 12 inches of the soil surface for 14% (38 consecutive days) of the growing season. GW 2-4 and GW 6-19 have a 10% (27 consecutive days) hydroperiod criterion. Growing season dates approved in the Mitigation Plan were March 4 through November 21 with allowance for modification based on soil temperature data and bud burst. Growing season dates for wetland hydrology evaluation are March 1, 2023 through November 21, 2023. These dates were established during prior monitoring years using soil temperature data and observation of bud burst.

Four additional groundwater gauges were installed for MY3 for a total of 23 at the Site. Eleven of the 23 GWs at the site attained the success criterion for MY3 (Table 13). A reference well was also installed in an existing wetland adjacent to the Site during MY3. GW 8 was significantly short of achieving the success criterion in terms of consecutive days but the water table depth remained very near the 12 inch depth consistently for the first 45 days of the growing season. This area is likely providing a moderate level of wetland function and may achieve the success criterion during future monitoring years. Low precipitation from mid-February through late March probably contributed to the water table at GW 8 falling just below the 12 inch threshold for brief periods during the early part of the growing season. GWs 2, 4, 9, 10, 16-21, and 23 were significantly short in achieving the hydroperiod criterion during MY3. Although precipitation conditions have been unfavorable for wetland hydrology during MY1 through MY3, the data suggest that these areas may not be capable of sustaining wetland hydrology. These areas will continue to be monitored; however, we believe it is appropriate to consider 13.410 acres of wetland re-establishment credit at risk (Figure 1a-Figure 1b). Wetland re-establishment was credited at a 1:1 ratio so this equates to 13.410 credits (Table 1). GW data is not currently available to corroborate the wetland credit at risk boundaries northeast of GW 21 and south of GW 16. To the northeast of GW 21, the at-risk boundary was estimated based on vegetation patterns and soil moisture conditions. Additional data will be collected during MY4 to corroborate or revise this boundary. The credit at risk boundary to the south of GW 16 is based on topography. This line follows relief; the elevation of the at-risk area around GW 16 is 6 to 12 inches higher than the re-establishment area to the south. The elevation of this area is approximately the same as the area surrounding GW 22. Refer to Figures 1-1b for the groundwater gauge locations and Appendix D for groundwater hydrology data and plots.

2.7 Adaptive Management Plan

The Chinese privet occurring around the upstream extent of UT2 will be foliar sprayed before it has the opportunity to spread or grow to saw-size. No other adaptive management practices are currently necessary.

2.8 Monitoring Year 3 Summary

Twenty-four out of 25 vegetation plots exceeded the MY3 interim stem density requirement of 320 planted stems per acre. Stem density appears to be sufficient in the general area surrounding the one vegetation plot with low density. Herbaceous vegetation and planted stems appear to have become well acclimated to site conditions and are growing vigorously throughout the project area. One small (0.19 acres), previously treated population of Chinese privet has begun to resprout and will be require follow-up treatment. All project streams are stable and well-functioning. Bankfull events were observed on UT1, UT2, and UT3, and greater than 30 consecutive days of flow were observed on UT3. Eleven of the 23 groundwater wells were successful in attaining hydrology criteria. Wetland credit at risk areas totaling 13.410 acres were identified where the first three years of data indicate that wetland hydrology may not have been adequately restored. The easement boundary and interior was inspected for

compliance and no encroachments were observed. Overall, the Site has exhibited excellent vegetation growth and stream channel stability during MY3 and demonstrates early indicators of successfully restored, diverse aquatic and terrestrial ecosystems.

Summary information and data related to the performance of various project and monitoring elements can be found in the tables and figures in the report appendices. All raw data supporting the tables and figures in the appendices are available from DMS upon request.

Section 3: REFERENCES

Breeding, R. 2010. Neuse River Basin Restoration Priorities. North Caroline Ecosystem Enhancement Program. Accessed at: https://files.nc.gov/ncdeq/Mitigation%20Services/Watershed_Planning/Neuse_River_Basin/FINAL%20RBRP%20Neuse%202010_%2020111207%20CORRECTED.pdf

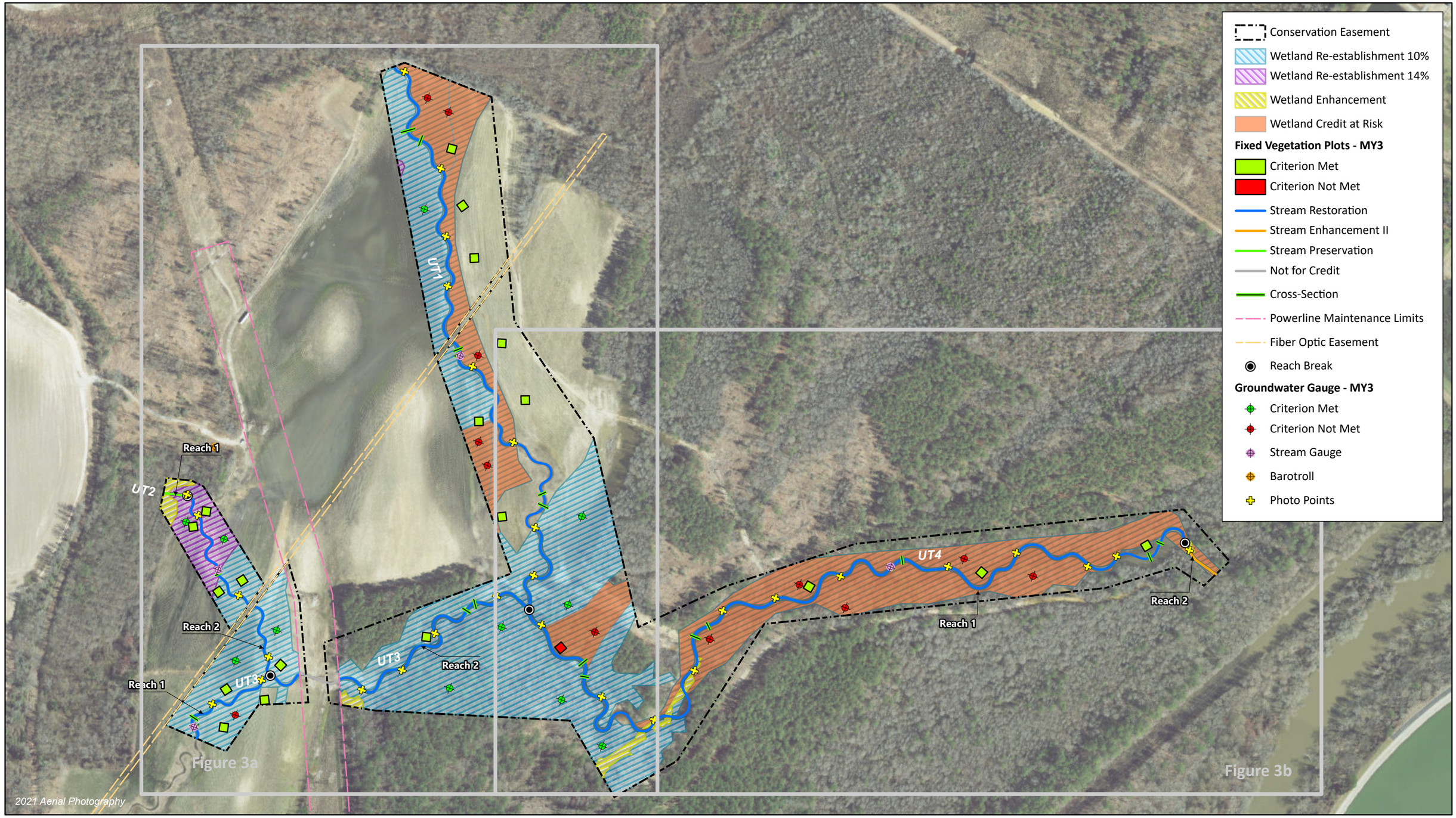
Rosgen, D. L. 1994. A classification of natural rivers. Catena 22:169-199.

Rosgen, D.L. 1996. Applied River Morphology. Pagosa Springs, CO: Wildland Hydrology Books.

Wildlands Engineering, Inc. 2020. McClenny Acres Mitigation Site Mitigation Plan. DMS, Raleigh, NC.

Wildlands Engineering, Inc. 2021. McClenny Acres Mitigation Site Monitoring Year 0 (MY0) Annual Report. DMS, Raleigh, NC.

FIGURES



WILDLANDS ENGINEERING

0 350 Feet

N

Figure 1 - Current Condition Plan View Key
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Wayne County, NC

Conservation Easement
Wetland Re-establishment 10%
Wetland Re-establishment 14%
Wetland Enhancement
Wetland Credit at Risk (13.410 acres)

Fixed Vegetation Plots - MY3

Criterion Met
Criterion Not Met

Random Vegetation Plots - MY3

Criterion Met
Structures
Chinese Privet (0.19 acres)
Stream Restoration
Stream Enhancement II
Stream Preservation
Not for Credit
Cross Section
Top of Bank
Powerline Maintenance Limits
Fiber Optic Easement
Reach Break

Groundwater Gauge - MY3

Criterion Met
Criterion Not Met
Crest Gauge
Flow and Crest Gauge
Barotroll
Photo Points
Beaver Dam

PP 1
GW 20
GW 2
XS 1
XS 2
PP 2
GW 3
PP 3
UT1
PP 4
XS 3
XS 4
GW 10
PP 5
GW 21
PP 6
GW 4
XS 5
XS 6
GW 11
PP 7
PP 8
XS 12
XS 11
PP 18
GW 22
GW 15
PP 19
GW 16
PP 17
Reach 1
UT4
XS 13
Reach 2
UT3
PP 16
GW 12
XS 14
PP 20
GW 14
PP 15
GW 13
Reach 1
UT2
PP 9
GW 1
PP 10
GW 5
XS 7
XS 8
PP 11
GW 6
Reach 2
GW 7
PP 12
Reach 1
PP 14
PP 13
XS 10
GW 8
UT3
XS 9

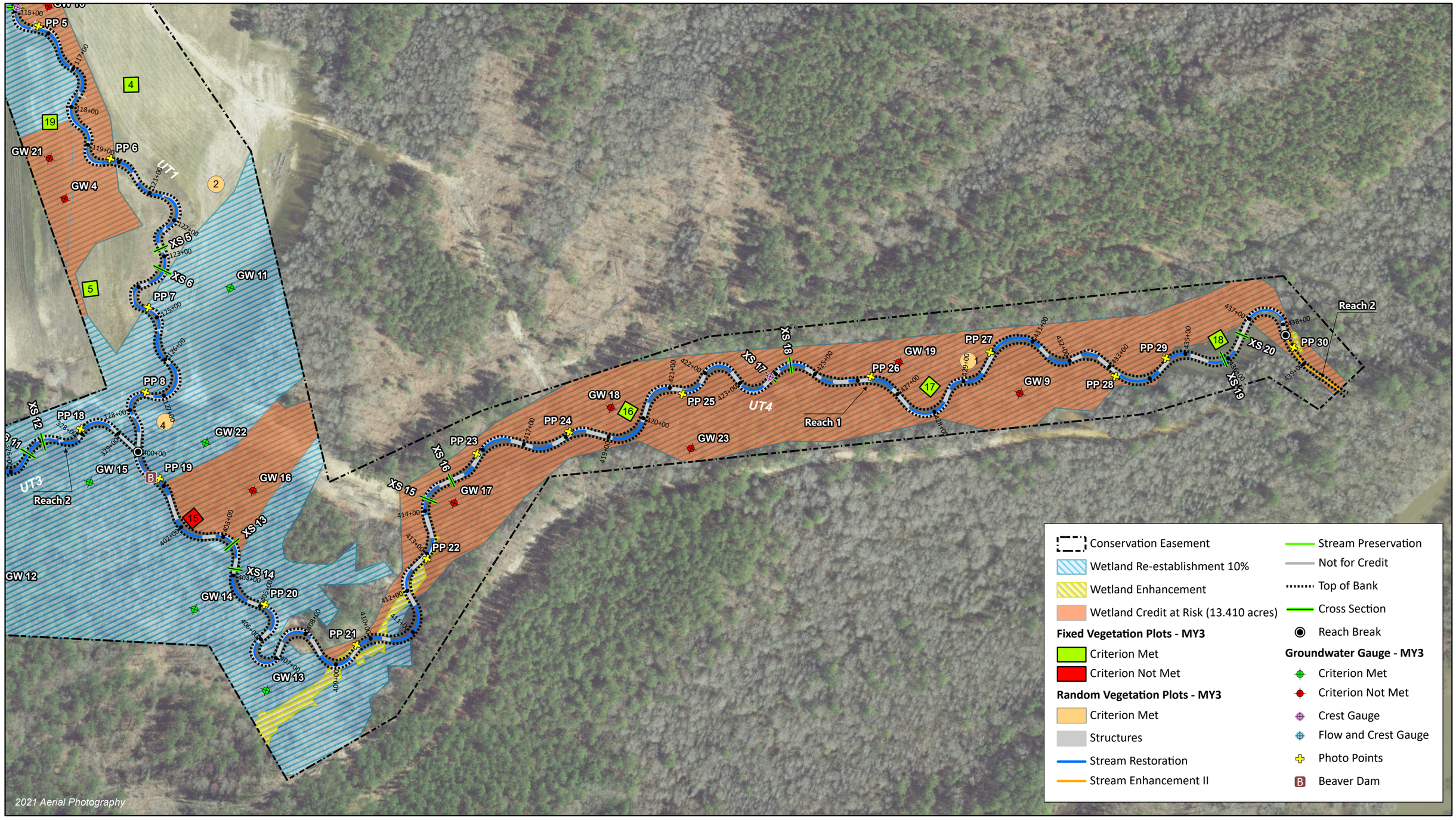
2021 Aerial Photography

WILDLANDS ENGINEERING

0 100 200 Feet

Figure 1a - Current Condition Plan View
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Wayne County, NC



WILDLANDS ENGINEERING

0 100 200 Feet

Figure 1b - Current Condition Plan View
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Wayne County, NC

APPENDIX A. VISUAL ASSESSMENT DATA

Table 4. Visual Stream Morphology Stability Assessment Table

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

UT1

Major Channel Category		Metric	Number Stable, Performing as Intended	Total Number in As-Built	Amount of Unstable Footage	% Stable, Performing as Intended
					Assessed Stream Length	2,783
					Assessed Bank Length	5,566
Bank	**Surface Scour/ Bare Bank**	Bank lacking vegetative cover resulting simply from poor growth and/or surface scour.			0	100%
	Toe Erosion	Bank toe eroding to the extent that bank failure appears likely. Does NOT include undercuts that are modest, appear sustainable and are providing habitat.			0	100%
	Bank Failure	Fluvial and geotechnical - rotational, slumping, calving, or collapse.			0	100%
				Totals:	**0**	**100%**
Structure	**Grade Control**	Grade control structures exhibiting maintenance of grade across the sill.	8	8		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	33	33		100%

Visual assessment completed on November 27, 2023

UT2

Major Channel Category		Metric	Number Stable, Performing as Intended	Total Number in As-Built	Amount of Unstable Footage	% Stable, Performing as Intended
					Assessed Stream Length	974
					Assessed Bank Length	1,948
Bank	**Surface Scour/ Bare Bank**	Bank lacking vegetative cover resulting simply from poor growth and/or surface scour.			0	100%
	Toe Erosion	Bank toe eroding to the extent that bank failure appears likely. Does NOT include undercuts that are modest, appear sustainable and are providing habitat.			0	100%
	Bank Failure	Fluvial and geotechnical - rotational, slumping, calving, or collapse.			0	100%
				Totals:	**0**	**100%**
Structure	**Grade Control**	Grade control structures exhibiting maintenance of grade across the sill.	4	4		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	11	11		100%

Visual assessment completed on November 27, 2023

Table 4. Visual Stream Morphology Stability Assessment Table

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

UT3

Major Channel Category		Metric	Number Stable, Performing as Intended	Total Number in As-Built	Amount of Unstable Footage	% Stable, Performing as Intended
					Assessed Stream Length	1,707
					Assessed Bank Length	3,414
Bank	**Surface Scour/ Bare Bank**	Bank lacking vegetative cover resulting simply from poor growth and/or surface scour.			0	100%
	Toe Erosion	Bank toe eroding to the extent that bank failure appears likely. Does NOT include undercuts that are modest, appear sustainable and are providing habitat.			0	100%
	Bank Failure	Fluvial and geotechnical - rotational, slumping, calving, or collapse.			0	100%
				Totals:	**0**	**100%**
Structure	**Grade Control**	Grade control structures exhibiting maintenance of grade across the sill.	3	3		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	7	7		100%

Visual assessment completed on November 27, 2023

UT4

Major Channel Category		Metric	Number Stable, Performing as Intended	Total Number in As-Built	Amount of Unstable Footage	% Stable, Performing as Intended
					Assessed Stream Length	4,029
					Assessed Bank Length	8,058
Bank	**Surface Scour/ Bare Bank**	Bank lacking vegetative cover resulting simply from poor growth and/or surface scour.			0	100%
	Toe Erosion	Bank toe eroding to the extent that bank failure appears likely. Does NOT include undercuts that are modest, appear sustainable and are providing habitat.			0	100%
	Bank Failure	Fluvial and geotechnical - rotational, slumping, calving, or collapse.			0	100%
				Totals:	**0**	**100%**
Structure	**Grade Control**	Grade control structures exhibiting maintenance of grade across the sill.	1	1		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	18	18		100%

Visual assessment completed on November 27, 2023

Table 5. Vegetation Condition Assessment Table

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage **34.56**

Vegetation Category	Definitions	Mapping Threshold (ac)	Combined Acreage	% of Planted Acreage
Bare Areas	Very limited cover of both woody and herbaceous material.	0.10	0	0%
Low Stem Density Areas	Woody stem densities clearly below target levels based on current MY stem count criteria.	0.10	0	0%
		Total	**0**	**0%**
Areas of Poor Growth Rates	Planted areas where average height is not meeting current MY Performance Standard.	0.10	0	0%
		Cumulative Total	**0.0**	**0%**

Easement Acreage **54.24**

Vegetation Category	Definitions	Mapping Threshold (ac)	Combined Acreage[1]	% of Easement Acreage
Invasive Areas of Concern	Invasives may occur outside of planted areas and within the easement and will therefore be calculated against the total easement acreage. Include species with the potential to directly outcompete native, young, woody stems in the short-term or community structure for existing communities. Invasive species included in summation above should be identified in report summary.	0.10	0.19	0.4%
Easement Encroachment Areas	Encroachment may be point, line, or polygon. Encroachment to be mapped consists of any violation of restrictions specified in the conservation easement. Common encroachments are mowing, cattle access, vehicular access. Encroachment has no threshold value as will need to be addressed regardless of impact area.	none	0 Encroachments Noted / 0 ac	

[1]The 0.19 acre Privet population was treated during December 2022 but resprouts have occurred and follow up treatment will be required.

STREAM PHOTOGRAPHS

	
PHOTO POINT 1 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 1 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 2 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 2 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 3 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 3 UT1 –** downstream *(3/16/2023)*

	
PHOTO POINT 4 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 4 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 5 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 5 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 6 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 6 UT1 –** downstream *(3/16/2023)*

	
PHOTO POINT 7 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 7 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 8 UT1 – upstream *(3/16/2023)*	**PHOTO POINT 8 UT1 –** downstream *(3/16/2023)*
	
PHOTO POINT 9 UT2 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 9 UT2 Reach 2 –** downstream *(3/16/2023)*

PHOTO POINT 10 UT2 Reach 2 – upstream *(3/16/2023)*

PHOTO POINT 10 UT2 Reach 2 – downstream *(3/16/2023)*

PHOTO POINT 11 UT2 Reach 2 – upstream *(3/16/2023)*

PHOTO POINT 11 UT2 Reach 2 – downstream *(3/16/2023)*

PHOTO POINT 12 UT2 Reach 2 – upstream *(3/16/2023)*

PHOTO POINT 12 UT 2 Reach 2 – downstream *(3/16/2023)*

	
PHOTO POINT 13 UT3 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 13 UT3 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 14 UT3 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 14 UT3 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 15 UT3 Reach 2 – upstream *(3/16/2023)*	**PHOTO POINT 15 UT3 Reach 2 –** downstream *(3/16/2023)*

	
PHOTO POINT 16 UT3 Reach 2 – upstream *(3/16/2023)*	**PHOTO POINT 16 UT3 Reach 2 –** downstream *(3/16/2023)*
	
PHOTO POINT 17 UT3 Reach 2 – upstream *(3/16/2023)*	**PHOTO POINT 17 UT3 Reach 2 –** downstream *(3/16/2023)*
	
PHOTO POINT 18 UT3 Reach 2 – upstream *(3/16/2023)*	**PHOTO POINT 18 UT3 Reach 2 –** downstream *(3/16/2023)*

	
PHOTO POINT 19 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 19 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 20 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 20 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 21 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 21 UT4 Reach 1 –** downstream *(3/16/2023)*

	
PHOTO POINT 22 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 22 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 23 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 23 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 24 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 24 UT4 Reach 1 –** downstream *(3/16/2023)*

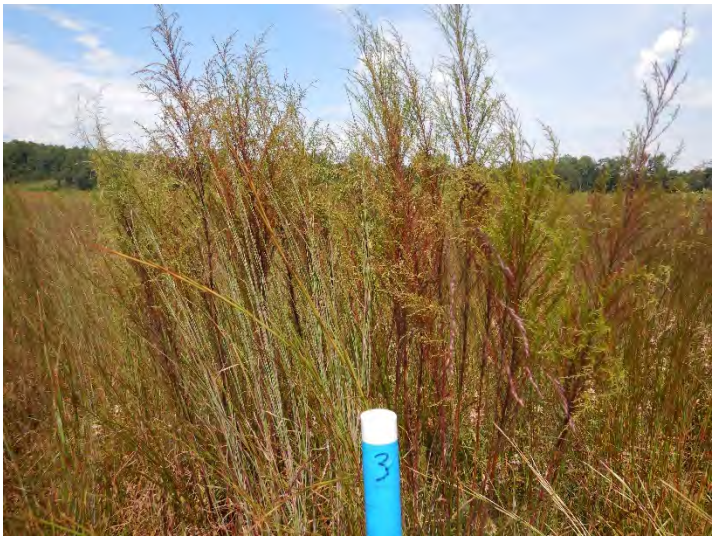
	
PHOTO POINT 25 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 25 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 26 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 26 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 27 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 27 UT4 Reach 1 –** downstream *(3/16/2023)*

	
PHOTO POINT 28 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 28 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 29 UT4 Reach 1 – upstream *(3/16/2023)*	**PHOTO POINT 29 UT4 Reach 1 –** downstream *(3/16/2023)*
	
PHOTO POINT 30 UT4 Reach 2 – upstream *(3/16/2023)*	**PHOTO POINT 30 UT4 Reach 2 –** downstream *(3/16/2023)*

VEGETATION PLOT PHOTOGRAPHS

VEGETATION PLOT 1 ***(9/21/2023)***

VEGETATION PLOT 2 ***(9/21/2023)***

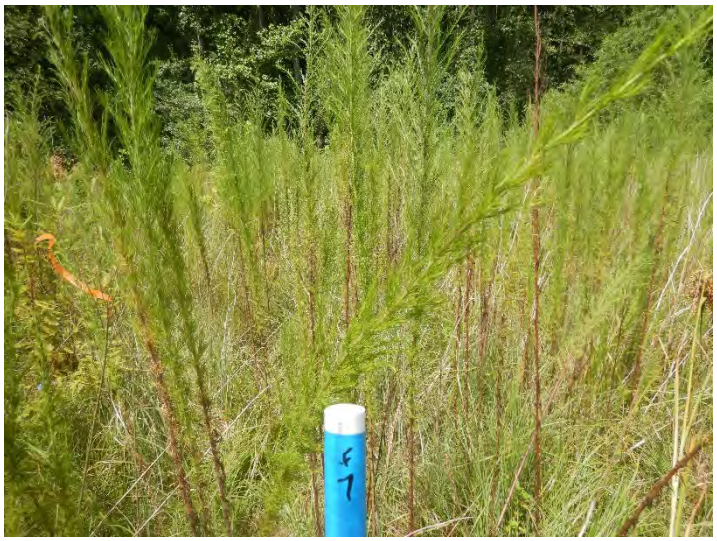


VEGETATION PLOT 3 ***(9/21/2023)***

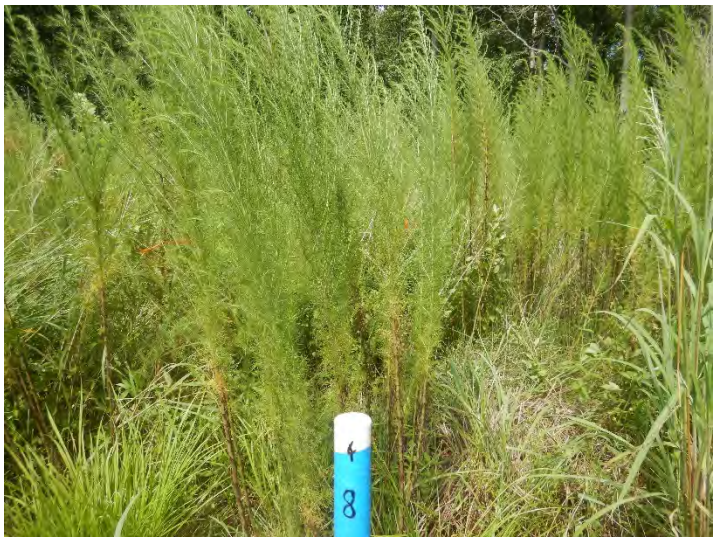
VEGETATION PLOT 4 ***(9/21/2023)***

VEGETATION PLOT 5 ***(9/21/2023)***

VEGETATION PLOT 6 ***(9/21/2023)***



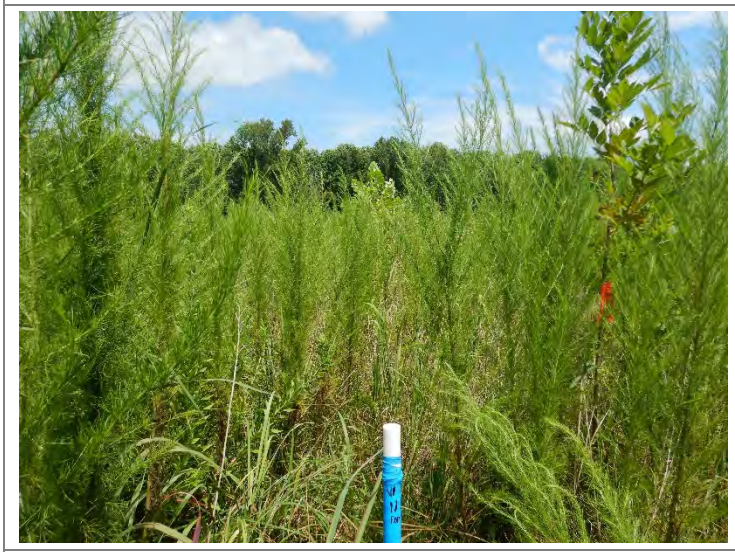
VEGETATION PLOT 7 (8/16/2023*)*



VEGETATION PLOT 8 *(8/16/2023)*

VEGETATION PLOT 9 *(8/16/2023)*

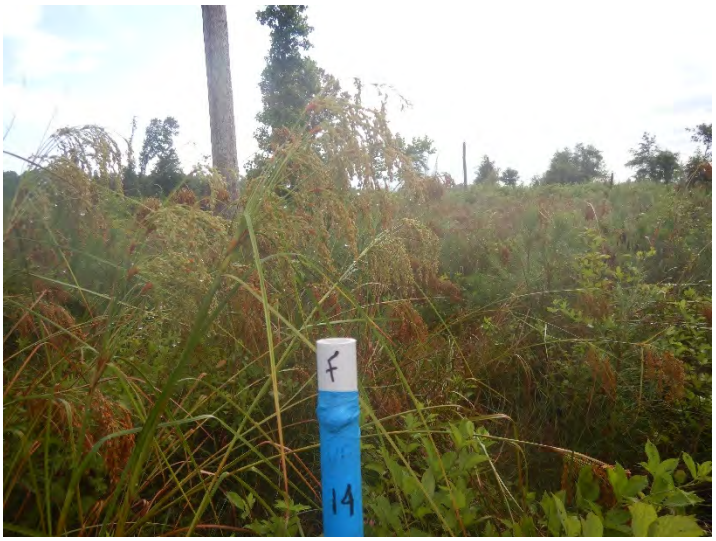
VEGETATION PLOT 10 *(8/16/2023)*



VEGETATION PLOT 11 *(8/17/2023)*

VEGETATION PLOT 12 *(8/17/2023)*

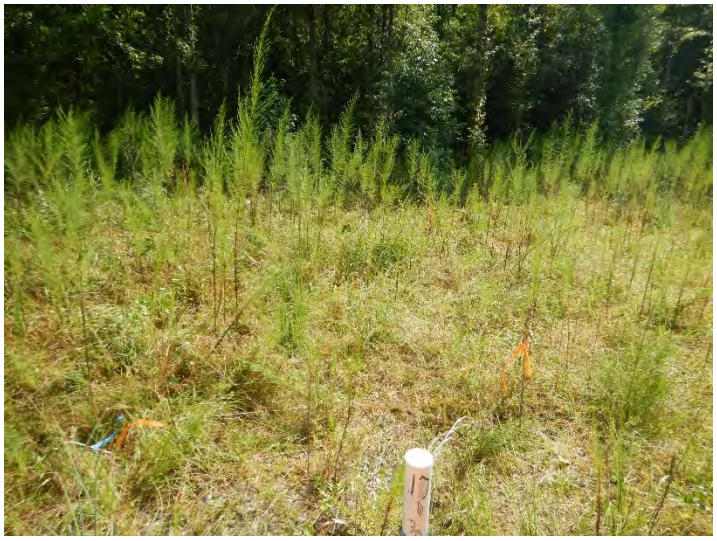
VEGETATION PLOT 13 *(8/16/2023)*



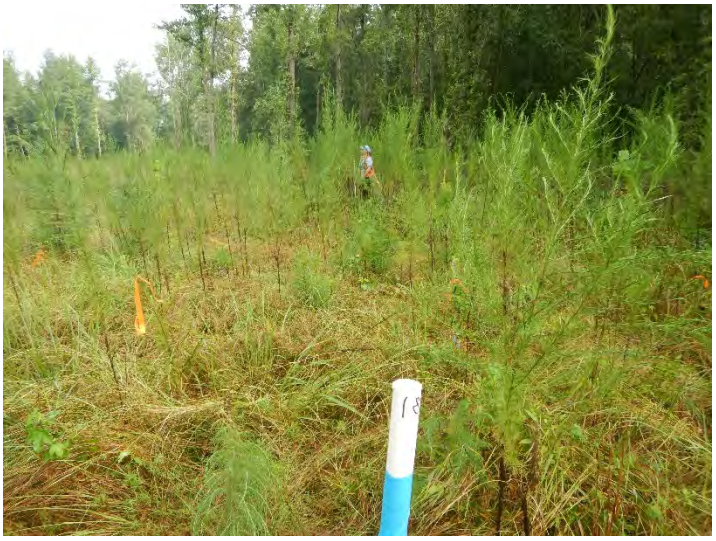
VEGETATION PLOT 14 *(8/16/2023)*

VEGETATION PLOT 15 *(8/16/2023)*

VEGETATION PLOT 16 *(8/16/2023)*



VEGETATION PLOT 17 *(8/16/2023)*



VEGETATION PLOT 18 *(8/16/2023)*

VEGETATION PLOT 19 *(8/16/2023)*

VEGETATION PLOT 20 *(8/17/2023)*

RANDOM VP 1 *(8/16/2023)*

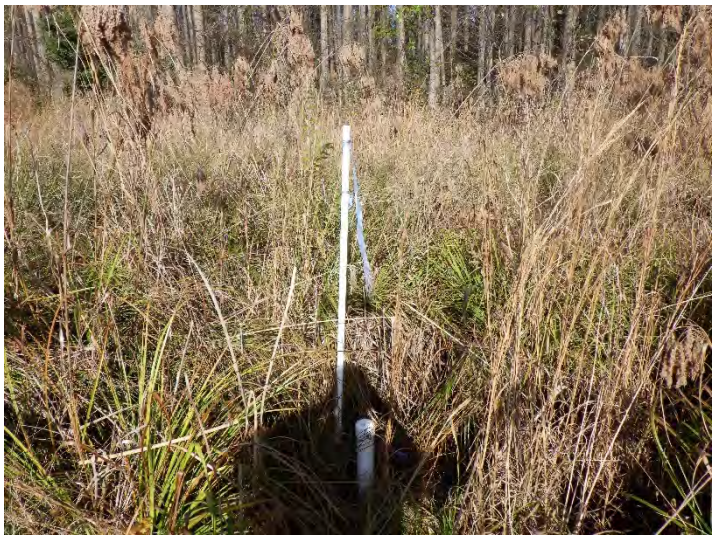
RANDOM VP 2 *(8/16/2023)*

RANDOM VP 3 *(8/17/2023)*

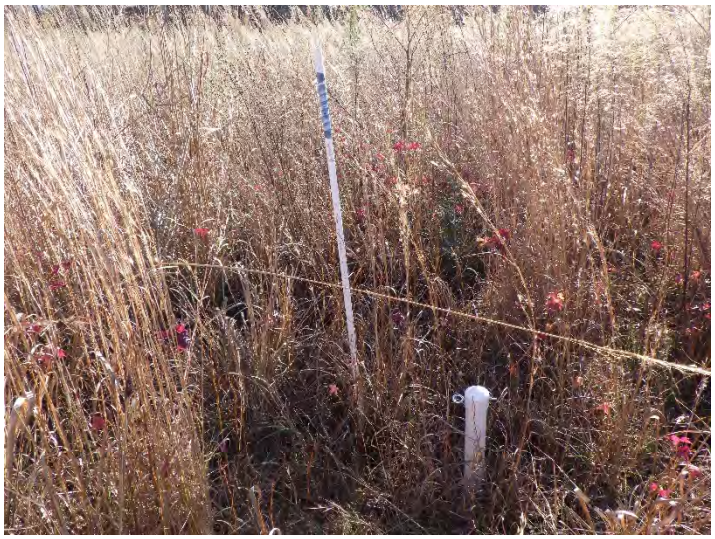
RANDOM VP 4 *(8/16/2023)*

RANDOM VP 5 *(*8/16/2023*)*

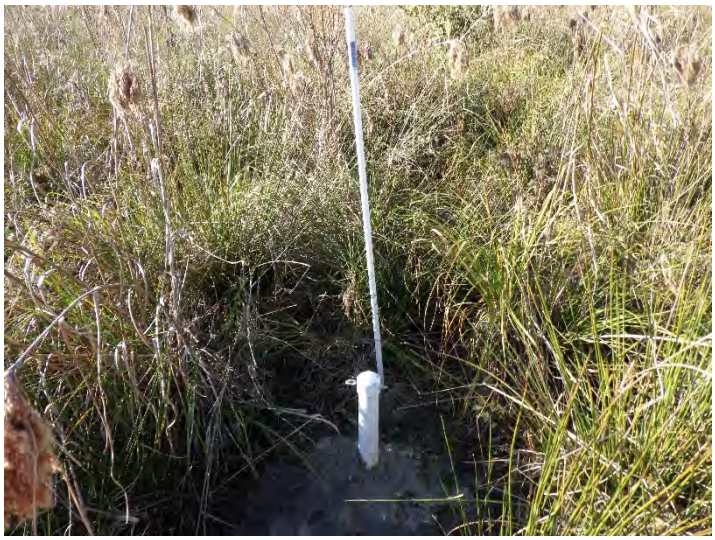
GROUNDWATER WELL PHOTOGRAPHS



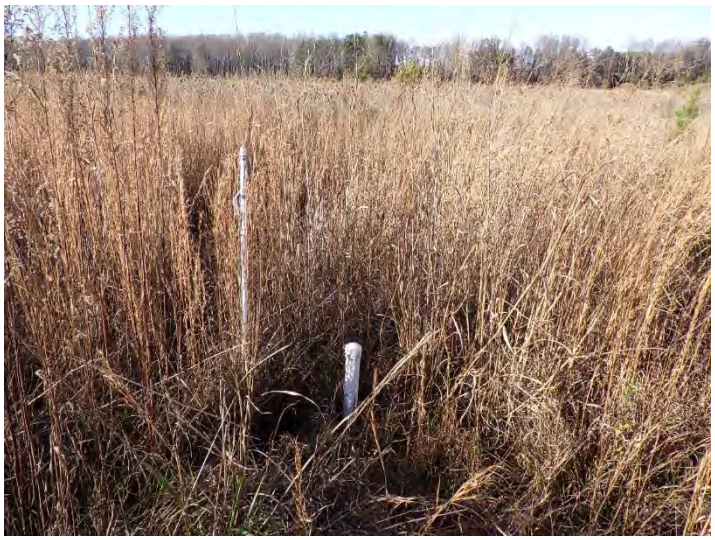
GROUNDWATER WELL 1 - *(11/27/2023)*



GROUNDWATER WELL 2 - *(11/27/2023)*



GROUNDWATER WELL 3 – *(11/27/2023)*



GROUNDWATER WELL 4 – *(11/27/2023)*

GROUNDWATER WELL 5 – *(11/27/2023)*

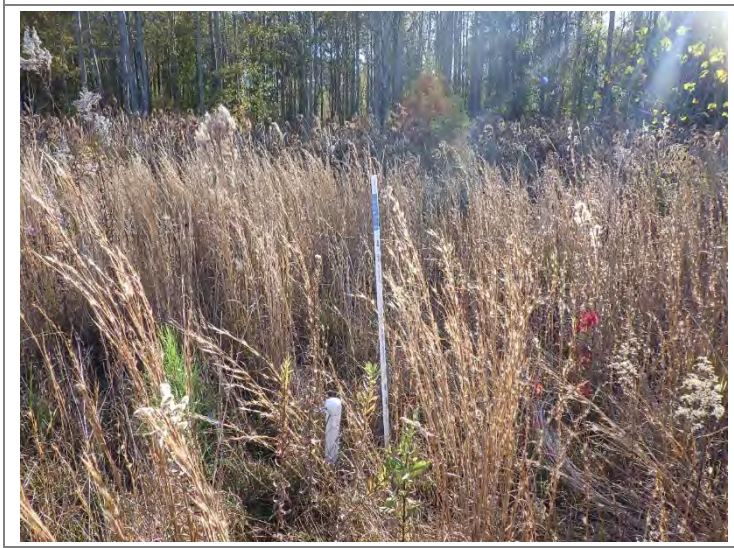
GROUNDWATER WELL 6 – *(11/27/2023)*

GROUNDWATER WELL 7 – *(11/27/2023)*

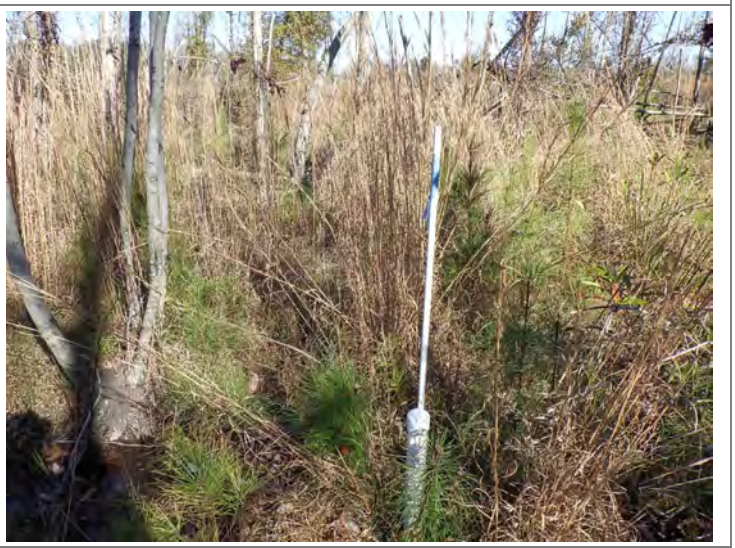
GROUNDWATER WELL 8 – *(11/27/2023)*

GROUNDWATER WELL 9 – *(11/27/2023)*

GROUNDWATER WELL 10 – *(11/27/2023)*



GROUNDWATER WELL 11 – *(11/27/2023)*



GROUNDWATER WELL 12 – *(11/27/2023)*

GROUNDWATER WELL 13 – *(11/27/2023)*

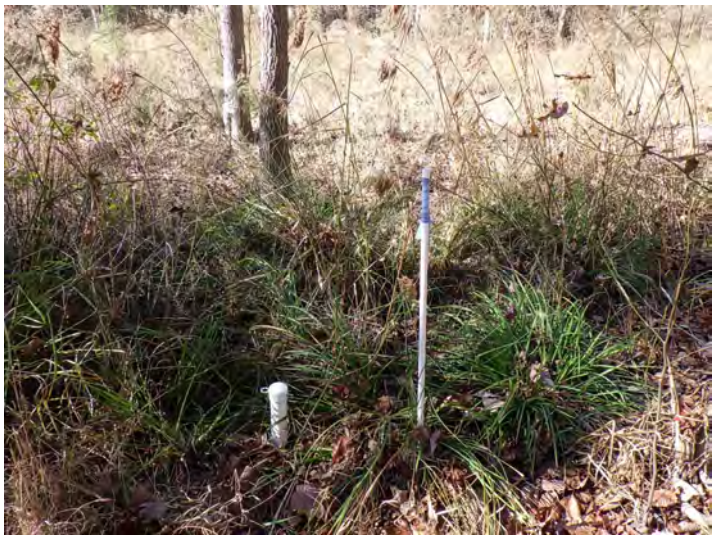
GROUNDWATER WELL 14 – *(11/27/2023)*

GROUNDWATER WELL 15 – *(11/27/2023)*

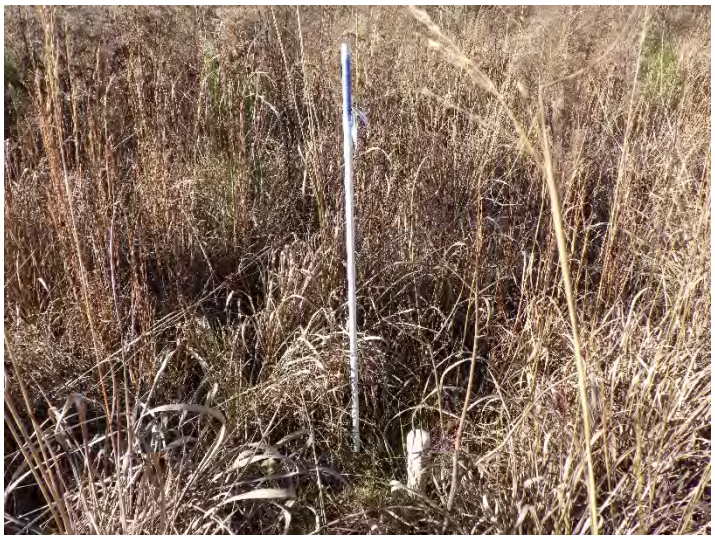
GROUNDWATER WELL 16 – *(11/27/2023)*

GROUNDWATER WELL 17 – upstream *(11/27/2023)*

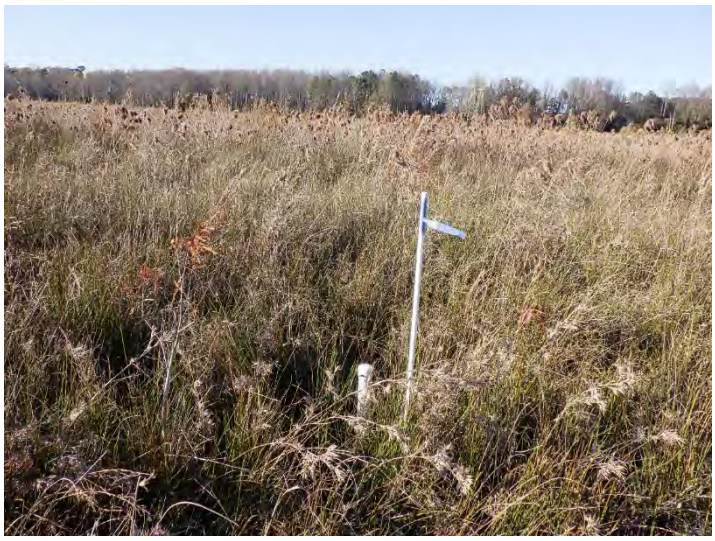
GROUNDWATER WELL 18 – *(11/27/2023)*



GROUNDWATER WELL 19 – (11/27/2023)



GROUNDWATER WELL 20 – (11/27/2023)



GROUNDWATER WELL 21 – (11/27/2023)

GROUNDWATER WELL 22 – (11/27/2023)

GROUNDWATER WELL 23 – upstream (11/27/2023

APPENDIX B. VEGETATION PLOT DATA

Table 6. Vegetation Plot Data
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage	34.56
Date of Initial Plant	2/8/2021
Date of Current Survey	2023-08-17
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 1 F		Veg Plot 2 F		Veg Plot 3 F		Veg Plot 4 F		Veg Plot 5 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Betula nigra	river birch	Tree	FACW	4	4	3	3	3	3	4	4	1	1
	Chamaecyparis thyoides	Atlantic white cedar	Tree	OBL										
	Diospyros virginiana	common persimmon	Tree	FAC			1	1	1	1	1	1		
	Fraxinus pennsylvanica	green ash	Tree	FACW	2	2					1	1	1	1
	Magnolia virginiana	sweetbay	Tree	FACW	1	1					1	1	1	1
	Nyssa biflora	swamp tupelo	Tree	OBL										
	Platanus occidentalis	American sycamore	Tree	FACW	2	2	3	3	3	3	3	3	5	5
	Populus deltoides	eastern cottonwood	Tree	FAC	1	1	1	1			1	1		
	Quercus lyrata	overcup oak	Tree	OBL										
	Quercus michauxii	swamp chestnut oak	Tree	FACW			1	1	1	1			1	1
	Quercus pagoda	cherrybark oak	Tree	FACW	1	1	2	2	1	1			1	1
	Quercus phellos	willow oak	Tree	FACW	3	3	1	1	6	6	1	1	2	2
	Salix nigra	black willow	Tree	OBL										
	Taxodium distichum	bald cypress	Tree	OBL							1	1	2	2
	Ulmus alata	winged elm	Tree	FACU										
Sum	Performance Standard				14	14	12	12	15	15	13	13	14	14
Post Mitigation Plan Species	*Acer negundo*	*boxelder*	*Tree*	*FAC*										
	Liquidambar styraciflua	*sweetgum*	*Tree*	*FAC*										
	Liriodendron tulipifera	*tuliptree*	*Tree*	*FACU*										
	Pinus taeda	*loblolly pine*	*Tree*	*FAC*										
	Rhus sp.													
Sum	Proposed Standard				14	14	12	12	15	15	13	13	14	14
Mitigation Plan Performance Standard	Current Year Stem Count					14		12		15		13		14
	Stems/Acre					567		486		607		526		567
	Species Count					7		7		6		8		8
	Dominant Species Composition (%)					29		25		40		31		36
	Average Plot Height (ft.)					3		3		3		2		3
	% Invasives					0		0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					14		12		15		13		14
	Stems/Acre					567		486		607		526		567
	Species Count					7		7		6		8		8
	Dominant Species Composition (%)					29		25		40		31		36
	Average Plot Height (ft.)					3		3		3		2		3
	% Invasives					0		0		0		0		0

1). Bolded species are proposed for the current monitoring year, italicized species are not approved, and a regular font indicates that the species has been approved.
2). The "Species Included in Approved Mitigation Plan" section contains only those species that were included in the original approved mitigation plan. The "Post Mitigation Plan Species" section includes species that are being proposed through a mitigation plan addendum for the current monitoring year (bolded), species that have been approved in prior monitoring years through a mitigation plan addendum (regular font), and species that are not approved (italicized).
3). The "Mitigation Plan Performance Standard" section is derived only from stems included in the original mitigation plan, whereas the "Post Mitigation Plan Performance Standard" includes data from mitigation plan approved, post mitigation plan approved, and proposed stems.

Table 6. Vegetation Plot Data
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage	34.56
Date of Initial Plant	2/8/2021
Date of Current Survey	2023-08-17
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 6 F		Veg Plot 7 F		Veg Plot 8 F		Veg Plot 9 F		Veg Plot 10 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Betula nigra	river birch	Tree	FACW	1	1	2	2	3	3	2	2	4	4
	Chamaecyparis thyoides	Atlantic white cedar	Tree	OBL										
	Diospyros virginiana	common persimmon	Tree	FAC	1	1								
	Fraxinus pennsylvanica	green ash	Tree	FACW			1	1			1	1	1	1
	Magnolia virginiana	sweetbay	Tree	FACW	1	1	1	1	1	1			1	1
	Nyssa biflora	swamp tupelo	Tree	OBL			2	2	1	1	2	2	1	1
	Platanus occidentalis	American sycamore	Tree	FACW	3	3	2	2	3	3	3	3	1	1
	Populus deltoides	eastern cottonwood	Tree	FAC										
	Quercus lyrata	overcup oak	Tree	OBL			1	1	1	1	1	1		
	Quercus michauxii	swamp chestnut oak	Tree	FACW	4	4					1	1		
	Quercus pagoda	cherrybark oak	Tree	FACW	2	2	1	1	1	1	1	1	1	1
	Quercus phellos	willow oak	Tree	FACW	1	1								
	Salix nigra	black willow	Tree	OBL			2	2			1	1	1	1
	Taxodium distichum	bald cypress	Tree	OBL			5	5	3	3	5	5	2	2
	Ulmus alata	winged elm	Tree	FACU			1	1			1	1	1	1
Sum	Performance Standard				13	13	18	18	13	13	18	18	13	13
Post Mitigation Plan Species	*Acer negundo*	*boxelder*	*Tree*	*FAC*										
	Liquidambar styraciflua	*sweetgum*	*Tree*	*FAC*										
	Liriodendron tulipifera	*tuliptree*	*Tree*	*FACU*										
	Pinus taeda	*loblolly pine*	*Tree*	*FAC*										
	Rhus sp.													
Sum	Proposed Standard				13	13	18	18	13	13	18	18	13	13
Mitigation Plan Performance Standard	Current Year Stem Count					13		18		13		18		13
	Stems/Acre					526		729		526		729		526
	Species Count					7		10		7		10		9
	Dominant Species Composition (%)					31		28		23		28		31
	Average Plot Height (ft.)					4		4		6		4		5
	% Invasives					0		0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					13		18		13		18		13
	Stems/Acre					526		729		526		729		526
	Species Count					7		10		7		10		9
	Dominant Species Composition (%)					31		28		23		28		31
	Average Plot Height (ft.)					4		4		6		4		5
	% Invasives					0		0		0		0		0

1). Bolded species are proposed for the current monitoring year, italicized species are not approved, and a regular font indicates that the species has been approved.
2). The "Species Included in Approved Mitigation Plan" section contains only those species that were included in the original approved mitigation plan. The "Post Mitigation Plan Species" section includes species that are being proposed through a mitigation plan addendum for the current monitoring year (bolded), species that have been approved in prior monitoring years through a mitigation plan addendum (regular font), and species that are not approved (italicized).
3). The "Mitigation Plan Performance Standard" section is derived only from stems included in the original mitigation plan, whereas the "Post Mitigation Plan Performance Standard" includes data from mitigation plan approved, post mitigation plan approved, and proposed stems.

Table 6. Vegetation Plot Data
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage	34.56
Date of Initial Plant	2/8/2021
Date of Current Survey	2023-08-17
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 11 F		Veg Plot 12 F		Veg Plot 13 F		Veg Plot 14 F		Veg Plot 15 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Betula nigra	river birch	Tree	FACW	3	3	3	3	5	5	2	2		
	Chamaecyparis thyoides	Atlantic white cedar	Tree	OBL										
	Diospyros virginiana	common persimmon	Tree	FAC										
	Fraxinus pennsylvanica	green ash	Tree	FACW	1	1			1	1	1	1		
	Magnolia virginiana	sweetbay	Tree	FACW			1	1	1	1	2	2		
	Nyssa biflora	swamp tupelo	Tree	OBL	1	1	2	2	2	2				
	Platanus occidentalis	American sycamore	Tree	FACW	1	1	4	4	2	2				
	Populus deltoides	eastern cottonwood	Tree	FAC										
	Quercus lyrata	overcup oak	Tree	OBL	1	1								
	Quercus michauxii	swamp chestnut oak	Tree	FACW			3	3			1	1	1	1
	Quercus pagoda	cherrybark oak	Tree	FACW					5	5				
	Quercus phellos	willow oak	Tree	FACW										
	Salix nigra	black willow	Tree	OBL	1	1								
	Taxodium distichum	bald cypress	Tree	OBL	3	3	3	3			2	2	3	3
	Ulmus alata	winged elm	Tree	FACU	1	1			1	1				
Sum	Performance Standard				12	12	16	16	17	17	8	8	4	4
Post Mitigation Plan Species	*Acer negundo*	*boxelder*	*Tree*	*FAC*										
	Liquidambar styraciflua	*sweetgum*	*Tree*	*FAC*										
	Liriodendron tulipifera	*tuliptree*	*Tree*	*FACU*										
	Pinus taeda	*loblolly pine*	*Tree*	*FAC*										
	Rhus sp.													
Sum	Proposed Standard				12	12	16	16	17	17	8	8	4	4
Mitigation Plan Performance Standard	Current Year Stem Count					12		16		17		8		4
	Stems/Acre					486		648		688		324		121
	Species Count					8		6		7		5		2
	Dominant Species Composition (%)					25		25		29		25		75
	Average Plot Height (ft.)					3		5		4		3		4
	% Invasives					0		0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					12		16		17		8		4
	Stems/Acre					486		648		688		324		121
	Species Count					8		6		7		5		2
	Dominant Species Composition (%)					25		25		29		25		75
	Average Plot Height (ft.)					3		5		4		3		4
	% Invasives					0		0		0		0		0

1). Bolded species are proposed for the current monitoring year, italicized species are not approved, and a regular font indicates that the species has been approved.
2). The "Species Included in Approved Mitigation Plan" section contains only those species that were included in the original approved mitigation plan. The "Post Mitigation Plan Species" section includes species that are being proposed through a mitigation plan addendum for the current monitoring year (bolded), species that have been approved in prior monitoring years through a mitigation plan addendum (regular font), and species that are not approved (italicized).
3). The "Mitigation Plan Performance Standard" section is derived only from stems included in the original mitigation plan, whereas the "Post Mitigation Plan Performance Standard" includes data from mitigation plan approved, post mitigation plan approved, and proposed stems.

Table 6. Vegetation Plot Data
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage	34.56
Date of Initial Plant	2/8/2021
Date of Current Survey	2023-08-17
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 16 F		Veg Plot 17 F		Veg Plot 18 F		Veg Plot 19 F		Veg Plot 20 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Betula nigra	river birch	Tree	FACW	1	1	1	1	2	2	3	3	1	1
	Chamaecyparis thyoides	Atlantic white cedar	Tree	OBL										
	Diospyros virginiana	common persimmon	Tree	FAC										
	Fraxinus pennsylvanica	green ash	Tree	FACW	1	1			1	1				
	Magnolia virginiana	sweetbay	Tree	FACW	1	1	1	1						
	Nyssa biflora	swamp tupelo	Tree	OBL	1	1					2	2		
	Platanus occidentalis	American sycamore	Tree	FACW	3	3	2	2	3	3	2	2	4	4
	Populus deltoides	eastern cottonwood	Tree	FAC										
	Quercus lyrata	overcup oak	Tree	OBL					1	1				
	Quercus michauxii	swamp chestnut oak	Tree	FACW	1	1	1	1	1	1	2	2	2	2
	Quercus pagoda	cherrybark oak	Tree	FACW			2	2	1	1	2	2		
	Quercus phellos	willow oak	Tree	FACW										
	Salix nigra	black willow	Tree	OBL			1	1	1	1	1	1		
	Taxodium distichum	bald cypress	Tree	OBL	1	1	2	2	4	4	3	3	5	5
	Ulmus alata	winged elm	Tree	FACU			1	1						
Sum	Performance Standard				9	9	11	11	14	14	15	15	12	12
Post Mitigation Plan Species	*Acer negundo*	*boxelder*	*Tree*	*FAC*										
	Liquidambar styraciflua	*sweetgum*	*Tree*	*FAC*										
	Liriodendron tulipifera	*tuliptree*	*Tree*	*FACU*										
	Pinus taeda	*loblolly pine*	*Tree*	*FAC*										
	Rhus sp.													
Sum	Proposed Standard				9	9	11	11	14	14	15	15	12	12
Mitigation Plan Performance Standard	Current Year Stem Count					9		11		14		15		12
	Stems/Acre					364		445		567		607		486
	Species Count					7		8		8		7		4
	Dominant Species Composition (%)					33		18		29		20		42
	Average Plot Height (ft.)					4		2		3		3		3
	% Invasives					0		0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					9		11		14		15		12
	Stems/Acre					364		445		567		607		486
	Species Count					7		8		8		7		4
	Dominant Species Composition (%)					33		18		29		20		42
	Average Plot Height (ft.)					4		2		3		3		3
	% Invasives					0		0		0		0		0

1). Bolded species are proposed for the current monitoring year, italicized species are not approved, and a regular font indicates that the species has been approved.
2). The "Species Included in Approved Mitigation Plan" section contains only those species that were included in the original approved mitigation plan. The "Post Mitigation Plan Species" section includes species that are being proposed through a mitigation plan addendum for the current monitoring year (bolded), species that have been approved in prior monitoring years through a mitigation plan addendum (regular font), and species that are not approved (italicized).
3). The "Mitigation Plan Performance Standard" section is derived only from stems included in the original mitigation plan, whereas the "Post Mitigation Plan Performance Standard" includes data from mitigation plan approved, post mitigation plan approved, and proposed stems.

Table 6. Vegetation Plot Data
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Planted Acreage	34.56
Date of Initial Plant	2/8/2021
Date of Current Survey	2023-08-17
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 1 R Total	Veg Plot 2 R Total	Veg Plot 3 R Total	Veg Plot 4 R Total	Veg Plot 5 R Total
Species Included in Approved Mitigation Plan	Betula nigra	river birch	Tree	FACW	1	2		3	1
	Chamaecyparis thyoides	Atlantic white cedar	Tree	OBL			23		
	Diospyros virginiana	common persimmon	Tree	FAC	1				2
	Fraxinus pennsylvanica	green ash	Tree	FACW					
	Magnolia virginiana	sweetbay	Tree	FACW	1			1	
	Nyssa biflora	swamp tupelo	Tree	OBL					
	Platanus occidentalis	American sycamore	Tree	FACW	3	4		1	2
	Populus deltoides	eastern cottonwood	Tree	FAC					
	Quercus lyrata	overcup oak	Tree	OBL				1	
	Quercus michauxii	swamp chestnut oak	Tree	FACW				1	
	Quercus pagoda	cherrybark oak	Tree	FACW		5			
	Quercus phellos	willow oak	Tree	FACW		2			
	Salix nigra	black willow	Tree	OBL				2	
	Taxodium distichum	bald cypress	Tree	OBL	4			5	6
	Ulmus alata	winged elm	Tree	FACU				1	
Sum	Performance Standard				10	13	23	15	11
Post Mitigation Plan Species	*Acer negundo*	*boxelder*	*Tree*	*FAC*		*1*	*2*		
	Liquidambar styraciflua	*sweetgum*	*Tree*	*FAC*	*4*		*1*		
	Liriodendron tulipifera	*tuliptree*	*Tree*	*FACU*				*1*	
	Pinus taeda	*loblolly pine*	*Tree*	*FAC*	*2*	*2*			
	Rhus sp.								*2*
Sum	Proposed Standard				10	13	23	15	11
Mitigation Plan Performance Standard	Current Year Stem Count				10	13	23	15	11
	Stems/Acre				405	526	526	607	445
	Species Count				5	4	1[4]	8	4
	Dominant Species Composition (%)				25	31	88	31	46
	Average Plot Height (ft.)				3	3	5	5	5
	% Invasives				0	0	0	0	0
Post Mitigation Plan Performance Standard	Current Year Stem Count				10	13	23	15	11
	Stems/Acre				405	526	526	607	445
	Species Count				5	4	1[4]	8	4
	Dominant Species Composition (%)				25	31	88	31	46
	Average Plot Height (ft.)				3	3	5	5	5
	% Invasives				0	0	0	0	0

1). Bolded species are proposed for the current monitoring year, italicized species are not approved, and a regular font indicates that the species has been approved.

2). The "Species Included in Approved Mitigation Plan" section contains only those species that were included in the original approved mitigation plan. The "Post Mitigation Plan Species" section includes species that are being proposed through a mitigation plan addendum for the current monitoring year (bolded), species that have been approved in prior monitoring years through a mitigation plan addendum (regular font), and species that are not approved (italicized).

3). The "Mitigation Plan Performance Standard" section is derived only from stems included in the original mitigation plan, whereas the "Post Mitigation Plan Performance Standard" includes data from mitigation plan approved, post mitigation plan approved, and proposed stems.

4.) VP 23 R was sampled in the 100% Atlantic white cedar planting zone.

Table 7. Vegetation Performance Standards Summary Table

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	Veg Plot 1 F				Veg Plot 2 F				Veg Plot 3 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	567	3	7	0	486	3	7	0	607	3	6	0
Monitoring Year 2	567	3	7	0	486	3	7	0	607	3	6	0
Monitoring Year 1	567	3	7	0	567	3	7	0	607	2	6	0
Monitoring Year 0	567	3	7	0	567	3	7	0	607	2	6	0
	Veg Plot 4 F				Veg Plot 5 F				Veg Plot 6 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	526	2	8	0	567	3	8	0	526	4	7	0
Monitoring Year 2	567	3	8	0	607	3	8	0	526	3	7	0
Monitoring Year 1	567	3	8	0	648	3	8	0	567	2	7	0
Monitoring Year 0	607	3	8	0	648	3	8	0	607	2	7	0
	Veg Plot 7 F				Veg Plot 8 F				Veg Plot 9 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	729	4	10	0	526	6	7	0	729	4	10	0
Monitoring Year 2	729	3	10	0	526	4	7	0	729	3	10	0
Monitoring Year 1	729	3	10	0	607	3	8	0	729	2	10	0
Monitoring Year 0	729	2	10	0	607	2	8	0	729	2	10	0

[1]Each monitoring year represents a different plot for the random vegetation plot "groups". Random plots are denoted with an R, and fixed plots with an F.

Table 7. Vegetation Performance Standards Summary Table

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

	Veg Plot 10 F				Veg Plot 11 F				Veg Plot 12 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	526	5	9	0	486	3	8	0	648	5	6	0
Monitoring Year 2	526	3	9	0	526	3	8	0	648	4	6	0
Monitoring Year 1	729	3	11	0	648	3	10	0	729	3	7	0
Monitoring Year 0	729	3	11	0	648	3	10	0	931	3	7	0
	Veg Plot 13 F				Veg Plot 14 F				Veg Plot 15 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	688	4	7	0	324	3	5	0	121	4	2	0
Monitoring Year 2	688	3	7	0	324	2	5	0	283	2	4	0
Monitoring Year 1	688	3	7	0	567	2	8	0	486	2	8	0
Monitoring Year 0	688	3	7	0	567	2	8	0	526	2	8	0
	Veg Plot 16 F				Veg Plot 17 F				Veg Plot 18 F			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	364	4	7	0	445	2	8	0	567	3	8	0
Monitoring Year 2	405	3	7	0	364	2	6	0	607	3	8	0
Monitoring Year 1	526	3	8	0	445	2	7	0	648	3	8	0
Monitoring Year 0	567	3	8	0	567	3	8	0	648	3	8	0

[1]Each monitoring year represents a different plot for the random vegetation plot "groups". Random plots are denoted with an R, and fixed plots with an F.

Table 7. Vegetation Performance Standards Summary Table

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

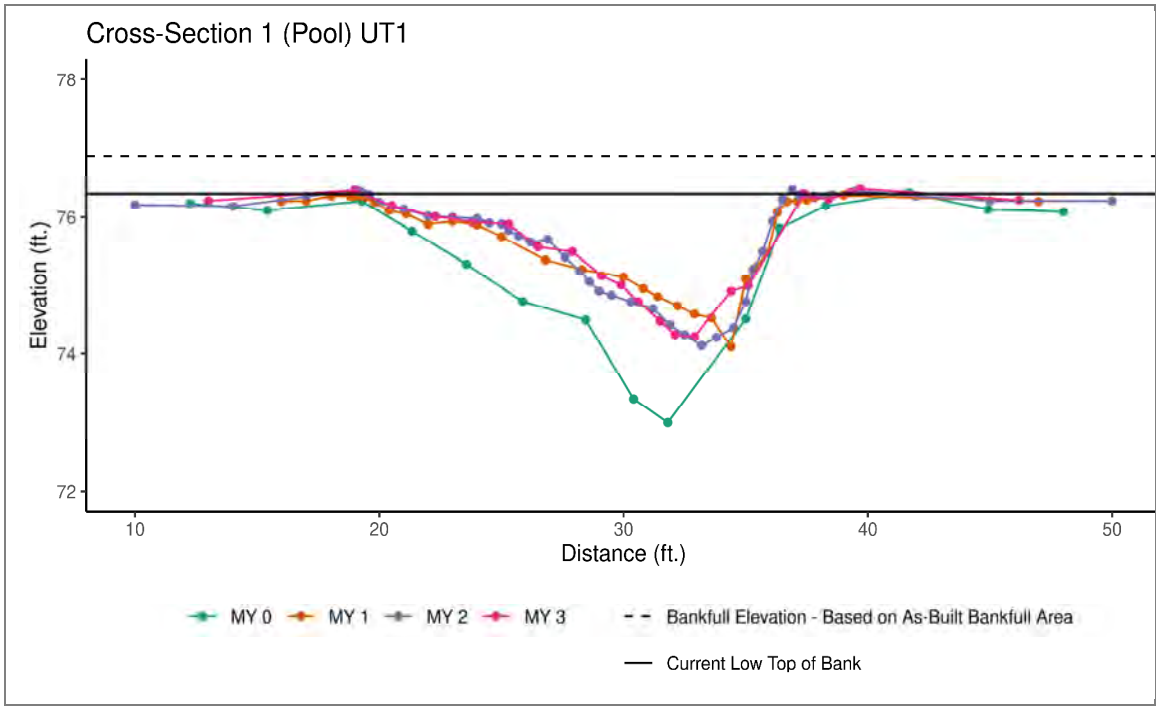
	Veg Plot 19 F				Veg Plot 20 F				Veg Plot Group 1 R			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	607	3	7	0	486	3	4	0	405	3	5	0
Monitoring Year 2	607	3	7	0	486	3	4	0	405	2	6	0
Monitoring Year 1	648	3	7	0	567	3	6	0	324	4	4	0
Monitoring Year 0	648	3	7	0	567	3	6	0	526	3	6	0
	Veg Plot Group 2 R				Veg Plot Group 3 R				Veg Plot Group 4 R			
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	526	3	4	0	526	5	1[2]	0	607	5	8	0
Monitoring Year 2	486	3	7	0	567	2	5	0	405	2	4	0
Monitoring Year 1	486	1	1[2]	0	567	3	5	0	405	2	4	0
Monitoring Year 0	648	2	6	0	688	21	8	0	648	2	5	0
	Veg Plot Group 5 R											
	Stems/Ac.	Av. Ht. (ft)	# Species	% Invasives								
Monitoring Year 7												
Monitoring Year 5												
Monitoring Year 3	445	5	4	0								
Monitoring Year 2	526	2	7	0								
Monitoring Year 1	607	2	7	0								
Monitoring Year 0	648	2	7	0								

[1]Each monitoring year represents a different plot for the random vegetation plot "groups". Random plots are denoted with an R, and fixed plots with an F.

[2]MY1 sampling for VP 2R and MY3 sampling for VP 3R was conducted in the 100% Atlantic white cedar planting zone.

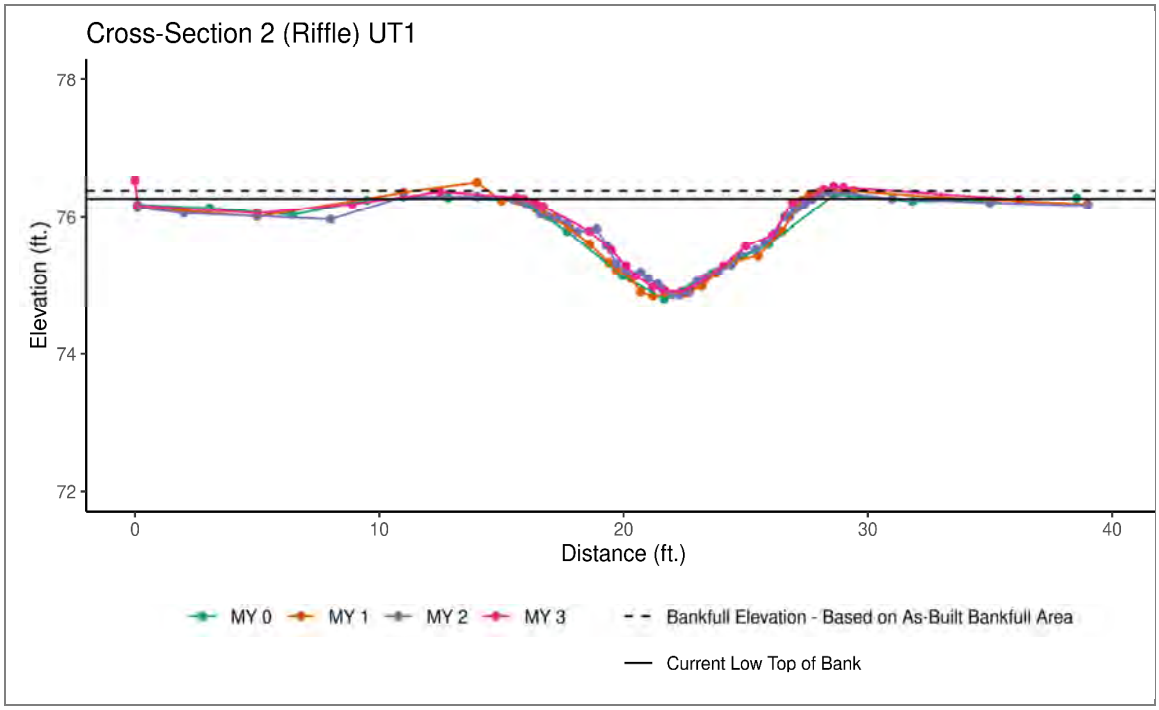
APPENDIX C. STREAM GEOMORPHOLOGY DATA

Cross-Section Plots



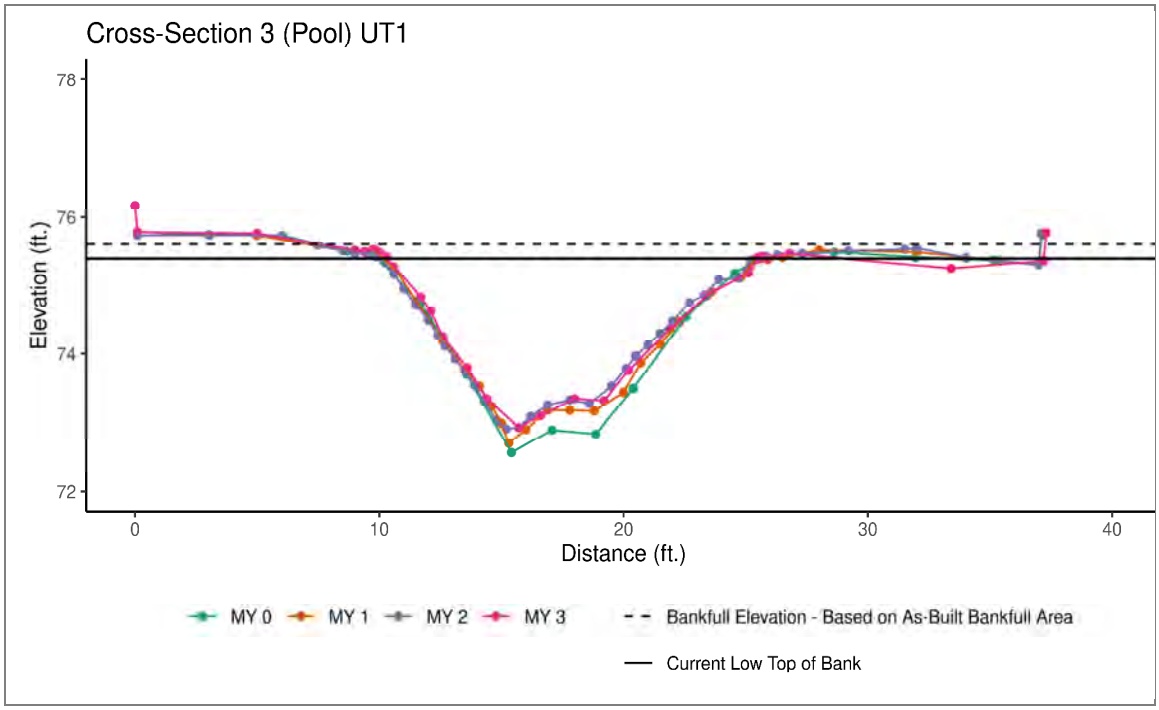
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	73.00	74.10	74.12	74.25		
LTOB Elevation	76.17	76.23	76.38	76.34		
LTOB Max Depth	3.17	2.13	2.26	2.09		
LTOB Cross-Sectional Area	26.20	14.60	17.74	16.35		

Downstream *(3/8/2023)*



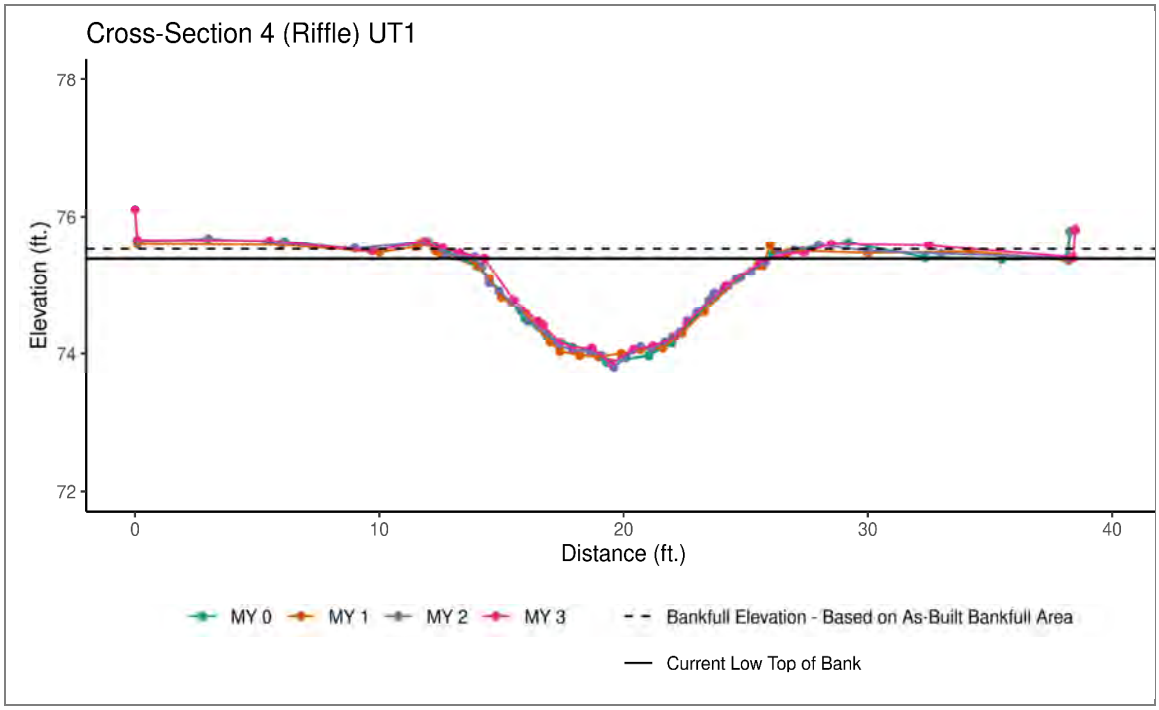
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	76.24	76.26	76.38	76.38		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.98	0.92	0.92		
Thalweg Elevation	74.81	74.85	74.87	74.92		
LTOB Elevation	76.24	76.23	76.26	76.27		
LTOB Max Depth	1.43	1.38	1.39	1.35		
LTOB Cross-Sectional Area	9.45	9.07	8.27	8.19		

Downstream *(3/8/2023)*



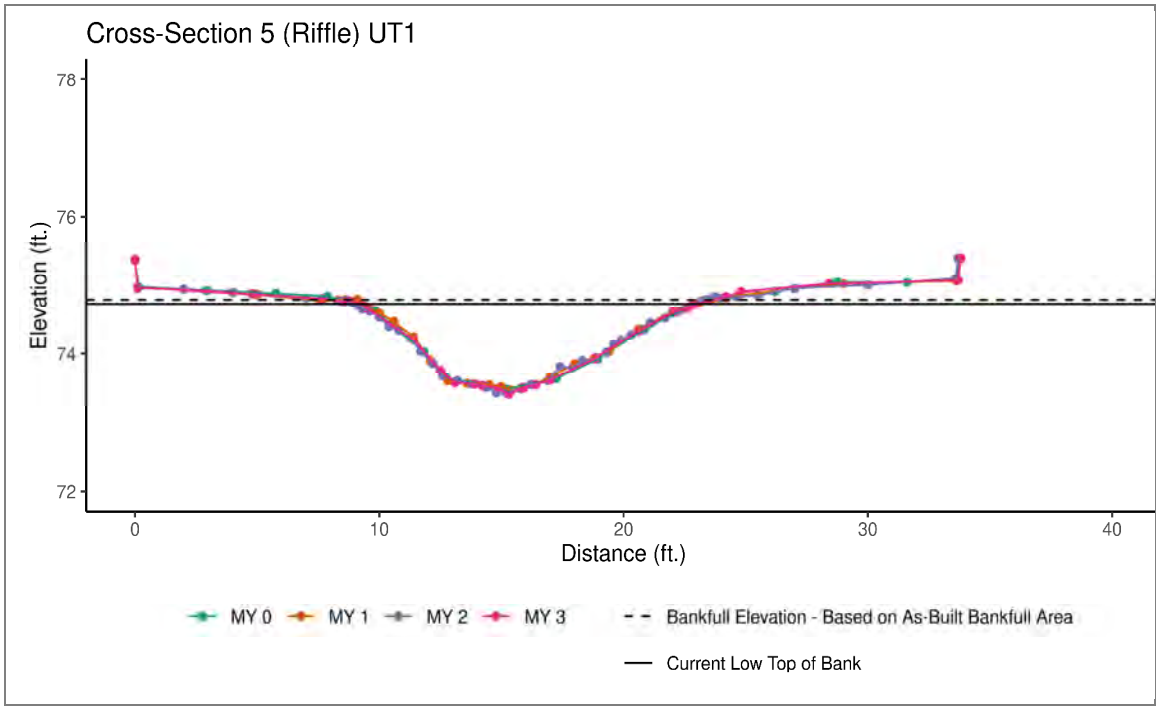
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	72.56	72.70	72.91	72.93		
LTOB Elevation	75.41	75.39	75.41	75.40		
LTOB Max Depth	2.85	2.69	2.50	2.47		
LTOB Cross-Sectional Area	23.72	21.60	20.83	20.60		

Downstream *(3/8/2023)*



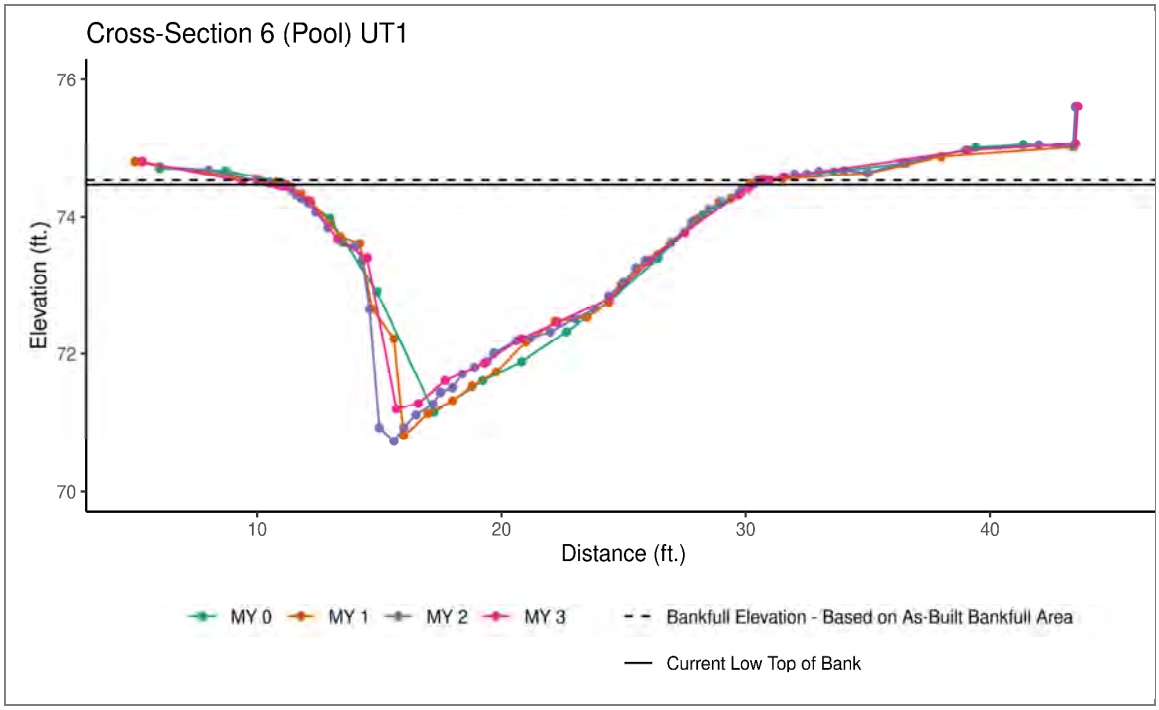
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	75.46	75.45	75.49	75.54		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.96	0.96	0.92		
Thalweg Elevation	73.88	73.96	73.81	73.87		
LTOB Elevation	75.46	75.41	75.42	75.40		
LTOB Max Depth	1.58	1.45	1.61	1.53		
LTOB Cross-Sectional Area	11.91	11.26	11.08	10.31		

Downstream *(3/8/2023)*



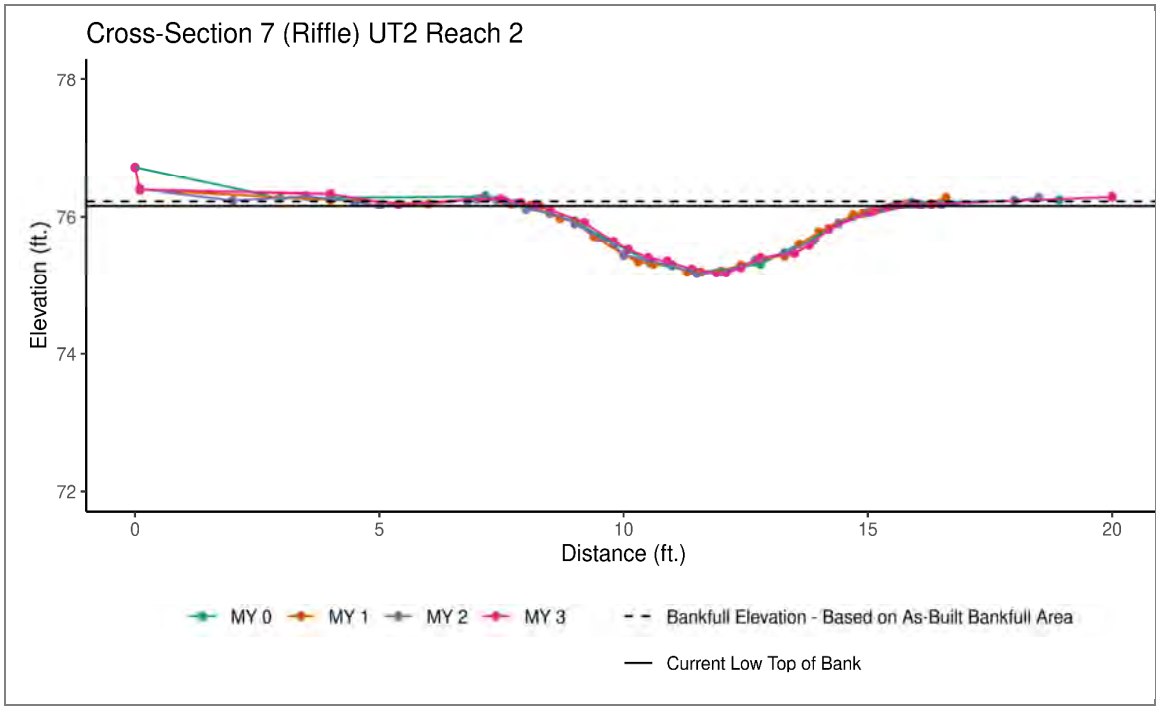
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	74.79	74.81	74.79	74.79		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.95	0.96	0.95		
Thalweg Elevation	73.48	73.47	73.44	73.42		
LTOB Elevation	74.79	74.75	74.74	74.73		
LTOB Max Depth	1.30	1.28	1.30	1.31		
LTOB Cross-Sectional Area	10.82	9.95	10.07	9.96		

Downstream *(3/8/2023)*



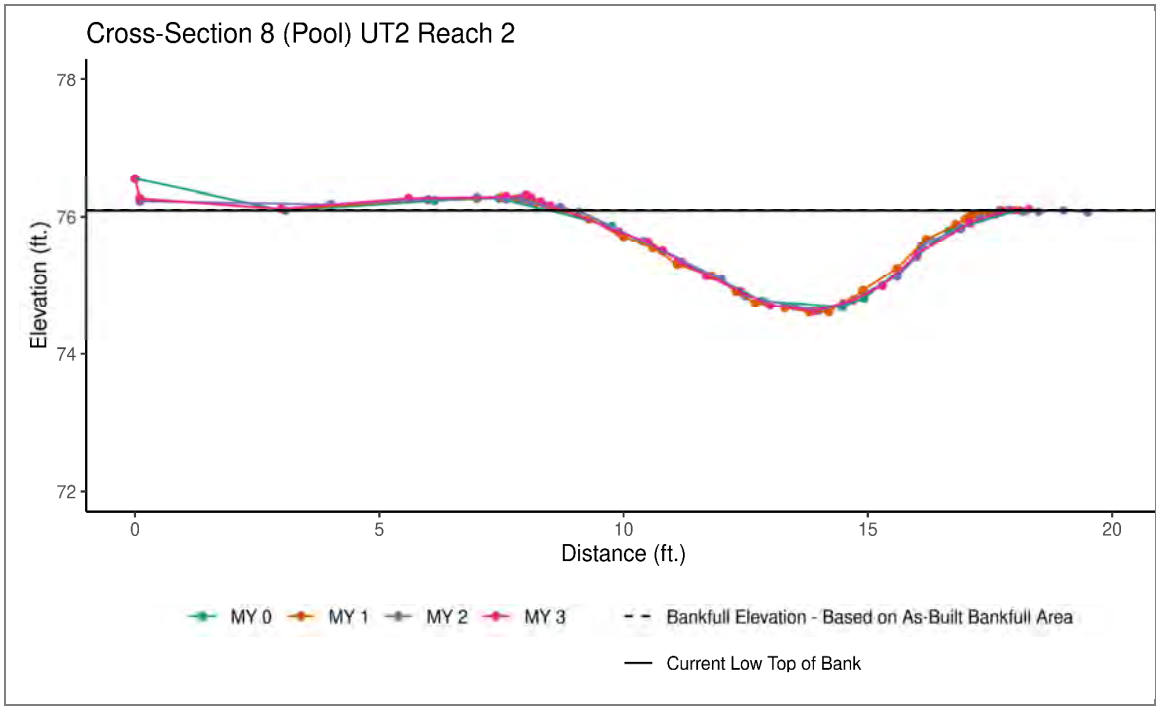
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	71.15	70.81	70.73	71.20		
LTOB Elevation	74.50	74.43	74.45	74.47		
LTOB Max Depth	3.36	3.62	3.72	3.27		
LTOB Cross-Sectional Area	31.59	30.39	31.55	30.30		

Downstream *(3/8/2023)*



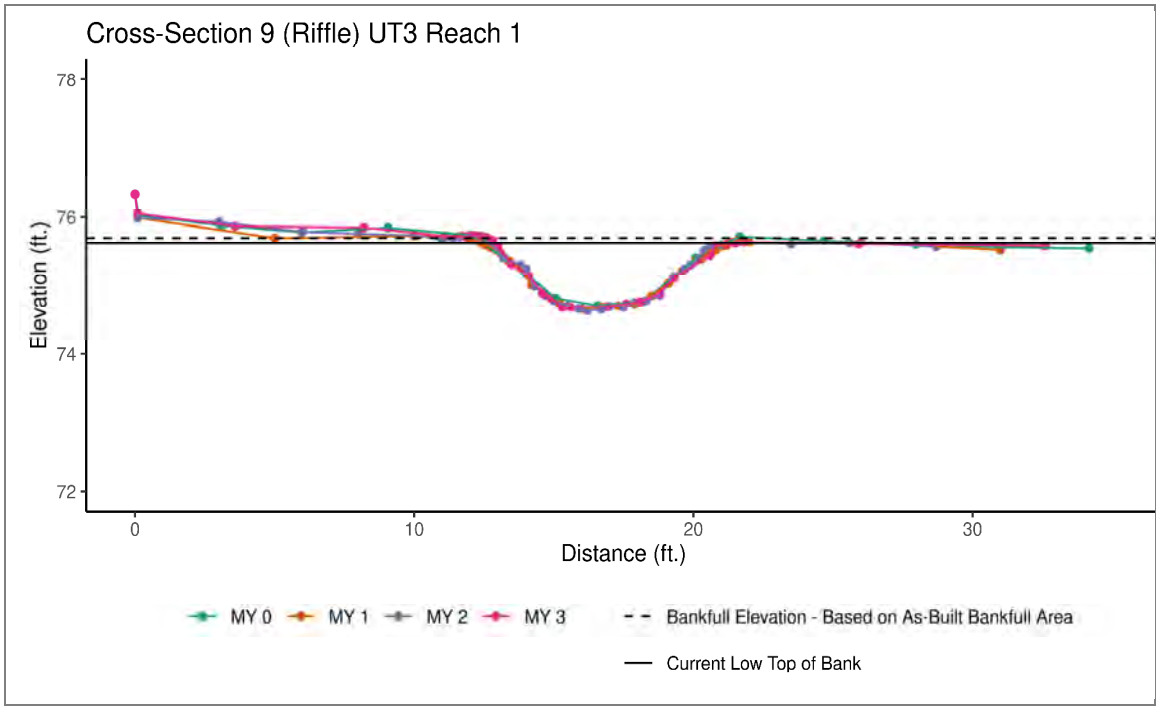
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	76.22	76.22	76.21	76.24		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.99	0.98	0.94		
Thalweg Elevation	75.20	75.20	75.18	75.19		
LTOB Elevation	76.22	76.21	76.19	76.17		
LTOB Max Depth	1.02	1.01	1.01	0.98		
LTOB Cross-Sectional Area	4.43	4.38	4.26	3.94		

Downstream *(3/8/2023)*



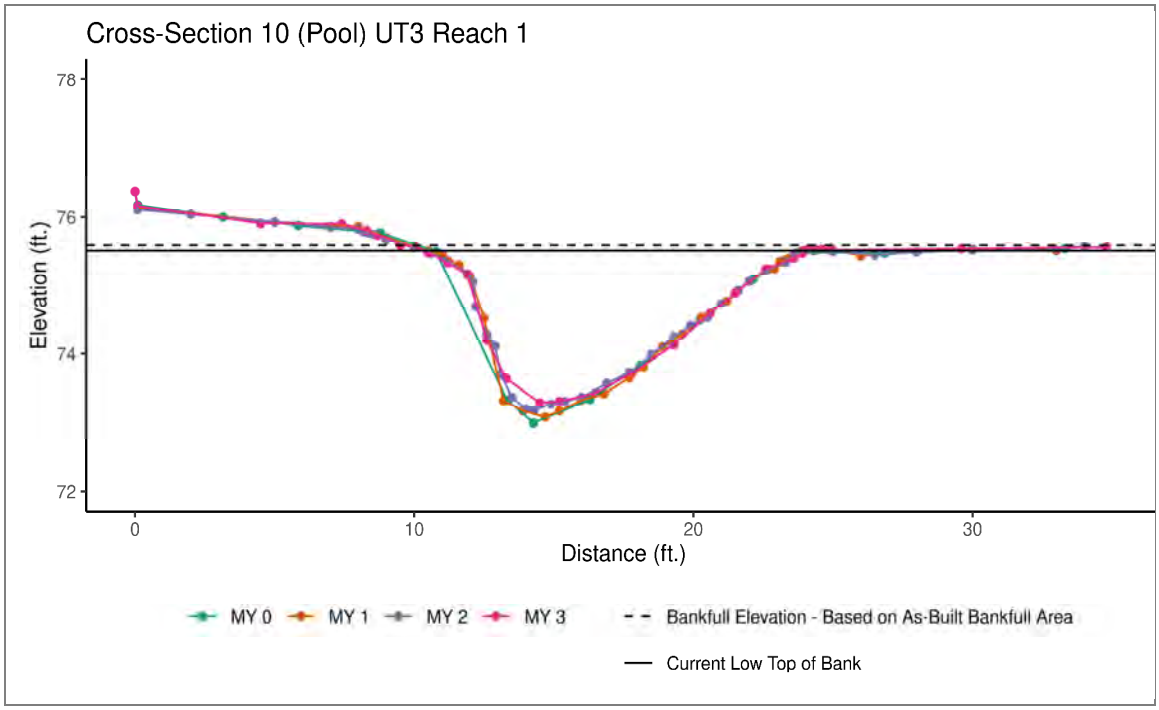
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	74.68	74.61	74.63	74.62		
LTOB Elevation	76.10	76.11	76.11	76.09		
LTOB Max Depth	1.42	1.50	1.48	1.47		
LTOB Cross-Sectional Area	7.00	7.00	6.97	6.95		

Downstream *(3/8/2023)*



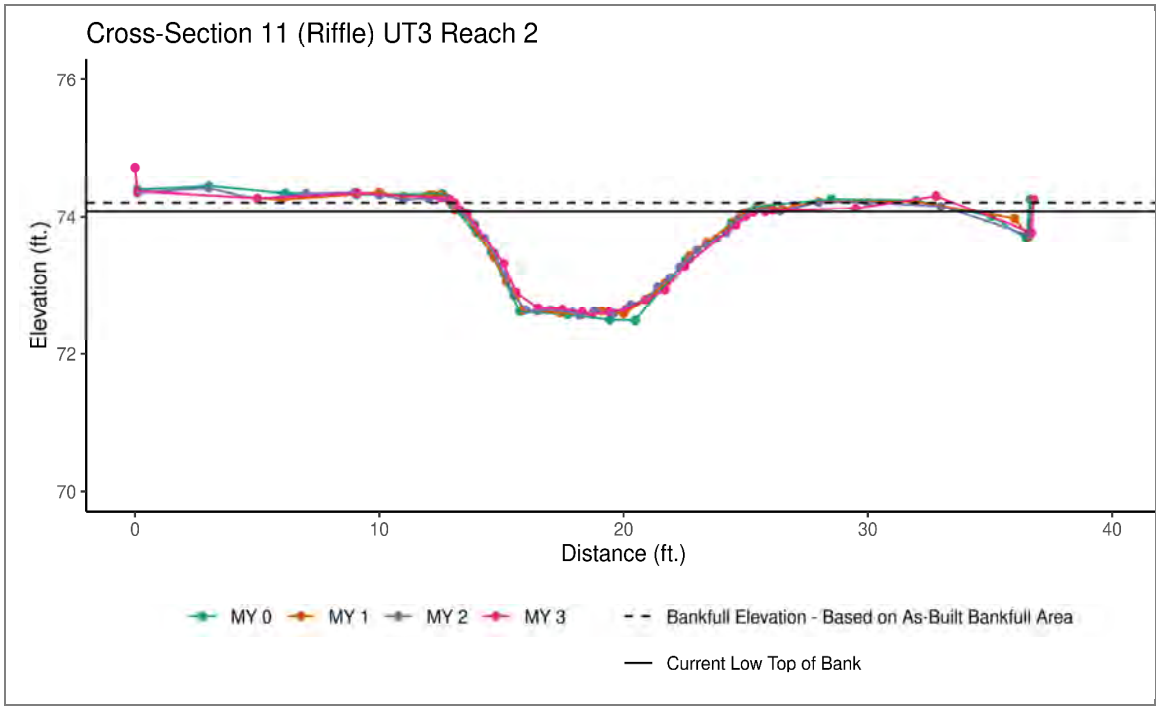
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	75.72	75.69	75.71	75.70		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.98	0.88	0.92		
Thalweg Elevation	74.71	74.66	74.63	74.68		
LTOB Elevation	75.72	75.67	75.58	75.62		
LTOB Max Depth	1.02	1.01	0.95	0.94		
LTOB Cross-Sectional Area	5.81	5.58	4.76	5.11		

Downstream *(3/8/2023)*



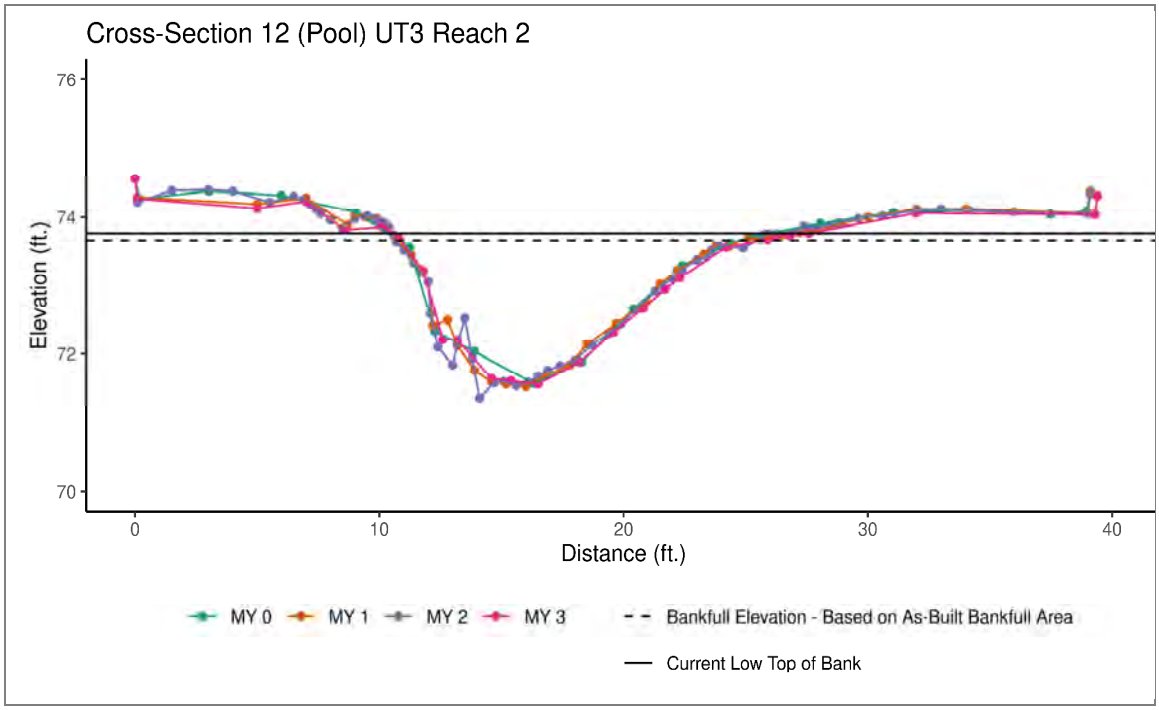
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	73.00	73.08	73.18	73.29		
LTOB Elevation	75.49	75.51	75.51	75.51		
LTOB Max Depth	2.50	2.43	2.33	2.22		
LTOB Cross-Sectional Area	17.58	16.96	16.42	16.49		

Downstream *(3/8/2023)*



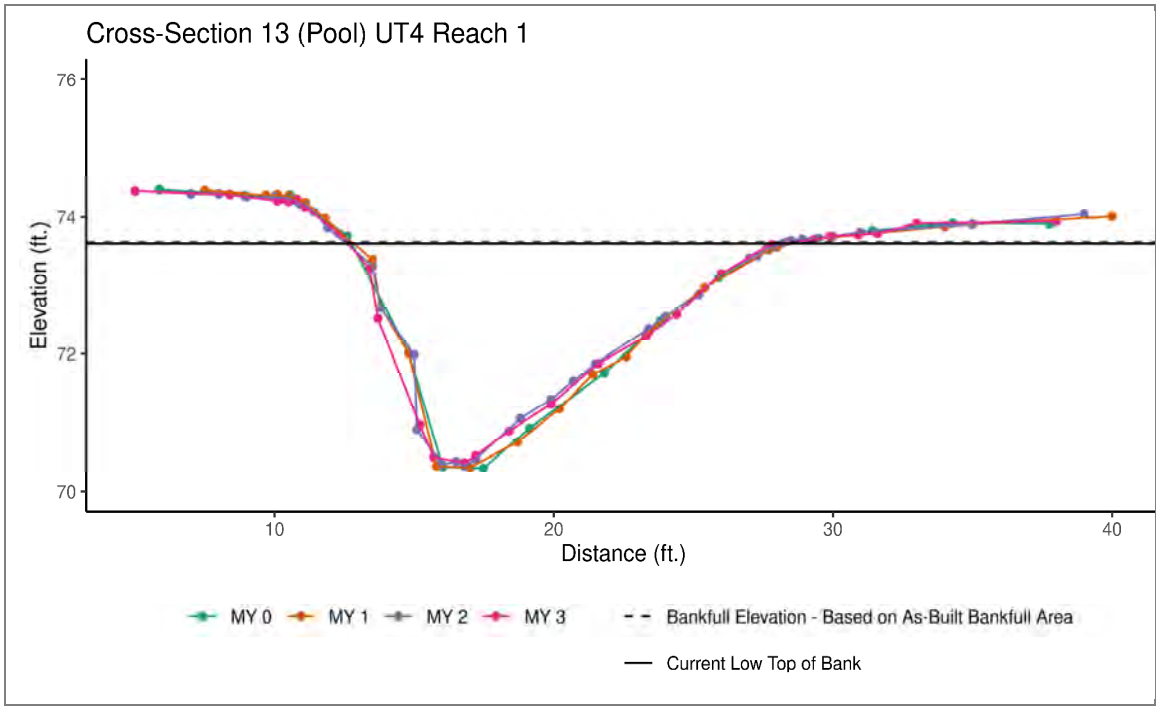
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	74.16	74.20	74.22	74.22		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.96	0.93	0.92		
Thalweg Elevation	72.49	72.57	72.56	72.57		
LTOB Elevation	74.16	74.13	74.10	74.08		
LTOB Max Depth	1.67	1.56	1.54	1.51		
LTOB Cross-Sectional Area	13.07	12.16	11.66	11.40		

Downstream *(3/8/2023)*



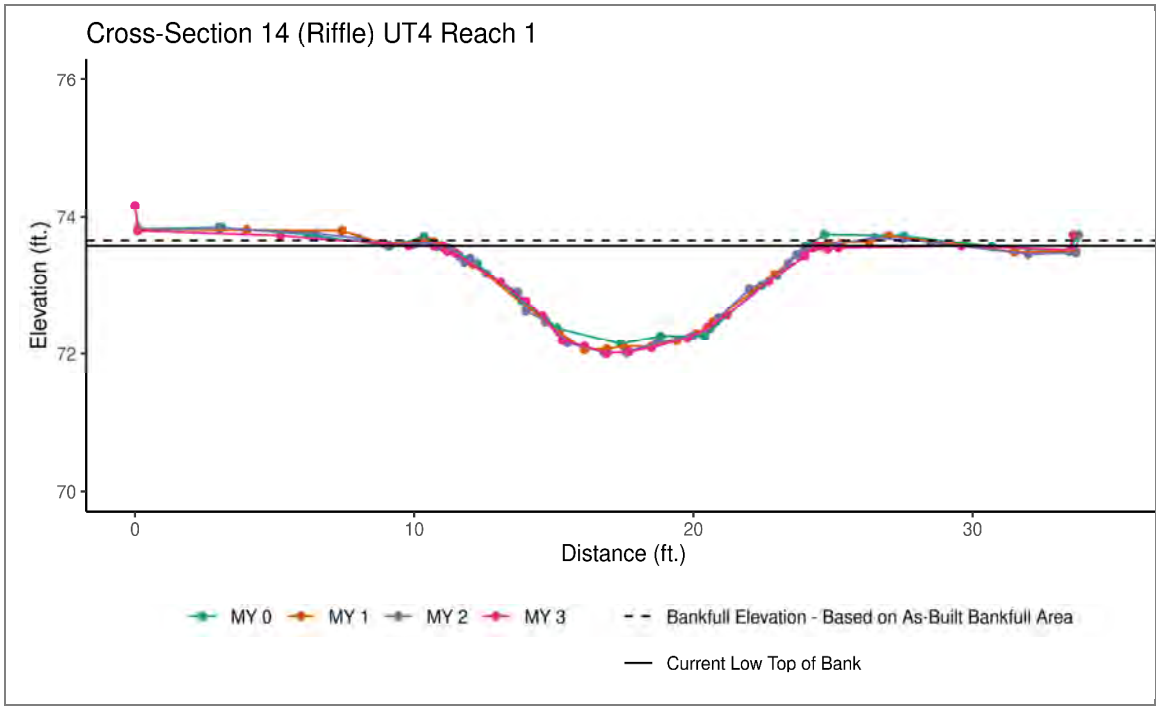
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	71.57	71.53	71.36	71.56		
LTOB Elevation	73.72	73.92	73.92	73.77		
LTOB Max Depth	2.15	2.39	2.56	2.21		
LTOB Cross-Sectional Area	16.99	20.62	21.09	18.62		

Downstream *(3/8/2023)*



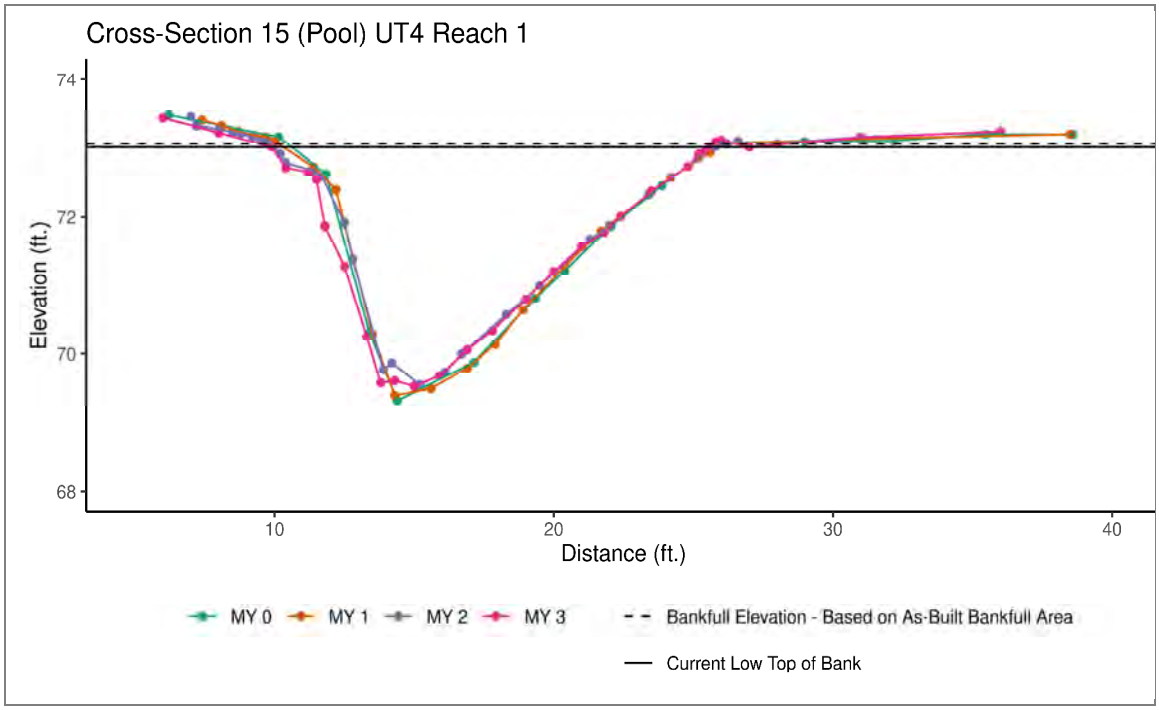
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	70.34	70.35	70.37	70.42		
LTOB Elevation	73.64	73.52	73.57	73.61		
LTOB Max Depth	3.30	3.17	3.20	3.19		
LTOB Cross-Sectional Area	26.09	24.38	23.89	25.60		

Downstream *(3/8/2023)*



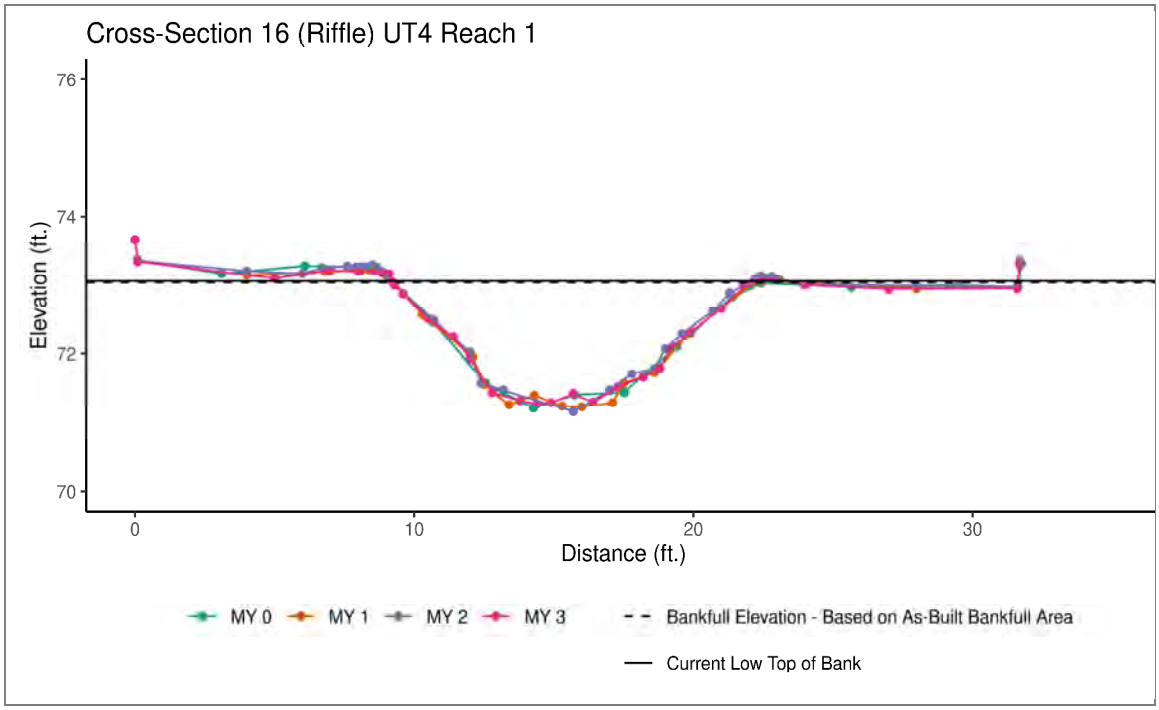
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	73.72	73.70	73.69	73.67		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.91	0.92	0.95		
Thalweg Elevation	72.15	72.06	72.02	72.01		
LTOB Elevation	73.72	73.55	73.55	73.58		
LTOB Max Depth	1.58	1.49	1.53	1.57		
LTOB Cross-Sectional Area	13.68	11.82	11.84	12.49		

Downstream *(3/8/2023)*



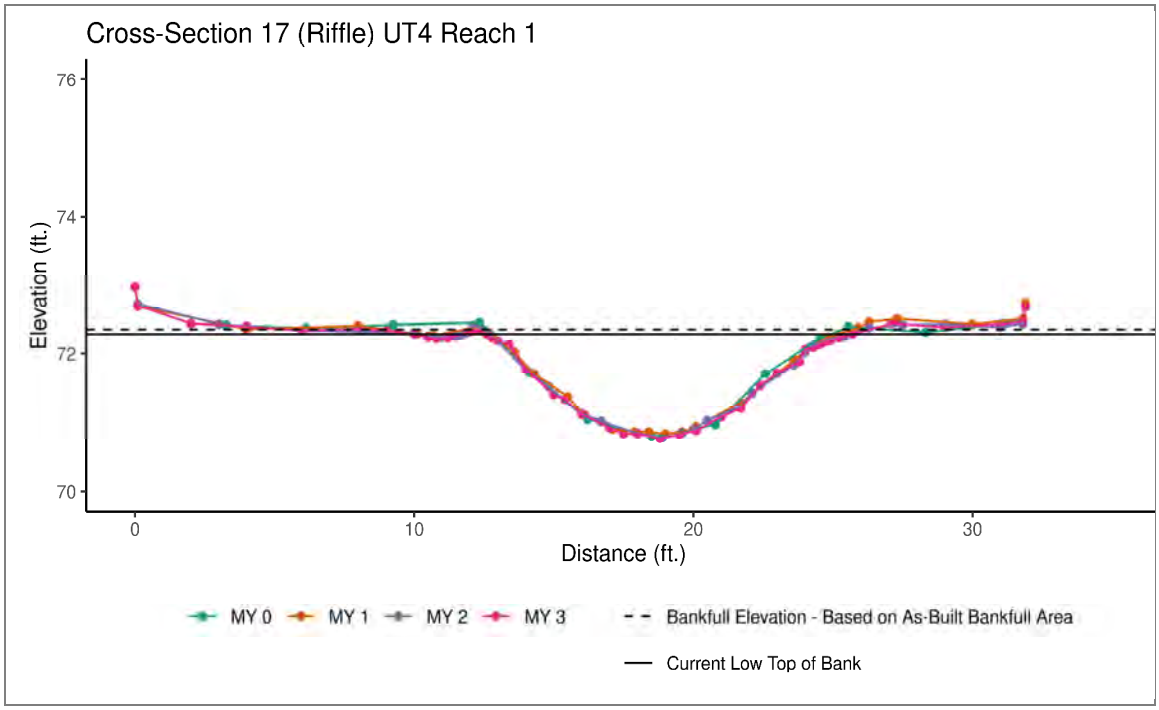
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	69.32	69.40	69.55	69.53		
LTOB Elevation	73.08	73.06	73.03	73.02		
LTOB Max Depth	3.76	3.66	3.48	3.49		
LTOB Cross-Sectional Area	28.70	28.02	26.53	27.90		

Downstream *(3/8/2023)*



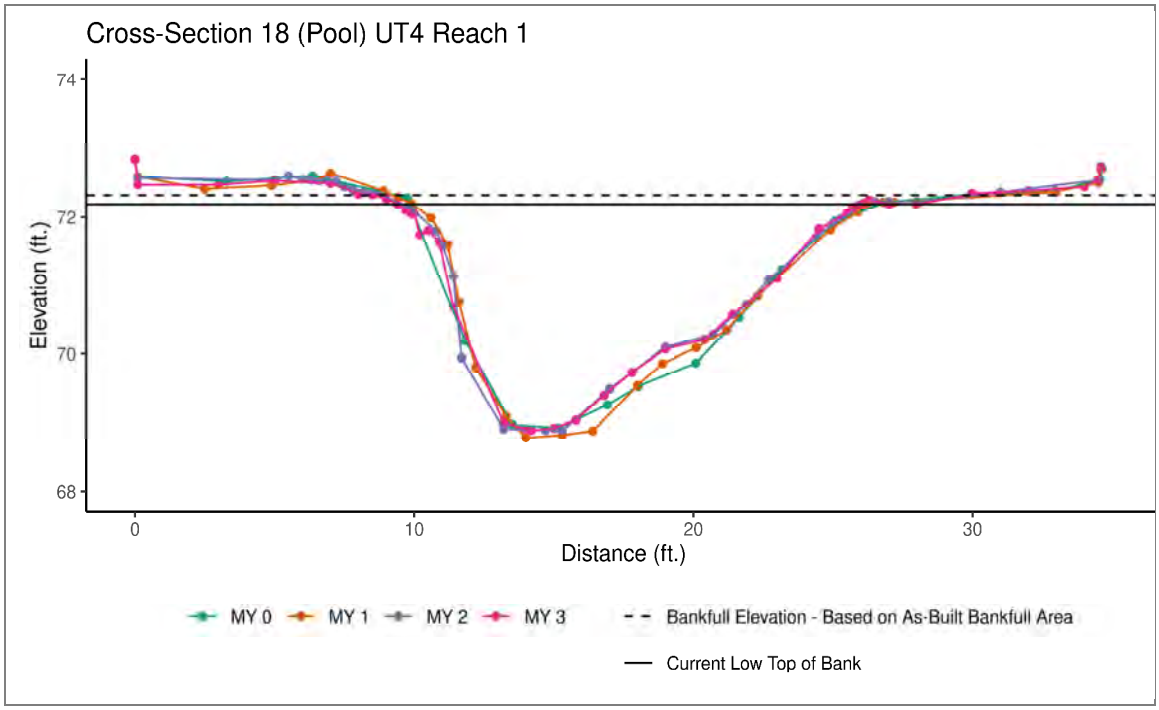
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	73.04	73.02	73.08	73.05		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	1.02	1.01	1.01		
Thalweg Elevation	71.21	71.23	71.16	71.27		
LTOB Elevation	73.04	73.05	73.09	73.07		
LTOB Max Depth	1.83	1.82	1.93	1.80		
LTOB Cross-Sectional Area	14.17	14.57	14.35	14.48		

Downstream *(3/8/2023)*



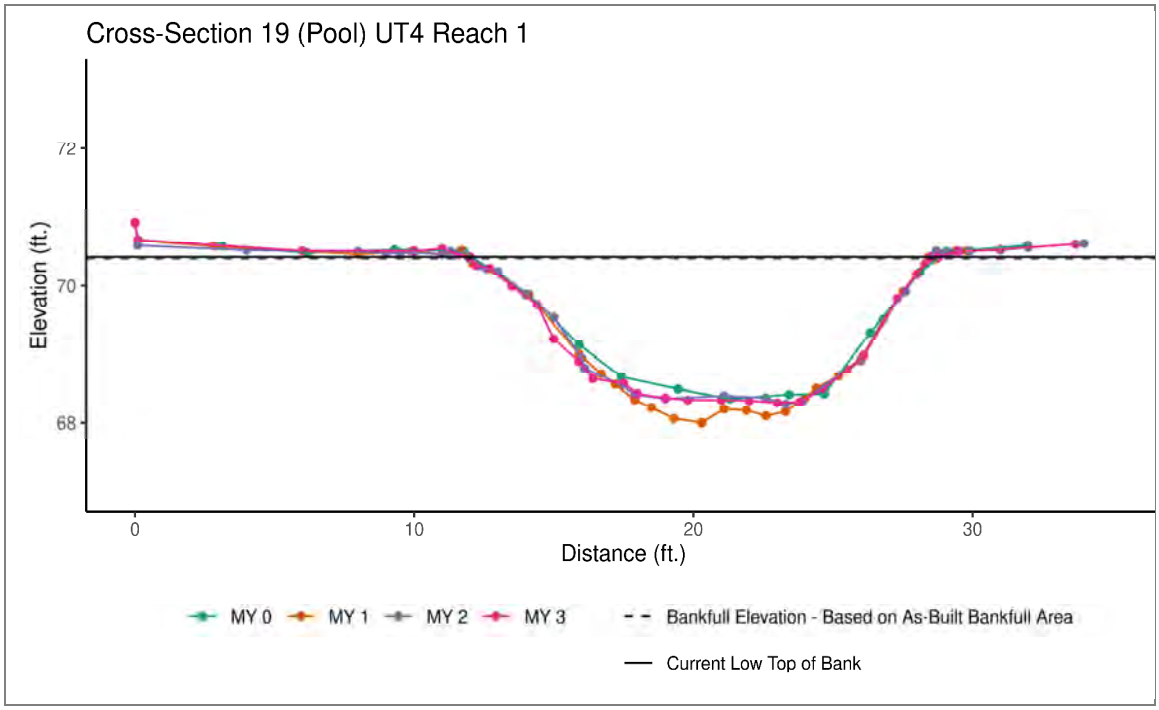
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	72.40	72.40	72.37	72.36		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	1.00	1.01	0.96		
Thalweg Elevation	70.79	70.84	70.78	70.77		
LTOB Elevation	72.40	72.39	72.38	72.29		
LTOB Max Depth	1.60	1.55	1.60	1.52		
LTOB Cross-Sectional Area	12.29	12.22	12.48	11.41		

Downstream *(3/8/2023)*



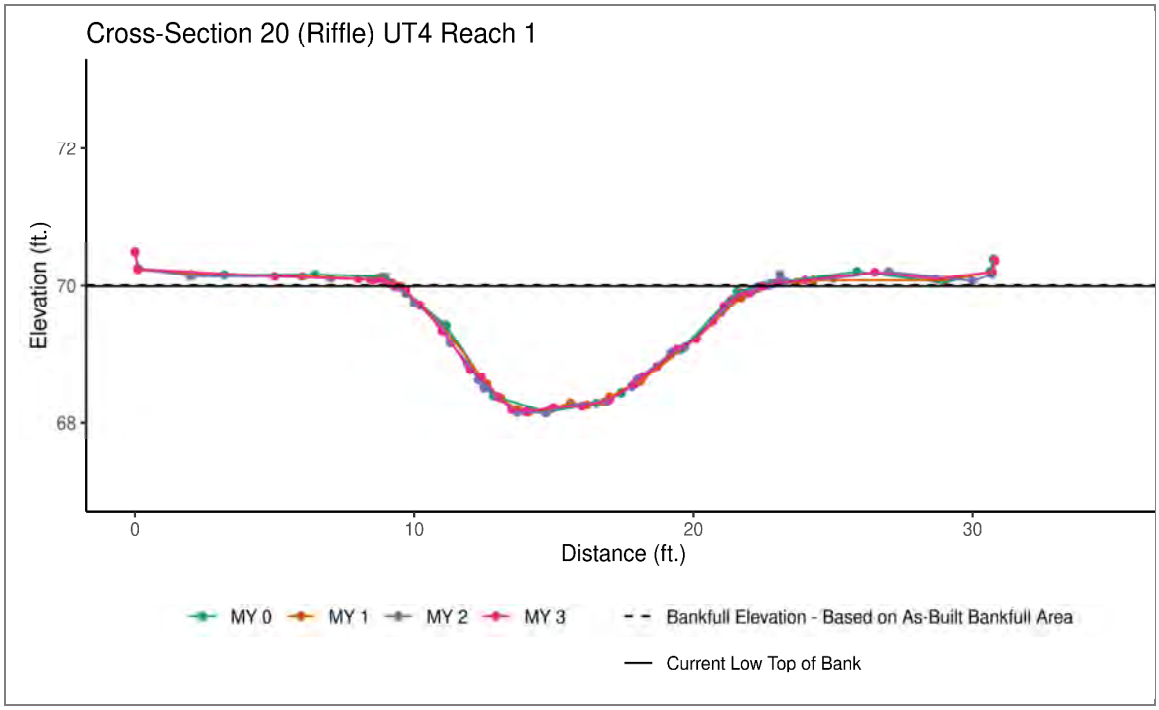
	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	68.92	68.78	68.88	68.89		
LTOB Elevation	72.22	72.23	72.21	72.19		
LTOB Max Depth	3.30	3.45	3.33	3.30		
LTOB Cross-Sectional Area	32.36	31.96	30.60	30.13		

Downstream *(3/8/2023)*



	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB-Bankfull Area	N/A	N/A	N/A	N/A		
Thalweg Elevation	68.35	68.00	68.27	68.29		
LTOB Elevation	70.50	70.41	70.42	70.42		
LTOB Max Depth	2.16	2.41	2.15	2.13		
LTOB Cross-Sectional Area	24.08	24.93	23.74	24.28		

Downstream *(3/8/2023)*



	MY0	MY1	MY2	MY3	MY5	MY7
Bankfull Elevation - Based on AB-Bankfull Area	70.03	70.01	70.00	70.01		
Bank Height Ratio - Based on AB-Bankfull Area	1.00	0.97	0.99	0.99		
Thalweg Elevation	68.15	68.15	68.14	68.16		
LTOB Elevation	70.03	69.96	69.98	69.99		
LTOB Max Depth	1.88	1.81	1.84	1.83		
LTOB Cross-Sectional Area	14.48	13.85	14.20	14.28		

Downstream *(3/8/2023)*

Table 8. Baseline Stream Data Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	PRE-EXISTING CONDITIONS			DESIGN		MONITORING BASELINE (MY0)		
Parameter	**UT1**							
Riffle Only	**Min**	**Max**	**n**	**Min**	**Max**	**Min**	**Max**	**n**
Bankfull Width (ft)	5.7	7.1	3	11.6		12.5	14.9	3
Floodprone Width (ft)	10	100	3	26	58	>200		3
Bankfull Mean Depth (ft)	0.8	0.9	3	0.9		0.7	0.9	3
Bankfull Max Depth (ft)	1.2		3	1.3		1.3	1.6	3
Bankfull Cross Sectional Area (ft^2)	4.9	6.5	3	10.9		9.5	11.9	3
Width/Depth Ratio	6.6	8.1	3	12.4		14.4	20.3	3
Entrenchment Ratio	1.4	17.6	3	2.2	5.0	13.5	16.0	3
Bank Height Ratio	1.6	2.8	3	1.0		1.0		3
Max particle size (mm) mobilized at bankfull	---			---		---		
Rosgen Classification	E5/G5			C5		C5		
Bankfull Discharge (cfs)	11.9			12		10.7	15.2	3
Sinuosity	1.05			1.25		1.28		
Water Surface Slope (ft/ft)	0.0022			0.0011		0.0014		
Other	---			---		---		
Parameter	**UT2 Reach 2**							
Riffle Only	**Min**	**Max**	**n**	**Min**	**Max**	**Min**	**Max**	**n**
Bankfull Width (ft)	5.9		1	7.0		8.3		1
Floodprone Width (ft)	7		1	15	35	>200		1
Bankfull Mean Depth (ft)	0.3		1	0.6		0.5		1
Bankfull Max Depth (ft)	0.5		1	0.9		1.0		1
Bankfull Cross Sectional Area (ft^2)	1.8		1	4.3		4.4		1
Width/Depth Ratio	18.8		1	11.5		15.5		1
Entrenchment Ratio	1.2		1	2.2	5.0	>24		1
Bank Height Ratio	5.6		1	1.0		1.0		1
Max particle size (mm) mobilized at bankfull	---			---		---		
Rosgen Classification	F5			C5		C5		
Bankfull Discharge (cfs)	4.2			4.0		4.2		
Sinuosity	1.03			1.25		1.19		
Water Surface Slope (ft/ft)	0.0024			0.0014		0.0019		
Other	---			---		---		

Table 8. Baseline Stream Data Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	PRE-EXISTING CONDITIONS			DESIGN		MONITORING BASELINE (MY0)		
Parameter	**UT3 Reach 1**							
Riffle Only	**Min**	**Max**	**n**	**Min**	**Max**	**Min**	**Max**	**n**
Bankfull Width (ft)	10.2		1	8.8		9.3		1
Floodprone Width (ft)	12		1	19	44	>200		1
Bankfull Mean Depth (ft)	0.3		1	0.7		0.6		1
Bankfull Max Depth (ft)	0.5		1	1.2		1.0		1
Bankfull Cross Sectional Area (ft^2)	3.5		1	6.3		5.8		1
Width/Depth Ratio	29.9		1	12.3		15.8		1
Entrenchment Ratio	1.2		1	2.2	5.0	>20		1
Bank Height Ratio	7.1		1	1.0		1.0		1
Max particle size (mm) mobilized at bankfull	---			---		---		
Rosgen Classification	F5			C5		C5		
Bankfull Discharge (cfs)	7.1			7		5		
Sinuosity	1.01			1.25		1.26		
Water Surface Slope (ft/ft)	0.0065			0.0015		0.0012		
Other	---			---		---		
Parameter	**UT3 Reach 2**							
Riffle Only	**Min**	**Max**	**n**	**Min**	**Max**	**Min**	**Max**	**n**
Bankfull Width (ft)	12		1	11.0		12.5		1
Floodprone Width (ft)	13		1	24	55	>200		1
Bankfull Mean Depth (ft)	0.8		1	0.9		1.0		1
Bankfull Max Depth (ft)	1.3		1	1.0		1.7		1
Bankfull Cross Sectional Area (ft^2)	9.1		1	9.6		13.1		1
Width/Depth Ratio	16.0		1	12.6		11.9		1
Entrenchment Ratio	1		1	2.2	5.0	>16		1
Bank Height Ratio	3.4		1	1.0		1.0		1
Max particle size (mm) mobilized at bankfull	---			---		---		
Rosgen Classification	F5			C5		C5		
Bankfull Discharge (cfs)	10.0			9.9		16.8		
Sinuosity	1.05			1.20		1.26		
Water Surface Slope (ft/ft)	0.0014			0.0010		0.0012		
Other	---			---		---		

Table 8. Baseline Stream Data Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	PRE-EXISTING CONDITIONS			DESIGN		MONITORING BASELINE (MY0)		
Parameter	**UT4 Reach 1**							
Riffle Only	**Min**	**Max**	**n**	**Min**	**Max**	**Min**	**Max**	**n**
Bankfull Width (ft)	5.1	12.4	2	12.8		13.1	13.5	3
Floodprone Width (ft)	13	14	2	28	64	178	>200	3
Bankfull Mean Depth (ft)	0.9	1.8	2	1.1		0.9	1.1	3
Bankfull Max Depth (ft)	1.3	2.2	2	1.5		1.6	1.9	3
Bankfull Cross Sectional Area (ft^2)	9.0	11.1	2	13.6		12.3	14.5	3
Width/Depth Ratio	2.9	13.9	2	12.1		12.3	13.9	3
Entrenchment Ratio	1.2	2.5	2	2.2	5.0	13.2	>15	3
Bank Height Ratio	2.3	5.3	2	1.0		1.0		3
Max particle size (mm) mobilized at bankfull	---			---		---		
Rosgen Classification	E5/F5			C5		C5		
Bankfull Discharge (cfs)	18.4			18.7		15.0	18.9	3
Sinuosity	1.04			1.25		1.29		
Water Surface Slope (ft/ft)	0.0010			0.0013		0.0012		
Other	---			---		---		

Table 9. Cross-Section Morphology Monitoring Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	UT1																					
	Cross-Section 1 (Pool)						Cross-Section 2 (Riffle)						Cross-Section 3 (Pool)						Cross-Section 4 (Riffle)					
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**
Bankfull Elevation (ft) - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A			76.24	76.26	76.38	76.38			N/A	N/A	N/A	N/A			75.46	75.45	75.49	75.54		
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A			1.00	0.98	0.92	0.92			N/A	N/A	N/A	N/A			1.00	0.96	0.96	0.92		
Thalweg Elevation (ft)	73.00	74.10	74.12	74.25			74.81	74.85	74.87	74.92			72.56	72.70	72.91	72.93			73.88	73.96	73.81	73.87		
LTOB[2] Elevation (ft)	76.16	76.23	76.38	76.34			76.24	76.23	76.26	76.27			75.41	75.39	75.41	75.40			75.46	75.41	75.42	75.40		
LTOB[2] Max Depth (ft)	3.17	2.13	2.26	2.09			1.43	1.38	1.39	1.35			2.85	2.69	2.50	2.47			1.58	1.45	1.61	1.53		
LTOB[2] Cross-Sectional Area (ft^2)	26.20	14.60	17.74	16.35			9.45	9.07	8.27	8.19			23.72	21.60	20.83	20.60			11.91	11.26	11.08	10.31		
	UT1												UT2 Reach 2											
	Cross-Section 5 (Riffle)						Cross-Section 6 (Pool)						Cross-Section 7 (Riffle)						Cross-Section 8 (Pool)					
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**
Bankfull Elevation (ft) - Based on AB Bankfull[1] Area	74.79	74.81	74.79	74.79			N/A	N/A	N/A	N/A			76.22	76.22	76.21	76.24			N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB Bankfull[1] Area	1.00	0.95	0.96	0.95			N/A	N/A	N/A	N/A			1.00	0.99	0.98	0.94			N/A	N/A	N/A	N/A		
Thalweg Elevation (ft)	73.48	73.47	73.44	73.42			71.15	70.81	70.73	71.20			75.20	75.20	75.18	75.19			74.68	74.61	74.63	74.62		
LTOB[2] Elevation (ft)	74.79	74.75	74.74	74.73			74.50	74.43	74.45	74.47			76.22	76.21	76.19	76.17			76.10	76.11	76.11	76.09		
LTOB[2] Max Depth (ft)	1.30	1.28	1.30	1.31			3.36	3.62	3.72	3.27			1.02	1.01	1.01	0.98			1.42	1.50	1.48	1.47		
LTOB[2] Cross-Sectional Area (ft^2)	10.82	9.95	10.07	9.96			31.59	30.39	31.55	30.30			4.43	4.38	4.26	3.94			7.00	7.00	6.97	6.95		
	UT3 Reach 1												UT3 Reach 2											
	Cross-Section 9 (Riffle)						Cross-Section 10 (Pool)						Cross-Section 11 (Riffle)						Cross-Section 12 (Pool)					
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**
Bankfull Elevation (ft) - Based on AB Bankfull[1] Area	75.72	75.69	75.71	75.70			N/A	N/A	N/A	N/A			74.16	74.20	74.22	74.22			N/A	N/A	N/A	N/A		
Bank Height Ratio - Based on AB Bankfull[1] Area	1.00	0.98	0.88	0.92			N/A	N/A	N/A	N/A			1.00	0.96	0.93	0.92			N/A	N/A	N/A	N/A		
Thalweg Elevation (ft)	74.71	74.66	74.63	74.68			73.00	73.08	73.18	73.29			72.49	72.57	72.56	72.57			71.57	71.53	71.36	71.56		
LTOB[2] Elevation (ft)	75.72	75.67	75.58	75.62			75.49	75.51	75.51	75.51			74.16	74.13	74.10	74.08			73.72	73.92	73.92	73.77		
LTOB[2] Max Depth (ft)	1.02	1.01	0.95	0.94			2.50	2.43	2.33	2.22			1.67	1.56	1.54	1.51			2.15	2.39	2.56	2.21		
LTOB[2] Cross-Sectional Area (ft^2)	5.81	5.58	4.76	5.11			17.58	16.96	16.42	16.49			13.07	12.16	11.66	11.40			16.99	20.62	21.09	18.62		

[1]Bank Height Ratio (BHR) takes the As-built bankful area as the basis for adjusting each subsequent years bankfull elevation.

[2]LTOB Area and Max depth - These are based on the LTOB elevation for each years survey (The same elevation used for the LTOB in the BHR calculation). Area below the LTOB elevation will be used and tracked for each year as above. The difference between the LTOB elevation and the thalweg elevation (same as in the BHR calculation) will be recroded and tracked above as LTOB max depth.

Table 9. Cross-Section Morphology Monitoring Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

	UT4 Reach 1																					
	Cross-Section 13 (Pool)						Cross-Section 14 (Riffle)						Cross-Section 15 (Pool)						Cross-Section 16 (Riffle)					
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**
Bankfull Elevation (ft) - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A			73.72	73.70	73.69	73.67			N/A	N/A	N/A	N/A			73.04	73.02	73.08	73.05		
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A			1.00	0.91	0.92	0.95			N/A	N/A	N/A	N/A			1.00	1.02	1.01	1.01		
Thalweg Elevation (ft)	70.34	70.35	70.37	70.42			72.15	72.06	72.02	72.01			69.32	69.40	69.55	69.53			71.21	71.23	71.16	71.27		
LTOB[2] Elevation (ft)	73.64	73.52	73.57	73.61			73.72	73.55	73.55	73.58			73.08	73.06	73.03	73.02			73.04	73.05	73.09	73.07		
LTOB[2] Max Depth (ft)	3.30	3.17	3.20	3.19			1.58	1.49	1.53	1.57			3.76	3.66	3.48	3.49			1.83	1.82	1.93	1.80		
LTOB[2] Cross-Sectional Area (ft^2)	26.09	24.38	23.89	25.60			13.68	11.82	11.84	12.49			28.70	28.02	26.53	27.90			14.17	14.57	14.35	14.48		
	UT4 Reach 1																					
	Cross-Section 17 (Riffle)						Cross-Section 18 (Pool)						Cross-Section 19 (Pool)						Cross-Section 20 (Riffle)					
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY5**	**MY7**
Bankfull Elevation (ft) - Based on AB Bankfull[1] Area	72.40	72.40	72.37	72.36			N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A			70.03	70.01	70.00	70.01		
Bank Height Ratio - Based on AB Bankfull[1] Area	1.00	1.00	1.01	0.96			N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A			1.00	0.97	0.99	0.99		
Thalweg Elevation (ft)	70.79	70.84	70.78	70.77			68.92	68.78	68.88	68.89			68.35	68.00	68.27	68.29			68.15	68.15	68.14	68.16		
LTOB[2] Elevation (ft)	72.40	72.39	72.38	72.29			72.22	72.23	72.21	72.19			70.50	70.41	70.42	70.42			70.03	69.96	69.98	69.99		
LTOB[2] Max Depth (ft)	1.60	1.55	1.60	1.52			3.30	3.45	3.33	3.30			2.16	2.41	2.15	2.13			1.88	1.81	1.84	1.83		
LTOB[2] Cross-Sectional Area (ft^2)	12.29	12.22	12.48	11.41			32.36	31.96	30.60	30.13			24.08	24.93	23.74	24.28			14.48	13.85	14.20	14.28		

[1]Bank Height Ratio (BHR) takes the As-built bankful area as the basis for adjusting each subsequent years bankfull elevation.

[2]LTOB Area and Max depth - These are based on the LTOB elevation for each years survey (The same elevation used for the LTOB in the BHR calculation). Area below the LTOB elevation will be used and tracked for each year as above. The difference between the LTOB elevation and the thalweg elevation (same as in the BHR calculation) will be recroded and tracked above as LTOB max depth.

APPENDIX D. HYDROLOGY DATA

Table 10. Bankfull Events
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

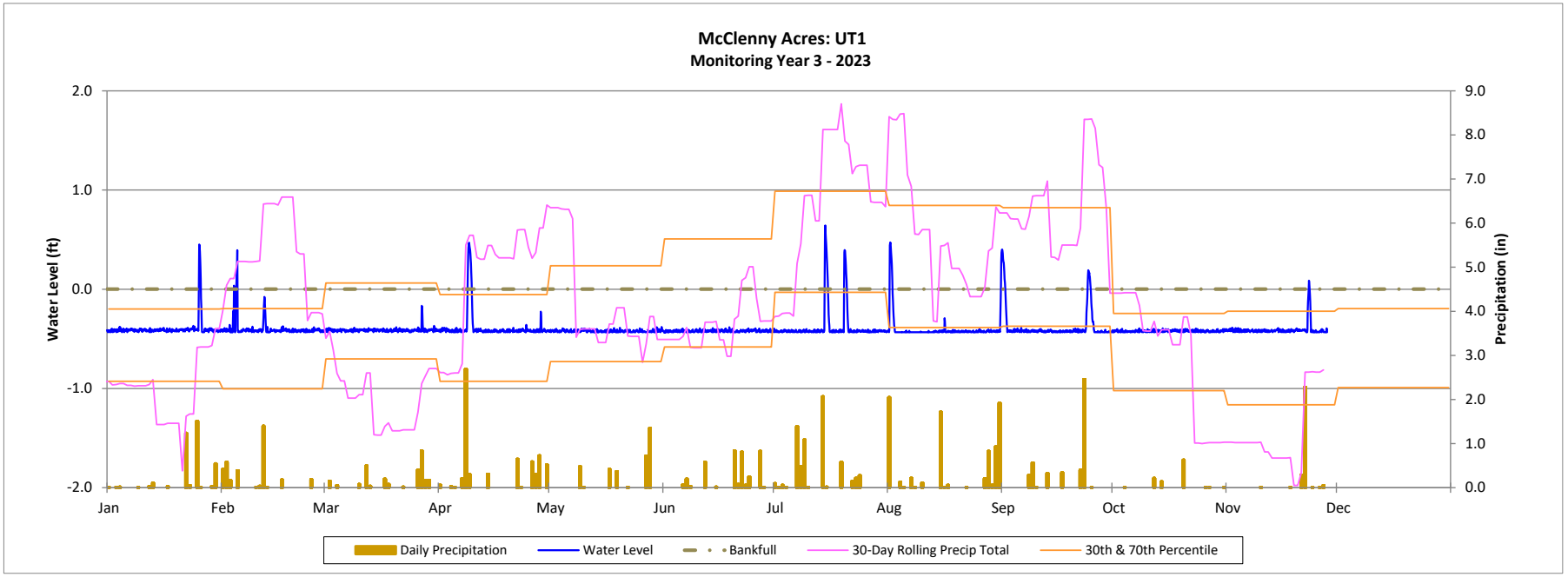
Reach	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
UT1	3/16/2021 6/3/2021 6/12/2021 7/19/2021	1/17/2022	1/25/2023 2/4/2023 4/8/2023 7/15/2023 7/20/2023 8/1/2023 9/1/2023 9/24/2023 11/22/2023				
UT2	7/19/2021		8/1/2023				
UT3	6/3/2021 7/19/2021	1/16/2022 7/9/2022	1/26/2023 4/8/2023 7/14/2023 7/19/2023 8/1/2023 8/31/2023				
UT4	3/16/2021 7/19/2021						

Table 11. Rainfall Summary
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

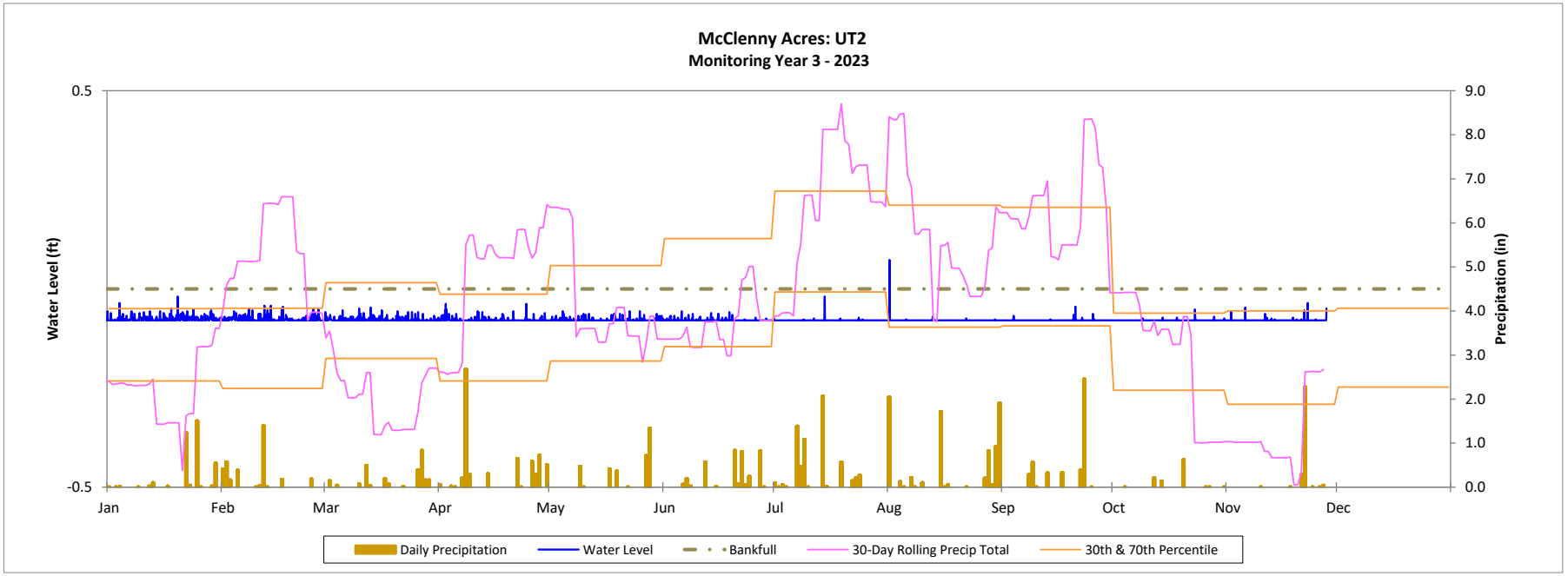
	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
Annual Precip Total	54.18	39.09	48.50*				
WETS 30th Percentile	33.95	33.95	33.95				
WETS 70th Percentile	58.89	58.89	58.89				
Normal	Yes	Yes	Yes				

*Data collection period was from 1/1/2023 through 11/27/2023. Total rainfall amout will be updated during MY4.
2023 monthly rainfall data collected from Cherry Research Station (NC State Climate Office), approximately 1 mile from Site.
30th and 70 percintile rainfall data collected from Smithfield weather station (317994), approximately 18 miles from Site.

Recorded Bankfull Events Plot
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023



Recorded Bankfull Events Plot
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023



Recorded Bankfull Events Plot
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

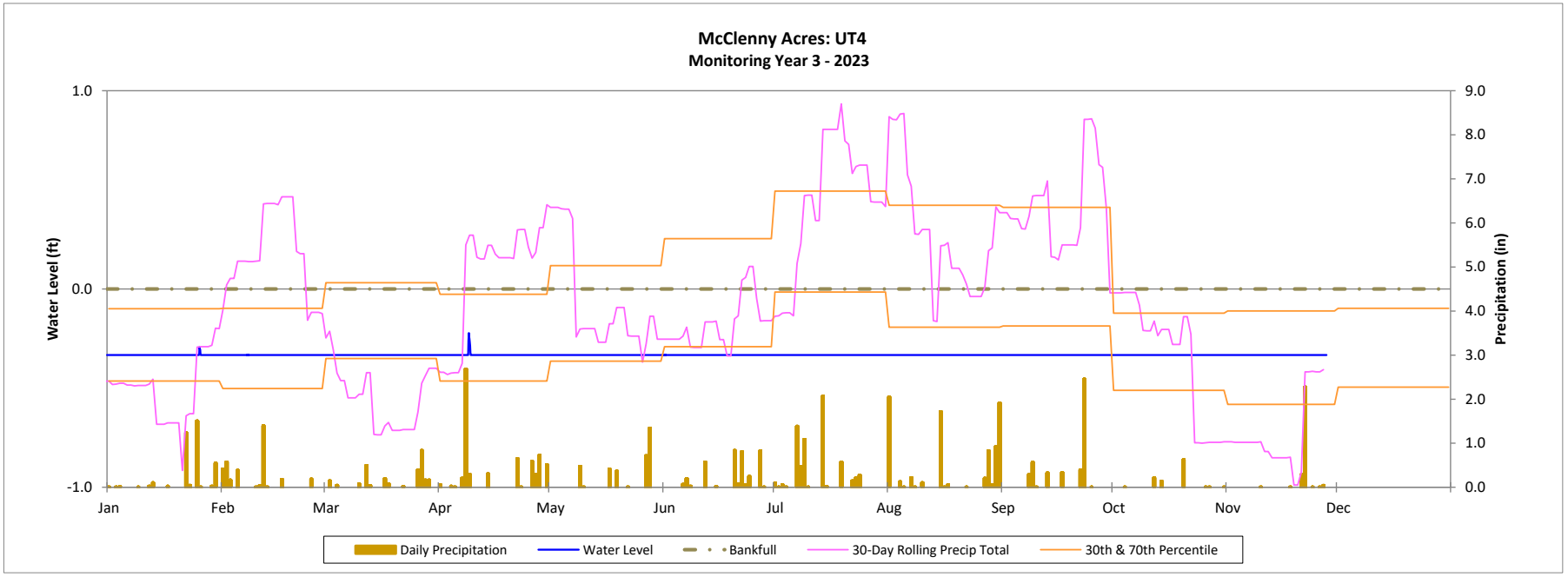


Table 12. Recorded In-Stream Flow Events Summary

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

Reach	Max Consecutive Days/Total Days Meeting Success Criteria[1]						
	MY1 (2021)[2]	MY2 (2022)	MY3 (2023)[3]	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
UT3 Reach 1	61 Days/ 143 Days	104 Days/ 130 Days	107 Days/ 181 Days				

[1]Success criteria is 30 consecutive days of flow.

[2]Data collected 2/26/2021 through 12/31/2021

[3]Data collected 1/1/2023 through 11/27/2023

Recorded In-Stream Flow Events Plot
McClenny Acres
DMS Project No. 100038
Monitoring Year 3 - 2023

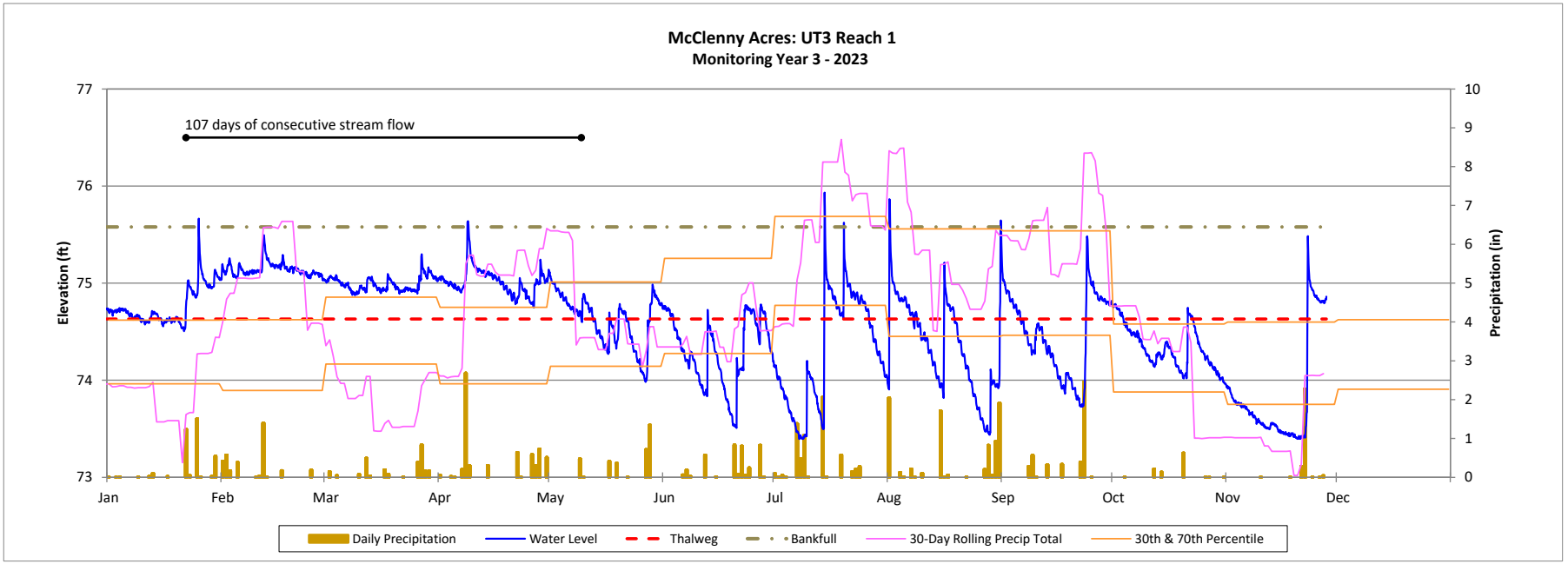


Table 13. Groundwater Gauge Summary

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Summary of Groundwater Gauge Results for Monitoring Years 1 through 7							
Gauge	Max Consecutive Days During Growing Season (Percentage)						
	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
1	89 Days (33.5%)	79 Days (29.7%)	109 Days (41.0%)				
2	6 Days (2.3%)	2 Days (0.8%)	5 Days (1.9%)				
3	87 Days (32.7%)	62 Days (23.3%)	102 Days (38.3%)				
4	4 Days (1.5%)	1 Day (0.4%)	3 Days (1.1%)				
5	40 Days (15.0%)	32 Days (12.0%)	50 Days (18.8%)				
6	40 Days (15.0%)	28 Days (10.5%)	50 Days (18.8%)				
7	89 Days (33.5%)	67 Days (25.2%)	79 Days (29.7%)				
8	20 Days (7.5%)	13 Days (4.9%)	11 Days (4.1%)				
9	2 Days (0.8%)	2 Days (0.8%)	3 Days (1.1%)				
10	3 Days (1.1%)	2 Days (0.8%)	3 Days (1.1%)				
11	58 Days (21.8%)	45 Days (16.9%)	73 Days (27.4%)				
12	57 Days (21.4%)	48 Days (18.0%)	73 Days (27.4%)				

Corresponds to gauges in units with a 10% (27 day) hydroperiod criterions

Corresponds to gauges in units with a 14% (38 day) hydroperiod criterions

Growing Season Dates: 3/1/2022 to 11/21/2022 (265 days).

Table 13. Groundwater Gauge Summary

McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Summary of Groundwater Gauge Results for Monitoring Years 1 through 7							
Gauge	Max Consecutive Days During Growing Season (Percentage)						
	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
13	60 Days (22.6%)	46 Days (17.3%)	72 Days (27.1%)				
14	52 Days (19.5%)	32 Days (12.0%)	50 Days (18.8%)				
15	60 Days (22.6%)	57 Days (21.4%)	74 Days (27.8%)				
16	2 Days (0.8%)	3 Days (1.1%)	10 Days (3.8%)				
17	11 Days (4.1%)	1 Day (0.4%)	7 Days (2.6%)				
18	24 Days (9.0%)	2 Days (0.8%)	10 Days (3.8%)				
19	22 Days (8.3%)	3 Days (1.1%)	8 Days (3.0%)				
20			4 Days (1.5%)				
21			5 Days (1.5%)				
22			50 Days (18.8%)				
23			3 Days (1.1%)				
Reference Well			**11 Days (4.1%)**				

Corresponds to gauges in units with a 10% (27 day) hydroperiod criterions

Corresponds to gauges in units with a 14% (38 day) hydroperiod criterions

Growing Season Dates: 3/1/2022 to 11/21/2022 (265 days).

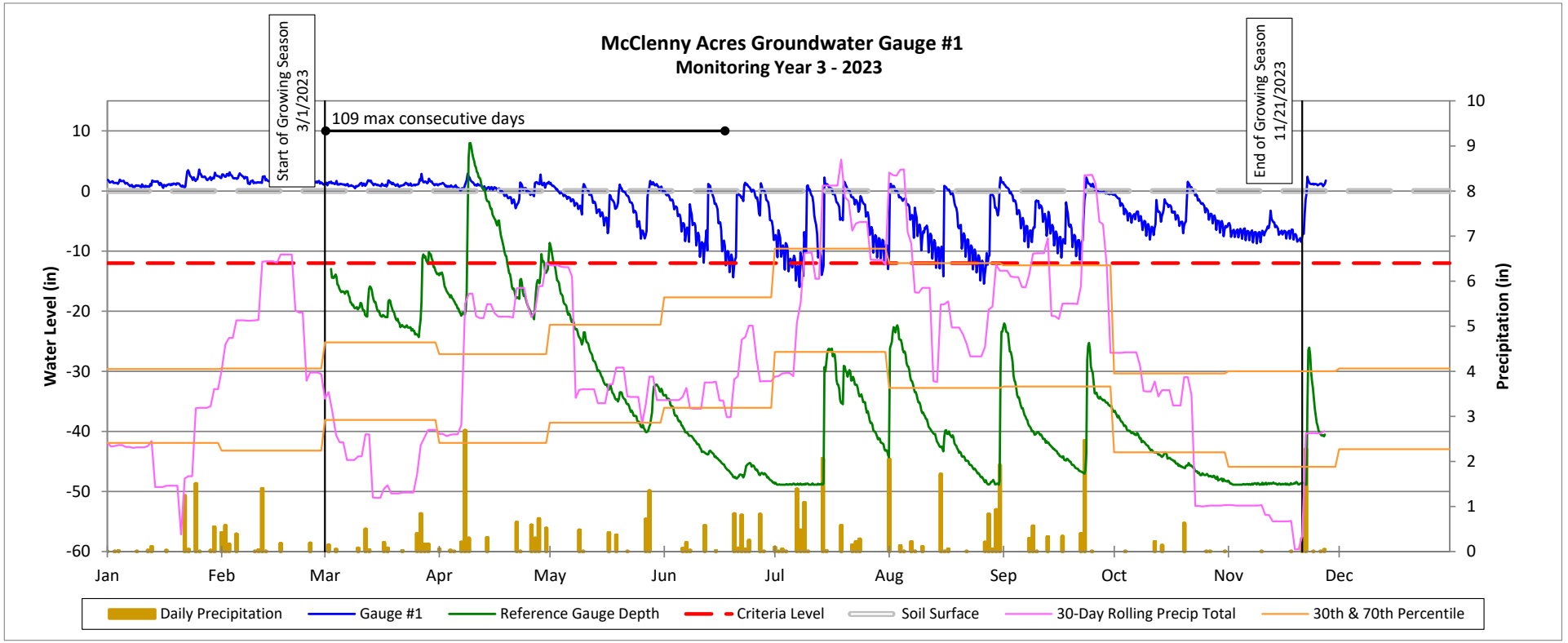
*GW 20-23 and reference well were added during MY3

Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

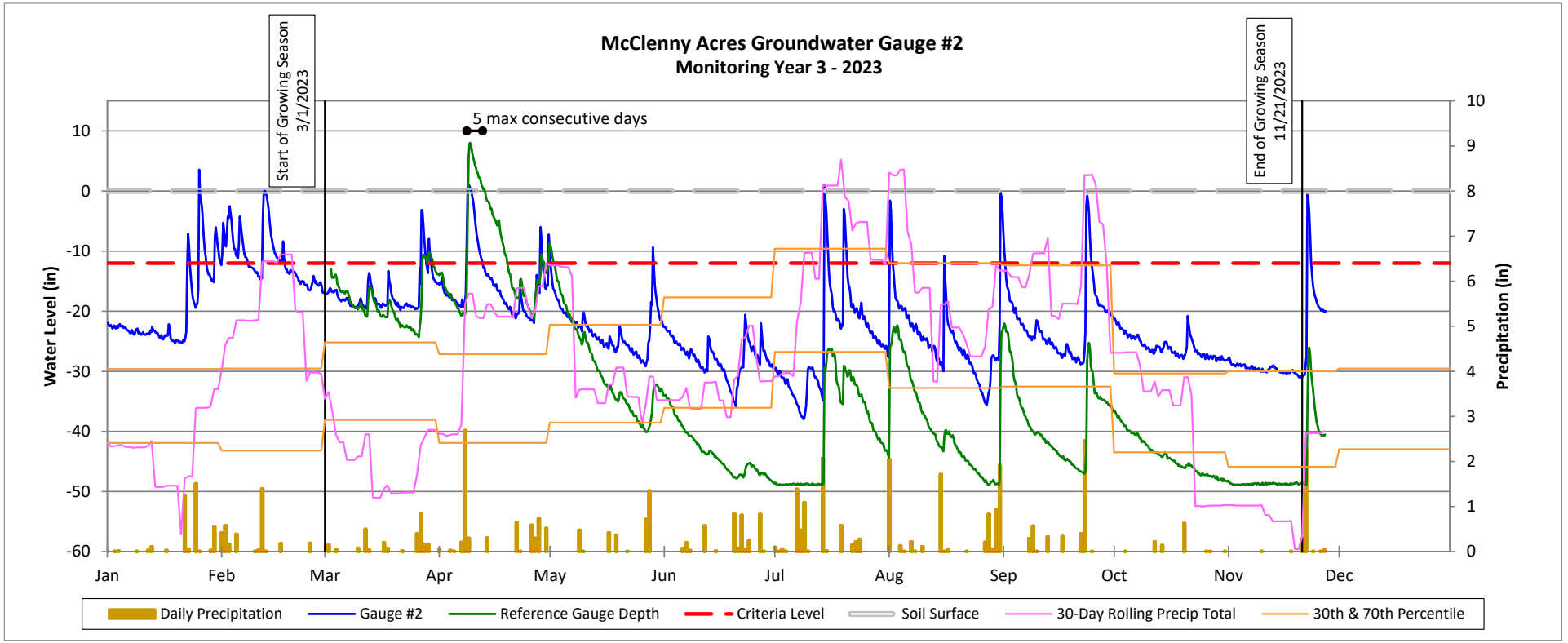


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

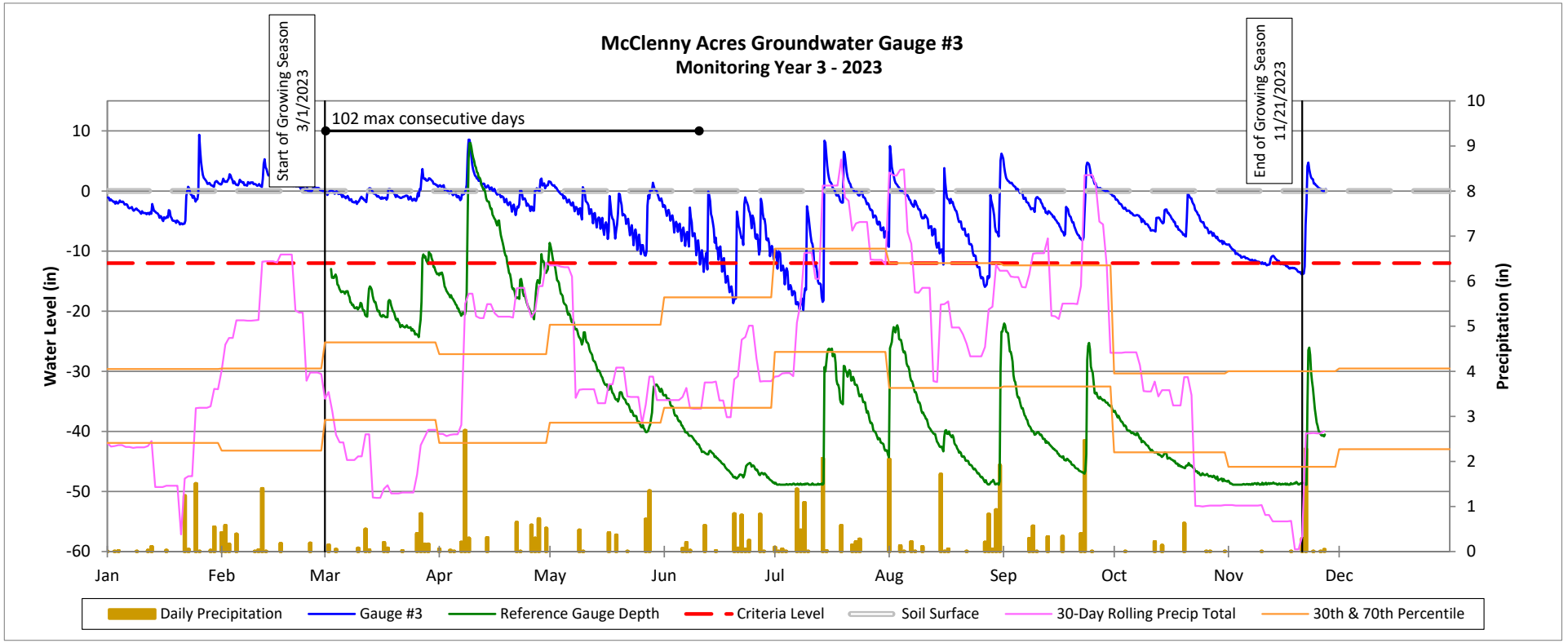


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

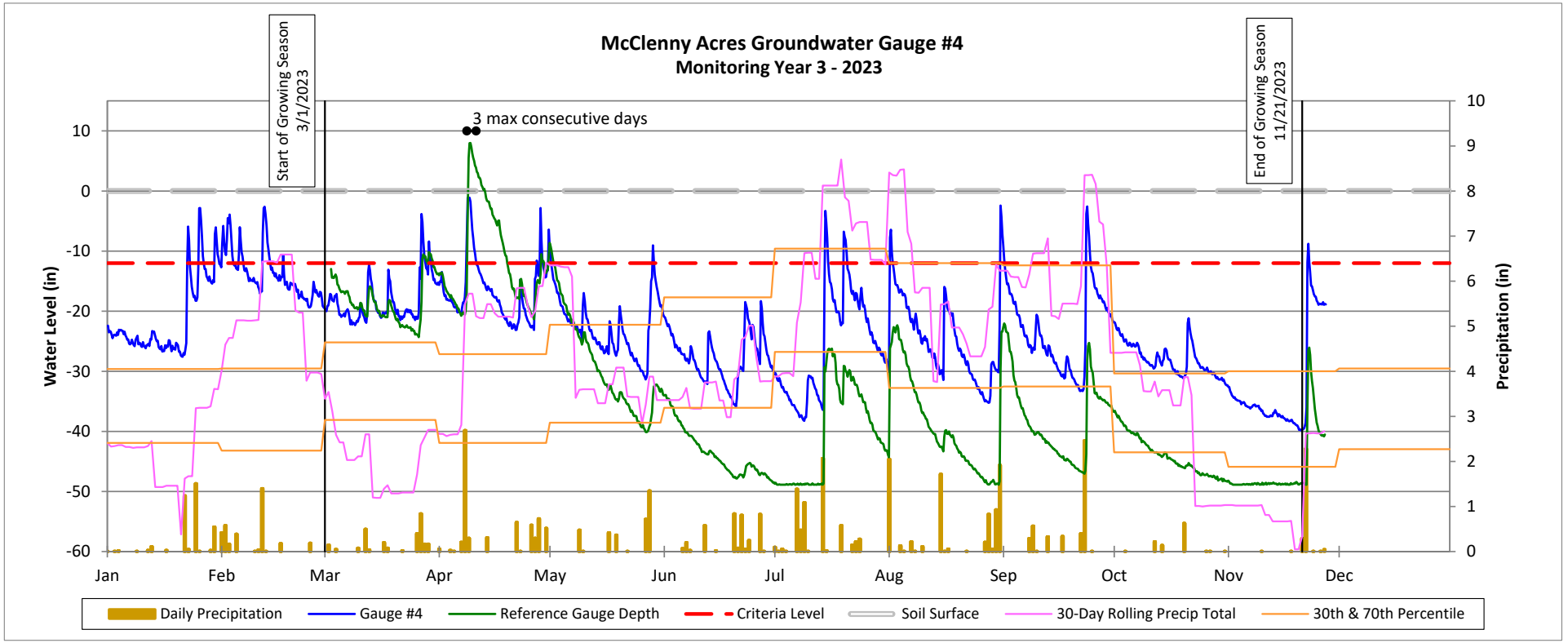


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

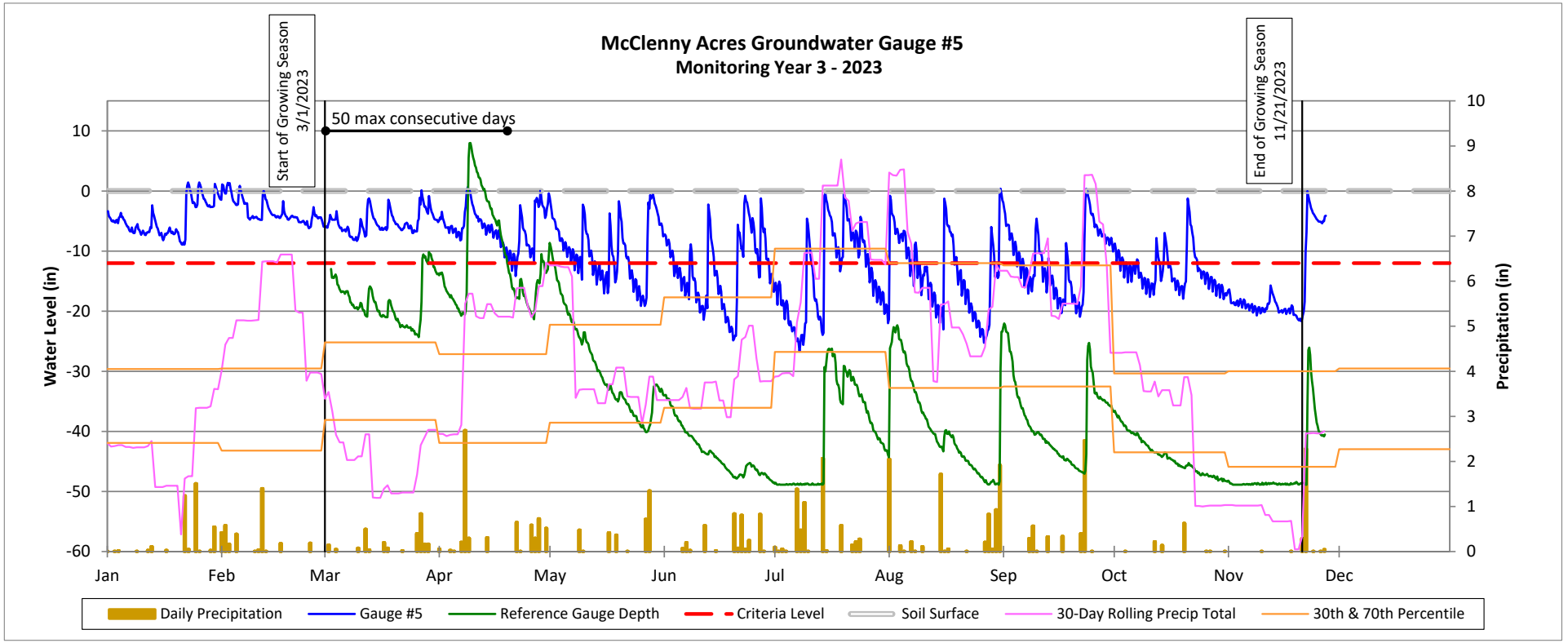


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

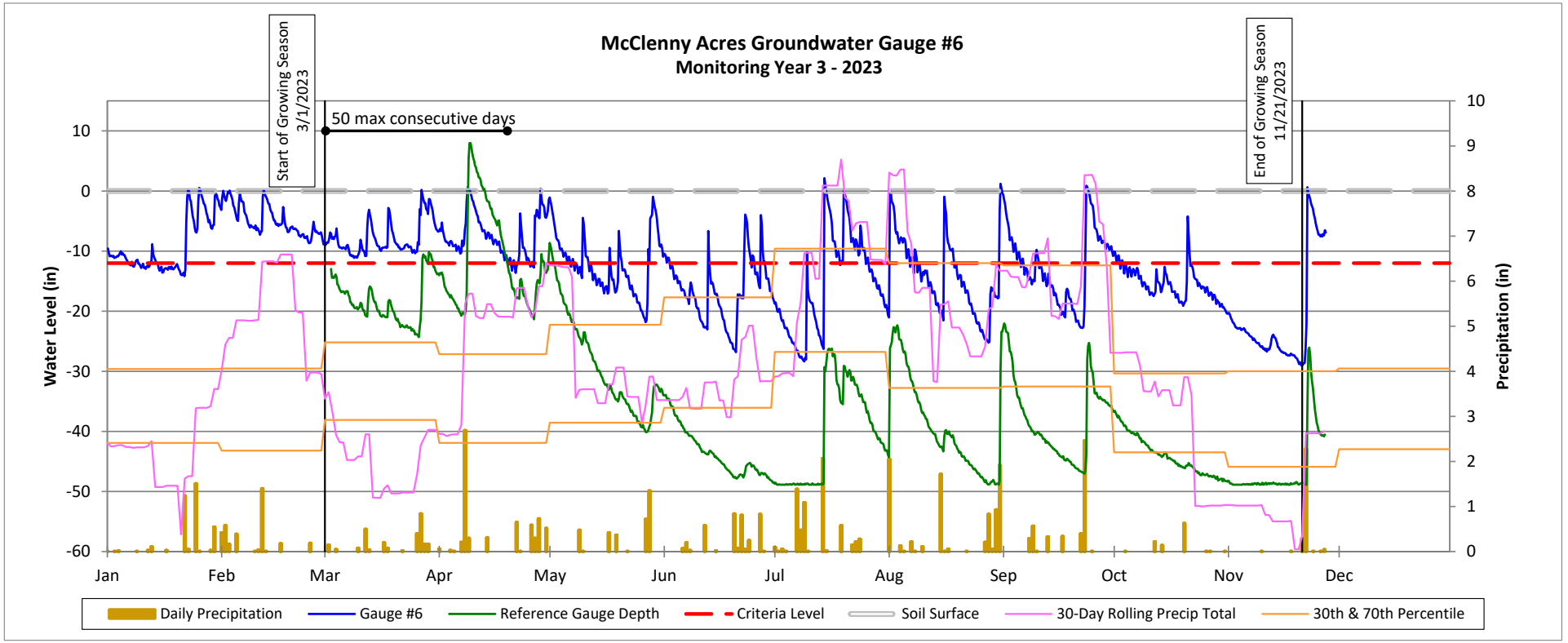


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

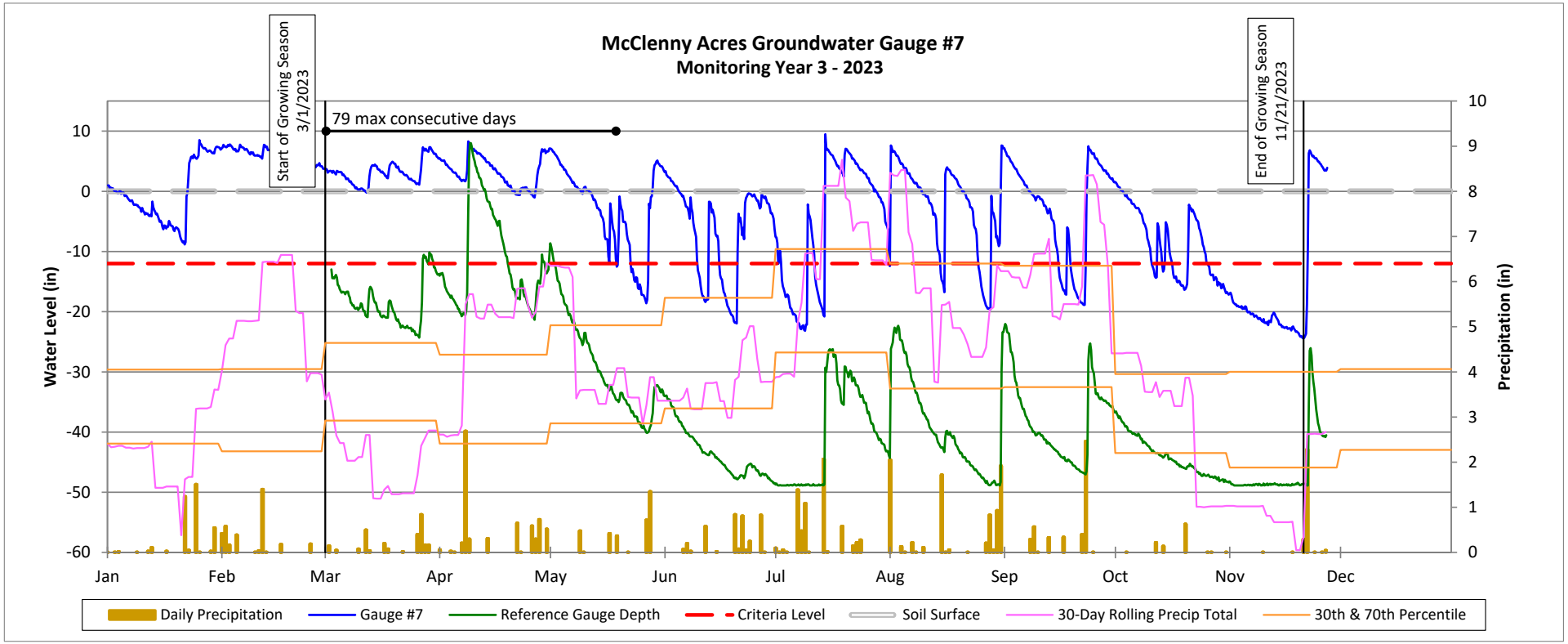


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

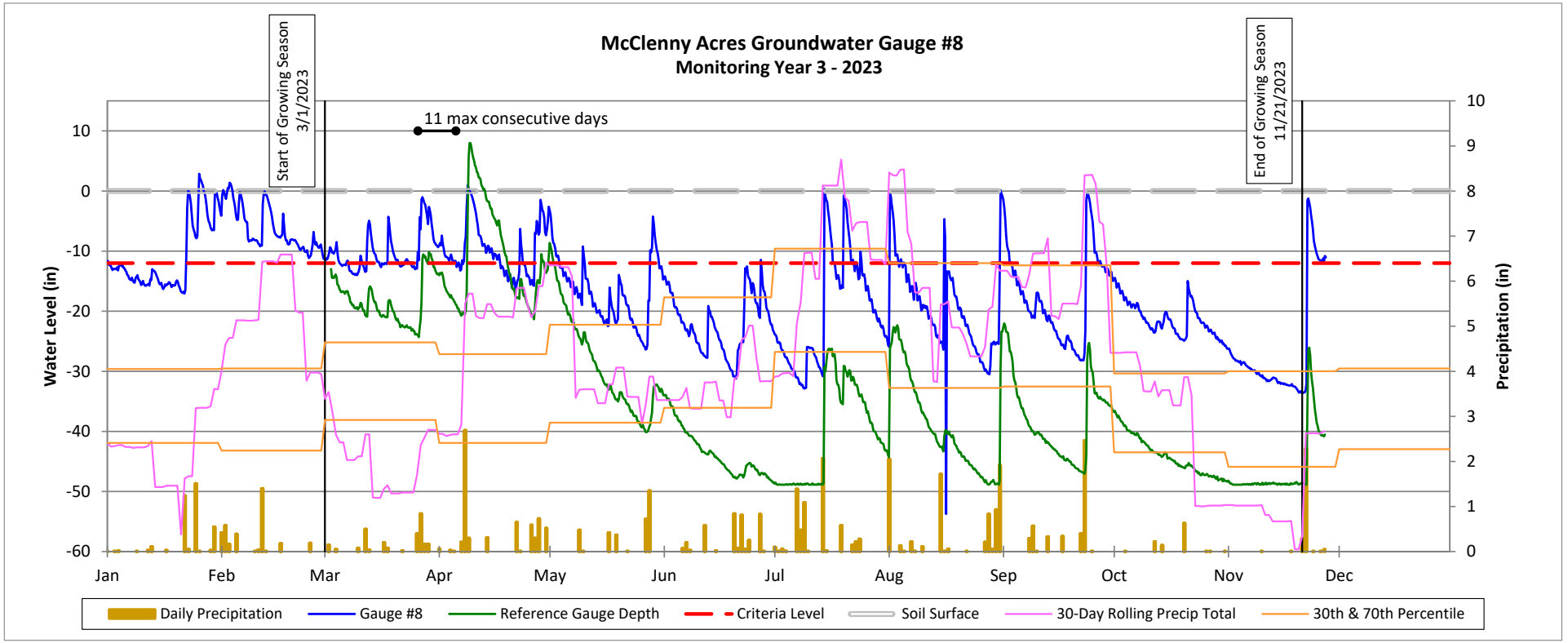


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

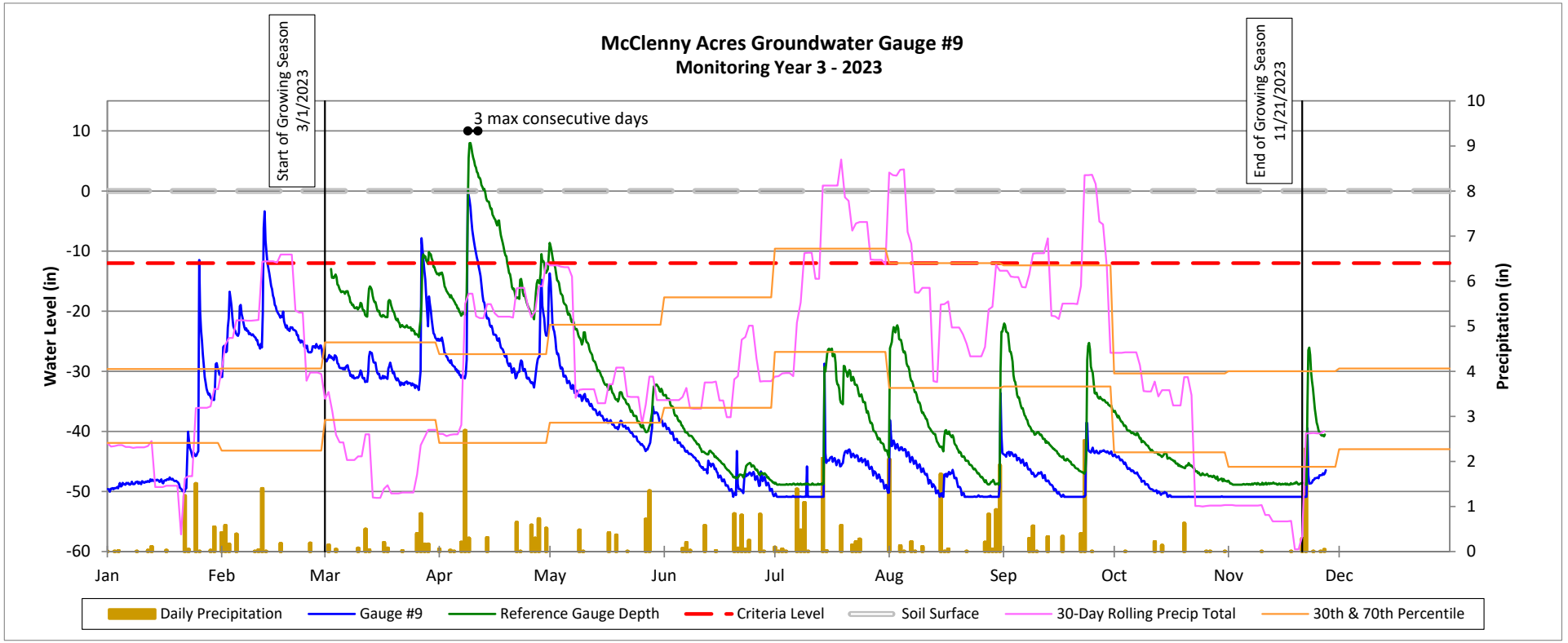


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023



Groundwater Gauge Plot

McClenny Acres Mitigation Site

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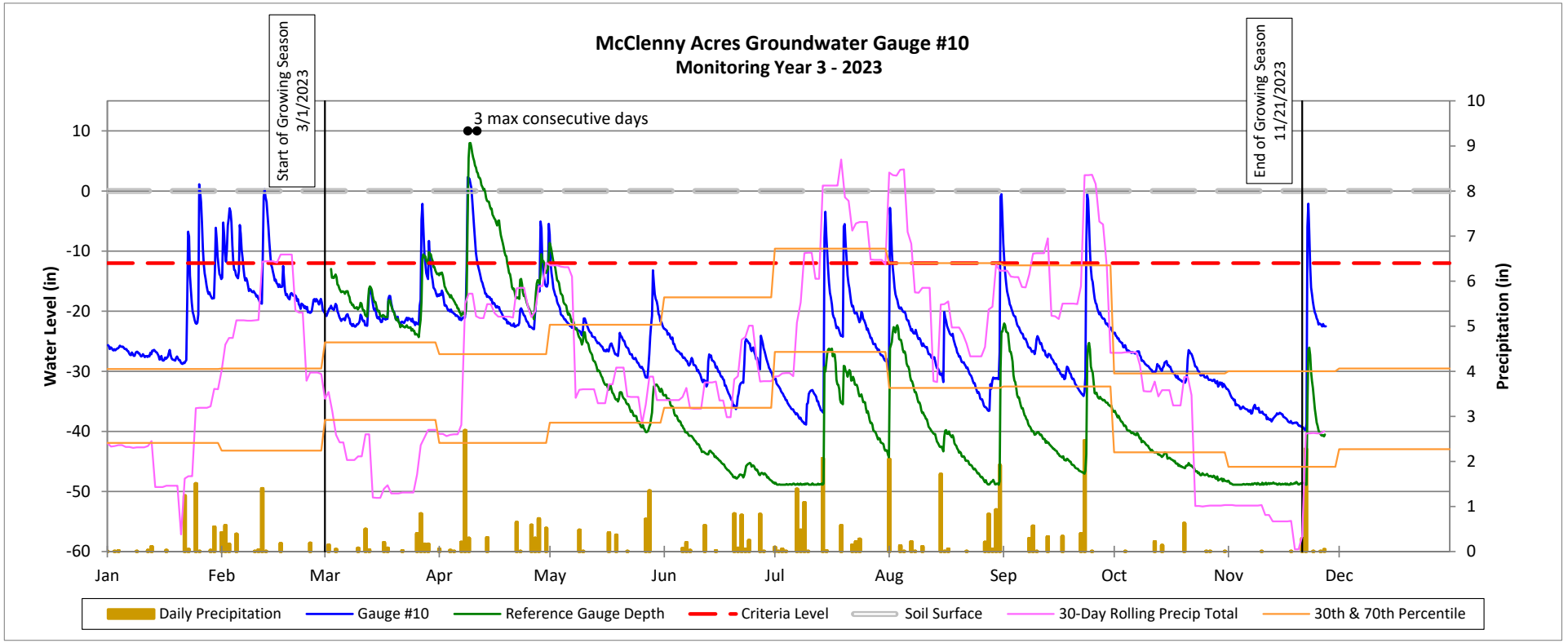
Monitoring Year 3 - 2023

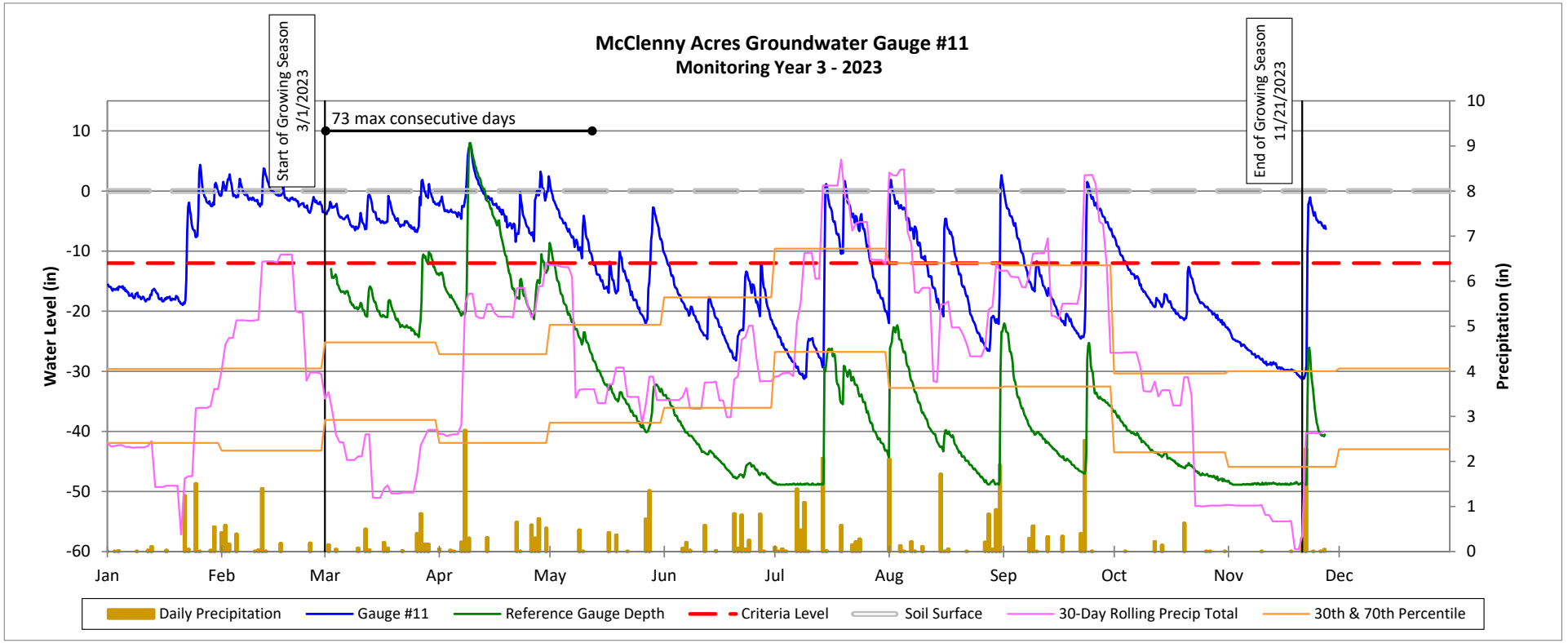


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

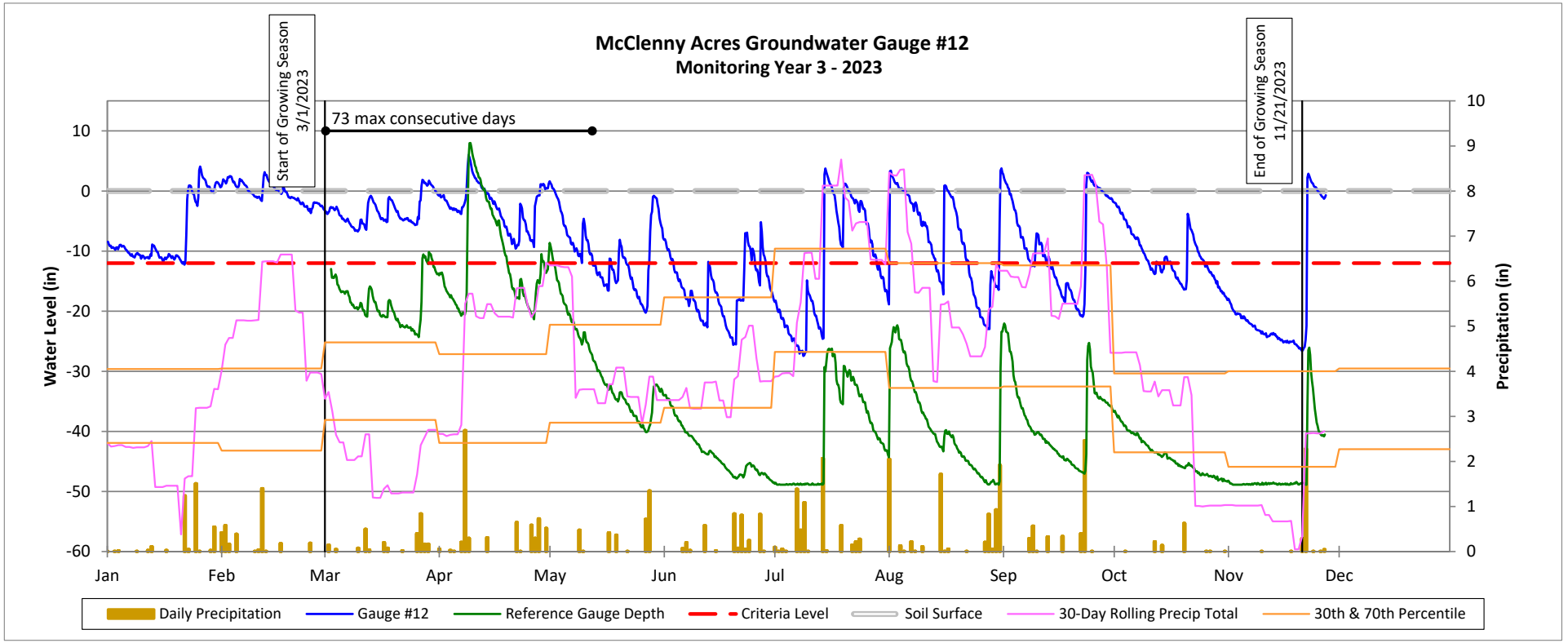


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

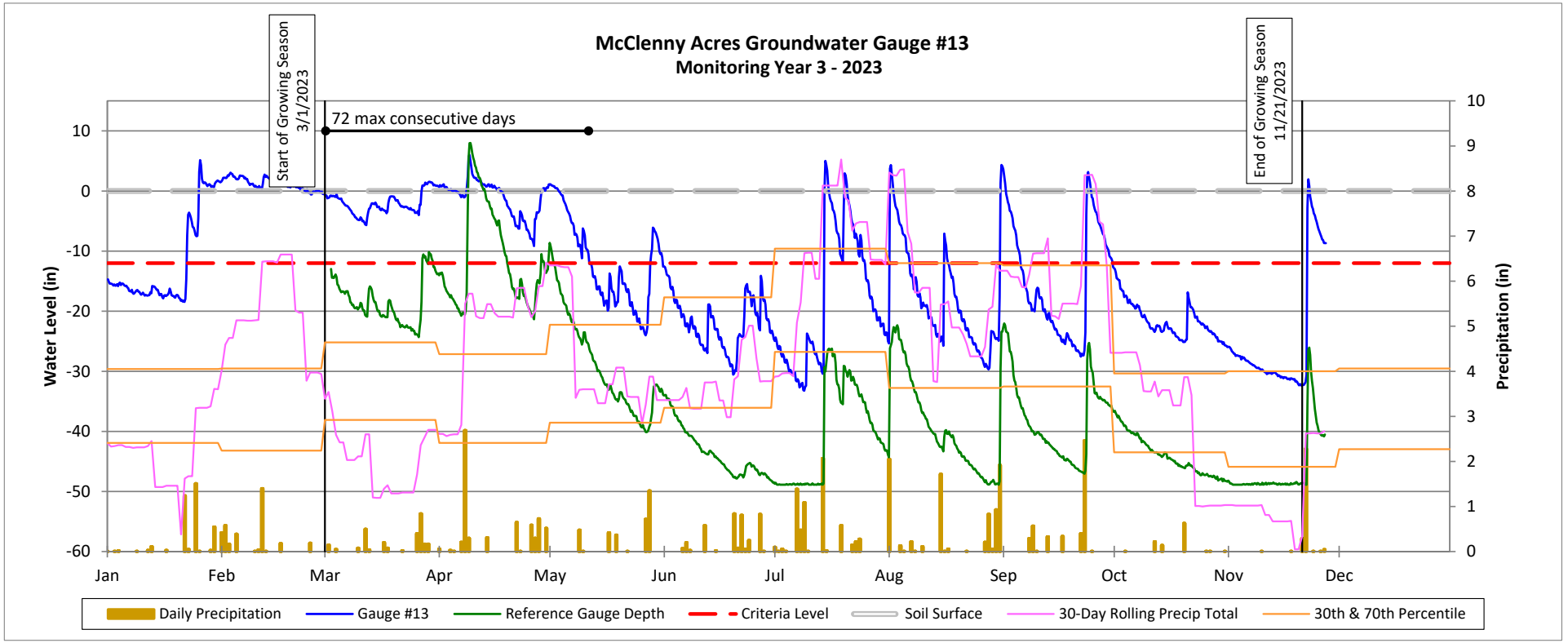


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

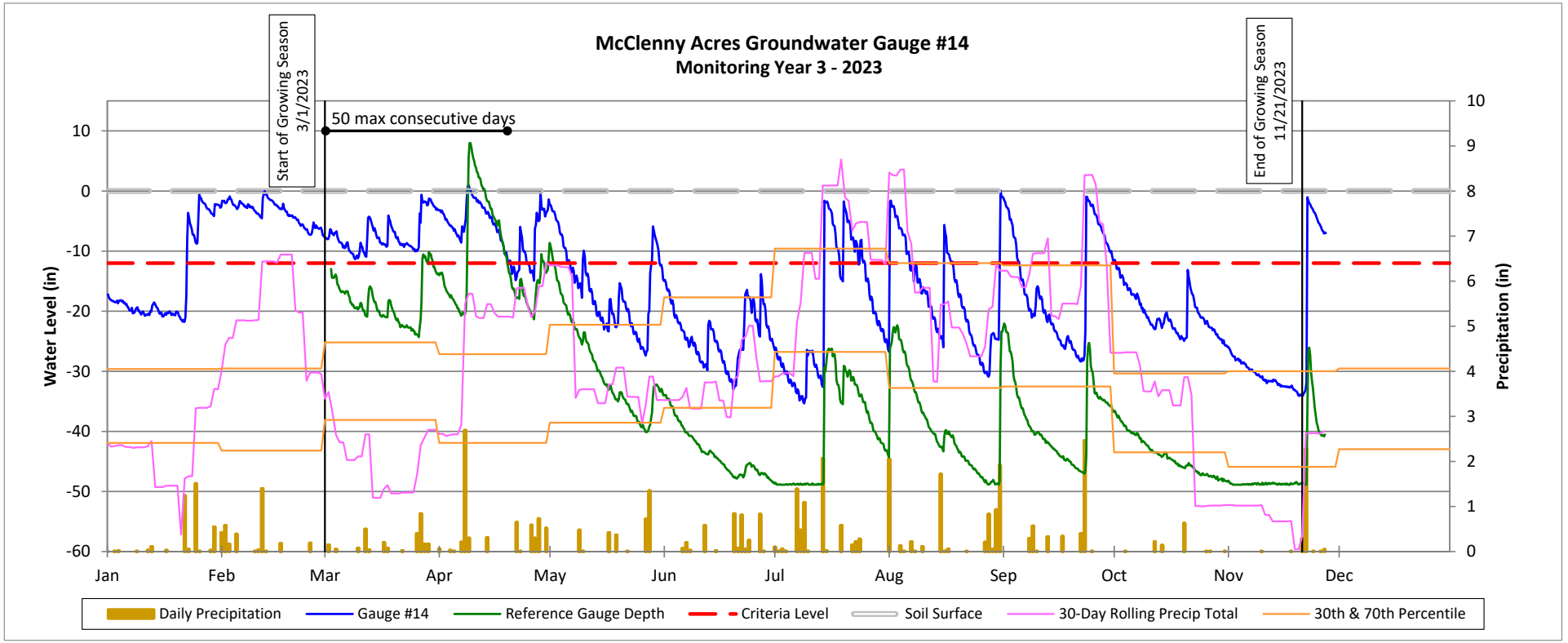


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

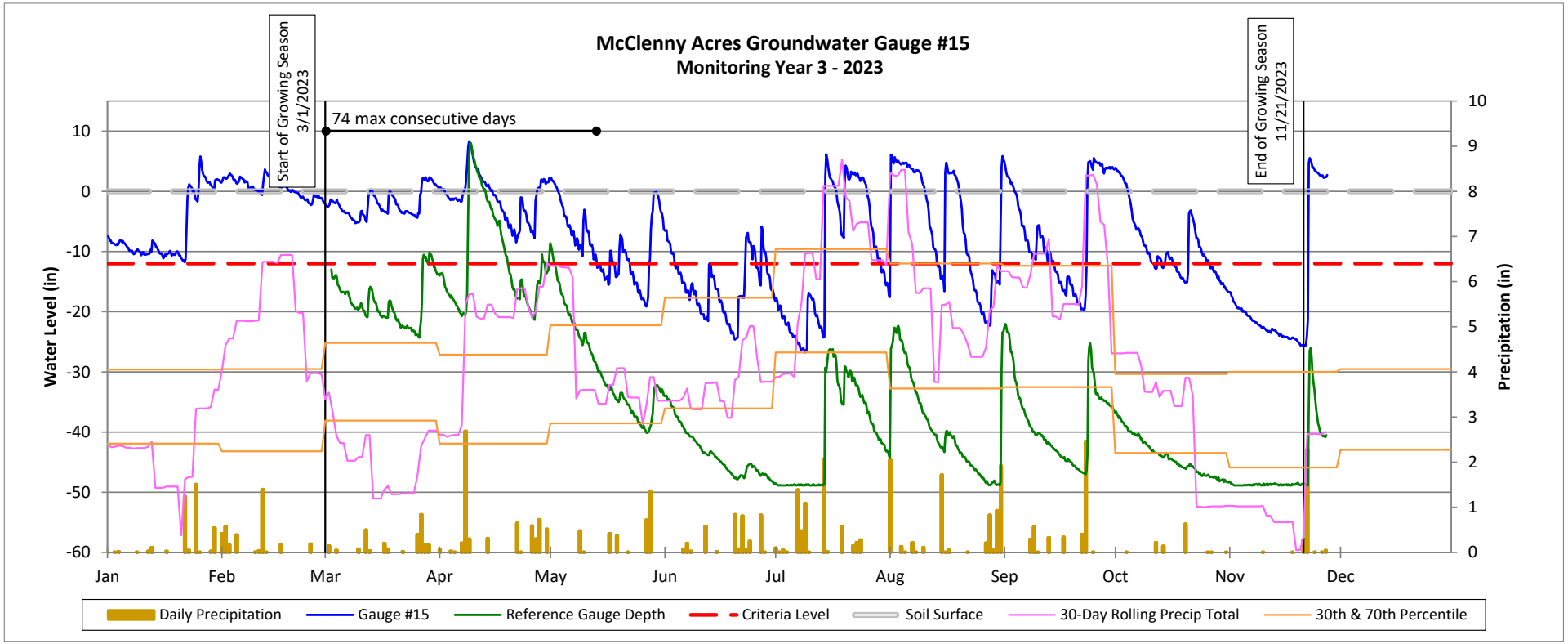


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

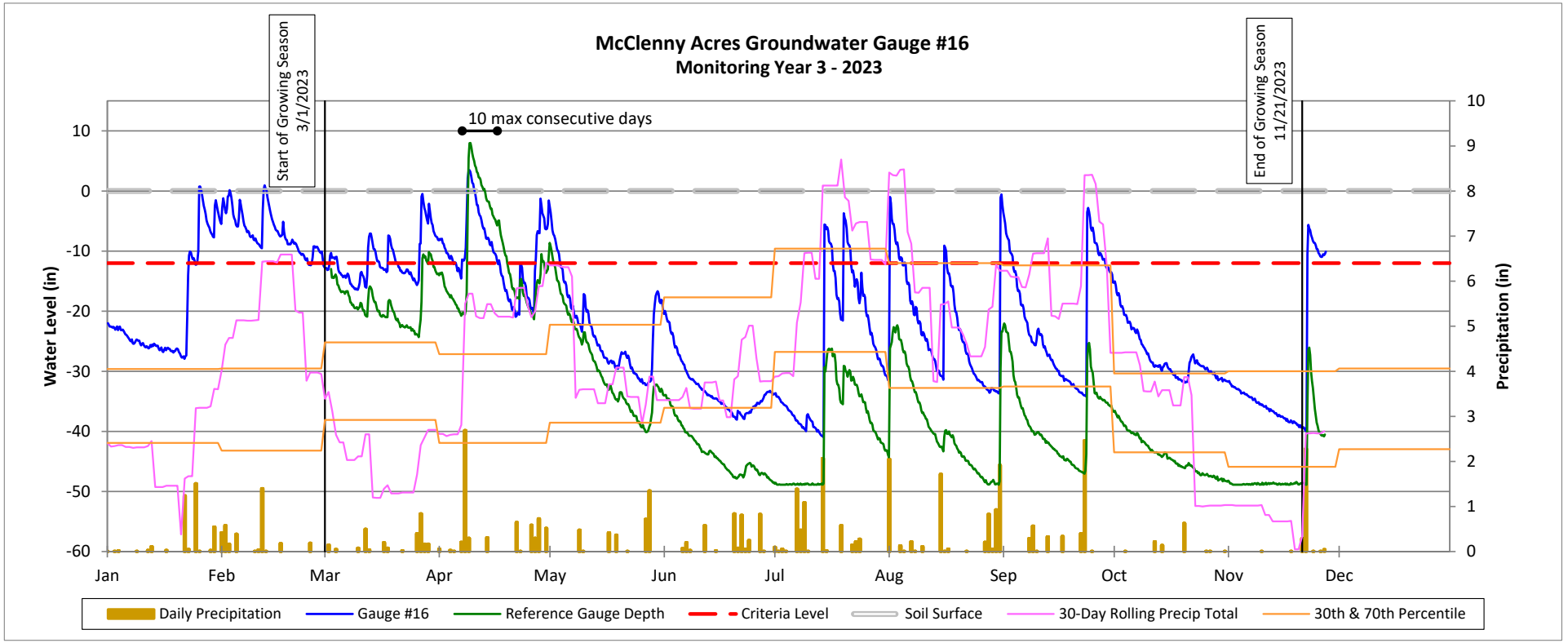


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

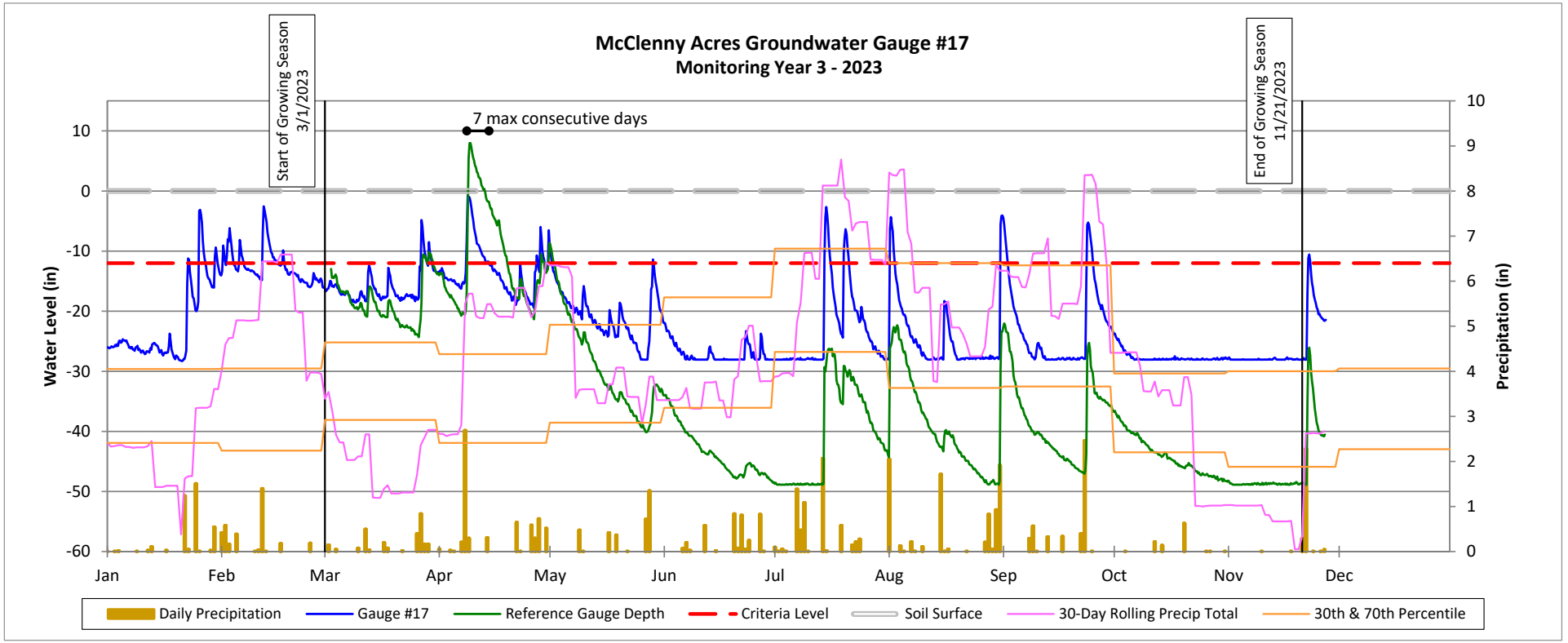


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

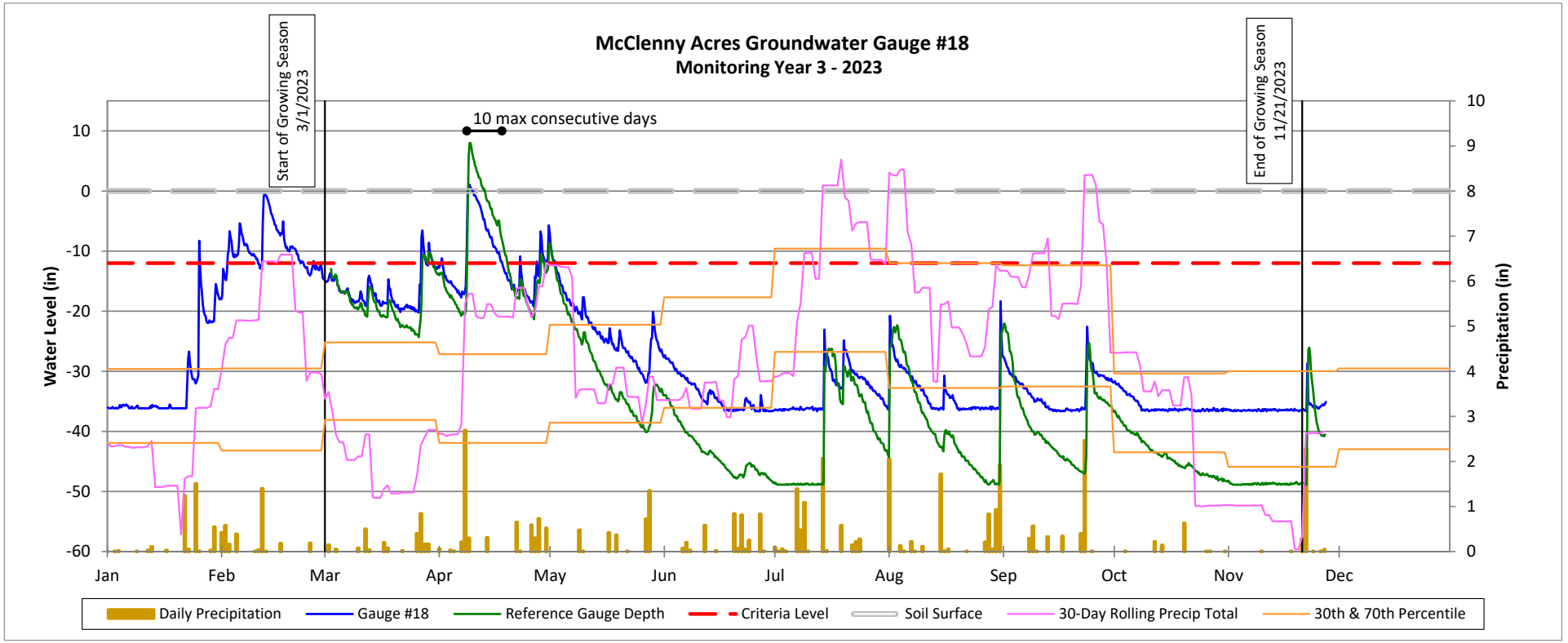


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

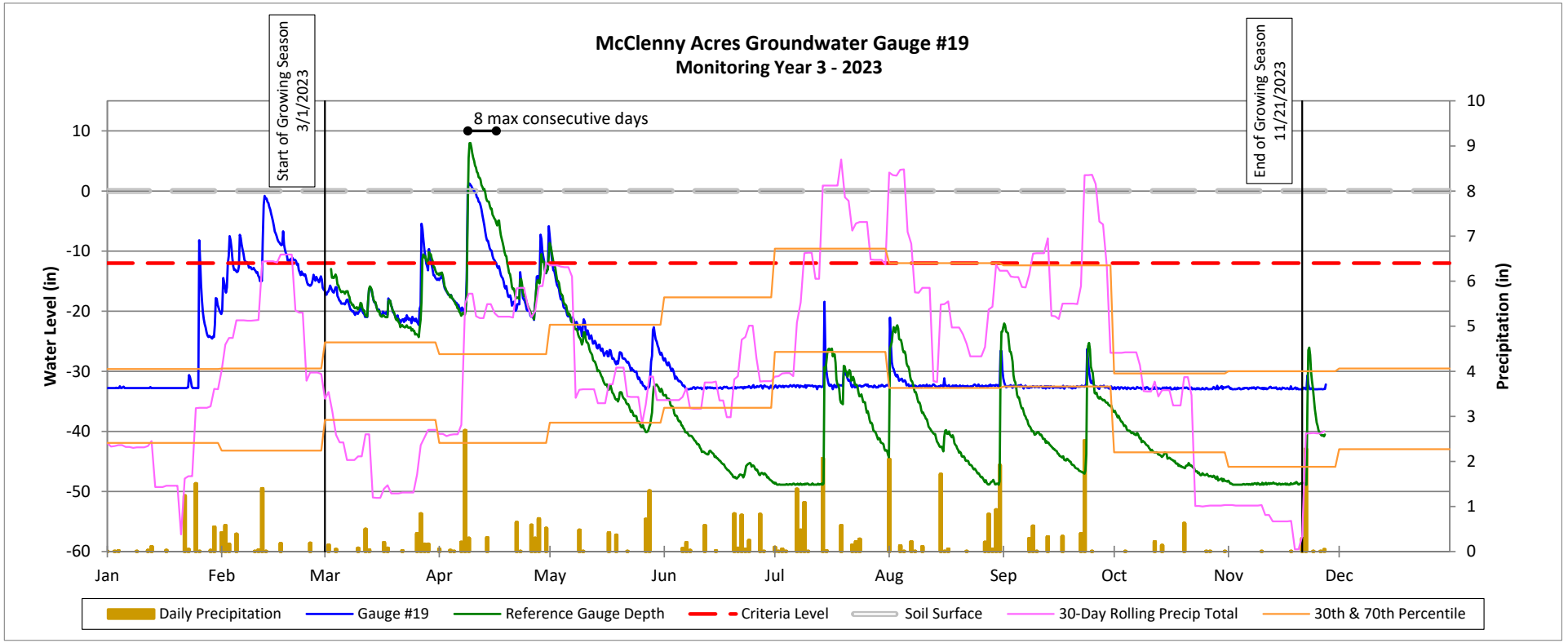


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

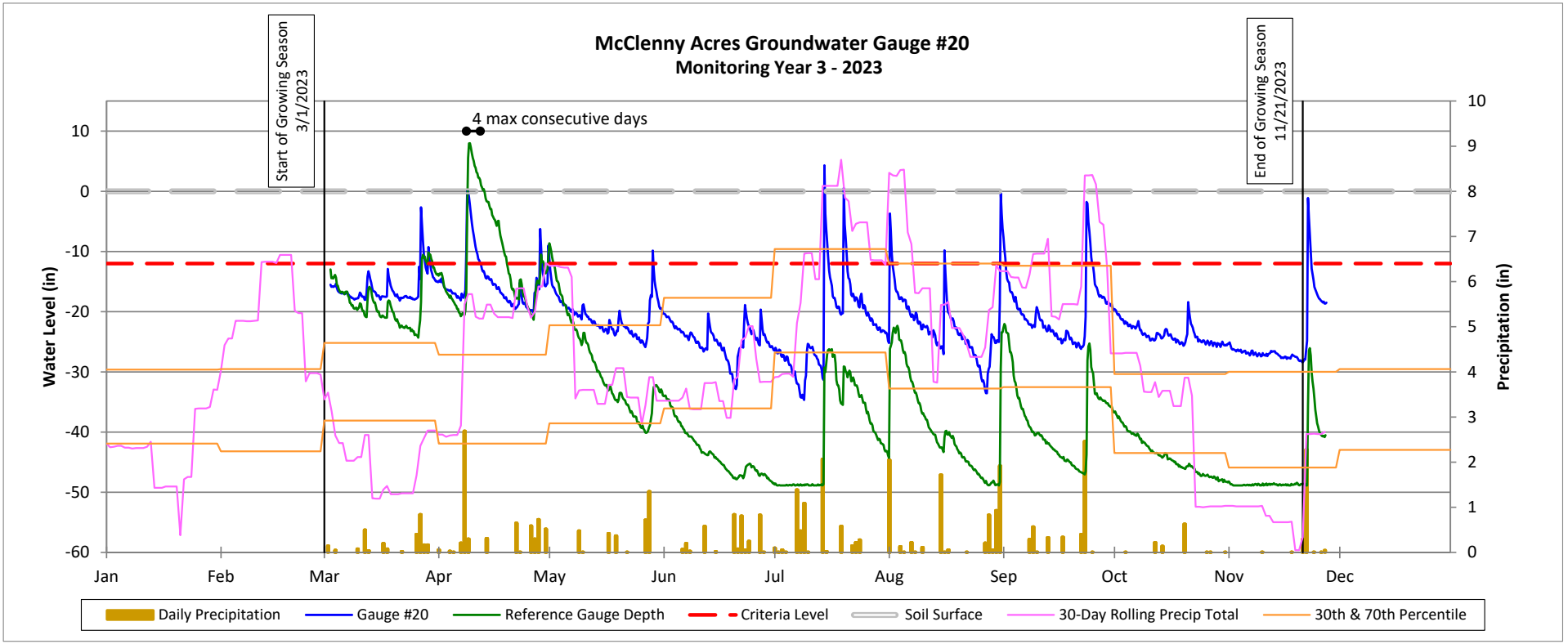


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

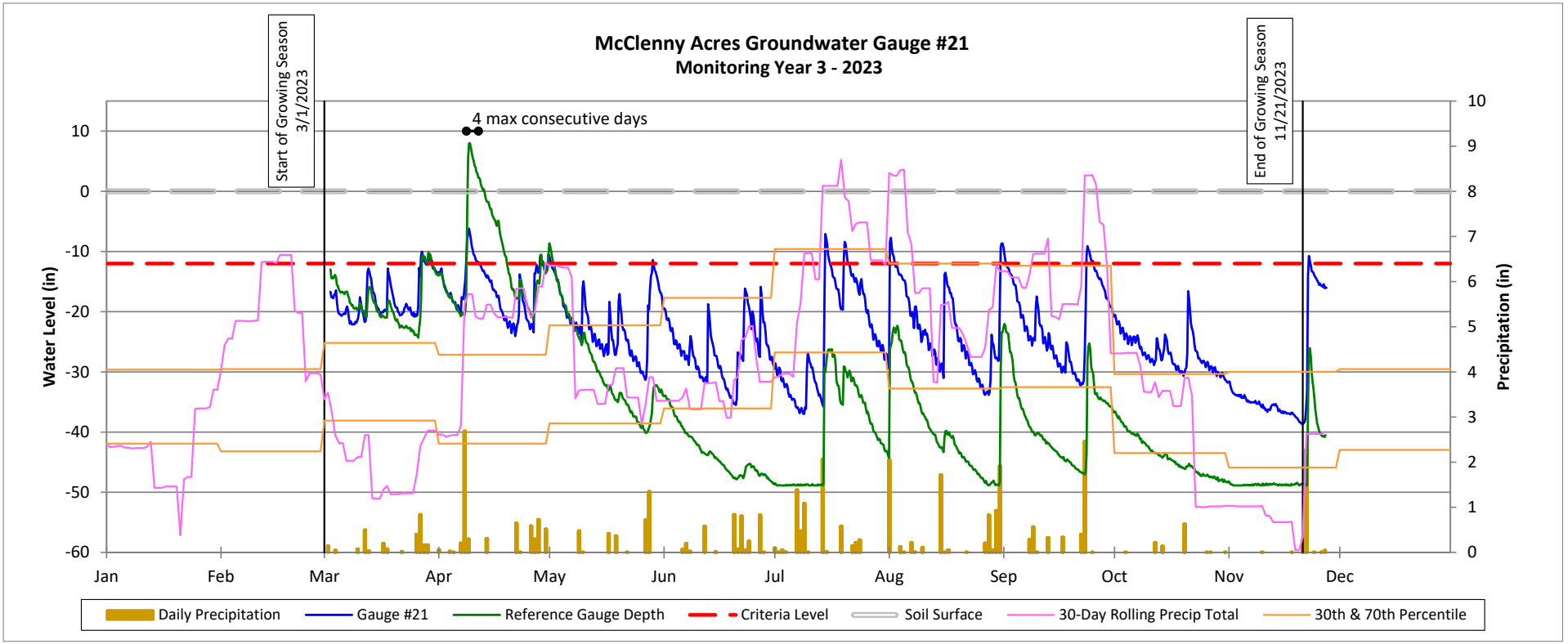


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

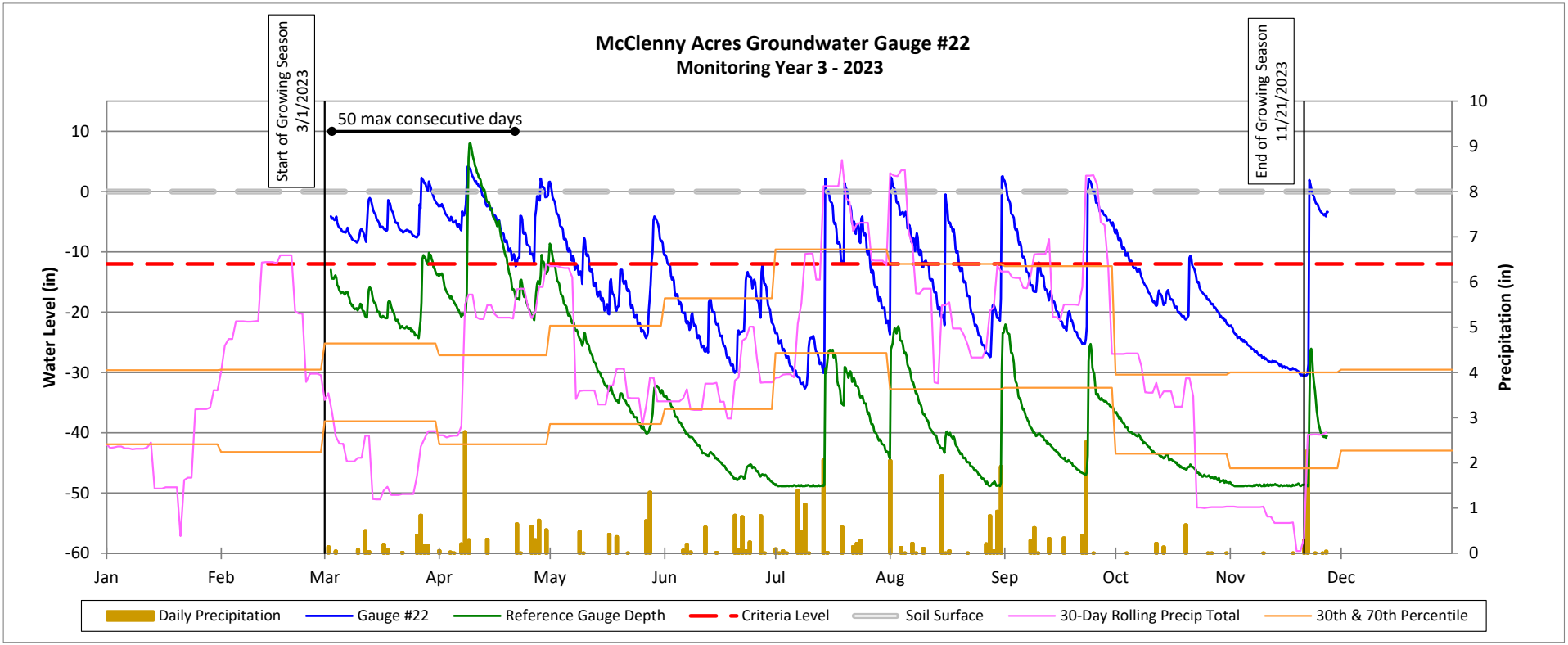


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023

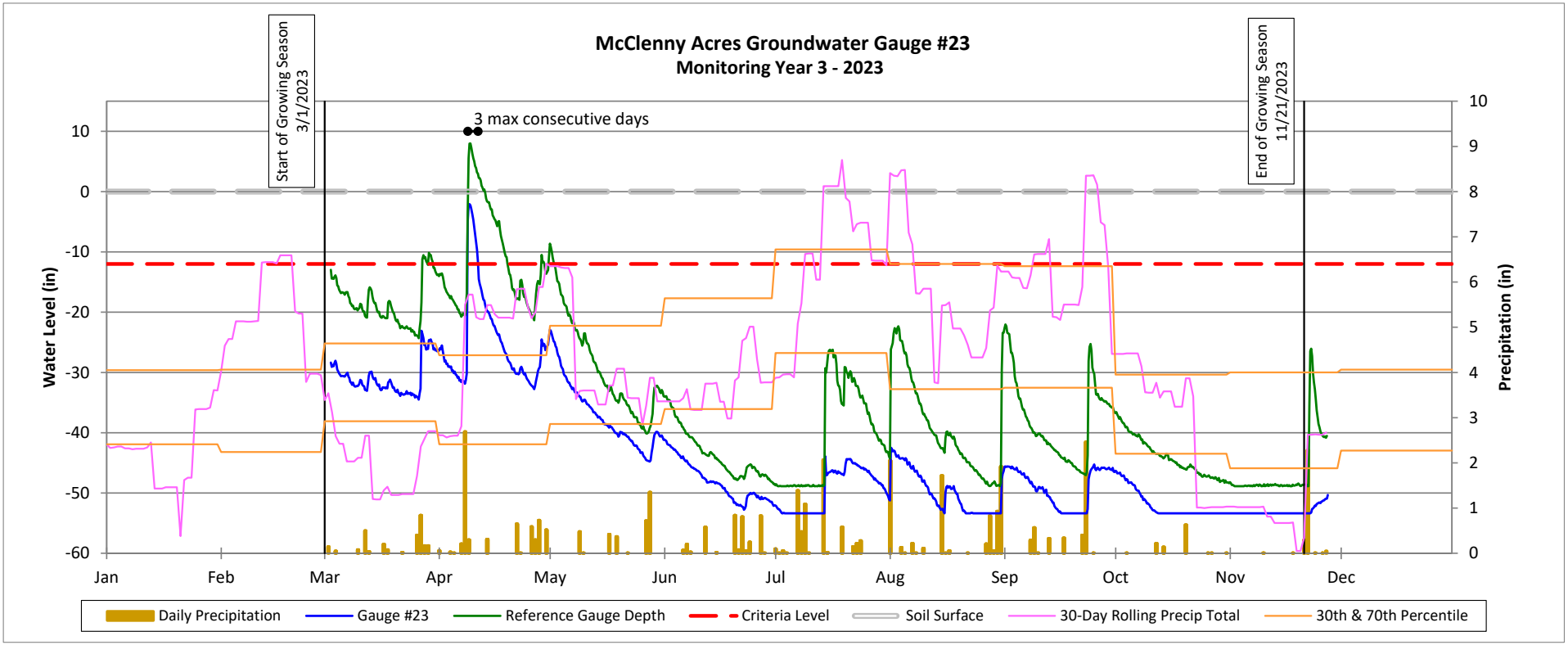


Groundwater Gauge Plot

McClenny Acres Mitigation Site

DMS Project No. 100038

Monitoring Year 3 - 2023



APPENDIX E. PROJECT TIMELINE AND CONTACT INFORMATION

Table 14. Project Activity and Reporting History
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Activity or Deliverable		Data Collection Complete	Task Completion or Deliverable Submission
Project Instituted		NA	Janurary 2018
Mitigation Plan Approved		February 2020	February 2020
Construction (Grading) Completed		NA	September 2020
Planting Completed		NA	March 2021
As-Built Survey Completed		September 2020	September 2020
Baseline Monitoring Document (Year 0)	Stream Survey	September 2020	May 2021
	Vegetation Survey	March 2021	
Year 1 Monitoring	Stream Survey	April 2021	December 2021
	Vegetation Survey	September 2021	
	Loblolly Pine Removal	December 2021	December 2021
Year 2 Monitoring	Stream Survey	March 2022	December 2022
	Vegetation Survey	September 2022	
	Chinese Privet Removal	December 2022	
Year 3 Monitoring	Stream Survey	March 2023	December 2023
	Vegetation Survey	September 2023	
	Beaver Activity	November 2023	
Year 4 Monitoring			December 2024
Year 5 Monitoring	Stream Survey	2025	December 2025
	Vegetation Survey	2025	
Year 6 Monitoring			December 2026
Year 7 Monitoring	Stream Survey	2027	December 2027
	Vegetation Survey	2027	

Table 15. Project Contact Table
McClenny Acres Mitigation Site
DMS Project No. 100038
Monitoring Year 3 - 2023

Designer Nicole Macaluso Millns, PE	**Wildlands Engineering, Inc.** 312 West Millbrook Road, Suite 225 Raleigh, NC 27609 919.851.9986
Construction Contractor	**Land Mechanic Designs, Inc.** 126 Circle G Lane Willow Spring, NC 27592
Monitoring Performers Monitoring, POC	**Wildlands Engineering, Inc.** Jason Lorch 919.851.9986