MONITORING YEAR 3 ANNUAL REPORT
FINAL

January, 2024

WYANT LANDS MITIGATION SITE
Lincoln County, NC
Catawba River Basin
HUC 03050102
(03050103 Expanded Service Area)

DMS Project No. 100067 & 100595
DMS Contract No. 7244
DMS RFQ No. 16-007133-CT03 (*Issued: April 24, 2017*)
USACE Action ID No. SAW-2017-02609 (Wyant Lands)
USACE Action ID No. SAW-2021-02449 (Wyant Lands: Phase II)
DWR Project No. 2018-0177 (Wyant Lands)
DWR Project No. 2018-0177v.2 (Wyant Lands: Phase II)
Data Collection Dates: May 2023 - November 2023

PREPARED FOR:

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WYANT LANDS MITIGATION SITE

Monitoring Year 3 Annual Report

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Section 1: PROJECT OVERVIEW

The Wyant Lands Mitigation Site (Site) is located in Lincoln County, approximately five miles northwest of Lincolnton and seven miles southwest of Maiden. The Site is located in the Piedmont Physiographic Province. The Site drains directly into Pott Creek, which is part of the Catawba River Basin. Currently, the Site is adjacent to an active cattle and row crop operation. Table 3 presents information related to the project attributes.

1.1 Project Quantities and Credits

The Wyant Lands Mitigation Site (Site) includes assets originally approved by the North Carolina Interagency Review Team (NCIRT) within the mitigation plan on December 20, 2019, herein referred to as "Wyant Phase I". Additionally, the Site also includes additional assets proposed within the Mitigation Plan Addendum approved by the NCIRT on January 5, 2022, here in referred to as "Wyant Phase II". The expansion of Wyant Phase I allowed for the enhancement II stream work previously proposed on UT2 Reach 1 to be revised to priority one stream restoration. The Site is located on a 253-acre property under one landowner and the Wyant Lands Mitigation Site conservation easement was recorded on a combined 47.27 acres. Mitigation work within the Site included restoration, enhancement I, and enhancement II of perennial stream channels as well as wetland re-establishment, rehabilitation and creation.

Table 1 below shows stream credits by reach and wetland credits along with total amount of credits expected at closeout for the Wyant Lands Mitigation Site, including both Phase I and Phase II.

Table 1: Project Quantities and Credits

PROJECT MITIGATION QUANTITIES							
Project Segment	**Mitigation Plan Footage (LF) or Acreage[1,2]**	**As-Built Footage (LF) or Acreage**	**Mitigation Category**	**Restoration Level**	**Mitigation Ratio (X:1)**	**Credits**	**Comments**
Stream							
UT1	604	604	Warm	R	1.0	604.00	Full Channel Restoration, Fencing Out Livestock
UT2 R1	396	396	Warm	R	1.0	396.00	Full Channel Restoration, Fencing Out Livestock
UT2 R2	515	515	Warm	EII	2.5	206.000	Fencing Out Livestock
UT2 R3	1,042	1,042	Warm	R	1.0	1,042.000	Full Channel Restoration, Fencing Out Livestock
UT3 R1	374	376	Warm	EI	1.5	250.667	Bank Stabilization, Fencing Out Livestock
UT3 R2	326	328	Warm	R	1.0	328.000	Full Channel Restoration, Fencing Out Livestock
Wyant Creek R1	1,482	1,475	Warm	R	1.0	1,475.000	Full Channel Restoration, Fencing Out Livestock

Table 1: Project Quantities and Credits

PROJECT MITIGATION QUANTITIES							
Project Segment	**Mitigation Plan Footage (LF) or Acreage[1,2]**	**As-Built Footage (LF) or Acreage**	**Mitigation Category**	**Restoration Level**	**Mitigation Ratio (X:1)**	**Credits**	**Comments**
Wyant Creek R2	523	523	Warm	R	1.0	523.000	Full Channel Restoration, Fencing Out Livestock
Wyant Creek R3	295	295	Warm	R	1.0	295.000	Full Channel Restoration, Fencing Out Livestock
Wyant Creek R4	1,972	1,971	Warm	R	1.0	1,971.000	Full Channel Restoration, Fencing Out Livestock
Wetland							
Wetland Re-establishment (Phase I)	11.000	10.992	Warm	REE	1.0	10.992	Full Wetland Restoration, Fencing Out Livestock
Wetland Rehabilitation (Phase I)	3.200	3.155	Warm	RH	1.5	2.103	Full Wetland Restoration, Fencing Out Livestock
Wetland Re-establishment (Phase II)	3.360	3.360	Warm	REE	1.0	3.360	Full Wetland Restoration, Fencing Out Livestock
Wetland Rehabilitation (Phase II)	1.078	1.078	Warm	RH	1.5	0.719	Full Wetland Restoration, Fencing Out Livestock
Wetland Creation (Phase II)	1.303	1.303	Warm	C	3.0	0.434	Full Wetland Restoration, Fencing Out Livestock
					Total Stream Credits:	**7,090.667**	
					Total Wetland Credits:	**17.608**	

1. Internal culvert crossing, and external break excluded from the credited stream footage.
2. No direct credit for BMPs on site.

Stream Restoration Level	**Stream**			**Wetland Restoration Level**	**Wetland**
	Warm	**Cool**	**Cold**		**Warm**
Restoration	6,634.000			Wetland Re-Establishment	14.352
Enhancement I	250.667			Wetland Rehabilitation	2.822
Enhancement II	206.000			Wetland Creation	0.434
Preservation	N/A				
Totals	**7,090.667**			**Totals**	**17.608**
Total Stream Credit	**7,090.667**			**Total Wetland Credit**	**17.608**

1.2 Project Goals and Objectives

The project is intended to provide numerous ecological benefits. 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
Exclude livestock from stream channels.	Install fencing around conservation easements or remove cattle from easements adjacent to cattle pastures.	Reduce and control sediment inputs; Reduce and manage nutrient inputs; Improve agricultural management activities.	Prevent easement encroachments.	Semi-annual visual inspections.	Minor evidence of livestock within conservation easement in MY3.
Improve the stability of stream channels.	Construct stream channels that will maintain a stable pattern and profile. Stabilize stream bed and banks using bank vegetation, bank revetments, and in-stream structures to protect restored/enhanced channels.	Reduce and control sediment inputs; Contribute to protection, or improvement of a Water Supply and Nutrient-Sensitive Waters.	BHR ≤ 1.2 and ER ≥ 2.2. Visual assessments showing progression towards stability.	Twenty (20) Cross-sections were installed. monitoring in MY1, MY3, MY3, MY5, & MY7. Visual inspections will be assessed annually.	In MY3, riffle cross-sections show streams are stable and functioning as designed. ERs are over 2.2 and BHRs are below 1.2.
Improve instream habitat.	Install habitat features such as constructed riffles, cover logs, and brush toes into restored/enhanced streams. Add woody materials to channel beds. Construct pools of varying depths.	Increase and diversify available habitats for macroinvertebrates, fish, and amphibians leading to colonization and increase in biodiversity over time.	No performance criteria.	Semi-annual visual inspections.	Most structures are performing as designed. One log sill on UT2 R3 is piping in MY3.
Reconnect stream channels with floodplains and riparian wetlands.	Reconstruct stream channels with designed bankfull dimensions and depth relative to existing floodplain.	Reduce shear stress on channel; Hydrate adjacent wetland areas; Filter out pollutants from overbank flows.	Four bankfull events in separate years within the monitoring period.	Four pressure transducers recording flow elevations and durations.	In MY3, 1 bankfull event was recorded on UT2 R1, 5 events each on UT2 R3 and 4 Wyant Creek R2.

Table 2: Goals, Performance Criteria, and Functional Improvements

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, filling existing ditch network, removing berm material over relic hydric soils, and planting native wetland species.	Improve terrestrial habitat; Contribute to protection and/ or improvement of a Water Supply and Nutrient-Sensitive Waters.	Free groundwater within 12 inches of ground surface for a minimum of 12% (27 consecutive days) of the growing season for Lincoln County.	Fifteen (15) groundwater gages placed in restoration areas and monitored annually.	In MY3, all groundwater wells met wetland performance criteria.
Restore and enhance native floodplain vegetation.	Plant native tree and understory species in riparian zones where they were insufficient.	Reduce and control sediment inputs; Reduce and manage nutrient inputs; Provide a canopy to shade and reduce thermal loadings; Contribute to protection and/or improvement of a Water Supply and Nutrient-Sensitive Waters.	Survival rate of 320 planted stems per acre at MY3, 260 planted stems per acre at MY5 and a height of 8 ft. and 210 stems per acre at MY7 with a height of 10 ft.	Thirty-six (36) one hundred square meter vegetation plots are placed on 2% of the planted area of the Site and monitored during MY1, MY3, MY3, MY5, and MY7.	In MY3, 30 of the 36 vegetation plots met MY3 criteria of 320 stems per acre. No invasive species presence within monitoring plots.
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 encroachments.	Semi-annual visual inspections.	Minor easement encroachments in MY3.

1.3 Project Attributes

The Site contains three unnamed tributaries (UTs) to Wyant Creek (UT1, UT2, UT3) and the mainstem of Wyant Creek, which has been broken into four reaches and flows in a south easterly direction through the Site. Multiple existing and relic riparian wetland areas exist on-site and have been re-established or rehabilitated to offset impacts within the Catawba River Basin HUC 03050103. Wyant Creek originates off-site, and its watershed consists predominantly of active row crops. UT1 originates from an on-site farm pond and flows east through an unconfined alluvial valley, adjacent to an active cattle pasture, before its confluence with Wyant Creek. UT2 and UT3 originate from on-site farm ponds and flow through moderately sloped and moderately confined alluvial valleys. All reaches are encompassed by the Pott Creek watershed, which is defined by forested and agricultural land use with sporadic development of rural homes and extends south past June Bug Road. Across Pott Creek and adjacent to the project area, there is an existing conservation easement held by the NC Division of Mitigation Services (DMS), formerly NC Ecosystem Enhancement Program, known as the Pott Creek I Mitigation

Bank. Table 3 below and Table 8 in Appendix C present additional information on pre-restoration conditions.

Table 3: Project Attributes

PROJECT INFORMATION				
Project Name	Wyant Lands Mitigation Site	County	Lincoln County	
Project Area (acres)	47.27	Project Coordinates	35.531083, -81.318040	
PROJECT WATERSHED SUMMARY INFORMATION				
Physiographic Province	Piedmont	River Basin	Catawba River	
USGS HUC 8-digit	03050102	USGS HUC 14-digit	03050102040020	
DWR Sub-basin	03-08-35	Land Use Classification	70% cultivated crop and hay; 16% forest; 7% grassland/herbaceous; 2% shrubland; 5% residential	
Project Drainage Area (acres)	671	Percentage of Impervious Area	0.9%	
RESTORATION TRIBUTARY SUMMARY INFORMATION				
Parameters	**UT1**	**UT2**	**UT3**	**Wyant Creek**
Pre-project length (feet)	458	2,137	647	4,286
Post-project (feet)	604	1,953	704	4,264
Valley confinement (Confined, moderately confined, unconfined)	Unconfined	Moderately Confined/ Confined	Moderately Confined/ Confined	Unconfined
Drainage area (acres)	54	126	84	671
Perennial, Intermittent, Ephemeral	Perennial	Perennial	Perennial	Perennial
Thermal regime	Warm	Warm	Warm	Warm
DWR Water Quality Classification	IV	IV	IV	IV
Dominant Stream Classification (existing)	C5/4	C4	G5	G5
Dominant Stream Classification (proposed)	C4b	Bc	C4b	C4
Dominant Evolutionary class (Simon) if applicable	III Degradation; IV Degradation and Widening	I Stable/ III Degradation	I Stable; II Incision; III Degradation	III Degradation

Table 3: Project Attributes

REGULATORY CONSIDERATIONS			
Parameters	**Applicable?**	**Resolved?**	**Supporting Documentation**
Water of the United States - Section 404	Yes	Yes	Approved 404/401 permit application
Water of the United States - Section 401	Yes	Yes	
Endangered Species Act & Historic Preservation Act	Yes	Yes	Approved Mitigation Plan (Wildlands, 2019)
FEMA Floodplain Compliance	Yes	Yes	Lincoln County Floodplain Development; Permit No-Rise Certification (FLDD19-06199)
NPDES	Yes	Yes	NCG010000 Construction Stormwater General Permit
Coastal Zone Management Act (CZMA or CAMA)	No	N/A	N/A
Essential Fisheries Habitat	No	N/A	N/A

Wetland Summary Information				
Parameters	**Wetland A**	**Wetland B**	**Wetland C**	**Wetland D**
Pre-project area (acres)	2.67	0.22	0.29	0.35
Wetland Type	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Bottomland Hardwood Forest
Mapped Soil Series	Chewacla	Chewacla	Chewacla	Chewacla
Drainage Class	Somewhat poorly drained	Somewhat poorly drained	Somewhat poorly drained	Somewhat poorly drained
Soil Hydric Status	No	No	No	No
Source of Hydrology	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge
Restoration or enhancement method	Restoration	Restoration	Restoration	Restoration
Parameters	**Wetland E**	**Wetland F**	**Wetland G**	**Wetland H**
Pre-project area (acres)	<0.02	0.49	0.11	0.01
Wetland Type	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Headwater Forest
Mapped Soil Series	Chewacla/ Pacolet	Chewacla	Chewacla	Worsham
Drainage Class	Somewhat poorly drained /Well drained	Somewhat poorly drained	Somewhat poorly drained	Poorly drained
Soil Hydric Status	No	No	No	Yes
Source of Hydrology	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge
Restoration or enhancement method	Restoration	Restoration	N/A	N/A

Table 3: Project Attributes

Wetland Summary Information				
Parameters	**Wetland I**	**Wetland J**	**Wetland K**	**Wetland L**
Pre-project area (acres)	0.01	0.01	0.03	<0.01
Wetland Type	Headwater Forest	Headwater Forest	Headwater Forest	Headwater Forest
Mapped Soil Series	Worsham	Chewacla	Pacolet	Pacolet
Drainage Class	Poorly drained	Somewhat poorly drained	Well drained	Well drained
Soil Hydric Status	Yes	No	No	No
Source of Hydrology	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge
Restoration or enhancement method	N/A	N/A	N/A	N/A
Parameters	**Wetland M**	**Wetland N**	**Wetland O**	**Wetland Q**
Pre-project area (acres)	0.01	0.04	0.04	0.32
Wetland Type	Headwater Forest	Headwater Forest	Headwater Forest	Bottomland Hardwood Forest
Mapped Soil Series	Pacolet	Pacolet	Pacolet	Chewacla/Pacolet
Drainage Class	Well Drained	Well Drained	Well Drained	Somewhat poorly drained/Well Drained
Soil Hydric Status	No	No	No	No
Source of Hydrology	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge
Restoration or enhancement method	N/A	N/A	N/A	Restoration
Parameters	**Wetland R**	**Wetland S**	**Wetland T**	**Wetland AA**
Pre-project area (acres)	0.36	0.21	0.16	0.09
Wetland Type	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Bottomland Hardwood Forest	Bottomland Hardwood Forest
Mapped Soil Series	Chewacla	Chewacla	Chewacla	Chewacla
Drainage Class	Somewhat poorly drained	Somewhat poorly drained	Somewhat poorly drained	Somewhat poorly drained
Soil Hydric Status	No	No	No	No
Source of Hydrology	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge	Groundwater Discharge
Restoration or enhancement method	Restoration	Restoration	Restoration	Restoration
Parameters	**Open Water 1**	**Open Water 2**		
Pre-project area (acres)	1.76	0.31		
Wetland Type	N/A (Canal)	N/A (Canal)		
Mapped Soil Series	Chewacla	Chewacla		
Drainage Class	Somewhat poorly drained	Somewhat poorly drained		
Soil Hydric Status	No	No		
Source of Hydrology	Groundwater Discharge	Groundwater Discharge		
Restoration or enhancement method	N/A	Restoration		

Section 2: Monitoring Year 3 Data Assessment

Annual monitoring and site visits were conducted during monitoring year (MY) 3 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, 2019 and Wildlands, 2022). Performance criteria for vegetation, stream, and hydrologic assessments are located in Section 1.2 Table 3. Methodology for annual monitoring is presented in the As-Built Baseline Monitoring Reports (Wildlands, 2021 and Wildlands, 2022).

To facilitate project organization, monitoring reports for Wyant Lands Phase I and Wyant Lands Phase II have been combined into one submittal for the Site. It is proposed that if the Wyant Lands Phase II area has met monitoring performance standards three of the prior four monitoring years at closeout of the Phase I portion of the project (monitoring year 6 of Phase II), the addendum area will be closed as well. If monitoring performance criteria within the Phase II addendum area has not met monitoring standards three out of the prior four years, an additional seventh year of monitoring will be performed for Phase II and the closeout monitoring period will be seven years beyond completion of construction and/or until performance standards have been met.

2.1 Vegetative Assessment

The MY3 vegetative assessment was completed in August 2023. As requested during the April 2023 credit release meeting, one mobile plot (MP7) was located across the stream from permanent vegetation plots VP3 and VP4 and north of BMP1. Vegetation monitoring resulted in a density range of 162 to 648 planted stems per acre with an overall average density of 400 stems per acre. Of the total 36 vegetation plots, 30 are meeting or exceeding the MY3 success criteria of 320 stems per acre. Five fixed vegetation plots (VP2, VP3, VP4, VP10, VP21) and one mobile vegetation plot (MP8) do not meet the interim MY3 stem density requirement. Vegetation plots 3 and 4 had the lowest stem densities of 162 and 202 stems per acre, respectively. The remaining vegetation plots not meeting MY3 density criteria are still meeting MY5 criteria with densities of 283 stems per acre. Throughout the Site, herbaceous vegetation and trees are well established and stabilizing stream banks. 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 and Management Activity

The small 0.03-acre area of limited vegetation cover that was identified on the right floodplain of UT2 Reach 3 during MY2 was resolved using coir rolls, logs, and seeded to reduce excessive sediment entering the project. Stems that were planted in low density areas in 2022 are surviving for the most part. The wet areas represented by VP3 and VP4 still have low stem densities even after the previous year's replanting. This 0.35-acre area of low stem density is likely due to extended inundation. This area will be supplementally planted in the dormant season of 2024, likely with a greater percentage of obligate species. Only mitigation approved species will be supplementally planted. Species and quantities will be provided in the MY4 report.

During the November 29 site visit, evidence of minor livestock presence was observed within the easement on UT3. No livestock were observed during the visit, and none have been observed throughout the monitoring year. It is unclear how the cattle entered the easement. Wildlands will continue to inspect the fence and communicate with the landowner about easement violations and fence repair. During the site visit, small amounts of agricultural debris and internal fencing were discovered within the easement. It was also discovered that along some portions of the conservation

easement boundary, signage was lacking in appropriate height and frequency. Internal fencing and debris will be removed, and signage will be installed during MY4. Areas of concern will continue to be monitored and assessed in future monitoring years and will be noted on the Current Condition Plan View (CCPV) Maps. Refer to Appendix A for the Vegetation Condition Assessment Table and Areas of Concern Photographs.

2.3 Stream Assessment

Morphological surveys for MY3 were conducted in May 2023. Of the 20 cross-sections on the Site, 19 show little to no change in the bankfull area and width-to-depth ratio compared to as-built. Pool cross-section 15 along Wyant Creek R4 showed bank slumping and erosion on the left bank, resulting in an increase in cross-section area of 5.4 square feet, compared to MY2 dimensions. This bank has been sloped back and sod matted and is currently stable. Overall, bank height ratios are less than 1.2 and entrenchment ratios are greater than 2.2 for riffle cross-sections. Refer to Appendix A for the Visual Stream Morphological Stability Assessment Table and Stream Photographs and Appendix C for Stream Geomorphology Data.

2.4 Stream Areas of Concern and Management Activity

A few isolated areas of concern were present during MY2. There was a gully, approximately 60 linear feet (LF) and 6 inches in depth that formed adjacent to BMP 3 on UT2 R1. The gully was repaired in June 2023 by redirecting overland flow towards the BMP, filling in the gully, placing coir matting and seeding disturbed areas. The log sill on UT2 Reach 3 at station 322+00 was found to be stable and has not changed since the previous monitoring year. The structure is still separated from the streambank; however, the piping is isolated to the structure's tie-in and not affecting the stability of the channel. During MY2, rock was added to the livestock crossing beneath Wyant Road and seeded during the dormant season and vegetation has become established, significantly reducing sediment input. Wildlands has worked with the landowner to reduce livestock use of this area to reduce impact. If stream banks become unstable during the monitoring period, Wildlands will assess and implement best methods to reduce sediment load. These areas will continue to be monitored annually.

During MY3, approximately 25 feet of the left bank of Wyant Creek Reach 4 near station 128+75 (at cross-section 15) slumped and was eroding. The bank was successfully repaired in June 2023 (see Resolved Areas of Concern Photographs in Appendix A) and will be live staked during the dormant season. Three small beaver dams were removed on Wyant Reach 4 near station 136+00, 139+50, and 141+00 in the fall of 2023. One beaver dam was removed during the winter of 2023 on Wyant Creek Reach 1 near 102+50. A beaver dam was discovered on the upstream extent of Wyant Creek R1 during the November 29 site visit. This new dam will be removed during MY4 and documented in the monitoring report. Planted trees were damaged by beaver activity, but most of the damage was to willows which will grow back and not be permanent. These areas of concern are noted on the CCPV maps and will continue to be monitored for signs of instability. Refer to Appendix A for the Visual Stream Morphology Stability Assessment Table and Areas of Concern Photographs.

2.5 Hydrology Assessment

Continuous baseflow was recorded on UT1 for the entirety of the monitoring period (310 consecutive days so far in MY3). This exceeds the requirement criteria of 30 consecutive days. In MY3, crest gages on Wyant Creek Reach 2 recorded four bankfull events, five bankfull events were recorded on UT2 Reach 3, and one bankfull event was recorded on UT2 Reach 1. Therefore, the hydrologic success criteria of four bankfull events in separate years has been partially met. Refer to Appendix D for hydrologic stream data.

2.6 Wetland Assessment

All 15 groundwater gages (GWG) met or exceeded the performance criteria of free groundwater surface within 12 inches of ground surface for a minimum of 12% (27 consecutive days) of the growing season. Percent consecutive days during the growing season ranged from 20% for groundwater gages 1, 12, 13, 14, and 15 to 100% for groundwater gages 3, 4, 5, 6, 7, 8, and 11. The hydrophytic vegetation appears to be thriving in areas around groundwater gages with measured hydroperiods of 100% of the growing season, with most vegetation plots meeting criteria as well. The average hydroperiod of the growing season across the entire Site was 68% in MY3, which is an increase of 36% compared to MY2. Refer to Appendix D for the Wetland Gage Summary and Wetland Gage Plots.

2.7 Adaptive Management Plan

No adaptive management plan is needed at this time.

2.8 Monitoring Year 3 Summary

Overall, the Site has met the required stream, hydrology, and MY3 vegetation success criteria. All the groundwater gages installed on the Site exceeded the hydrologic success criteria. All crest gages recorded at least one bankfull event during the monitoring year. Consistent flow was recorded on UT1 during the entirety of MY3. Of the 36 vegetation plots, 30 exceed the MY3 requirement of 320 planted stems per acre with an overall average planted stem density of 400 stems per acre. The wet area represented by VP3 and VP4 on the left and right floodplain of UT1 will be supplementally planted with more wet tolerant species in the dormant season of 2024. Only mitigation plan approved species will be planted. Species and quantities will be reported in MY4. All but one cross-section showed the channels are stable and functioning as designed with minor changes in dimensions. The left bank on cross-section 15 on Wyant Creek Reach 4 was repaired in MY3 and is considered stable. The gully on the right bank of UT2 Reach 1 alongside BMP 3 was repaired in MY3 and flow has been diverted to the BMP. Beavers are actively being managed on Site and dams are being monitored and removed. Short sections of internal fencing and small amounts of debris will be removed during MY4. Additional signage will also be installed along the conservation easement. Wildlands will continue to monitor these areas and adaptive management maintenance measures will be implemented as necessary to benefit the ecological health of the Site.

Section 3: METHODOLOGY

Geomorphic data was collected following the standards outlined in The Stream Channel Reference Site: An Illustrated Guide to Field Techniques (Harrelson et al., 1994) and in Stream Restoration: A Natural Channel Design Handbook (Doll et al., 2003). All Integrated Current Condition Mapping was recorded using handheld GPS units with sub-meter accuracy and processed using ArcGIS. Pressure transducers recording bankfull events and stream flow were installed in riffle cross-sections and monitored throughout the year. Hydrologic monitoring instrument installation and monitoring methods are in accordance with the United States Army Corps of Engineers standards (USACE, 2003). Monitoring protocols follow the Wilmington District Stream and Wetland Compensatory Mitigation Update (NCIRT, 2016). Vegetation monitoring protocols followed the Carolina Vegetation Survey-EEP Level 2 Protocol (Lee et al., 2008); however, vegetation data processing follows the NCDMS Vegetation Data Entry Tool and Vegetation Plot Data Table (NCDMS, 2020).

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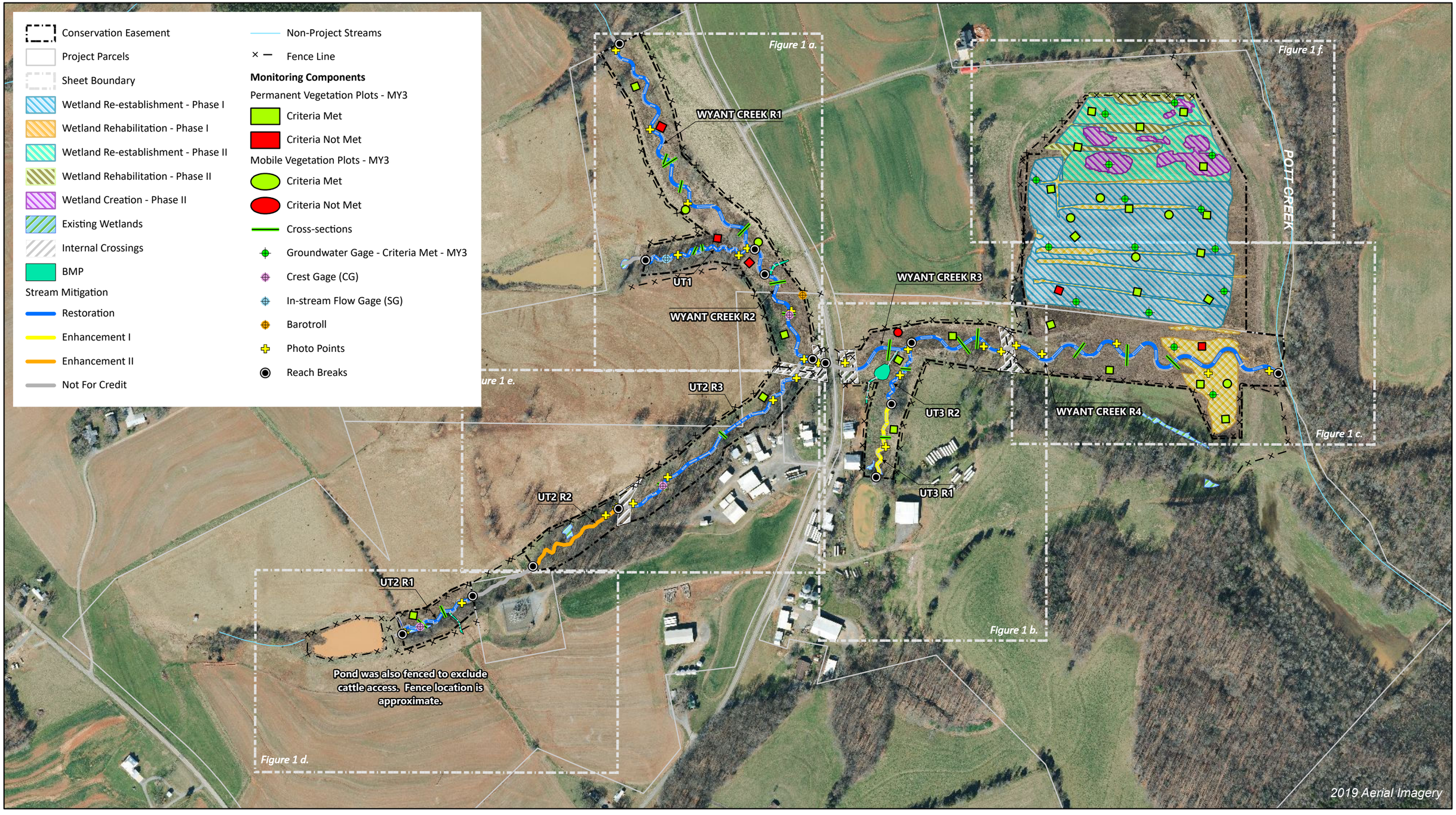
Figures 1a-f

Current Condition Plan View Maps



WILDLANDS ENGINEERING

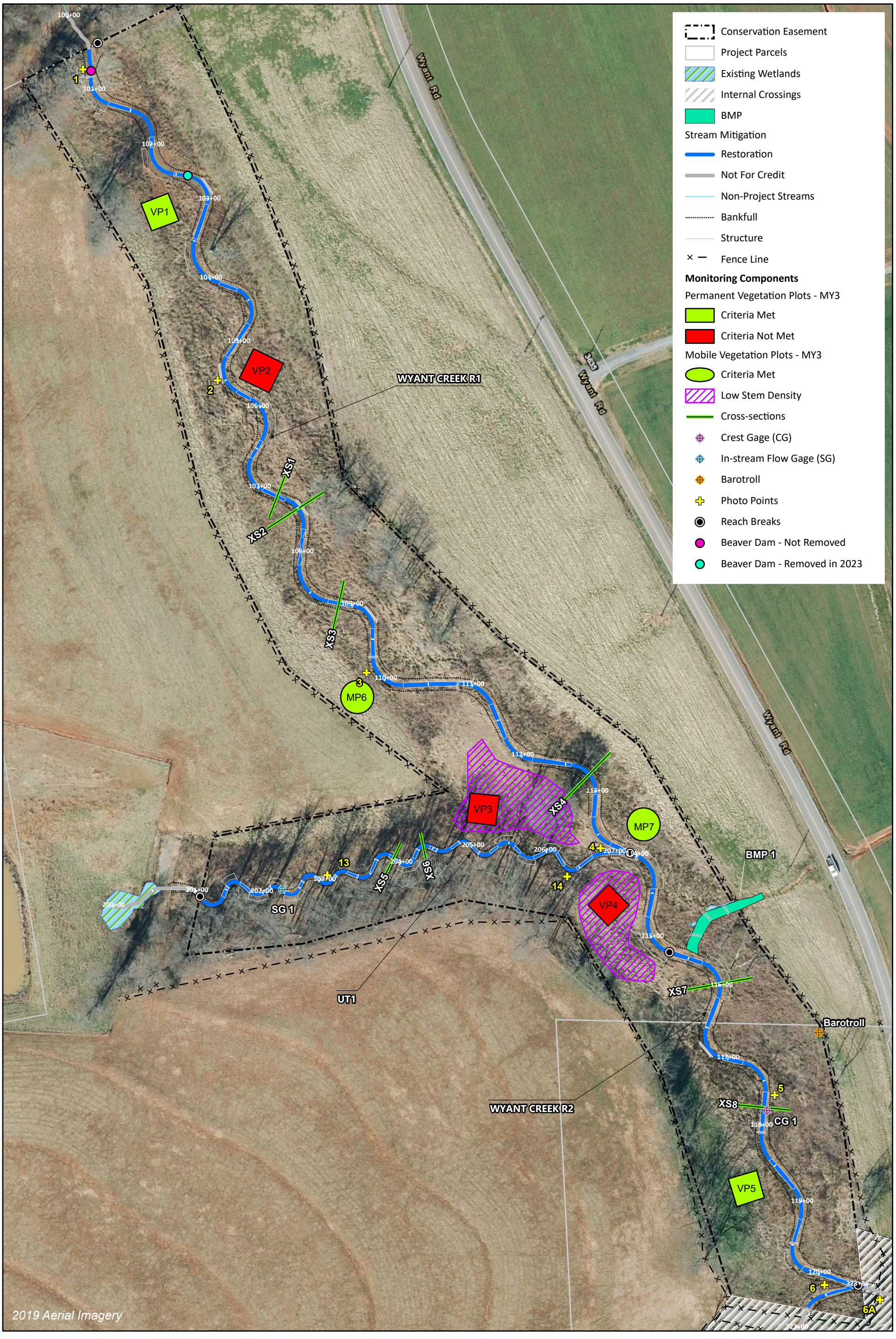
Environmental Quality

0 200 400 Feet

N

Figure 1. Current Condition Plan View Key
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023

Lincoln County, NC



WILDLANDS ENGINEERING

Environmental Quality

0 50 100 Feet

Figure 1a. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023

Lincoln County, NC

WILDLANDS ENGINEERING

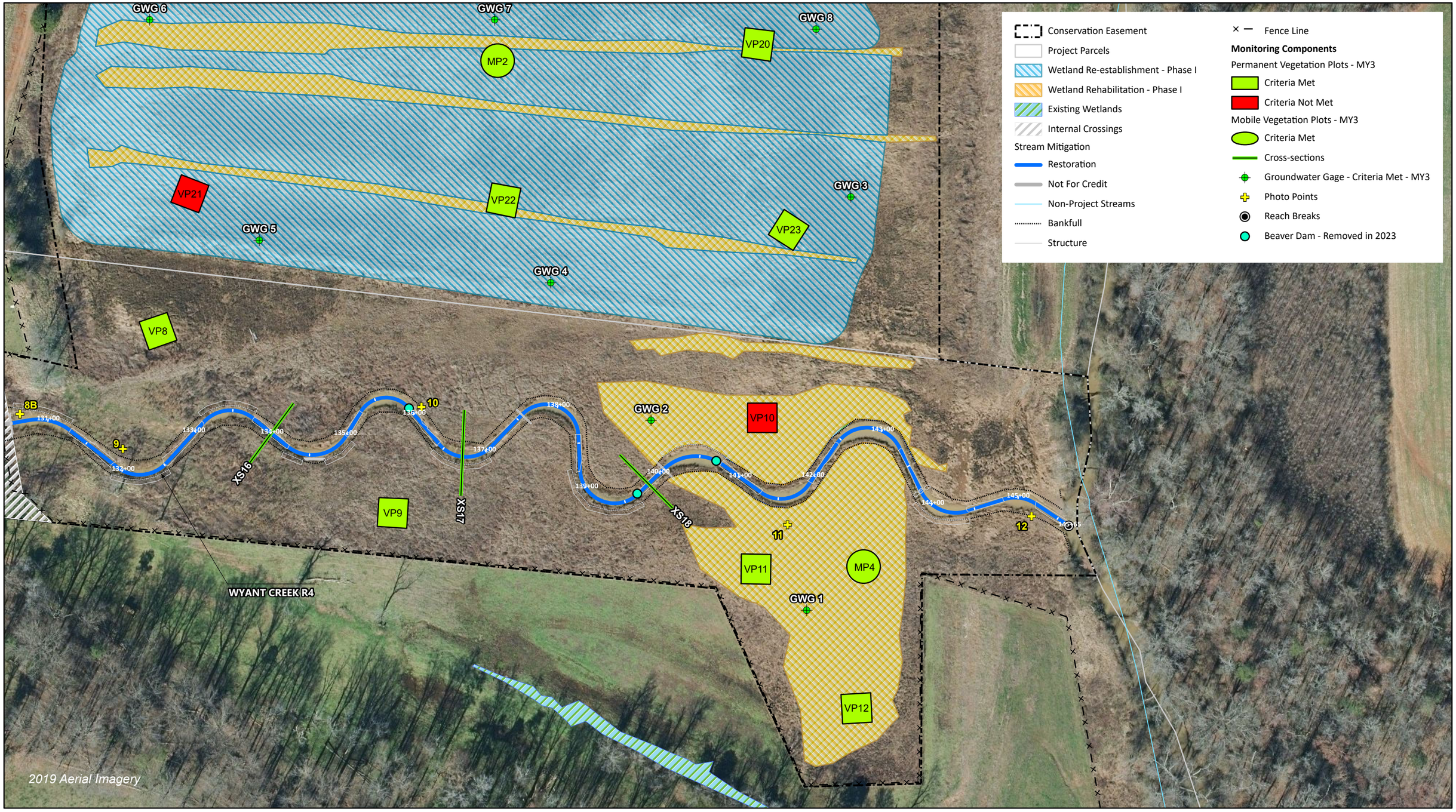
NC Environmental Quality

0 50 100 Feet

N

Figure 1b. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023

Lincoln County, NC



WILDLANDS ENGINEERING

NC Environmental Quality

0 50 100 Feet

N

Figure 1c. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023
Lincoln County, NC

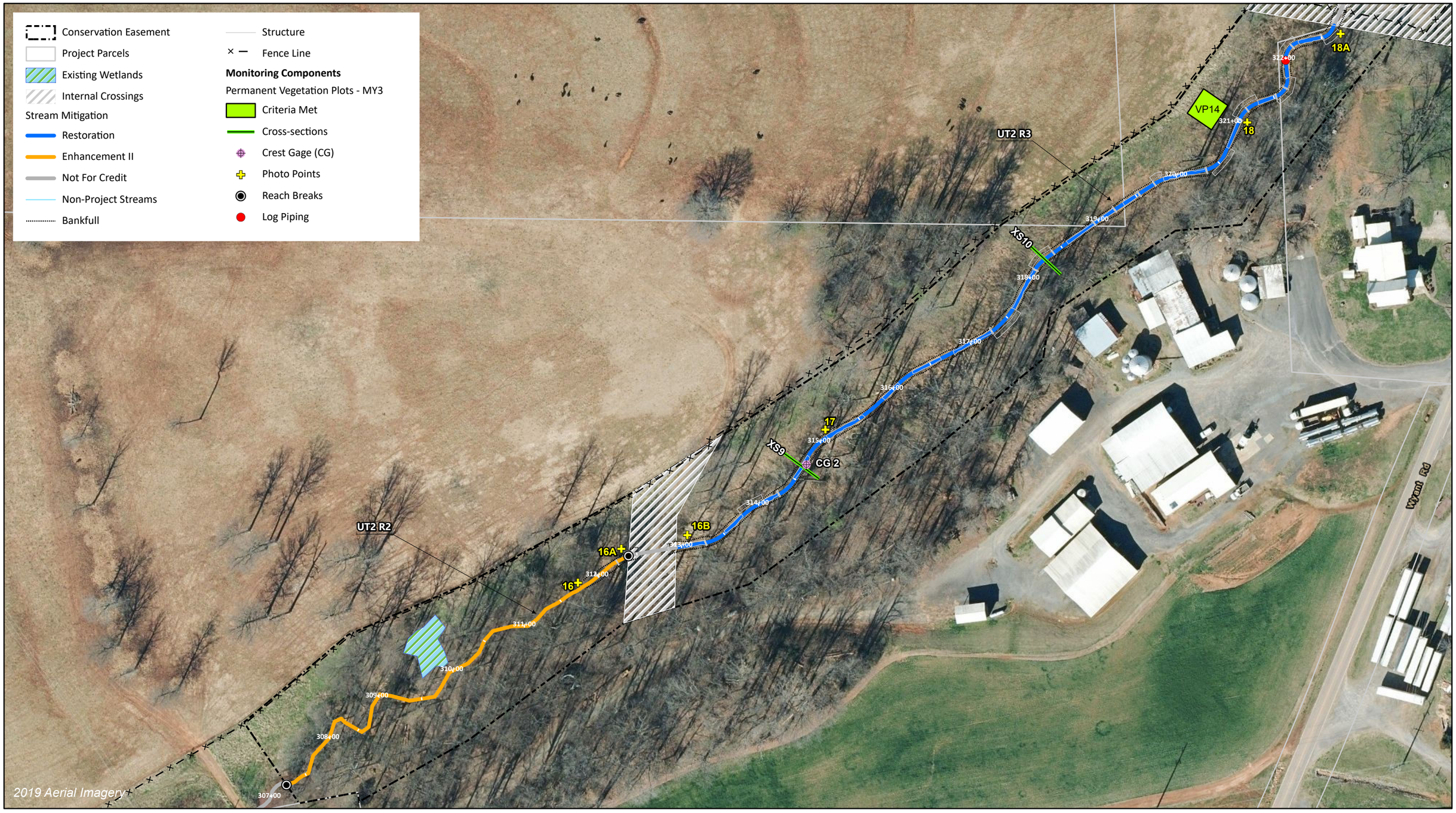
WILDLANDS ENGINEERING

Environmental Quality

0 50 100 Feet

N

Figure 1d. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023
Lincoln County, NC



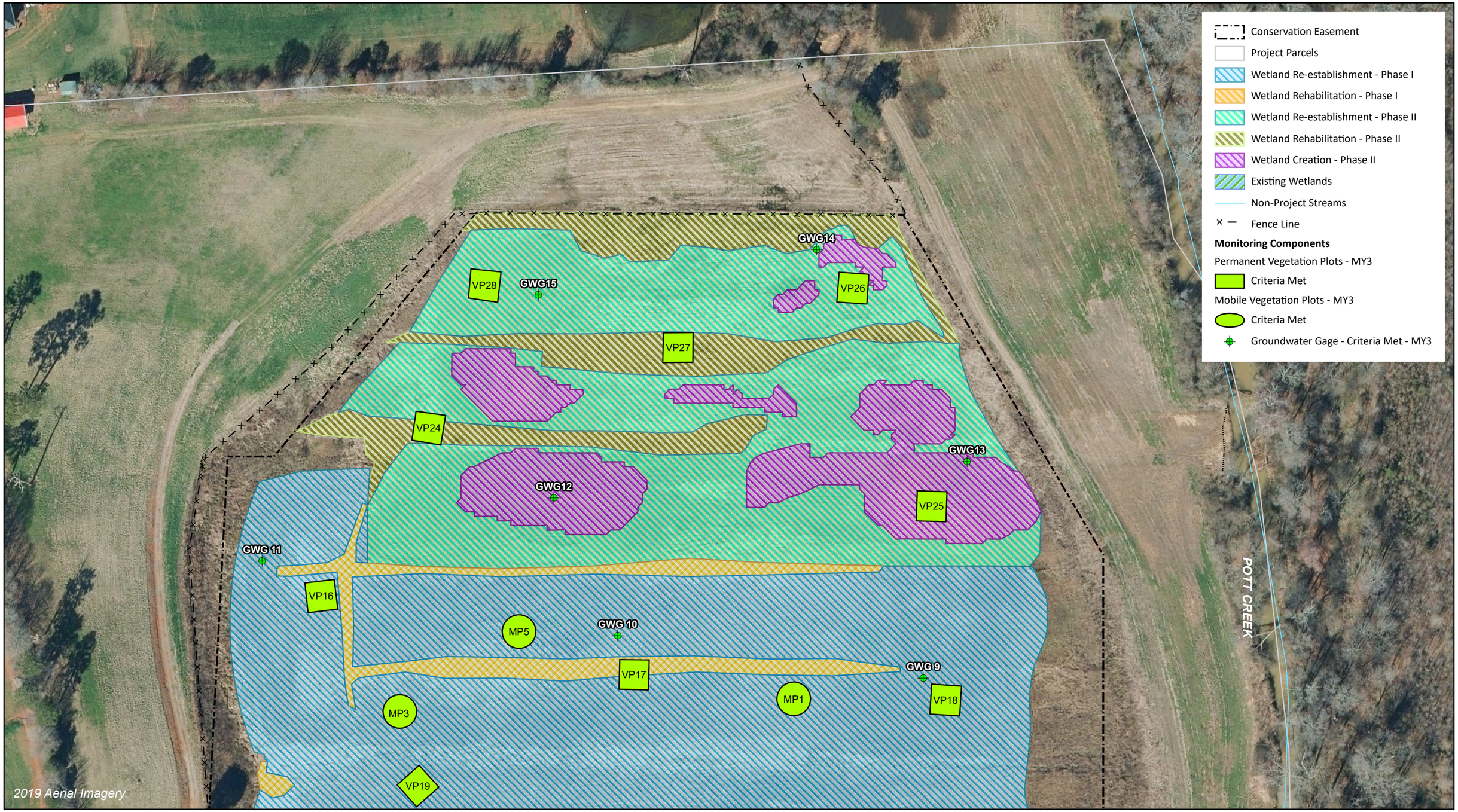
WILDLANDS ENGINEERING

Environmental Quality

0 50 100 Feet

N

Figure 1e. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023
Lincoln County, NC



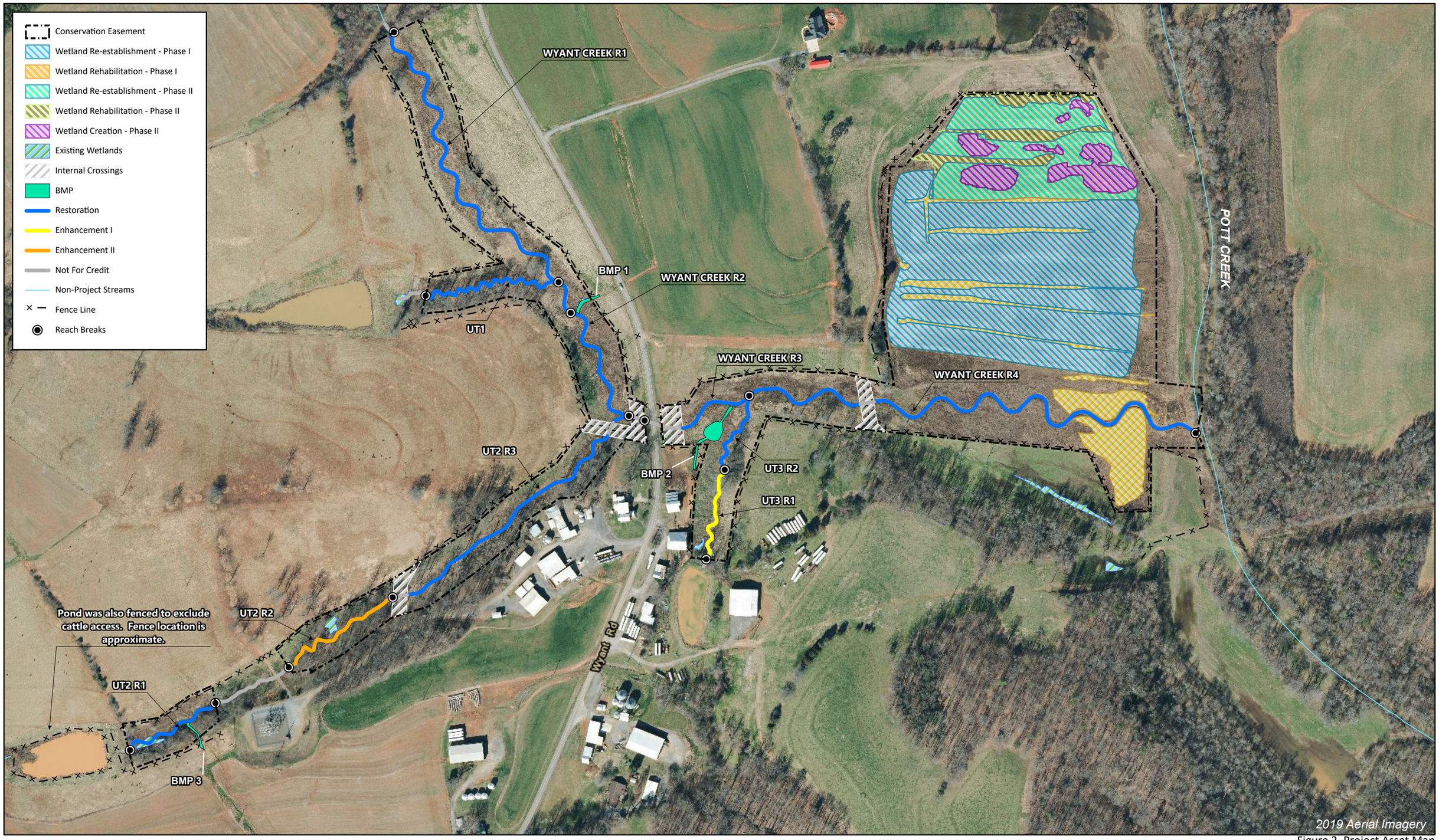
WILDLANDS ENGINEERING

Environmental Quality

0 50 100 Feet

N

Figure 1f. Current Condition Plan View
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023
Lincoln County, NC



WILDLANDS ENGINEERING

Environmental Quality

0 160 320 Feet

N

Figure 2. Project Asset Map
Wyant Lands Mitigation Site
Catawba River Basin 03050102
(03050103 Expanded Service Area)
Monitoring Year 3 - 2023

Lincoln County, NC

APPENDICES

Appendix A

Visual Assessment Data

Table 4a. Visual Stream Morphology Stability Assessment Table

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Stream **Wyant Creek (Reaches 1 - 4)**

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	4,264
					Assessed Bank Length	8,528
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.	17	17		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	29	29		100%

Assessment Date: 11/29/2023

Stream **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	604
					Assessed Bank Length	1,208
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.	15	15		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	8	8		100%

Assessment Date: 11/29/2023

Table 4b. Visual Stream Morphology Stability Assessment Table

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Stream **UT2 Reach 1 and Reach 3**

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	1,438
					Assessed Bank Length	2,876
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.	26	27		96%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	17	17		100%

Assessment Date: 11/29/2023

Stream **UT3 Reach 1 and Reach 2**

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	704
					Assessed Bank Length	1,408
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.	15	15		100%
	Bank Protection	Bank erosion within the structures extent of influence does not exceed 15%.	9	9		100%

Assessment Date: 11/29/2023

Table 5. Vegetation Condition Assessment Table
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage **45.00**

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	0.00%
Low Stem Density Areas	Woody stem densities clearly below target levels based on current MY stem count criteria.	0.10	0.45	1.00%
		Total	**0.45**	**1.00%**
Areas of Poor Growth Rates	Planted areas where average height is not meeting current MY Performance Standard.	0.10	0	0%
		Cumulative Total	**0.45**	**1.00%**

Assessment Date: 11/29/2023

Easement Acreage **47.27**

Vegetation Category	Definitions	Mapping Threshold (ac)	Combined Acreage	% 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	0.00%
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	1 Encroachment Noted / 0 ac	

Assessment Date: 11/29/2023

Stream Photographs

	
Wyant R1 – Photo Point 1 looking upstream *(3/22/2023)*	**Wyant R1** – Photo Point 1 looking downstream *(3/22/2023)*
	
Wyant R1 – Photo Point 2 looking upstream *(3/22/2023)*	**Wyant R1** – Photo Point 2 looking downstream *(3/22/2023)*
	
Wyant R1 – Photo Point 3 looking upstream *(3/22/2023)*	**Wyant R1** – Photo Point 3 looking downstream *(3/22/2023)*

	
Wyant R1 – Photo Point 4 looking upstream *(3/22/2023)*	**Wyant R1** – Photo Point 4 looking downstream *(3/22/2023)*
	
Wyant R2 – Photo Point 5 looking upstream *(3/22/2023)*	**Wyant R2** – Photo Point 5 looking downstream *(3/22/2023)*
	
Wyant R2 – Photo Point 6 looking upstream *(3/22/2023)*	**Wyant R2** – Photo Point 6 looking downstream *(3/22/2023)*

	
Wyant R3 – Photo Point 7 looking upstream *(3/22/2023)*	**Wyant R3** – Photo Point 7 looking downstream *(3/22/2023)*
	
Wyant R4 – Photo Point 8 looking upstream *(3/22/2023)*	**Wyant R4** – Photo Point 8 looking downstream *(3/22/2023)*
	
Wyant R4 – Photo Point 9 looking upstream *(3/22/2023)*	**Wyant R4** – Photo Point 9 looking downstream *(3/22/2023)*

	
Wyant R4 – Photo Point 10 looking upstream *(3/22/2023)*	**Wyant R4** – Photo Point 10 looking downstream *(3/22/2023)*
	
Wyant R4 – Photo Point 11 looking upstream *(3/22/2023)*	**Wyant R4** – Photo Point 11 looking downstream *(3/22/2023)*
	
Wyant R4 – Photo Point 12 looking upstream *(3/22/2023)*	**Wyant R4** – Photo Point 12 looking downstream *(3/22/2023)*

	
UT1 – Photo Point 13 looking upstream *(3/22/2023)*	**UT1** – Photo Point 13 looking downstream *(3/22/2023)*
	
UT1 – Photo Point 14 looking upstream *(3/22/2023)*	**UT1** – Photo Point 14 looking downstream *(3/22/2023)*
	
UT2 R1 – Photo Point 15 looking upstream *(3/22/2023)*	**UT2 R1** – Photo Point 15 looking downstream *(3/22/2023)*

	
UT2 R2 – Photo Point 16 looking upstream *(3/22/2023)*	**UT2 R2** – Photo Point 16 looking downstream *(3/22/2023)*
	
UT2 R3 – Photo Point 17 looking upstream *(3/22/2023)*	**UT2 R3** – Photo Point 17 looking downstream *(3/22/2023)*
	
UT2 R3 – Photo Point 18 looking upstream *(3/22/2023)*	**UT2 R3** – Photo Point 18 looking downstream *(3/22/2023)*

	
UT3 R1 – Photo Point 19 looking upstream *(3/22/2023)*	**UT3 R1** – Photo Point 19 looking downstream *(3/22/2023)*
	
UT3 R2 – Photo Point 20 looking upstream *(3/22/2023)*	**UT3 R2** – Photo Point 20 looking downstream *(3/22/2023)*
	
UT2 R1 – Photo Point 21 looking upstream *(3/22/2023)*	**UT2 R1** – Photo Point 21 looking downstream *(3/22/2023)*

Crossing Photographs

	
Wyant R2 – Photo Point 6A downstream inlet *(3/22/2023)*	**Wyant R2** – Photo Point 6B upstream outlet *(3/22/2023)*
	
Wyant R3 – Photo Point 8A downstream inlet *(3/22/2023)*	**Wyant R3** – Photo Point 8B upstream outlet *(3/22/2023)*
	
UT2 R2 – Photo Point 16A downstream inlet *(3/22/2023)*	**UT2 R2**– Photo Point 16B upstream outlet *(3/22/2023)*

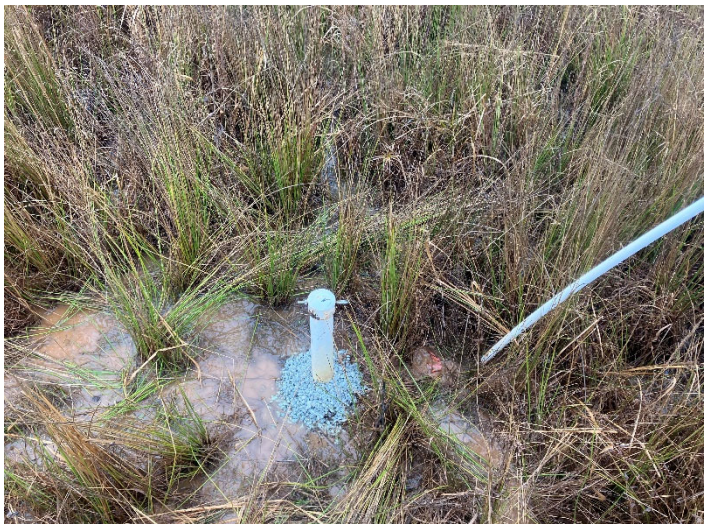
	
UT2 R3– Photo Point 18A downstream ford crossing *(3/22/2023)*	**UT2 R1**– Photo Point 21 upstream outlet *(3/22/2023)*

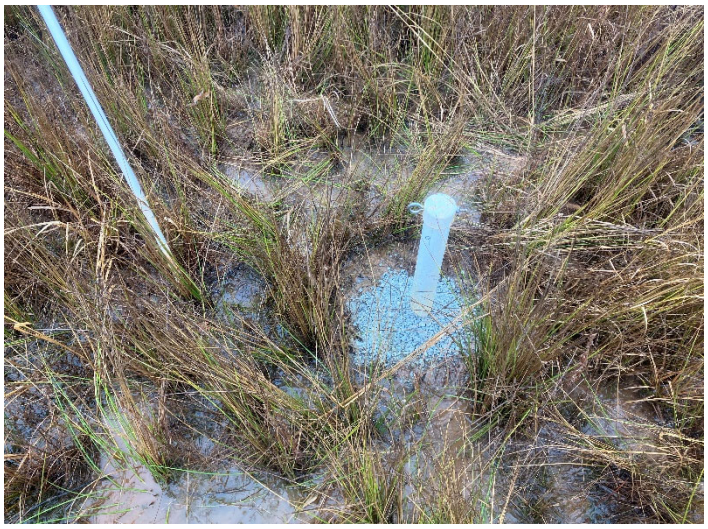
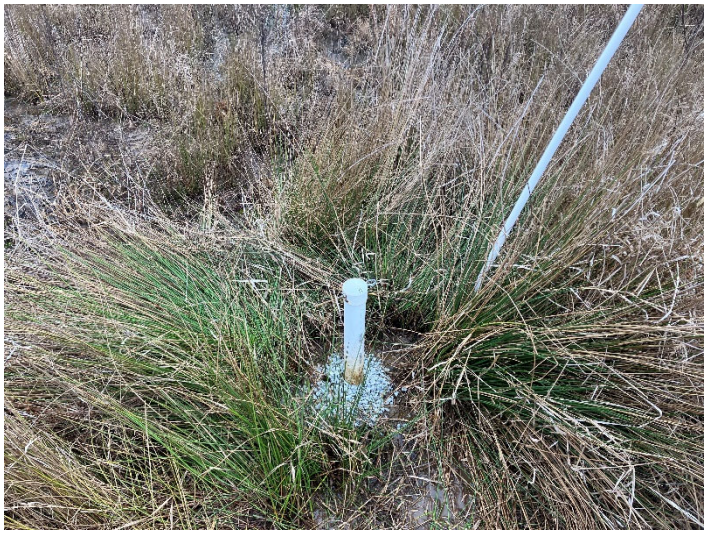
BMP Photographs

	
BMP 1 - looking up from bottom *(3/22/2023)*	**BMP 1** - looking down from outside of easement *(3/22/2023)*
	
BMP 2 - looking up across containment *(3/22/2023)*	**BMP 2** - looking down from outside easement *(3/22/2023)*
	
BMP 3 - looking up from bottom *(3/22/2023)*	**BMP 3** - looking down from outside easement (*3/22/2023)*

BMP 3 - looking up from outside easement *(3/22/2023)*

Groundwater Gage Photographs

	
Groundwater Gage 1 - *(1/31/2023)*	**Groundwater Gage 2** - *(1/31/2023)*
	
Groundwater Gage 3 - *(1/31/2023)*	**Groundwater Gage 4** - *(1/31/2023)*
	
Groundwater Gage 5 - *(1/31/2023)*	**Groundwater Gage 6** - *(1/31/2023)*

	
Groundwater Gage 7 - *(1/31/2023)*	**Groundwater Gage 8** - *(1/31/2023)*
	
Groundwater Gage 9 - *(1/31/2023)*	**Groundwater Gage 10** - *(1/31/2023)*
	
Groundwater Gage 11 - *(1/31/2023)*	**Groundwater Gage 12** - *(1/31/2023)*

Groundwater Gage 13 - *(1/31/2023)*

Groundwater Gage 14 - *(1/31/2023)*

Groundwater Gage 15 - *(1/31/2023)*

Vegetation Plot Photographs

PERMANENT VEGETATION PLOT 1 *(8/7/2023)*

PERMANENT VEGETATION PLOT 2 *(8/7/2023)*

PERMANENT VEGETATION PLOT 3 *(8/7/2023)*

PERMANENT VEGETATION PLOT 4 *(8/7/2023)*

PERMANENT VEGETATION PLOT 5 *(8/7/2023)*

PERMANET VEGETATION PLOT 6 *(8/7/2023)*

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

PERMANENT VEGETATION PLOT 8 *(8/2/2023)*

PERMANENT VEGETATION PLOT 9 *(8/2/2023)*

PERMANENT VEGETATION PLOT 10 *(8/2/2023)*

PERMANENT VEGETATION PLOT 11 *(8/2/2023)*

PERMANENT VEGETATION PLOT 12 *(8/2/2023)*

PERMANENT VEGETATION PLOT 13 *(8/7/2023)*

PERMANET VEGETATION PLOT 14 *(8/7/2023)*

PERMANENT VEGETATION PLOT 15 *(8/7/2023)*

PERMANENT VEGETATION PLOT 16 *(8/2/2023)*

PERMANENT VEGETATION PLOT 17 *(8/1/2023)*

PERMANENT VEGETATION PLOT 18 *(8/1/2023)*

PERMANENT VEGETATION PLOT 19 *(8/2/2023)*

PERMANENT VEGETATION PLOT 20 *(8/2/2023)*

PERMANENT VEGETATION PLOT 21 *(8/2/2023)*

PERMANET VEGETATION PLOT 22 *(8/1/2023)*

PERMANENT VEGETATION PLOT 23 *(8/1/2023)*

PERMANENT VEGETATION PLOT 24 *(8/2/2023)*

PERMANENT VEGETATION PLOT 25 *(8/1/2023)*

PERMANET VEGETATION PLOT 26 *(8/2/2023)*

PERMANENT VEGETATION PLOT 27 *(8/1/2023)*

PERMANENT VEGETATION PLOT 28 *(8/1/2023)*

MOBILE VEGETATION PLOT 1 *(8/1/2023)*

MOBILE VEGETATION PLOT 2 *(8/1/2023)*

MOBILE VEGETATION PLOT 3 *(8/2/2023)*

MOBILE VEGETATION PLOT 4 *(8/2/2023)*

MOBILE VEGETATION PLOT 5 *(8/7/2023)*

MOBILE VEGETATION PLOT 6 *(8/7/2023)*

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

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

Resolved Areas of Concern Photographs

UT2 R1 – Repaired Gully looking downslope (*6/23/2023*)

UT2 R1 – Repaired Gully looking upslope (*6/23/2023*)

Wyant Creek R4 – STA:128+75 (XS15) Bank Repair (*6/23/2023*)

Wyant Creek R2 – Ford Crossing Vegetation Cover (9/19/2023)

Wyant Creek R3 – Ford Crossing Vegetation Cover (*9/19/2023*)

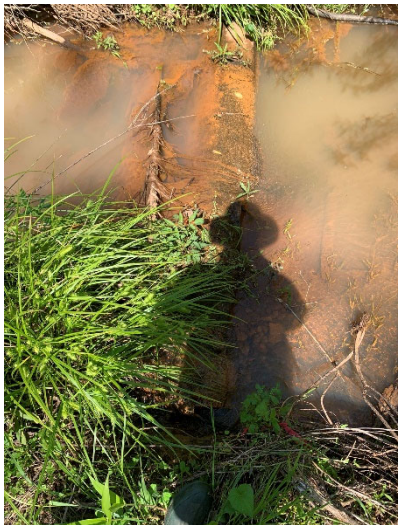
Wyant Creek R1 – STA:102+50 Beaver Dam Removed (*2/6/2023*)

Wyant Creek R4 – STA:136+00 Beaver Dam Pre-Removal (9/19/2023)

UT2 R3 – Off-Site Sediment Repair (5/2*/2023*)

Wyant Creek R4 – STA:139+50 Beaver Dam Pre-Removal (6/23/2023)

Existing Areas of Concern Photographs



Wyant UT2 R3 – STA: 322+00 Log Piping (5/2*/2023*)

Appendix B

Vegetation Plot Data

Table 6a. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
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	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL								
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	1	1	1	1			2	2
	Carpinus caroliniana	American hornbeam	Tree	FAC								
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL					2	2		
	Diospyros virginiana	common persimmon	Tree	FAC	2	2	1	1			1	1
	Fraxinus pennsylvanica	green ash	Tree	FACW	1	1	1	1				
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU	1	1						
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	2	2	2	2	1	1	2	2
	Populus deltoides	eastern cottonwood	Tree	FAC	1	1	1	1				
	Quercus michauxii	swamp chestnut oak	Tree	FACW	2	2						
	Quercus nigra	water oak	Tree	FAC			1	1				
	Quercus phellos	willow oak	Tree	FAC	1	1						
	Salix nigra	black willow	Tree	OBL	1	1			1	1		
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree									
Sum	Performance Standard				12	12	7	7	4	4	5	5
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				12	12	7	7	4	4	5	5
Mitigation Plan Performance Standard	Current Year Stem Count					12		7		4		5
	Stems/Acre					486		283		162		202
	Species Count					9		6		3		3
	Dominant Species Composition (%)					17		29		50		40
	Average Plot Height (ft.)					5		6		4		4
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					12		7		4		5
	Stems/Acre					486		283		162		202
	Species Count					9		6		3		3
	Dominant Species Composition (%)					17		29		50		40
	Average Plot Height (ft.)					5		6		4		4
	% Invasives					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 6b. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 5 F		Veg Plot 6 F		Veg Plot 7 F		Veg Plot 8 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL								
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	1	1	2	2				
	Carpinus caroliniana	American hornbeam	Tree	FAC			1	1				
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL							3	3
	Diospyros virginiana	common persimmon	Tree	FAC	1	1	1	1	2	2		
	Fraxinus pennsylvanica	green ash	Tree	FACW			2	2				
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU								
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	3	3	2	2	3	3	2	2
	Populus deltoides	eastern cottonwood	Tree	FAC	2	2	1	1	2	2		
	Quercus michauxii	swamp chestnut oak	Tree	FACW					2	2		
	Quercus nigra	water oak	Tree	FAC	1	1	1	1				
	Quercus phellos	willow oak	Tree	FAC			1	1	3	3		
	Salix nigra	black willow	Tree	OBL								
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree								3	3
Sum	Performance Standard				8	8	11	11	12	12	8	8
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				8	8	11	11	12	12	8	8
Mitigation Plan Performance Standard	Current Year Stem Count					8		11		12		8
	Stems/Acre					324		445		486		324
	Species Count					5		8		5		3
	Dominant Species Composition (%)					38		18		25		38
	Average Plot Height (ft.)					12		7		6		6
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					8		11		12		8
	Stems/Acre					324		445		486		324
	Species Count					5		8		5		3
	Dominant Species Composition (%)					38		18		25		38
	Average Plot Height (ft.)					12		7		6		6
	% Invasives					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 6c. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 9 F		Veg Plot 10 F		Veg Plot 11 F		Veg Plot 12 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL								
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	1	1	1	1	4	4	2	2
	Carpinus caroliniana	American hornbeam	Tree	FAC	1	1						
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL			1	1	2	2	2	2
	Diospyros virginiana	common persimmon	Tree	FAC	1	1						
	Fraxinus pennsylvanica	green ash	Tree	FACW								
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU								
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	4	4	2	2	2	2	3	3
	Populus deltoides	eastern cottonwood	Tree	FAC	1	1						
	Quercus michauxii	swamp chestnut oak	Tree	FACW	1	1	3	3	4	4		
	Quercus nigra	water oak	Tree	FAC	1	1						
	Quercus phellos	willow oak	Tree	FAC	1	1			2	2	1	1
	Salix nigra	black willow	Tree	OBL								1
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree						2	2	1	1
Sum	Performance Standard				11	11	7	7	16	16	9	10
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				11	11	7	7	16	16	9	10
Mitigation Plan Performance Standard	Current Year Stem Count					11		7		16		10
	Stems/Acre					445		283		648		405
	Species Count					8		4		6		6
	Dominant Species Composition (%)					36		43		25		30
	Average Plot Height (ft.)					5		4		5		6
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					11		7		16		10
	Stems/Acre					445		283		648		405
	Species Count					8		4		6		6
	Dominant Species Composition (%)					36		43		25		30
	Average Plot Height (ft.)					5		4		5		6
	% Invasives					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 6d. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 13 F		Veg Plot 14 F		Veg Plot 15 F		Veg Plot 16 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL								
	Aronia arbutifolia	red chokeberry	Shrub	FACW	2	2						
	Betula nigra	river birch	Tree	FACW	2	2	2	2	3	3	2	2
	Carpinus caroliniana	American hornbeam	Tree	FAC			1	1				
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL							1	2
	Diospyros virginiana	common persimmon	Tree	FAC			1	1	1	1		
	Fraxinus pennsylvanica	green ash	Tree	FACW			2	2	2	2		
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU			1	1				
	Morus rubra	red mulberry	Tree	FACU	1	1						
	Platanus occidentalis	American sycamore	Tree	FACW	2	2	2	2	2	2	2	2
	Populus deltoides	eastern cottonwood	Tree	FAC			1	1	1	1		
	Quercus michauxii	swamp chestnut oak	Tree	FACW			2	2			2	2
	Quercus nigra	water oak	Tree	FAC	1	1	1	1				
	Quercus phellos	willow oak	Tree	FAC					1	1	2	2
	Salix nigra	black willow	Tree	OBL								
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree									
Sum	Performance Standard				8	8	13	13	10	10	9	10
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL	2	2						
Sum	Proposed Standard				10	10	13	13	10	10	9	10
Mitigation Plan Performance Standard	Current Year Stem Count					8		13		10		10
	Stems/Acre					324		526		405		405
	Species Count					5		9		6		5
	Dominant Species Composition (%)					20		15		30		20
	Average Plot Height (ft.)					6		6		7		5
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					10		13		10		10
	Stems/Acre					405		526		405		405
	Species Count					6		9		6		5
	Dominant Species Composition (%)					20		15		30		20
	Average Plot Height (ft.)					5		6		7		5
	% Invasives					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 6e. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 17 F		Veg Plot 18 F		Veg Plot 19 F		Veg Plot 20 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL				1				
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	2	2	1	1	3	3	1	1
	Carpinus caroliniana	American hornbeam	Tree	FAC								
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL	3	3	2	2	1	1	1	1
	Diospyros virginiana	common persimmon	Tree	FAC								
	Fraxinus pennsylvanica	green ash	Tree	FACW								
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU								
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	2	2	1	1	1	1	4	4
	Populus deltoides	eastern cottonwood	Tree	FAC								
	Quercus michauxii	swamp chestnut oak	Tree	FACW	1	1	2	2	2	2	2	2
	Quercus nigra	water oak	Tree	FAC								
	Quercus phellos	willow oak	Tree	FAC	1	1	2	2	2	2	1	1
	Salix nigra	black willow	Tree	OBL	4	4						
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree		1	1						
Sum	Performance Standard				14	14	8	9	9	9	9	9
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				14	14	8	9	9	9	9	9
Mitigation Plan Performance Standard	Current Year Stem Count					14		9		9		9
	Stems/Acre					567		364		364		364
	Species Count					7		6		5		5
	Dominant Species Composition (%)					29		22		33		44
	Average Plot Height (ft.)					4		2		3		4
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					14		9		9		9
	Stems/Acre					567		364		364		364
	Species Count					7		6		5		5
	Dominant Species Composition (%)					29		22		33		44
	Average Plot Height (ft.)					4		2		3		4
	% Invasives					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 6f. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 21 F		Veg Plot 22 F		Veg Plot 23 F		Veg Plot 24 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL							1	1
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	2	2	3	3	1	1	1	1
	Carpinus caroliniana	American hornbeam	Tree	FAC								
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL	2	2	1	1	3	3		
	Diospyros virginiana	common persimmon	Tree	FAC								
	Fraxinus pennsylvanica	green ash	Tree	FACW								
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU								
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	2	2	1	1	3	3	3	3
	Populus deltoides	eastern cottonwood	Tree	FAC								
	Quercus michauxii	swamp chestnut oak	Tree	FACW					1	1		
	Quercus nigra	water oak	Tree	FAC								
	Quercus phellos	willow oak	Tree	FAC			3	3	2	2		
	Salix nigra	black willow	Tree	OBL							4	4
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree		1	1						
Sum	Performance Standard				7	7	8	8	10	10	9	9
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC								
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				7	7	8	8	10	10	9	9
Mitigation Plan Performance Standard	Current Year Stem Count					7		8		10		9
	Stems/Acre					283		324		405		364
	Species Count					4		4		5		4
	Dominant Species Composition (%)					29		38		30		44
	Average Plot Height (ft.)					4		4		4		5
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					7		8		10		9
	Stems/Acre					283		324		405		364
	Species Count					4		4		5		4
	Dominant Species Composition (%)					29		38		30		44
	Average Plot Height (ft.)					4		4		4		5
	% Invasives					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 6g. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
Plot size (ACRES)	0.0247

	Scientific Name	Common Name	Tree/Shrub	Indicator Status	Veg Plot 25 F		Veg Plot 26 F		Veg Plot 27 F		Veg Plot 28 F	
					Planted	Total	Planted	Total	Planted	Total	Planted	Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL	2	2						
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	2	2	3	3	2	2	3	3
	Carpinus caroliniana	American hornbeam	Tree	FAC								
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL			2	2			1	1
	Diospyros virginiana	common persimmon	Tree	FAC								
	Fraxinus pennsylvanica	green ash	Tree	FACW								
	Lindera benzoin	northern spicebush	Tree	FAC								
	Liriodendron tulipifera	tuliptree	Tree	FACU								
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	4	4	3	3	1	1	2	2
	Populus deltoides	eastern cottonwood	Tree	FAC								
	Quercus michauxii	swamp chestnut oak	Tree	FACW	1	1	1	1	3	3	2	2
	Quercus nigra	water oak	Tree	FAC								
	Quercus phellos	willow oak	Tree	FAC								
	Salix nigra	black willow	Tree	OBL	3	3	1	1	3	3	1	1
	Salix sericea	silky willow	Shrub	OBL							1	1
	Sambucus canadensis	American black elderberry	Tree									
Sum	Performance Standard				12	12	10	10	9	9	10	10
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC	1	1	2	2				
	Nyssa sylvatica	blackgum	Tree	FAC			1	1				
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				13	13	13	13	9	9	10	10
Mitigation Plan Performance Standard	Current Year Stem Count					12		10		9		10
	Stems/Acre					486		405		364		405
	Species Count					5		5		4		6
	Dominant Species Composition (%)					31		23		33		30
	Average Plot Height (ft.)					3		4		5		3
	% Invasives					0		0		0		0
Post Mitigation Plan Performance Standard	Current Year Stem Count					13		13		9		10
	Stems/Acre					526		526		364		405
	Species Count					6		7		4		6
	Dominant Species Composition (%)					31		23		33		30
	Average Plot Height (ft.)					3		4		5		3
	% Invasives					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 6h. Vegetation Plot Data

Wyant Lands Mitigation Site DMS
Project No. 100067
Monitoring Year 3 - 2023

Planted Acreage	45
Date of Initial Plant	2021-04-04
Date(s) of Supplemental Plant(s)	2022-04-19
Date(s) Mowing	NA
Date of Current Survey	2023-08-07
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	Veg Plot 6 R Total	Veg Plot 7 R Total	Veg Plot 8 R Total
Species Included in Approved Mitigation Plan	Alnus serrulata	hazel alder	Tree	OBL								
	Aronia arbutifolia	red chokeberry	Shrub	FACW								
	Betula nigra	river birch	Tree	FACW	3	4		4	1		3	1
	Carpinus caroliniana	American hornbeam	Tree	FAC						1		1
	Cephalanthus occidentalis	common buttonbush	Shrub	OBL		1	4	1				
	Diospyros virginiana	common persimmon	Tree	FAC					1	2		1
	Fraxinus pennsylvanica	green ash	Tree	FACW						2		1
	Lindera benzoin	northern spicebush	Tree	FAC					4			
	Liriodendron tulipifera	tuliptree	Tree	FACU					5			
	Morus rubra	red mulberry	Tree	FACU								
	Platanus occidentalis	American sycamore	Tree	FACW	5			3	2	2	1	1
	Populus deltoides	eastern cottonwood	Tree	FAC						4	1	1
	Quercus michauxii	swamp chestnut oak	Tree	FACW			6		1		3	
	Quercus nigra	water oak	Tree	FAC						1	1	1
	Quercus phellos	willow oak	Tree	FAC	3		2	1				
	Salix nigra	black willow	Tree	OBL	1	5			2			
	Salix sericea	silky willow	Shrub	OBL								
	Sambucus canadensis	American black elderberry	Tree									
Sum	Performance Standard				12	10	12	9	16	12	9	7
Post Mitigation Plan Species	Acer negundo	boxelder	Tree	FAC					1			
	Nyssa sylvatica	blackgum	Tree	FAC								
	Oxydendrum arboreum	sourwood	Shrub	UPL								
Sum	Proposed Standard				12	10	12	9	17	12	9	7
Mitigation Plan Performance Standard	Current Year Stem Count				12	10	12	9	16	12	9	7
	Stems/Acre				486	405	486	364	648	486	364	283
	Species Count				4	3	3	4	7	6	5	7
	Dominant Species Composition (%)				42	50	50	44	29	33	33	14
	Average Plot Height (ft.)				3	4	2	7	6	8	5	6
	% Invasives				0	0	0	0	0	0	0	0
Post Mitigation Plan Performance Standard	Current Year Stem Count				12	10	12	9	17	12	9	7
	Stems/Acre				486	405	486	364	688	486	364	283
	Species Count				4	3	3	4	8	6	5	7
	Dominant Species Composition (%)				42	50	50	44	29	33	33	14
	Average Plot Height (ft.)				3	4	2	7	6	8	5	6
	% Invasives				0	0	0	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 7a. Vegetation Performance Standards Summary Table
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Vegetation Performance Standards Summary Table												
	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	486	5	9	0	283	6	6	0	162	4	3	0
Monitoring Year 2	405	4	7	0	324	4	7	0	40	4	1	0
Monitoring Year 1	445	3	8	0	324	2	7	0	202	3	4	0
Monitoring Year 0	607	2	10	0	526	3	9	0	526	3	7	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	202	4	3	0	324	12	5	0	445	7	8	0
Monitoring Year 2	283	3	6	0	324	9	5	0	445	6	8	0
Monitoring Year 1	364	3	6	0	324	4	5	0	526	3	10	0
Monitoring Year 0	486	2	8	0	526	2	8	0	567	3	10	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	486	6	5	0	324	6	3	0	445	5	8	0
Monitoring Year 2	486	4	5	0	324	5	4	0	526	4	9	0
Monitoring Year 1	486	2	6	0	405	3	5	0	486	3	8	0
Monitoring Year 0	526	2	7	0	526	2	6	0	567	2	9	0
	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	283	4	4	0	648	5	6	0	405	6	6	0
Monitoring Year 2	324	3	4	0	567	5	6	0	364	5	5	0
Monitoring Year 1	405	2	5	0	607	3	6	0	405	3	6	0
Monitoring Year 0	526	2	5	0	607	2	6	0	607	2	6	0

*After MY1, 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 7b. Vegetation Performance Standards Summary Table
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Vegetation Performance Standards Summary Table												
	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	324	6	5	0	526	6	9	0	405	7	6	0
Monitoring Year 2	364	4	5	0	526	4	9	0	405	4	6	0
Monitoring Year 1					567	2	9	0	202	3	3	0
Monitoring Year 0	567	3	9	0	607	3	10	0	486	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	405	5	5	0	567	4	7	0	364	2	6	0
Monitoring Year 2	364	4	5	0	283	3	6	0	364	2	5	0
Monitoring Year 1	405	3	5	0	364	2	6	0	445	2	6	0
Monitoring Year 0	526	2	6	0	486	2	6	0	526	2	6	0
	Veg Plot 19 F				Veg Plot 20 F				Veg Plot 21 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	3	5	0	364	4	5	0	283	4	4	0
Monitoring Year 2	405	2	6	0	405	3	6	0	364	2	6	0
Monitoring Year 1	405	2	6	0	445	2	6	0	405	2	6	0
Monitoring Year 0	486	2	6	0	445	2	6	0	526	2	6	0
	Veg Plot 22 F				Veg Plot 23 F				Veg Plot 24 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	324	4	4	0	405	4	5	0	364	5	4	0
Monitoring Year 2	364	3	4	0	445	4	5	0	445	4	4	0
Monitoring Year 1	445	3	6	0	526	3	6	0				
Monitoring Year 0	486	2	6	0	526	2	6	0	486	2	4	0

*After MY1, 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 7c. Vegetation Performance Standards Summary Table
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Vegetation Performance Standards Summary Table												
	Veg Plot 25 F				Veg Plot 26 F				Veg Plot 27 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	486	3	5	0	405	4	5	0	364	5	4	0
Monitoring Year 2	486	3	5	0	405	3	5	0	364	4	4	0
Monitoring Year 1												
Monitoring Year 0	486	2	5	0	486	3	6	0	364	2	4	0
	Veg Plot 28 F				Veg Plot Group 1 R				Veg Plot Group 2 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	405	3	6	0	486	3	4	0	405	4	3	0
Monitoring Year 2	405	3	6	0	445	6	4	0	324	5	3	0
Monitoring Year 1					324	3	6	0	283	3	5	0
Monitoring Year 0	486	2	7	0	486	2	6	0	526	2	8	0
	Veg Plot Group 3 R				Veg Plot Group 4 R				Veg Plot Group 5 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	486	2	3	0	364	7	4	0	648	6	7	0
Monitoring Year 2	324	3	4	0	364	6	5	0	324	4	4	0
Monitoring Year 1	364	2	5	0	324	2	4	0	324	3	3	0
Monitoring Year 0	607	2	9	0	567	2	6	0	526	2	6	0
	Veg Plot Group 6 R				Veg Plot Group 7 R				Veg Plot Group 8 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	486	8	6	0	364	5	5	0	283	6	7	0
Monitoring Year 2	445	4	5	0	405	3	4	0	486	6	5	0
Monitoring Year 1	486	2	5	0	364	2	4	0	324	3	5	0
Monitoring Year 0	445	3	7	0	486	2	4	0	526	2	6	0

*After MY1, 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.

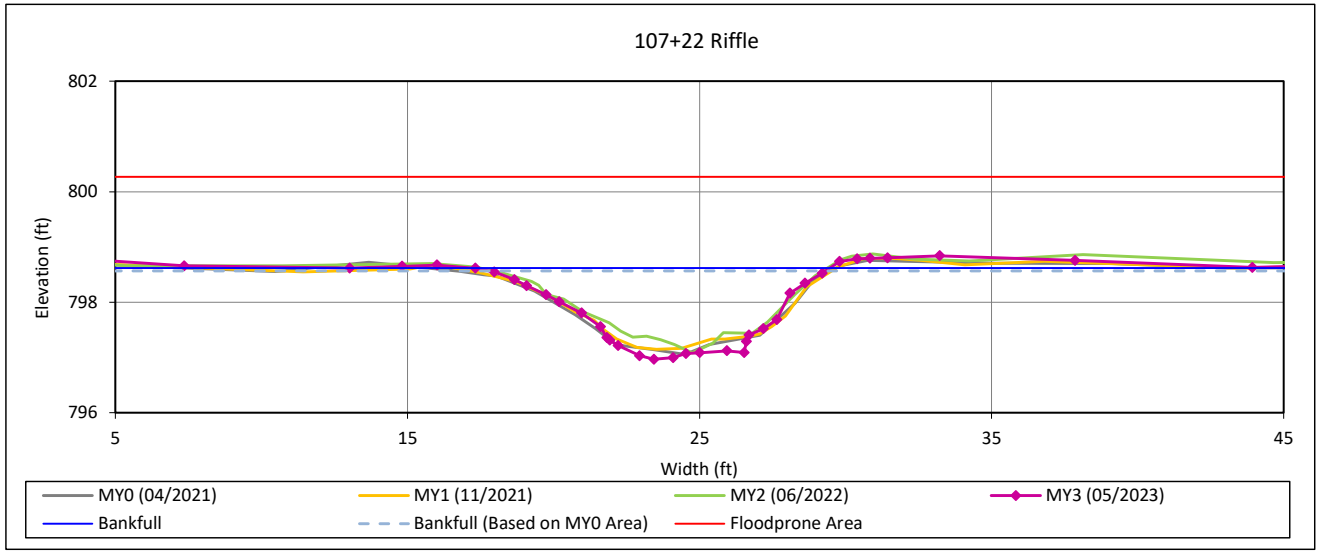
Appendix C

Stream Geomorphology Data

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 1-Wyant Creek R1



Bankfull Dimensions	
11.2	x-section area (ft.sq.)
11.5	width (ft)
1.0	mean depth (ft)
1.7	max depth (ft)
12.3	wetted perimeter (ft)
0.9	hydraulic radius (ft)
11.8	width-depth ratio
50.7	W flood prone area (ft)
4.4	entrenchment ratio
1.0	low bank height ratio

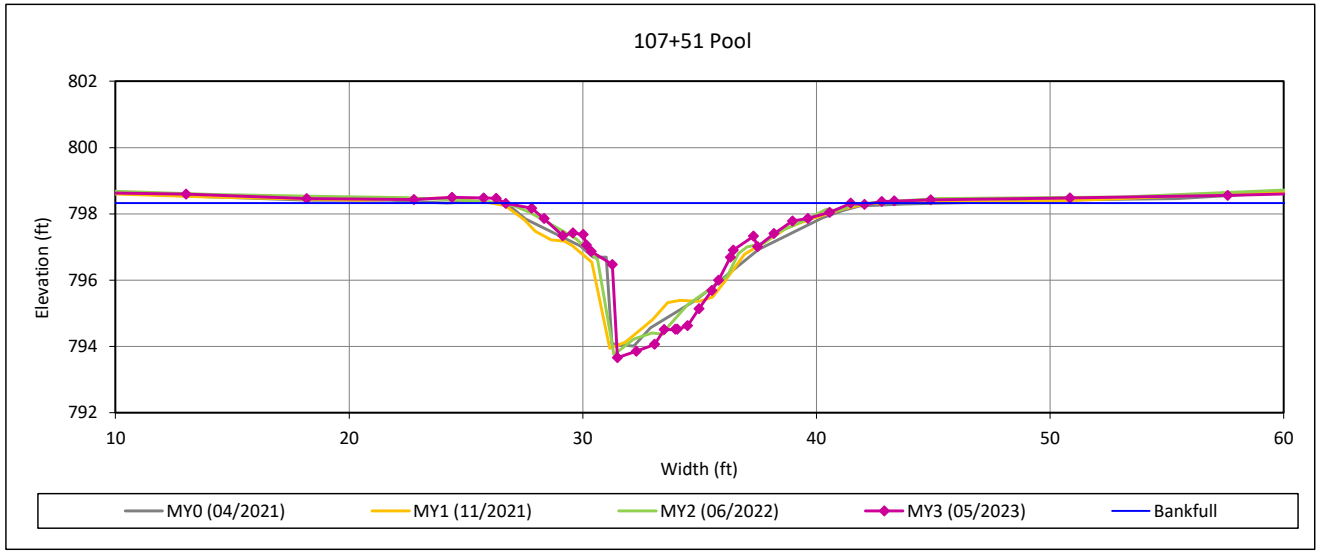
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 2-Wyant Creek R1



Bankfull Dimensions	
25.4	x-section area (ft.sq.)
14.8	width (ft)
1.7	mean depth (ft)
4.7	max depth (ft)
19.9	wetted perimeter (ft)
1.3	hydraulic radius (ft)
8.6	width-depth ratio

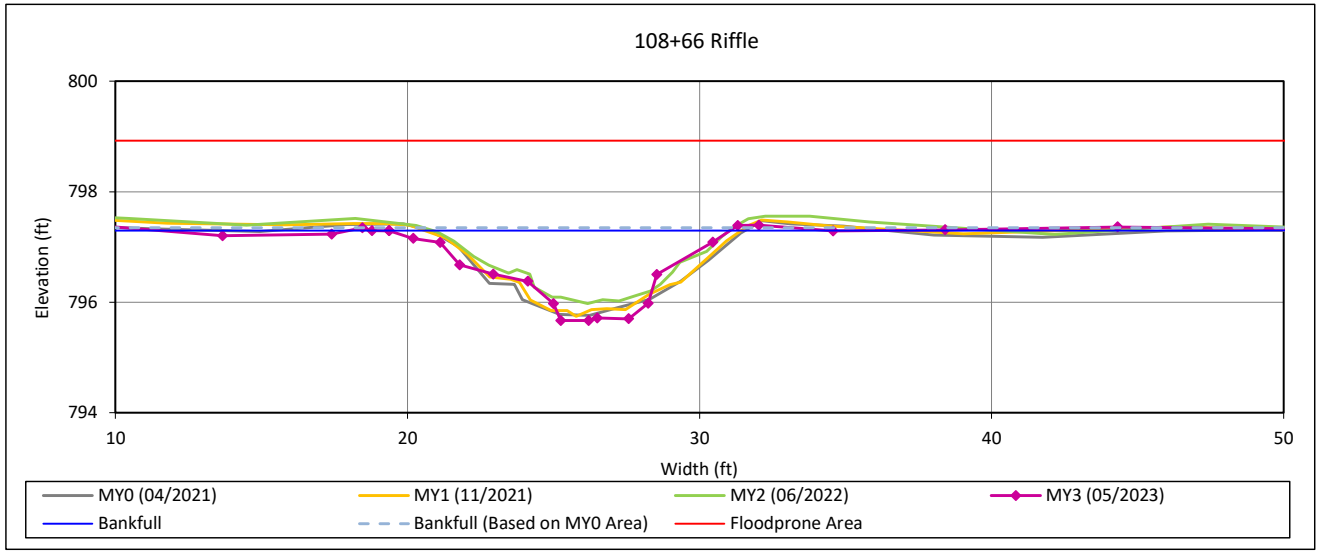
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 3-Wyant Creek R1



Bankfull Dimensions	
9.7	x-section area (ft.sq.)
11.7	width (ft)
0.8	mean depth (ft)
1.6	max depth (ft)
12.5	wetted perimeter (ft)
0.8	hydraulic radius (ft)
14.1	width-depth ratio
55.8	W flood prone area (ft)
4.8	entrenchment ratio
1.0	low bank height ratio

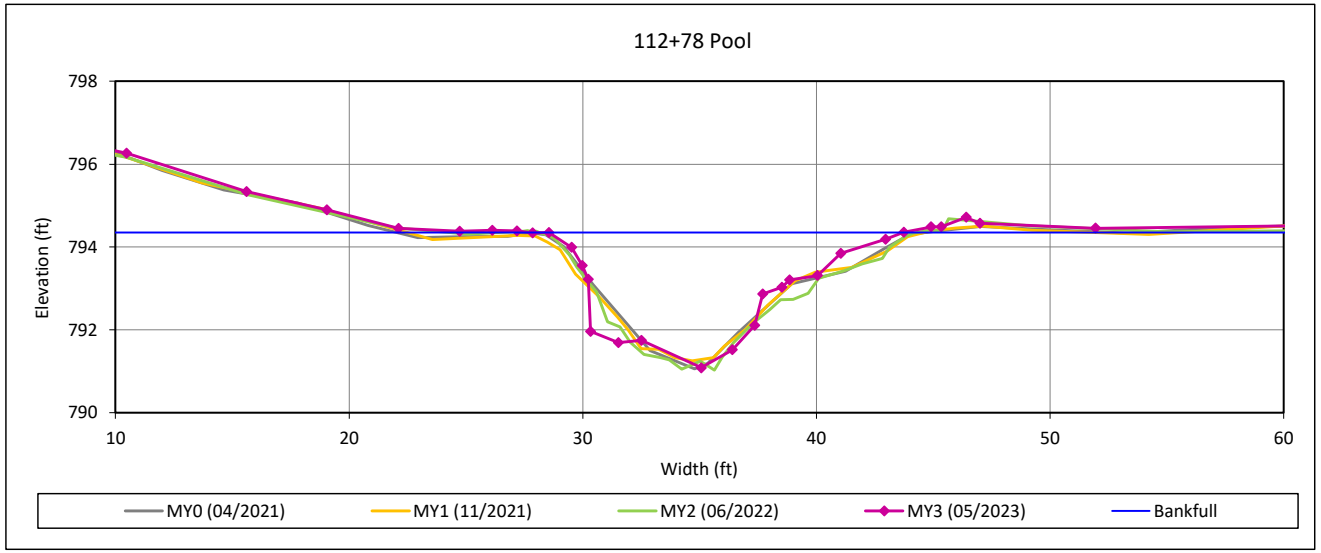
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 4-Wyant Creek R1



Bankfull Dimensions	
25.4	x-section area (ft.sq.)
15.1	width (ft)
1.7	mean depth (ft)
3.3	max depth (ft)
17.8	wetted perimeter (ft)
1.4	hydraulic radius (ft)
9.0	width-depth ratio

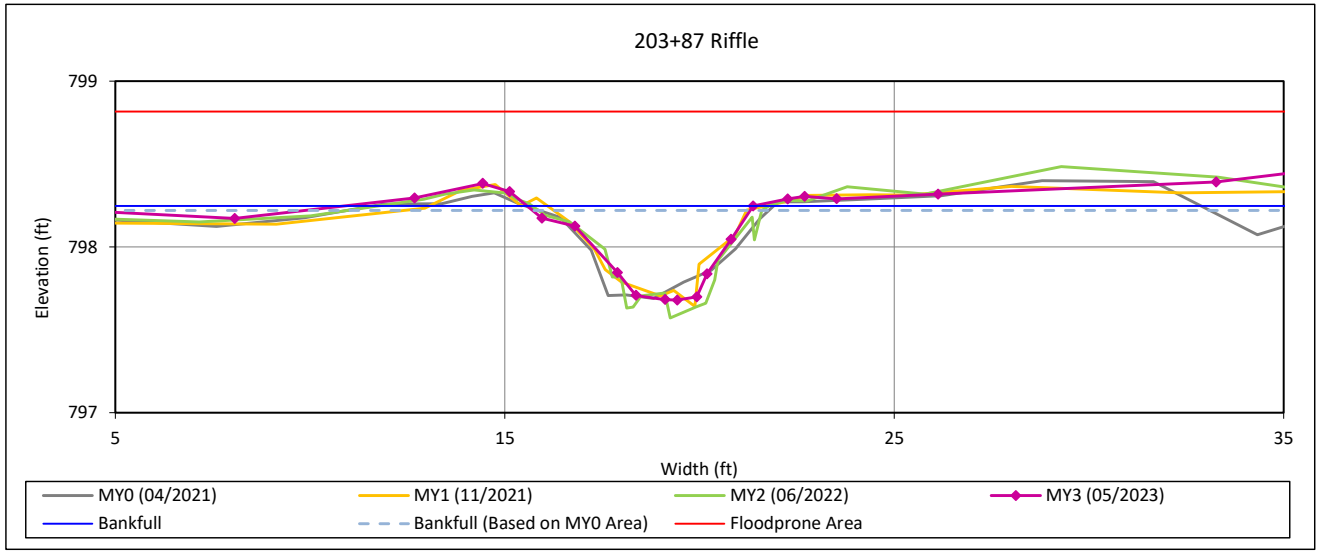
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 5 - UT1



Bankfull Dimensions	
1.9	x-section area (ft.sq.)
5.8	width (ft)
0.3	mean depth (ft)
0.6	max depth (ft)
6.0	wetted perimeter (ft)
0.3	hydraulic radius (ft)
18.3	width-depth ratio
39.1	W flood prone area (ft)
6.7	entrenchment ratio
1.1	low bank height ratio

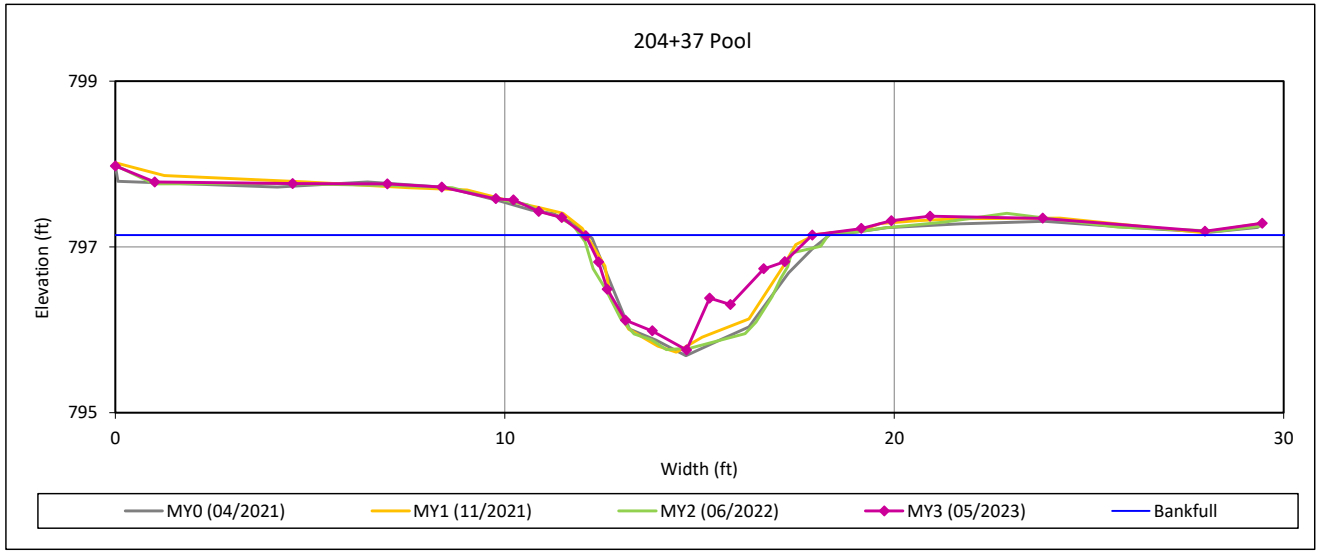
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 6 - UT1



Bankfull Dimensions	
4.3	x-section area (ft.sq.)
5.8	width (ft)
0.7	mean depth (ft)
1.4	max depth (ft)
6.8	wetted perimeter (ft)
0.6	hydraulic radius (ft)
7.9	width-depth ratio

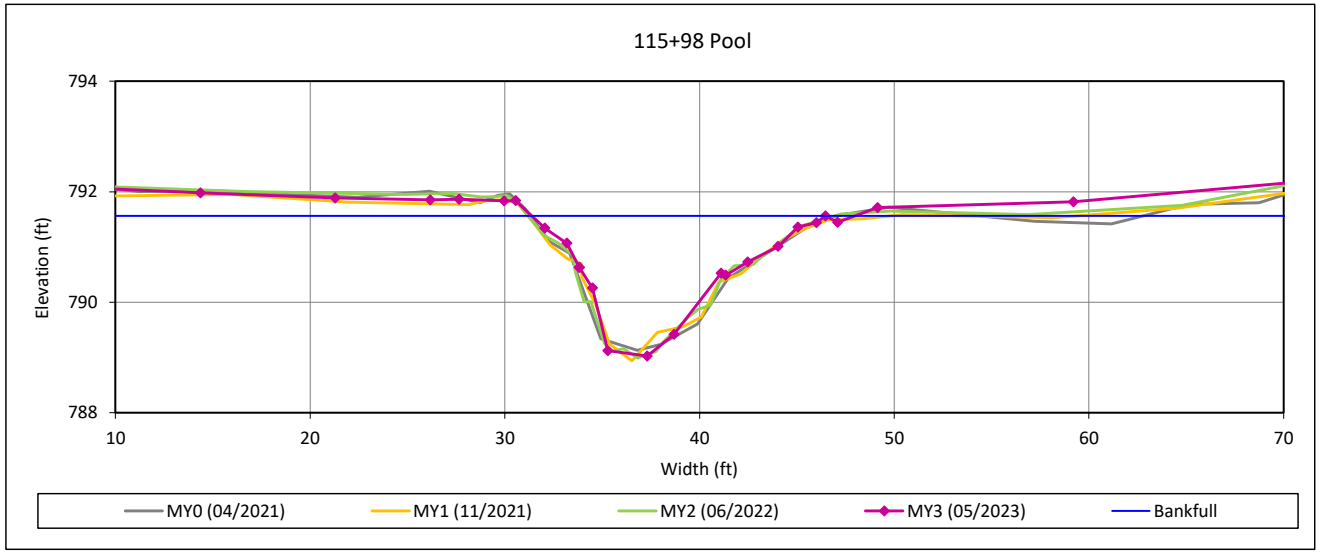
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 7 - Wyant Creek R2



Bankfull Dimensions	
18.2	x-section area (ft.sq.)
15.1	width (ft)
1.2	mean depth (ft)
2.5	max depth (ft)
16.4	wetted perimeter (ft)
1.1	hydraulic radius (ft)
12.5	width-depth ratio

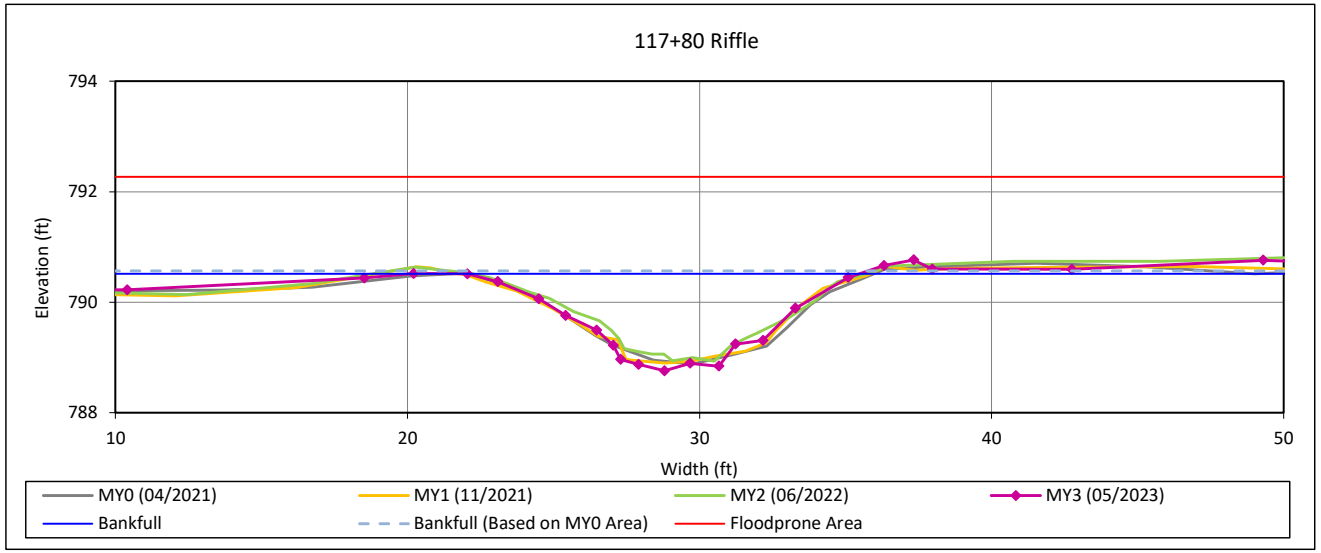
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 8 - Wyant Creek R2



Bankfull Dimensions	
12.2	x-section area (ft.sq.)
13.4	width (ft)
0.9	mean depth (ft)
1.8	max depth (ft)
14.1	wetted perimeter (ft)
0.9	hydraulic radius (ft)
14.7	width-depth ratio
59.0	W flood prone area (ft)
4.4	entrenchment ratio
1.0	low bank height ratio

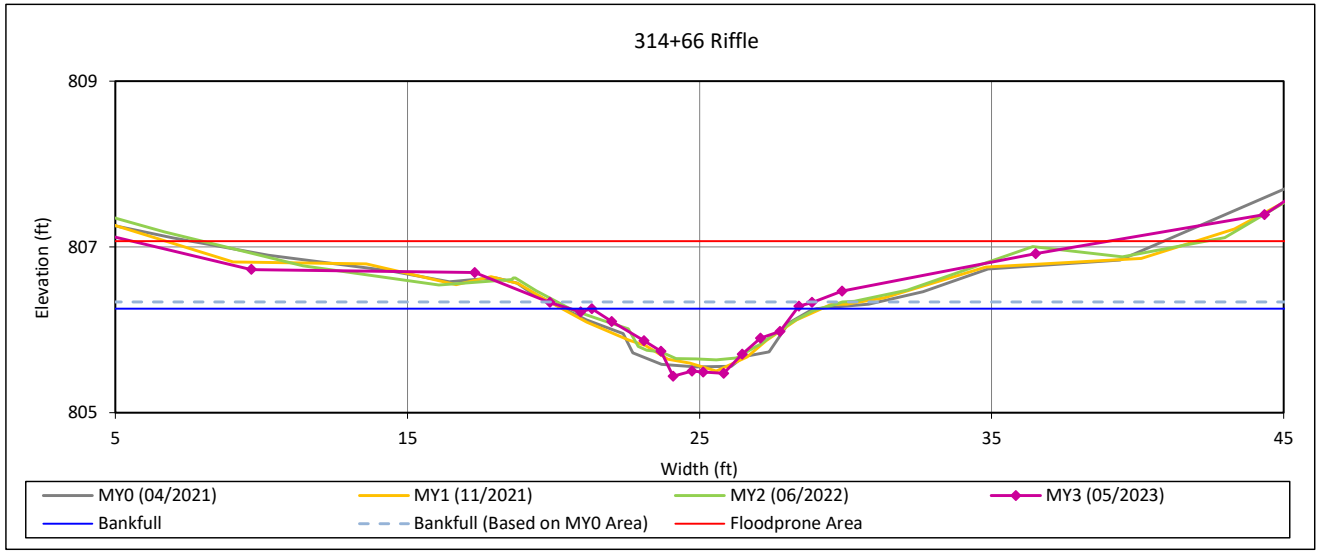
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 9 - UT2 R3



Bankfull Dimensions	
3.2	x-section area (ft.sq.)
7.0	width (ft)
0.5	mean depth (ft)
0.8	max depth (ft)
7.3	wetted perimeter (ft)
0.4	hydraulic radius (ft)
15.3	width-depth ratio
33.5	W flood prone area (ft)
4.8	entrenchment ratio
< 1.0	low bank height ratio

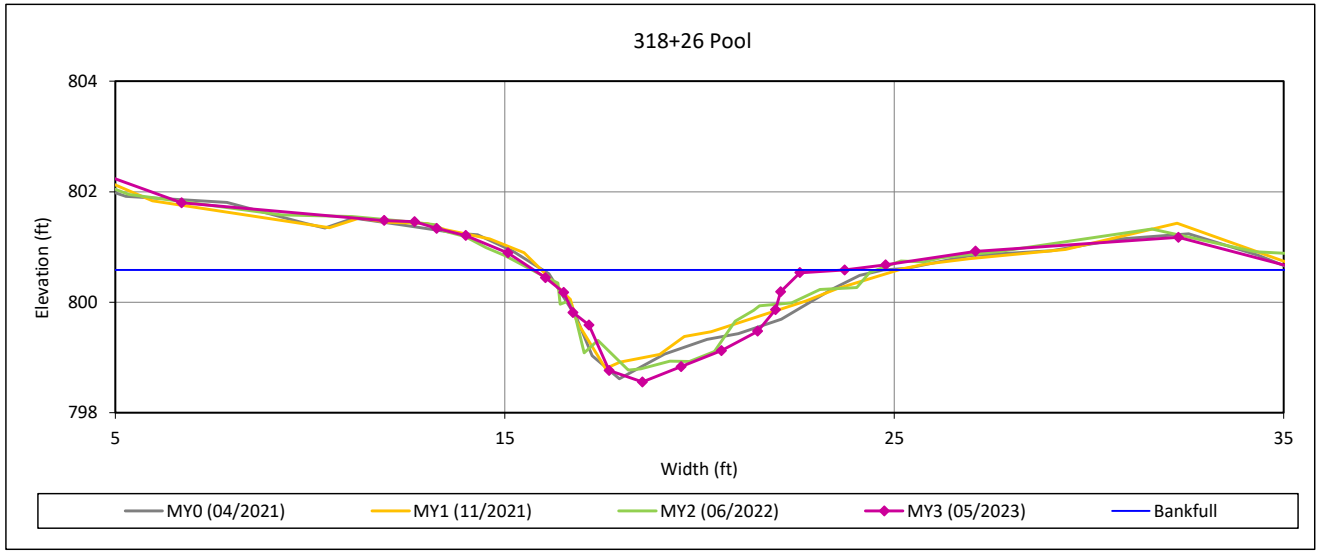
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 10-UT2 R2



Bankfull Dimensions	
8.3	x-section area (ft.sq.)
6.8	width (ft)
1.2	mean depth (ft)
2.0	max depth (ft)
8.3	wetted perimeter (ft)
1.0	hydraulic radius (ft)
5.6	width-depth ratio

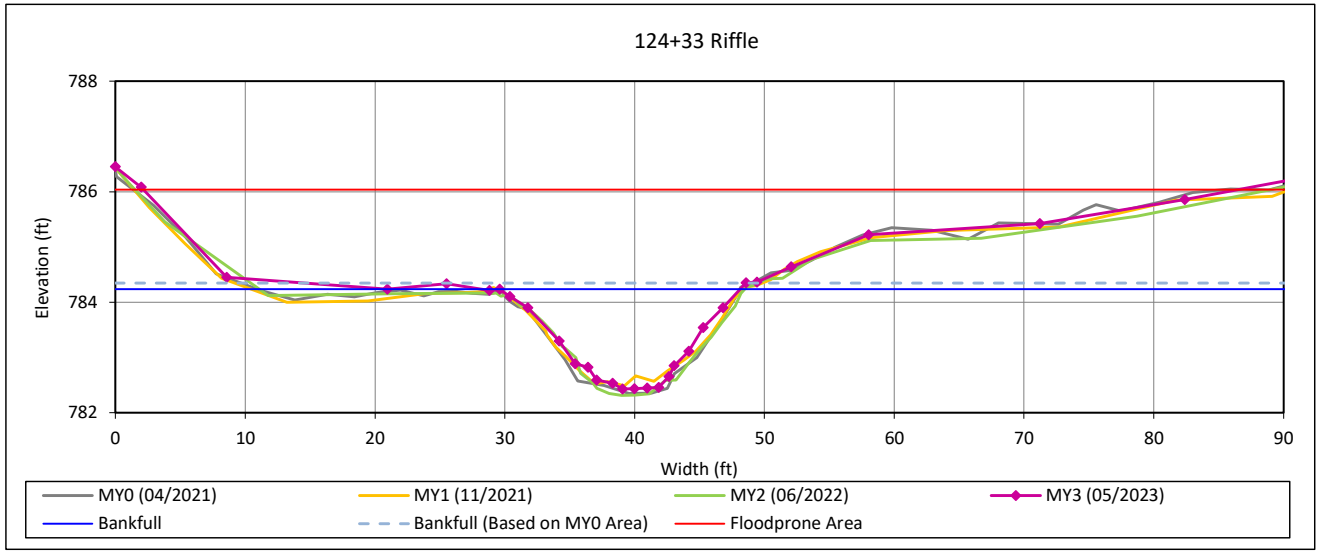
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 11-Wyant Creek R3



Bankfull Dimensions	
19.4	x-section area (ft.sq.)
18.5	width (ft)
1.0	mean depth (ft)
1.8	max depth (ft)
19.0	wetted perimeter (ft)
1.0	hydraulic radius (ft)
17.7	width-depth ratio
84.3	W flood prone area (ft)
4.6	entrenchment ratio
< 1.0	low bank height ratio

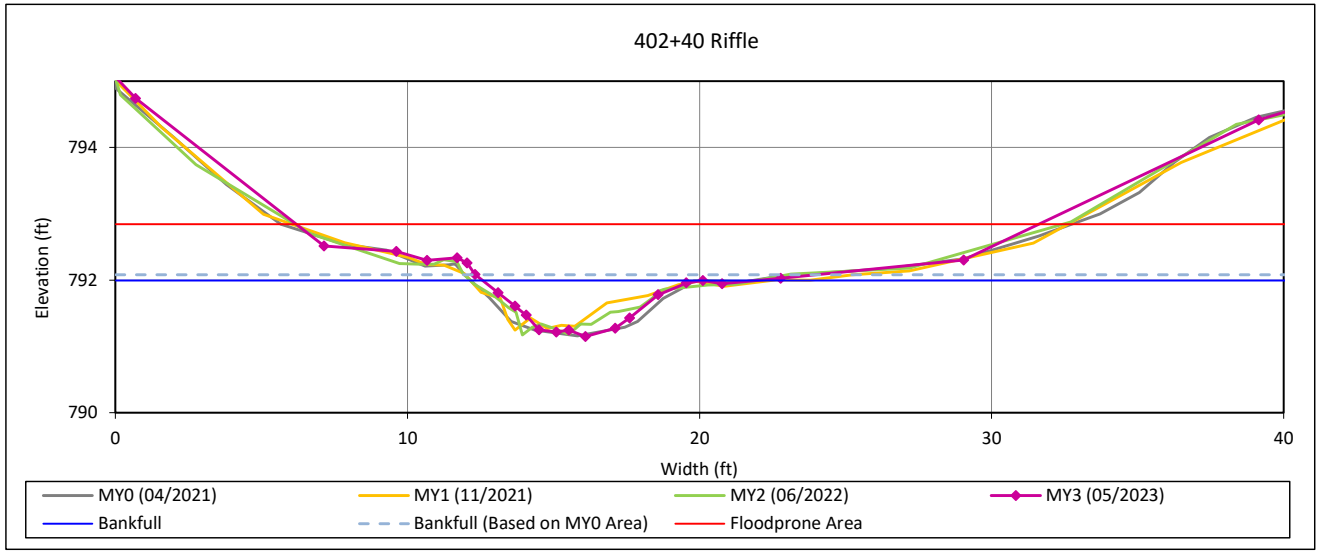
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 12-UT3 R1



Bankfull Dimensions	
3.5	x-section area (ft.sq.)
7.5	width (ft)
0.5	mean depth (ft)
0.8	max depth (ft)
7.8	wetted perimeter (ft)
0.5	hydraulic radius (ft)
16.1	width-depth ratio
25.4	W flood prone area (ft)
3.4	entrenchment ratio
< 1.0	low bank height ratio

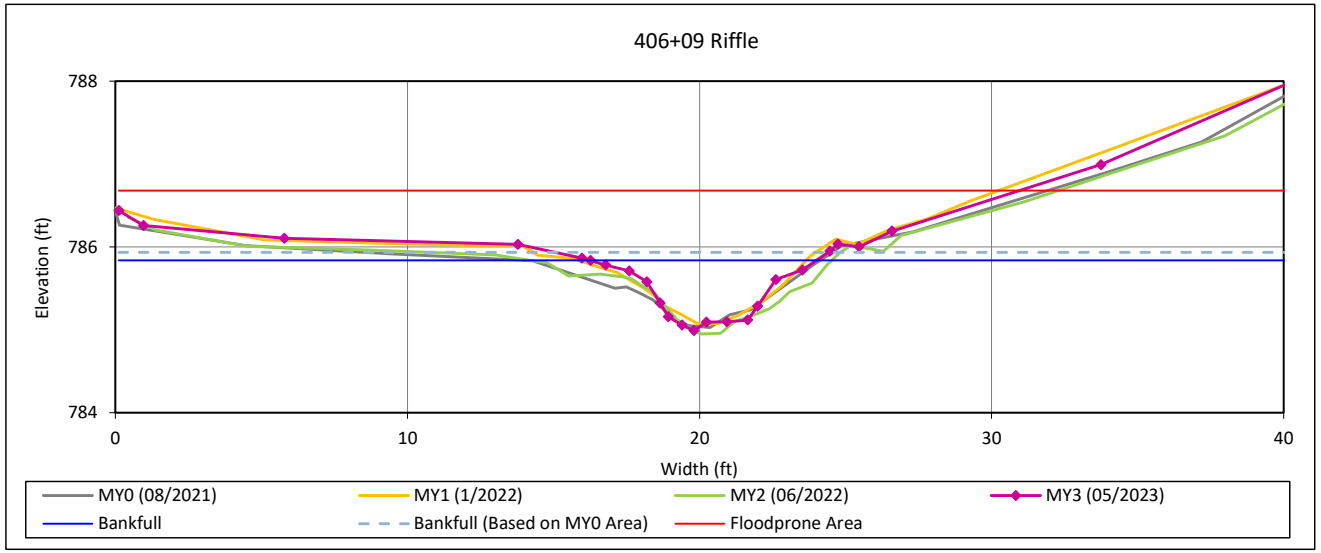
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 13-UT3 R2



Bankfull Dimensions	
3.2	x-section area (ft.sq.)
7.7	width (ft)
0.4	mean depth (ft)
0.8	max depth (ft)
8.0	wetted perimeter (ft)
0.4	hydraulic radius (ft)
18.4	width-depth ratio
30.8	W flood prone area (ft)
4.0	entrenchment ratio
< 1.0	low bank height ratio

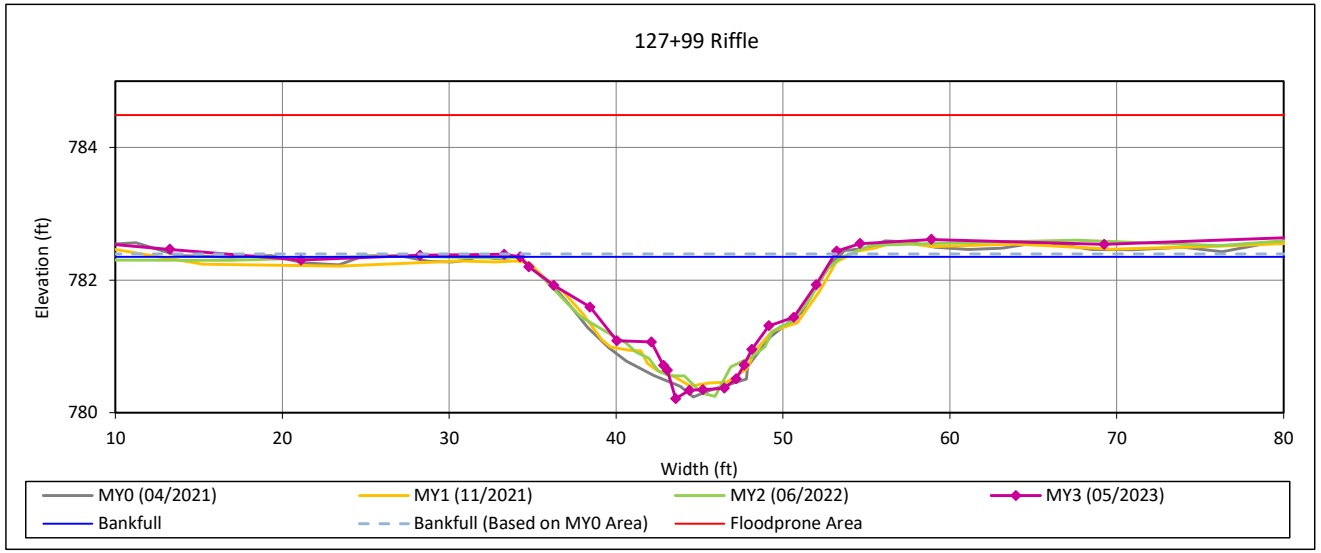
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 14-Wyant Creek R4



Bankfull Dimensions	
21.0	x-section area (ft.sq.)
18.8	width (ft)
1.1	mean depth (ft)
2.1	max depth (ft)
19.5	wetted perimeter (ft)
1.1	hydraulic radius (ft)
16.7	width-depth ratio
93.8	W flood prone area (ft)
5.0	entrenchment ratio
1.0	low bank height ratio

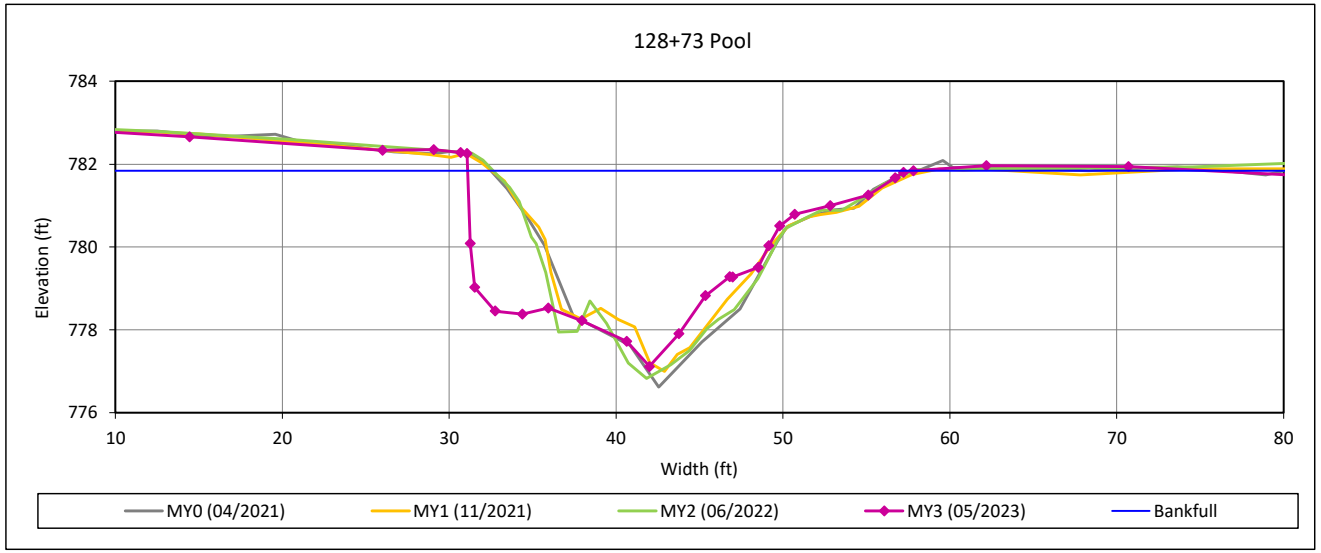
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 15-Wyant Creek R4



Bankfull Dimensions	
67.9	x-section area (ft.sq.)
26.7	width (ft)
2.5	mean depth (ft)
4.7	max depth (ft)
30.5	wetted perimeter (ft)
2.2	hydraulic radius (ft)
10.5	width-depth ratio

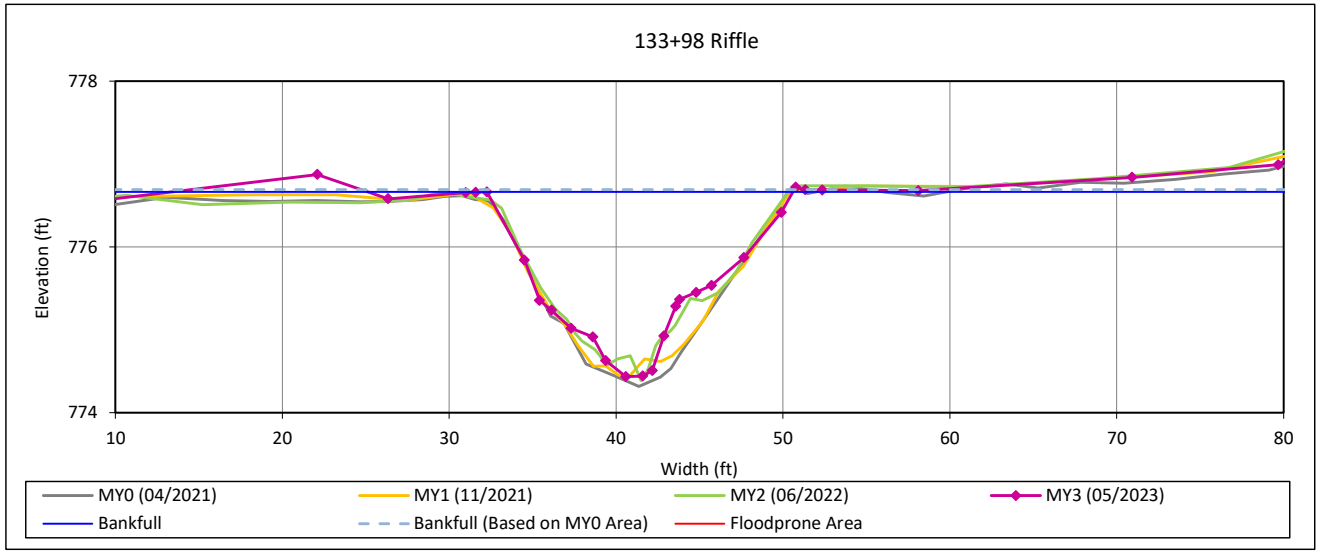
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 16 - Wyant Creek R4



Bankfull Dimensions	
22.6	x-section area (ft.sq.)
18.3	width (ft)
1.2	mean depth (ft)
2.2	max depth (ft)
19.1	wetted perimeter (ft)
1.2	hydraulic radius (ft)
14.9	width-depth ratio
81.7	W flood prone area (ft)
4.5	entrenchment ratio
1.0	low bank height ratio

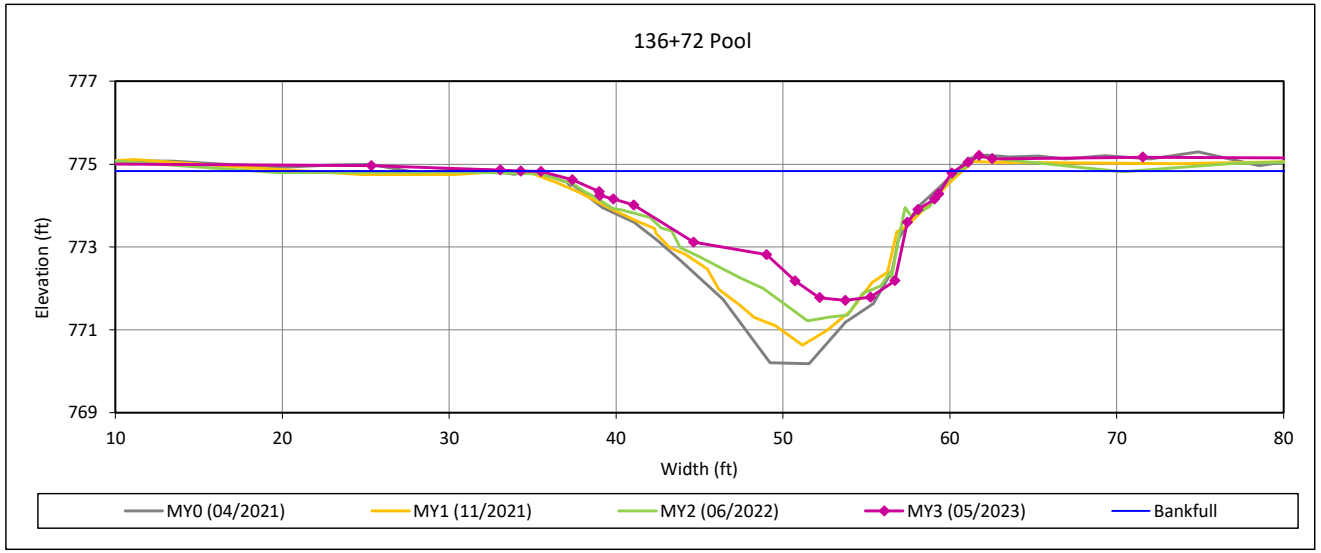
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 17 - Wyant Creek R4



Bankfull Dimensions	
40.0	x-section area (ft.sq.)
26.0	width (ft)
1.5	mean depth (ft)
3.1	max depth (ft)
27.6	wetted perimeter (ft)
1.4	hydraulic radius (ft)
16.9	width-depth ratio

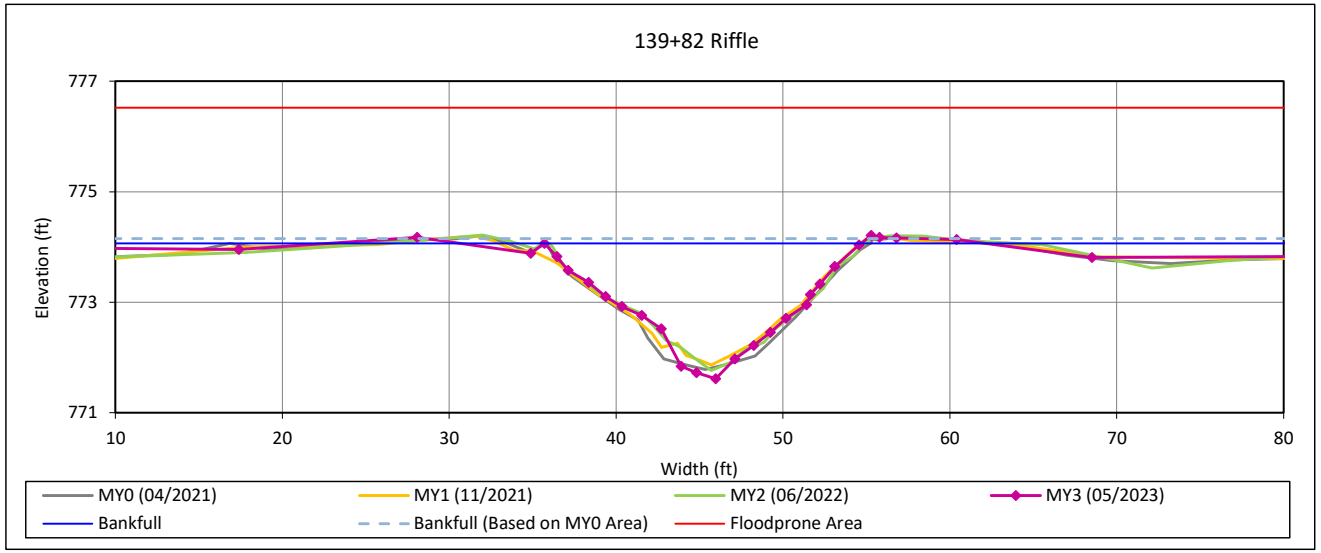
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 18 - Wyant Creek R4



Bankfull Dimensions	
24.2	x-section area (ft.sq.)
19.0	width (ft)
1.3	mean depth (ft)
2.5	max depth (ft)
19.7	wetted perimeter (ft)
1.2	hydraulic radius (ft)
14.9	width-depth ratio
82.9	W flood prone area (ft)
4.4	entrenchment ratio
1.0	low bank height ratio

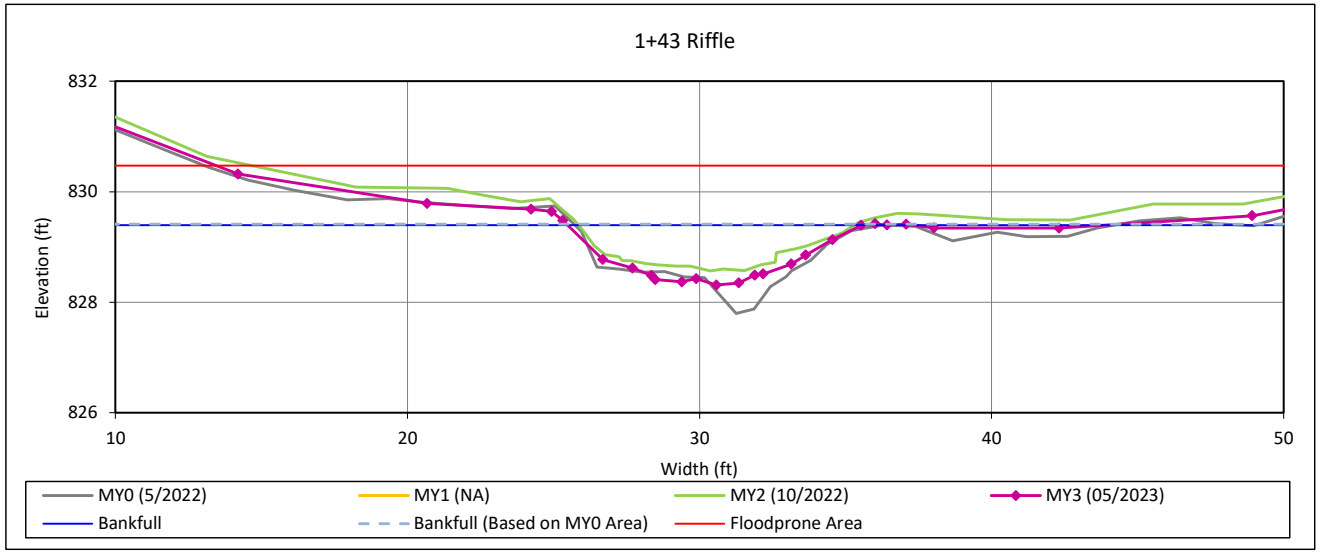
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 19 - UT2 R1



Bankfull Dimensions	
7.0	x-section area (ft.sq.)
10.0	width (ft)
0.7	mean depth (ft)
1.1	max depth (ft)
10.4	wetted perimeter (ft)
0.7	hydraulic radius (ft)
14.4	width-depth ratio
42.0	W flood prone area (ft)
4.2	entrenchment ratio
1.0	low bank height ratio

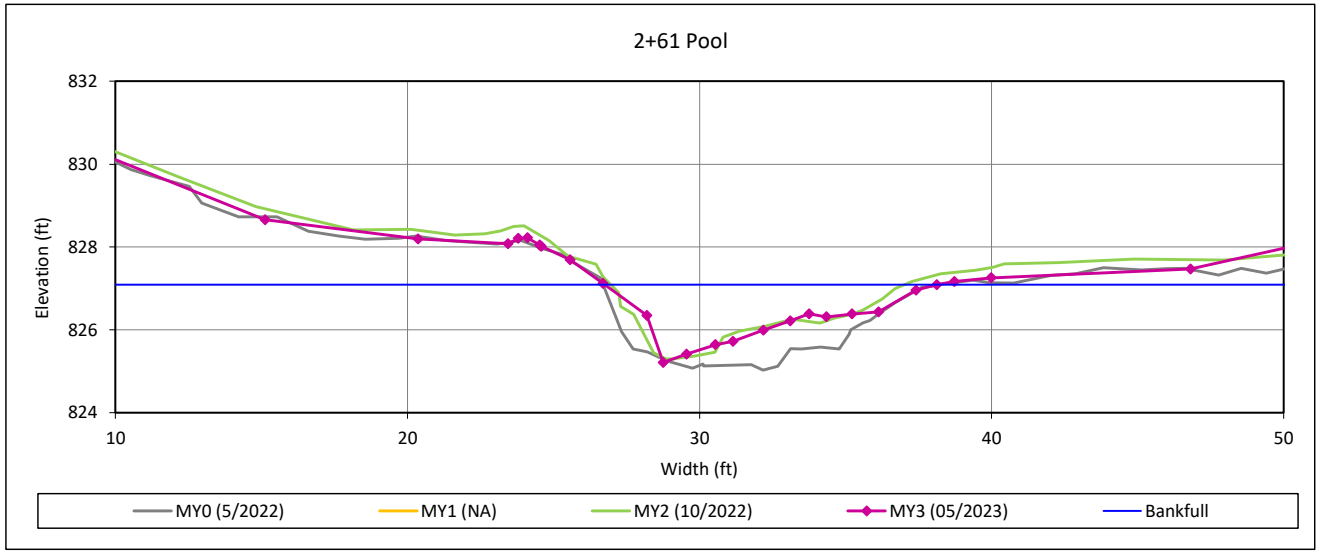
Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Cross-Section Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Cross-Section 20 - UT2 R1



Bankfull Dimensions	
10.0	x-section area (ft.sq.)
11.4	width (ft)
0.9	mean depth (ft)
1.9	max depth (ft)
12.5	wetted perimeter (ft)
0.8	hydraulic radius (ft)
12.9	width-depth ratio

Survey Date: 05/2023
Field Crew: Wildlands Engineering

View Downstream

Table 8. Baseline Stream Data Summary
Wyant Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

	Pre-Existing Condition																											
Parameter	**Wyant Creek R1**			**Wyant Creek R2**			**Wyant Creek R3**			**Wyant Creek R4**			**UT1**			**UT2 R1**			**UT2 R3**			**UT3 R1**			**UT3 R2**		
	Min	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**
Dimension and Substrate - Riffle																												
Bankfull Width (ft)	11.1		1	10.8		1	17.9		1	17.1		1	1.5		1	8.3		1	5.9		1	-		N/A	6.1		1
Floodprone Width (ft)	18.9		1	15.4		1	15.6		1	-		1	8.1		1	19.6		1	11.0		1	-		N/A	18.8		1
Bankfull Mean Depth (ft)	1.1		1	0.9		1	1.5		1	1.2		1	0.4		1	0.6		1	0.7		1	-		N/A	0.7		1
Bankfull Max Depth (ft)	1.7		1	1.3		1	1.9		1	1.5		1	0.3		1	0.9		1	0.9		1	-		N/A	1.2		1
Bankfull Cross-sectional Area (ft^2)	11.1		1	10.8		1	17.9		1	17.1		1	1.5		1	5.0		1	5.9		1	-		N/A	6.1		1
Width/Depth Ratio	9.3		1	12.5		1	7.8		1	12.6		1	13.4		1	13.8		1	12.8		1	-		N/A	12.9		1
Entrenchment Ratio[1]	1.9		1	1.3		1	1.3		1	-		1	1.8		1	2.4		1	1.3		1	-		N/A	2.1		1
Bank Height Ratio	2.7		1	3.2		1	3.0		1	2.4		1	6.0		1	2.0		1	4.7		1	-		N/A	3.3		1
Max part size (mm) mobilized at bankfull	-		N/A	-		N/A	-		N/A	-		N/A	-		N/A	-		N/A	-		N/A	-		N/A	-		N/A
Rosgen Classification	G5		1	G5		1	G5		1	G5		1	C5/4		1	C4b		1	G4		1	-		N/A	G5		1
Bankfull Discharge (cfs)	3.8		1	3.0		1	3.3		1	4.1		1	2.6		1	16.8		1	3.7		1	-		N/A	4.0		1
Sinuosity	1.2		1	1.2		1	1.1		1	1.1		1	1.0		1	1.2		1	1.2		1	-		N/A	1.1		1
Bankfull/Channel Slope (ft/ft)[2]	0.0110		1	0.0075		1	0.0057		1	0.0048		1	0.0100		1	0.0167		1	0.0190		1	-		N/A	0.0210		1
	Design																											
Parameter	**Wyant Creek R1**			**Wyant Creek R2**			**Wyant Creek R3**			**Wyant Creek R4**			**UT1**			**UT2 R1**			**UT2 R3**			**UT3 R1**			**UT3 R2**		
	Min	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**
Dimension and Substrate - Riffle																												
Bankfull Width (ft)	12.9		1	13.8		1	17.7		1	19.6		1	4.9		1	9.3		1	9.3		1	7.7		1	7.7		1
Floodprone Width (ft)	39.0	65.0	2	30.0	69.0	2	39.0	89.0	2	43.0	98.0	2	11.0	25.0	2	-		-	13.0	47.0	2	17.0	39.0	2	17.0	39.0	2
Bankfull Mean Depth (ft)	1.0		1	1.0		1	1.3		1	1.4		1	0.3		1	0.7		1	0.7		1	0.6		1	0.6		1
Bankfull Max Depth (ft)	1.2	1.6	2	1.3	1.7	2	1.5	2.0	2	1.7	2.2	2	0.4	0.6	2	1.0		1	0.8	1.1	2	0.7	1.0	2	0.7	1.0	2
Bankfull Cross-sectional Area (ft^2)	12.6		1	14.4		1	22.2		1	27.2		1	1.7		1	6.8		1	6.6		1	4.7		1	4.7		1
Width/Depth Ratio	13.0		1	13.0		1	14.0		1	14.0		1	14.0		1	13.0		1	13.0		1	12.0		1	12.0		1
Entrenchment Ratio[1]	3.0	5.0	2	2.2	5.0	2	2.2	5.0+	2	2.2	5.0+	2	2.2	5.0	2	>1.4	5.0	2	1.4	5.0	2	2.2	5.0	2	2.2	5.0	2
Bank Height Ratio	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2	1.0	1.1	2
Max part size (mm) mobilized at bankfull	36	88	2	27	72	2	25	69	2	17	52	2	27	73	2	-		-	25	69	2	-		N/A	48	108	2
Rosgen Classification	C4		1	C4		1	C4		1	C4		1	C4b		1	Bc		1	B4		1	C4b		1	C4b		1
Bankfull Discharge (cfs)	43.0		1	45.0		1	70.0		1	72.0		1	4.0		1	26.0		1	26.0		1	17.0		1	17.0		1
Sinuosity	1.2		1	1.2		1	1.2		1	1.3		1	1.2		1	1.1		1	1.1		N/A	1.2		N/A	1.2		N/A
Bankfull/Channel Slope (ft/ft)[2]	0.0088	0.0095	2	0.0059	0.0064	2	0.0050	0.0117	2	0.0029	0.0031	2	0.0188	0.0225	2	0.0190		1	0.0182	0.0200	2	0.0206	0.0247	2	0.0207	0.0248	2
	As-Built/ Baseline																											
Parameter	**Wyant Creek R1**			**Wyant Creek R2**			**Wyant Creek R3**			**Wyant Creek R4**			**UT1**			**UT2 R1**			**UT2 R3**			**UT3 R1**			**UT3 R2**		
	Min	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**	**Min**	**Max**	**n**
Dimension and Substrate - Riffle																												
Bankfull Width (ft)	10.8	12.7	2	14.0		1	18.0		1	17.5	19.3	3	5.2		1	9.3		1	8.8		1	7.6		1	9.8		1
Floodprone Width (ft)	50.7	55.9	2	59.1		1	87.8		1	81.8	93.8	3	39.2		1	43.9		1	31.0		1	26.8		1	31.5		1
Bankfull Mean Depth (ft)	0.8	1.0	2	0.9		1	1.2		1	1.2	1.3	3	0.3		1	0.8		1	0.4		1	0.5		1	0.4		1
Bankfull Max Depth (ft)	1.5		2	1.7		1	1.9		1	2.0	2.3	3	0.5		1	1.5		1	0.7		1	0.8		1	0.8		1
Bankfull Cross-sectional Area (ft^2)[1]	10.3	10.6	2	12.9		1	21.5		1	21.7	25.9	3	1.6		1	7.2		1	3.8		1	4.2		1	4.0		1
Width/Depth Ratio	11.3	15.2	2	15.1		1	15.0		1	13.3	15.3	3	16.8		1	12.0		1	20.4		1	14.0		1	24.4		1
Entrenchment Ratio[1]	4.0	5.2	2	4.2		1	4.9		1	4.3	5.1	3	7.6		1	4.7		1	3.5		1	3.5		1	3.2		1
Bank Height Ratio	1.0		2	1.0		1	1.0		1	1.0		3	1.0		1	1.0		1	1.0		1	1.0		1	1.0		1
Max part size (mm) mobilized at bankfull	1.1		1	2.0		1	13.3		1	0.9		1	1.0		1	-		-	37.9		1	19.0		1	35.9		1
Rosgen Classification	C4			C4			C4			C4			C4b			Bc			B4			C4b			C4b		
Bankfull Discharge (cfs)	25.8	28.7	2	51.1		1	49.5		1	70.7	84.4	2	3.27		1	25.1		1	11.1		1	14.3		1	9.9		1
Sinuosity	1.24		1	1.19		1	1.12		1	1.25		1	1.21		1	1.10		1	1.09		1	1.20		1	1.20		1
Bankfull/Channel Slope (ft/ft)[2]	0.0061		1	0.013		1	0.003		1	0.006		1	0.015		1	0.0180		1	0.021		1	0.021		1	0.015		1

1. ER for the baseline/monitoring parameters are based on the width of the cross-section, in lieu of assuming the width across the floodplain.
(---): Data was not provided, N/A: Not Applicable

Table 9a. Cross-Section Morphology Monitoring Summary

Wyant Lands Mitigation Site

DMS Project No. 100067

Monitoring Year 3 - 2023

	Wyant Creek R1 Cross Section 1 Riffle								Wyant Creek R1 Cross Section 2 Pool								Wyant Creek R1 Cross Section 3 Riffle							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	798.56	798.60	798.69	798.57					798.24	N/A	N/A	N/A					797.30	797.34	797.51	797.35				
Bank Height Ratio - Based on AB Bankfull[1] Area	1.0	1.0	1.0	1.0					N/A	N/A	N/A	N/A					1.0	1.0	< 1.0	1.0				
Thalweg Elevation (ft)	797.05	797.15	797.08	796.97					794.01	793.94	794.23	793.67					795.76	795.75	795.98	795.67				
LTOB[2] Elevation (ft)	798.56	798.63	798.64	798.62					798.24	798.25	798.24	798.32					797.30	797.39	797.36	797.30				
LTOB[2] Max Depth (ft)	1.5	1.5	1.6	1.7					4.2	4.3	4.5	4.7					1.5	1.6	1.4	1.6				
LTOB[2] Cross Sectional Area (ft^2)	10.6	11.0	9.9	11.2					25.5	26.2	24.8	25.4					10.3	10.8	8.6	9.7				
	Wyant Creek R1 Cross Section 4 Pool								**UT1 Cross Section 5 Riffle**								**UT1 Cross Section 6 Pool**							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	794.30	N/A	N/A	N/A					798.18	798.22	798.18	798.22					797.15	N/A	N/A	N/A				
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A					1.0	1.0	1.0	1.1					N/A	N/A	N/A	N/A				
Thalweg Elevation (ft)	791.06	791.25	791.03	791.09					797.69	797.64	797.57	797.68					795.69	795.73	795.76	795.76				
LTOB[2] Elevation (ft)	794.30	794.25	794.25	794.35					798.18	798.22	798.15	798.25					797.15	797.15	797.17	797.32				
LTOB[2] Max Depth (ft)	3.2	3.0	3.2	3.3					0.5	0.6	0.6	0.6					1.5	1.4	1.4	1.4				
LTOB[2] Cross Sectional Area (ft^2)	24.7	24.6	25.9	25.4					1.6	1.6	1.5	1.9					5.6	5.2	5.9	4.3				
	Wyant Creek R2 Cross Section 7 Pool								**Wyant Creek R2 Cross Section 8 Riffle**								**UT2 R3 Cross Section 9 Riffle**							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	791.51	N/A	N/A	N/A					790.54	790.56	790.65	790.56					806.26	806.28	806.33	806.34				
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A					1.0	1.0	< 1.0	1.0					1.0	1.0	1.0	< 1.0				
Thalweg Elevation (ft)	789.13	788.94	788.99	789.03					788.88	788.90	788.93	788.76					805.55	805.50	805.64	805.44				
LTOB[2] Elevation (ft)	791.51	791.50	791.60	791.56					790.54	790.54	790.53	790.51					806.26	806.31	806.34	806.26				
LTOB[2] Max Depth (ft)	2.4	2.6	2.6	2.5					1.7	1.6	1.6	1.8					0.7	0.8	0.7	0.8				
LTOB[2] Cross Sectional Area (ft^2)	18.9	18.1	19.8	18.2					12.9	12.6	11.1	12.2					3.8	4.0	3.9	3.2				
	UT2 R3 Cross Section 10 Pool								**Wyant Creek R3 Cross Section 11 Riffle**															
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**								
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	800.58	N/A	N/A	N/A					784.20	784.30	784.24	784.35												
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A					1.0	< 1.0	< 1.0	< 1.0												
Thalweg Elevation (ft)	798.62	798.80	798.77	798.56					782.35	782.49	782.31	782.43												
LTOB[2] Elevation (ft)	800.58	800.60	800.75	800.58					784.20	784.19	784.13	784.24												
LTOB[2] Max Depth (ft)	2.0	1.8	2.0	2.0					1.9	1.7	1.8	1.8												
LTOB[2] Cross Sectional Area (ft^2)	8.6	8.1	9.9	8.3					21.5	19.4	19.5	19.4												

[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 recorded and tracked above as LTOB max depth.

Table 9b. Cross-Section Morphology Monitoring Summary

Wyant Lands Mitigation Site

DMS Project No. 100067

Monitoring Year 3 - 2023

	UT3 R1 Cross Section 12 Riffle								UT3 R2 Cross Section 13 Riffle								Wyant Creek R4 Cross Section 14 Riffle							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	791.99	792.15	792.09	792.08					785.83	785.92	785.81	785.93					782.26	782.32	782.34	782.39				
Bank Height Ratio - Based on AB Bankfull[1] Area	1.0	< 1.0	< 1.0	< 1.0					1.0	1.0	1.0	< 1.0					1.0	1.0	< 1.0	1.0				
Thalweg Elevation (ft)	791.16	791.24	791.18	791.15					785.03	785.07	784.95	784.99					780.24	780.40	780.25	780.21				
LTOB[2] Elevation (ft)	791.99	791.98	791.93	792.00					785.83	785.90	785.81	785.84					782.26	782.26	782.23	782.35				
LTOB[2] Max Depth (ft)	0.8	0.7	0.8	0.8					0.8	0.8	0.9	0.8					2.0	1.9	2.0	2.1				
LTOB[2] Cross Sectional Area (ft^2)	4.2	2.9	2.9	3.5					4.0	3.8	4.0	3.2					21.7	20.7	19.7	21.0				
	Wyant Creek R4 Cross Section 15 Pool								**Wyant Creek R4 Cross Section 16 Riffle**								**Wyant Creek R4 Cross Section 17 Pool**							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	782.09	N/A	N/A	N/A					776.54	776.58	776.70	776.69					774.81	N/A	N/A	N/A				
Bank Height Ratio - Based on AB Bankfull[1] Area	N/A	N/A	N/A	N/A					1.0	1.0	< 1.0	1.0					N/A	N/A	N/A	N/A				
Thalweg Elevation (ft)	776.62	777.00	776.83	777.12					774.30	774.42	774.39	774.44					770.18	770.63	771.21	771.72				
LTOB[2] Elevation (ft)	782.09	781.89	781.87	781.84					776.54	776.58	776.57	776.67					774.81	774.78	774.76	774.83				
LTOB[2] Max Depth (ft)	5.5	4.9	5.0	4.7					2.2	2.2	2.2	2.2					4.6	4.2	3.5	3.1				
LTOB[2] Cross Sectional Area (ft^2)	67.8	58.7	62.5	67.9					23.1	23.1	20.7	22.6					57.2	51.0	44.8	40.0				
	Wyant Creek R4 Cross Section 18 Riffle								**UT2 R1 Cross Section 19 Riffle**								**UT2 R1 Cross Section 20 Pool**							
Dimension and Substrate	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**	**Base**	**MY1**	**MY2**	**MY3**	**MY4**	**MY5**	**MY6**	**MY7**
Bankfull Elevation (ft) - Based on AB-Bankfull[1] Area	774.06	774.15	774.16	774.15					829.30	---	829.58	829.41					827.03	---	N/A	N/A				
Bank Height Ratio - Based on AB Bankfull[1] Area	1.0	1.0	1.0	1.0					1.0	---	< 1.0	1.0					N/A	---	N/A	N/A				
Thalweg Elevation (ft)	771.78	771.86	771.77	771.61					827.80	---	828.57	828.31					825.03	---	825.30	825.22				
LTOB[2] Elevation (ft)	774.06	774.12	774.11	774.07					829.30	---	829.53	829.39					827.03	---	827.35	827.09				
LTOB[2] Max Depth (ft)	2.3	2.3	2.3	2.5					1.5	---	1.0	1.1					2.0	---	2.1	1.9				
LTOB[2] Cross Sectional Area (ft^2)	25.9	25.3	24.9	24.2					7.2	---	6.6	7.0					14.8	---	12.9	10.0				

[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
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Reach	MY1 (2021)	MY2 (2022)	MY3 (2023)*	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
Wyant Creek R2	---	5/26, 7/31	1/4, 1/25, 4/28, 6/20				
UT2 R1	---	---	6/20				
UT2 R3	---	5/26, 9/30, 11/6	1/4, 1/25, 4/28, 6/20, 8/6				

* Data collected from Jan. 1 - Nov. 7

Table 11. Rainfall Summary
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
Annual Preciptation Total (in)	37.2	53.50	42.25**				
WETS 30th Percentile (in)	42.11	41.86	42.72				
WETS 70th Percentile (in)	54.52	54.40	55.15				
Normal	Below Normal	Normal	———				

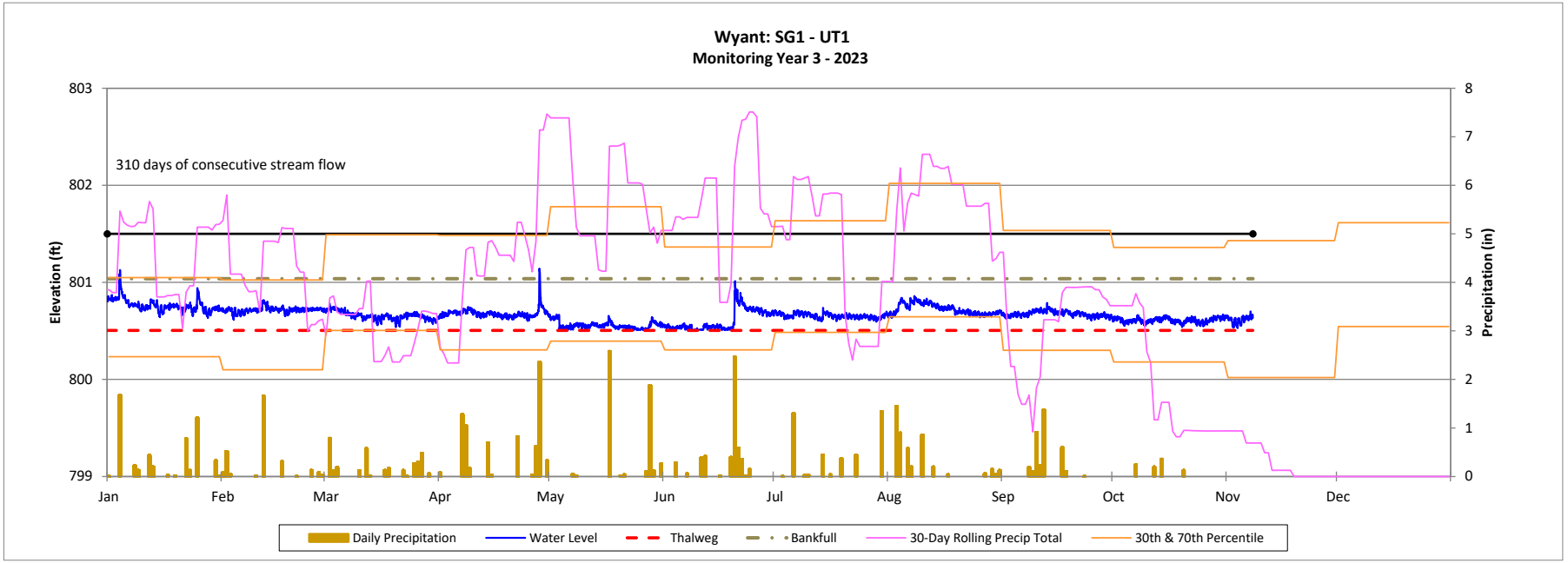
*30th and 70th percentile rainfall data collected from WETS Station NC4997: LINCOLNTON 4 W, NC (35.46056, -81.32889) approx. 5 mi from Site for 20 years prior to previous year.
** Jan. 1 - Nov. 6 rainfall data collected from LINCOLNTON 4W, NC (35.46056, -81.32889) approx. 5 mi from Site.

Table 12. Recorded In-Stream Flow Events Summary
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

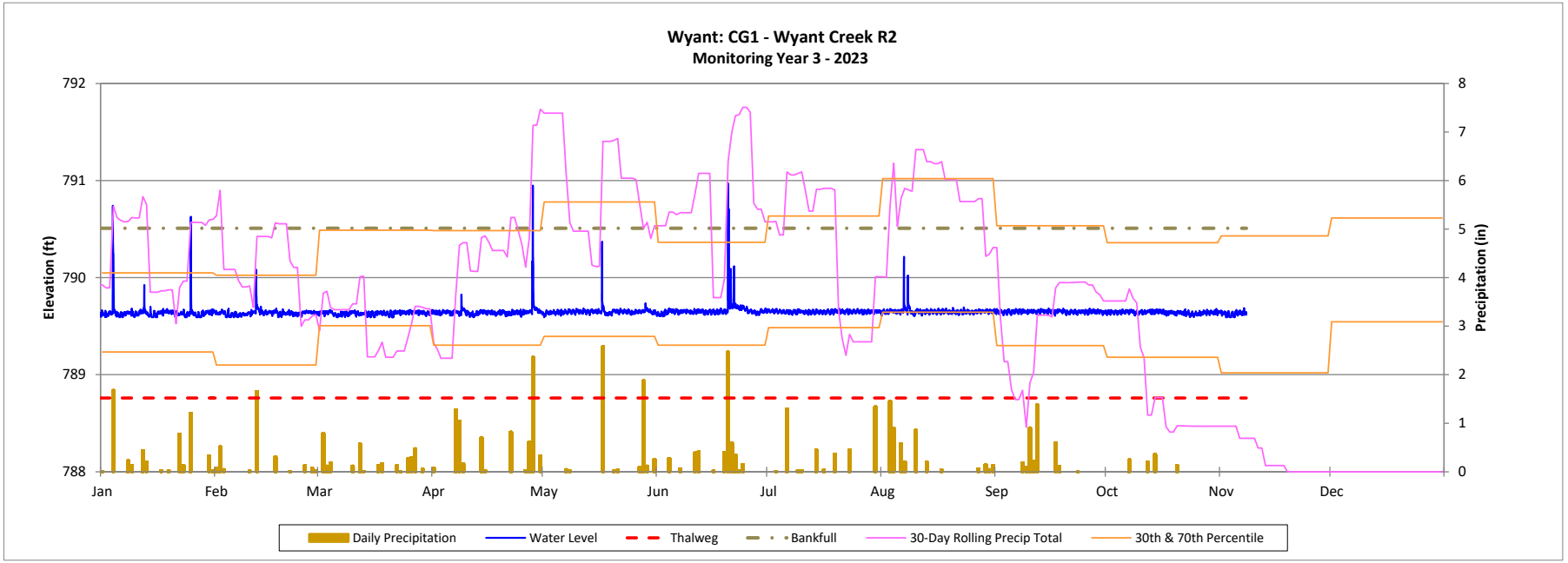
Reach	Max Consecutive Days/Total Days Meeting Success Criteria*						
	MY1 (2021)	MY2 (2022)	MY3 (2023)**	MY5 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
UT1	**222 Days/222 Days**	**311 Days/311 Days**	**310 Days/310 Days**				

*Success criteria is 30 consecutive days of flow.
** Data collected from Jan. 1 - Nov. 7

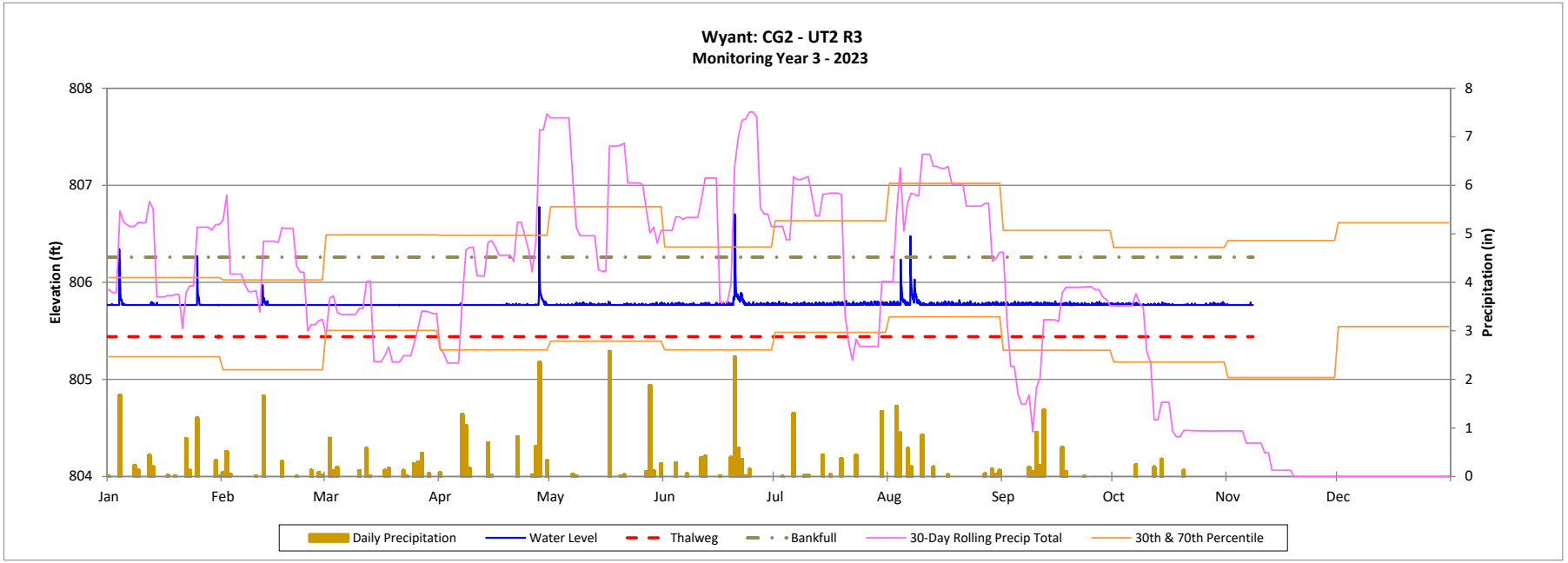
Recorded In-Stream Flow Events Plot
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023



Recorded In-Stream Flow Events Plot
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023



Recorded In-Stream Flow Events Plot
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023



Recorded In-Stream Flow Events Plot
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

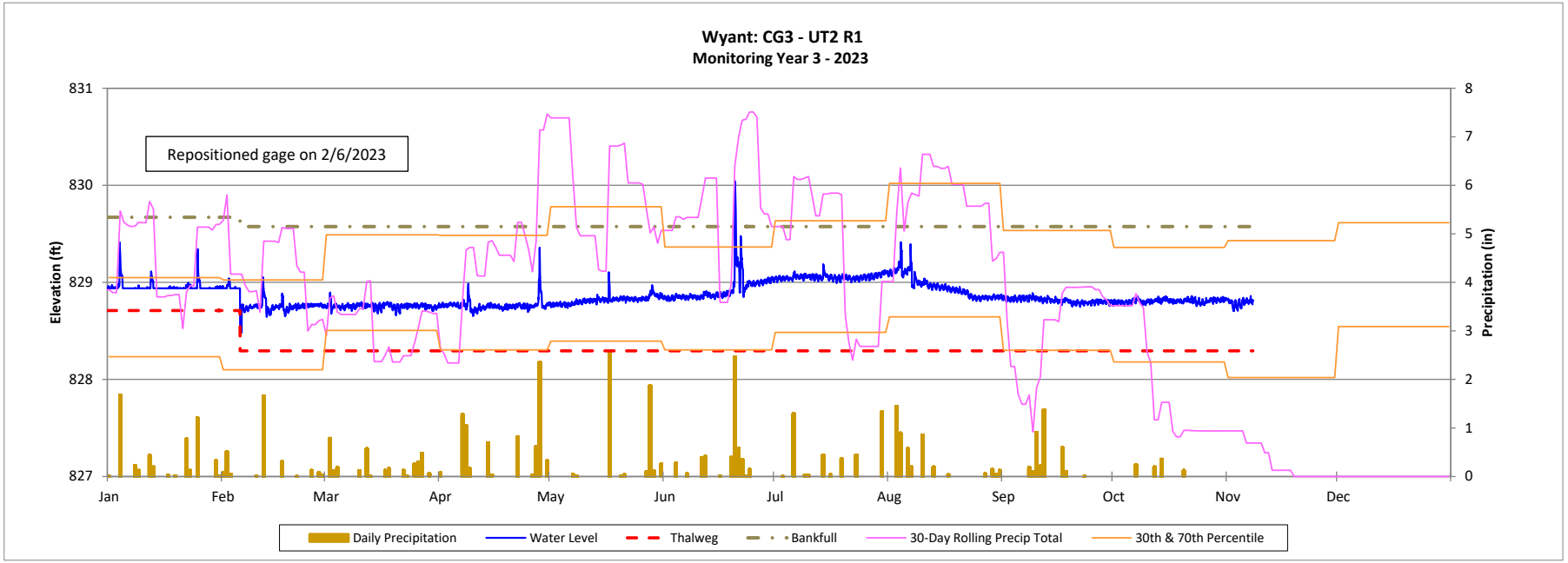


Table 13. Wetland Gage Summary

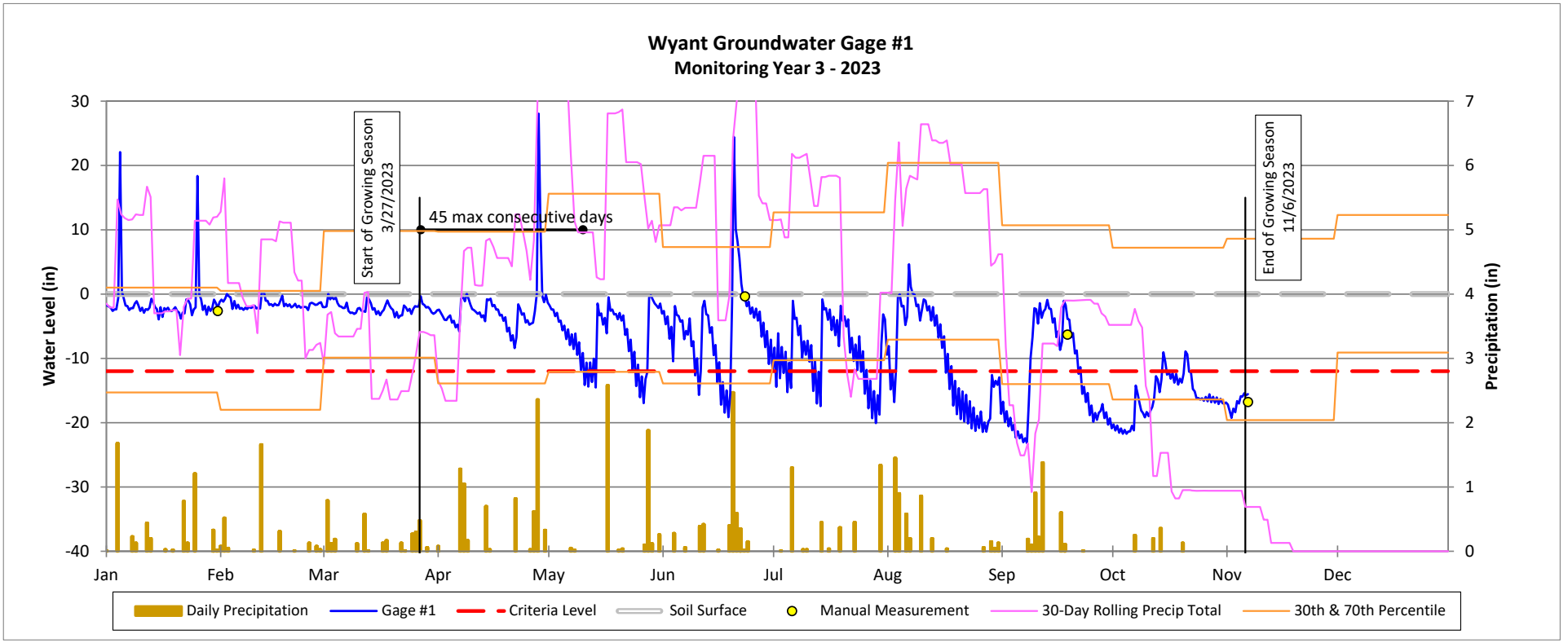
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Gage	Max. Consecutive Hydroperiod (Percentage)						
	MY1 (2021)	MY2 (2022)	MY3 (2023)	MY4 (2024)	MY5 (2025)	MY6 (2026)	MY7 (2027)
1	13%	16%	20%				
2	3%	14%	52%				
3	8%	19%	100%				
4	23%	34%	100%				
5	34%	44%	100%				
6	97%	100%	100%				
7	23%	44%	100%				
8	2%	15%	100%				
9	21%	17%	86%				
10	22%	24%	85%				
11	97%	100%	100%				
12	---	17%	20%				
13	---	6%	20%				
14	---	16%	20%				
15	---	14%	20%				

Performance Standard: 12.0% or 27 consecutive days.
WETS Station: NC 4997 Lincolnton 4W
Growing Season: 3/27/2023 to 11/6/2023 (225 Days)

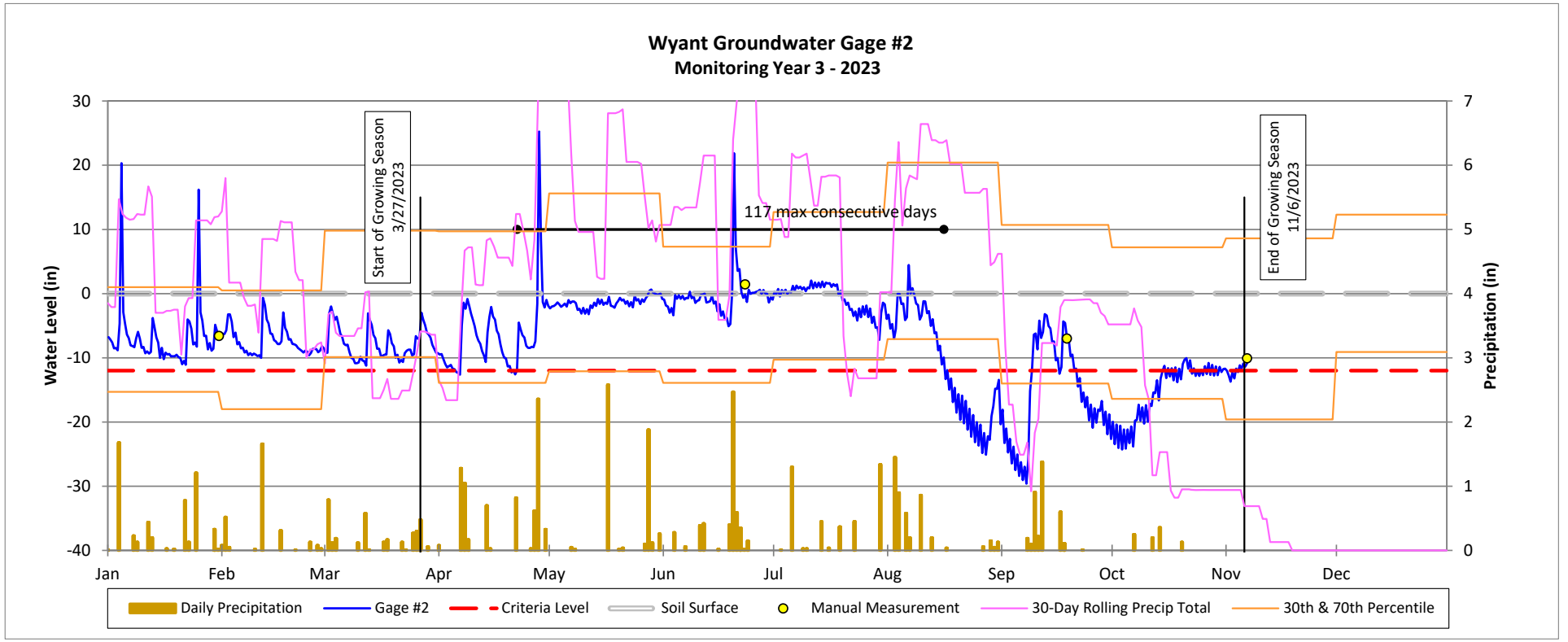
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Rehabilitation



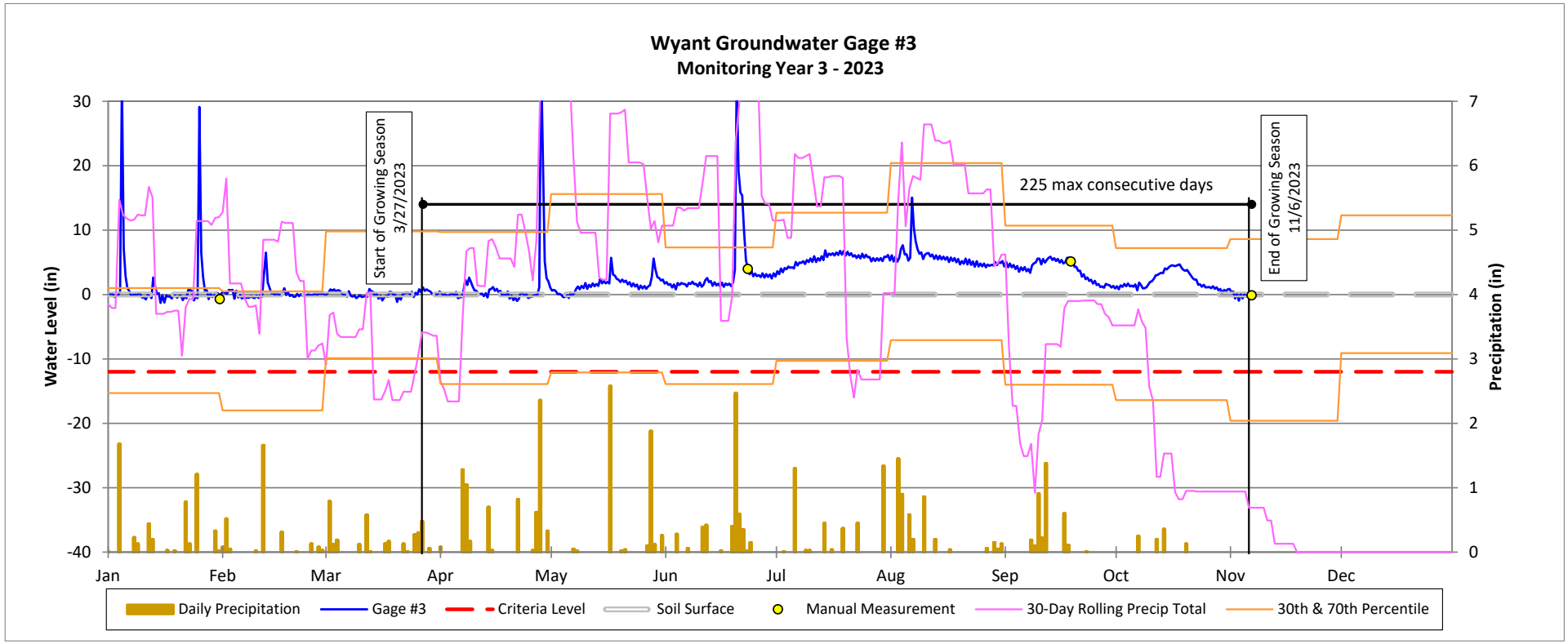
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Rehabilitation



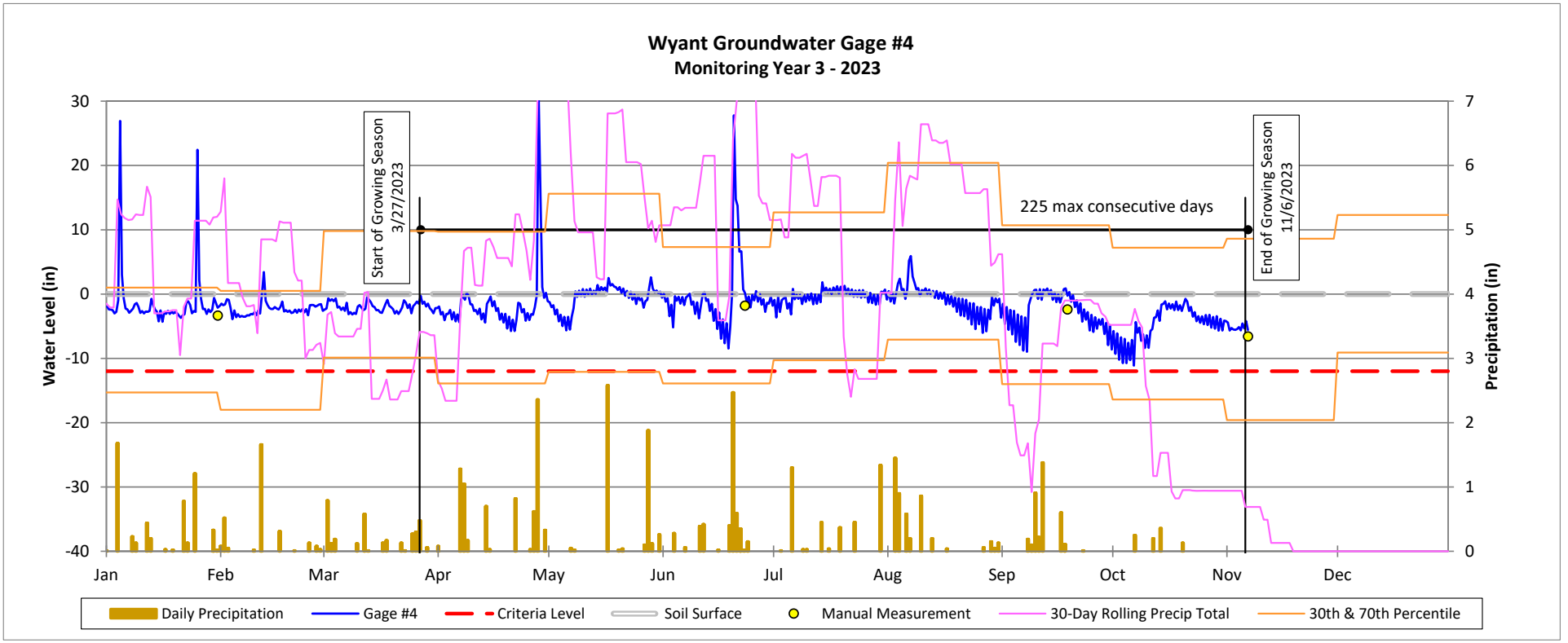
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



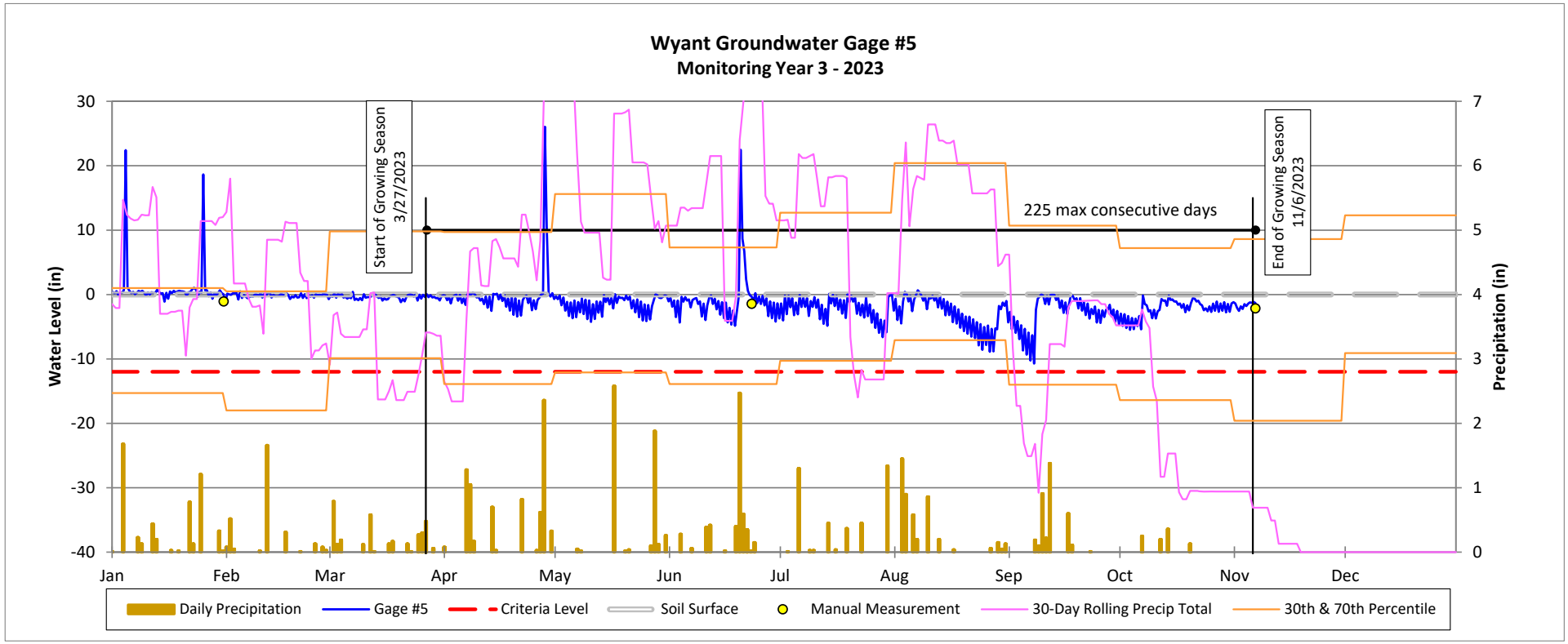
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



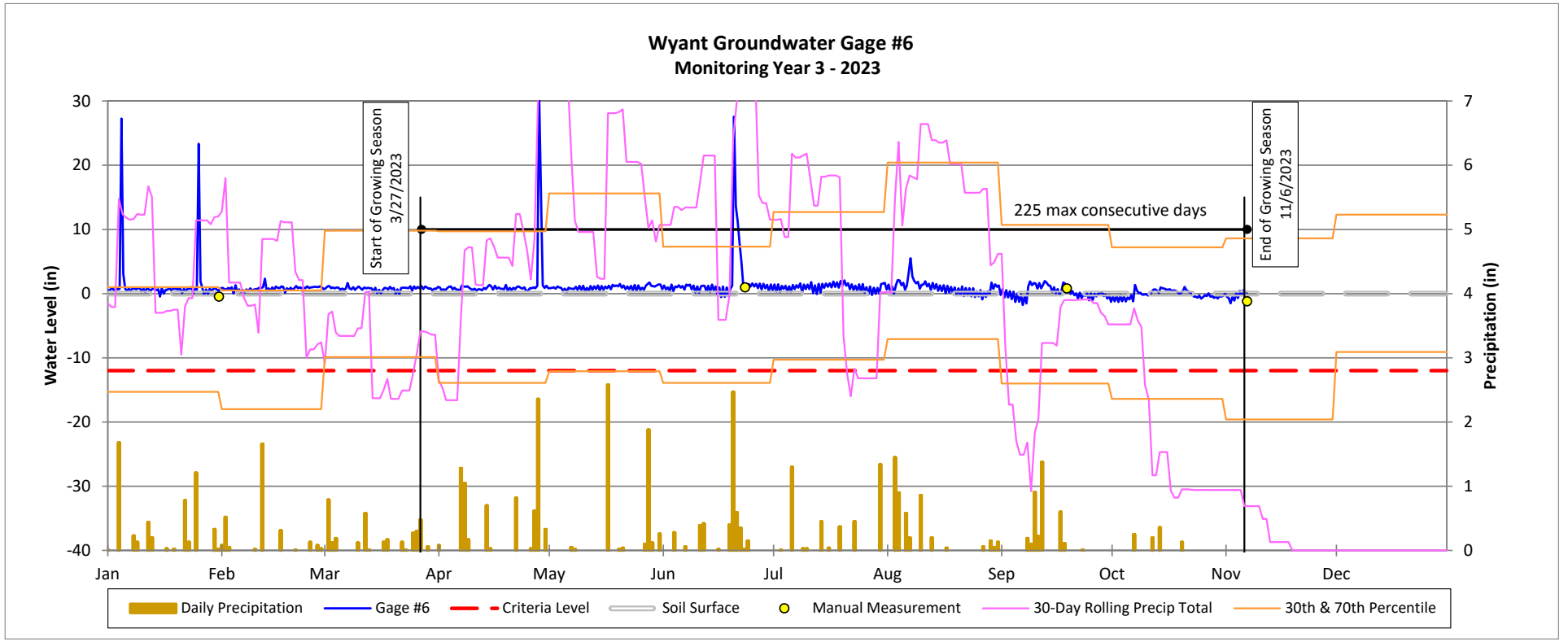
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



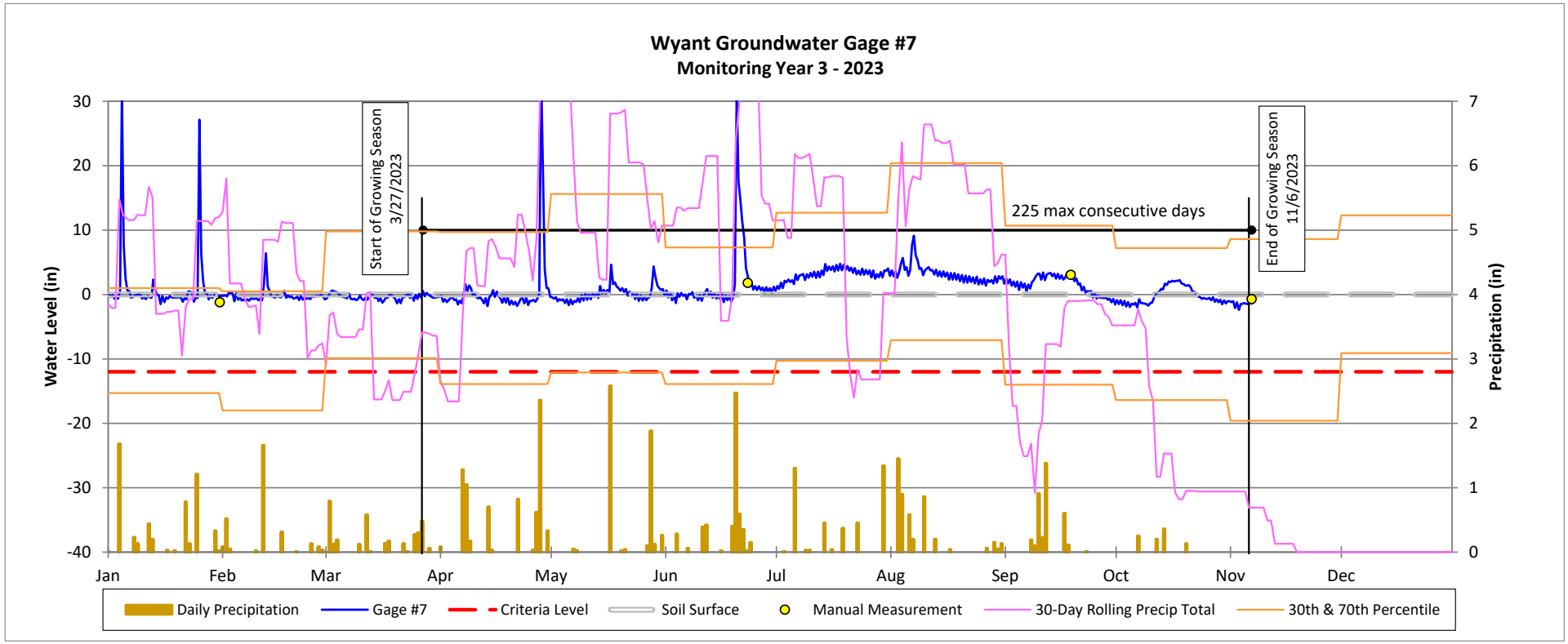
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



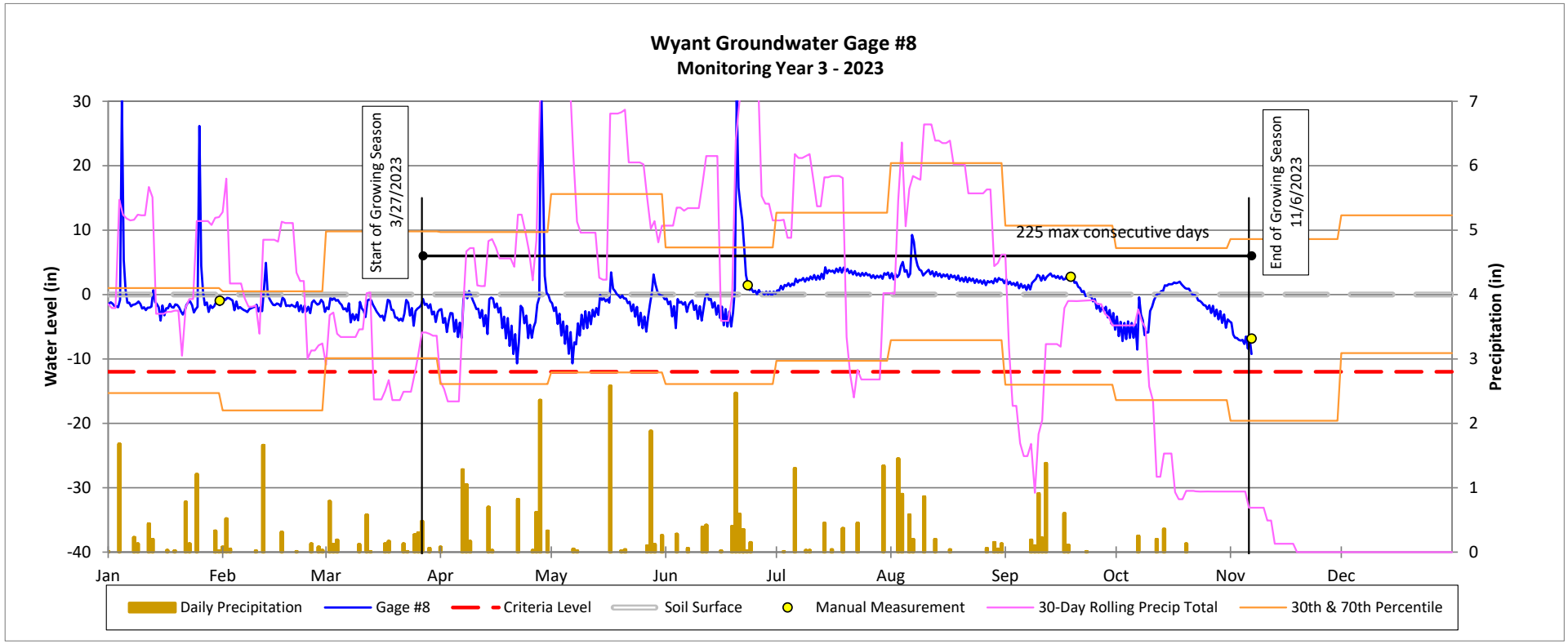
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



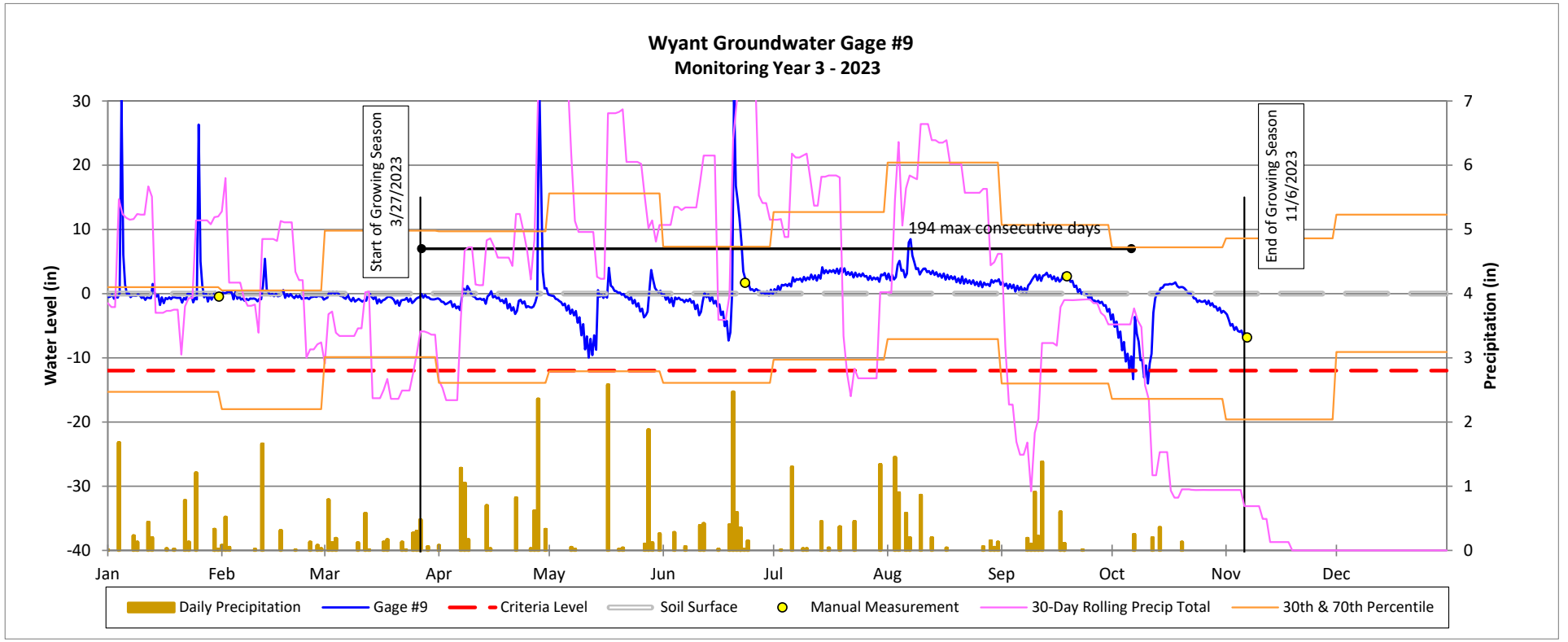
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



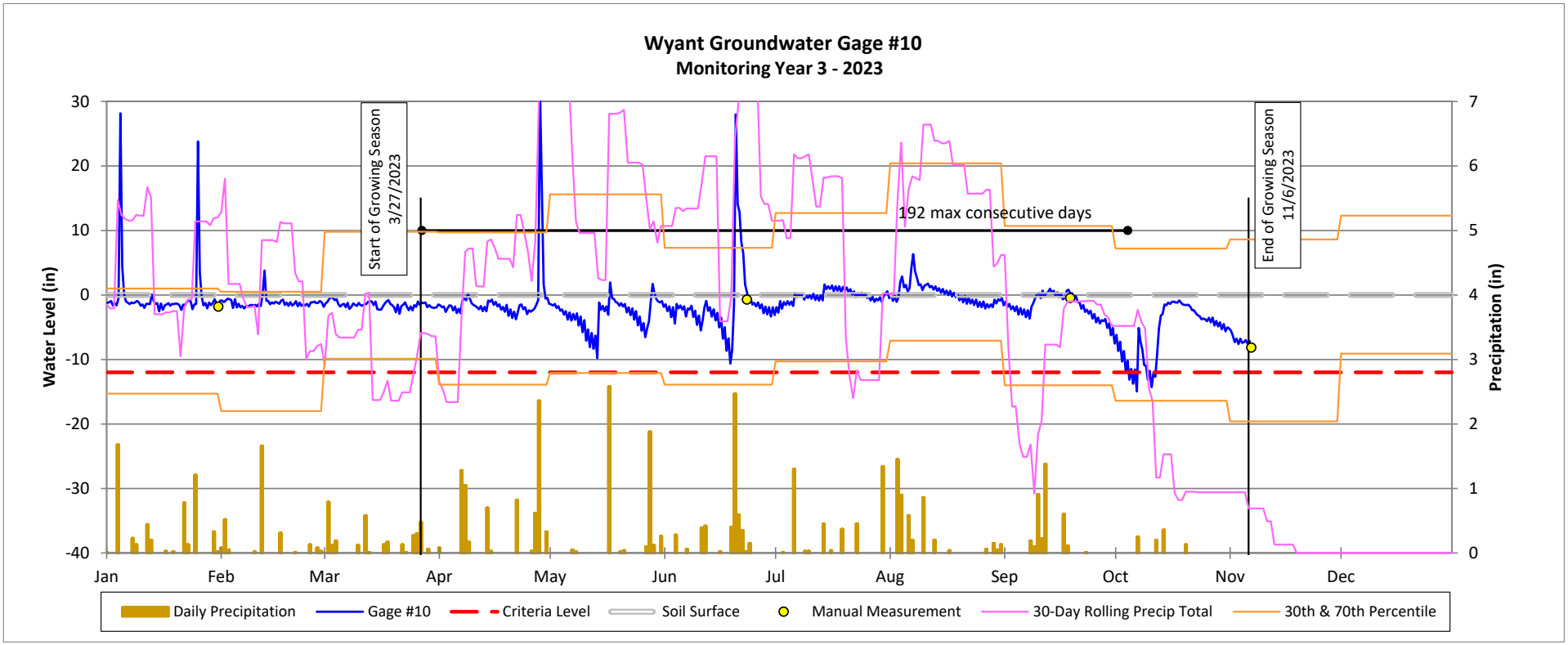
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



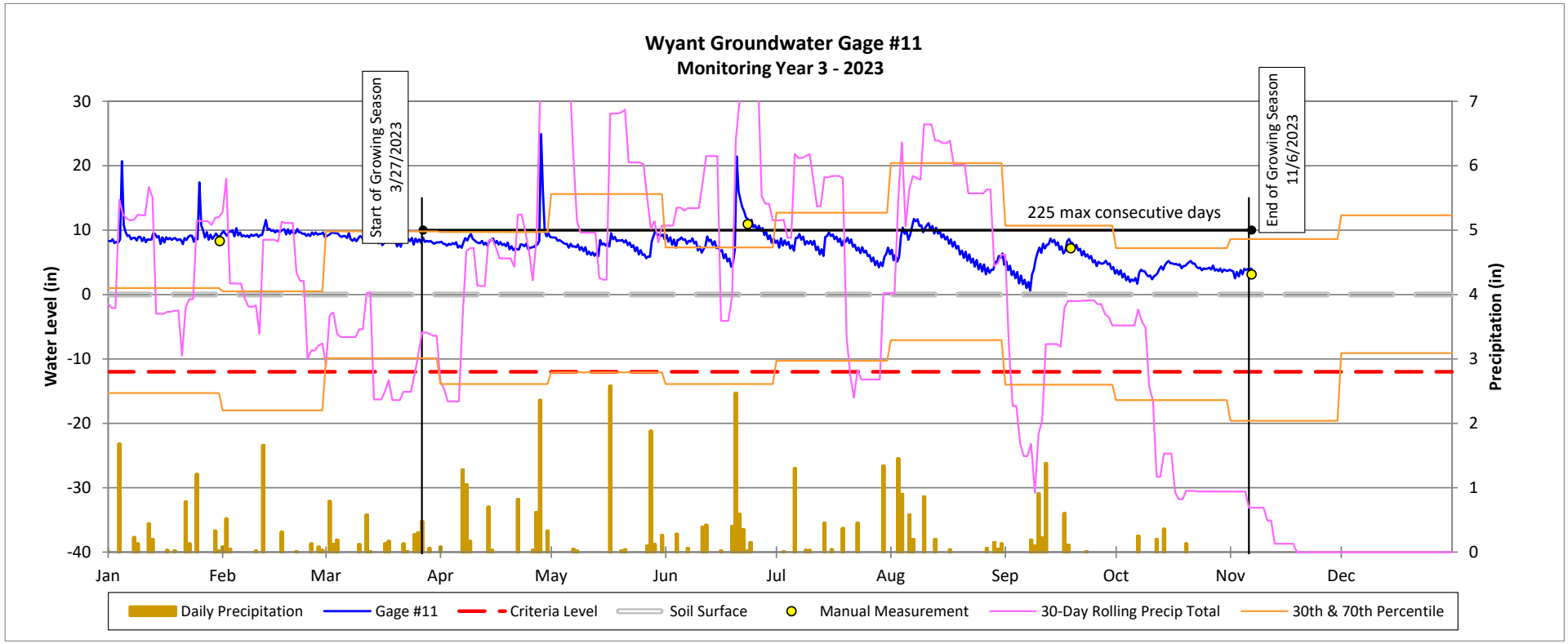
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



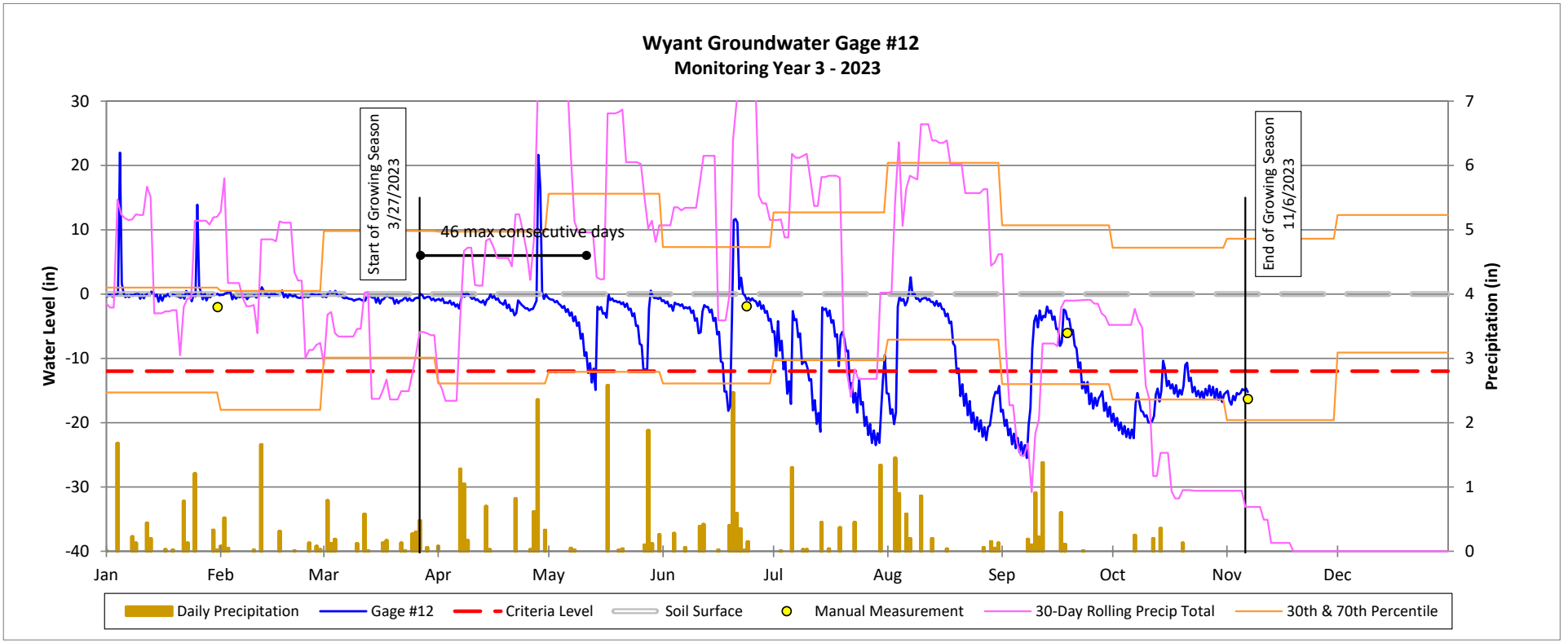
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



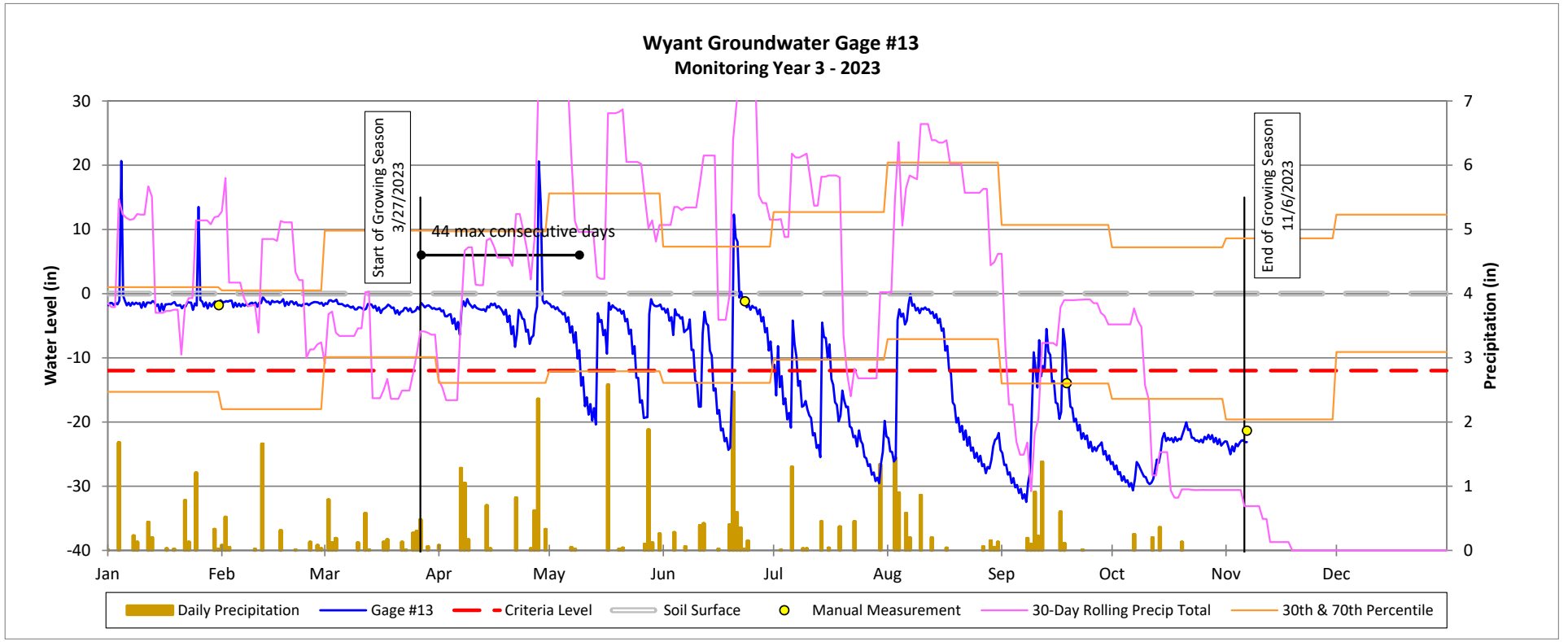
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Creation



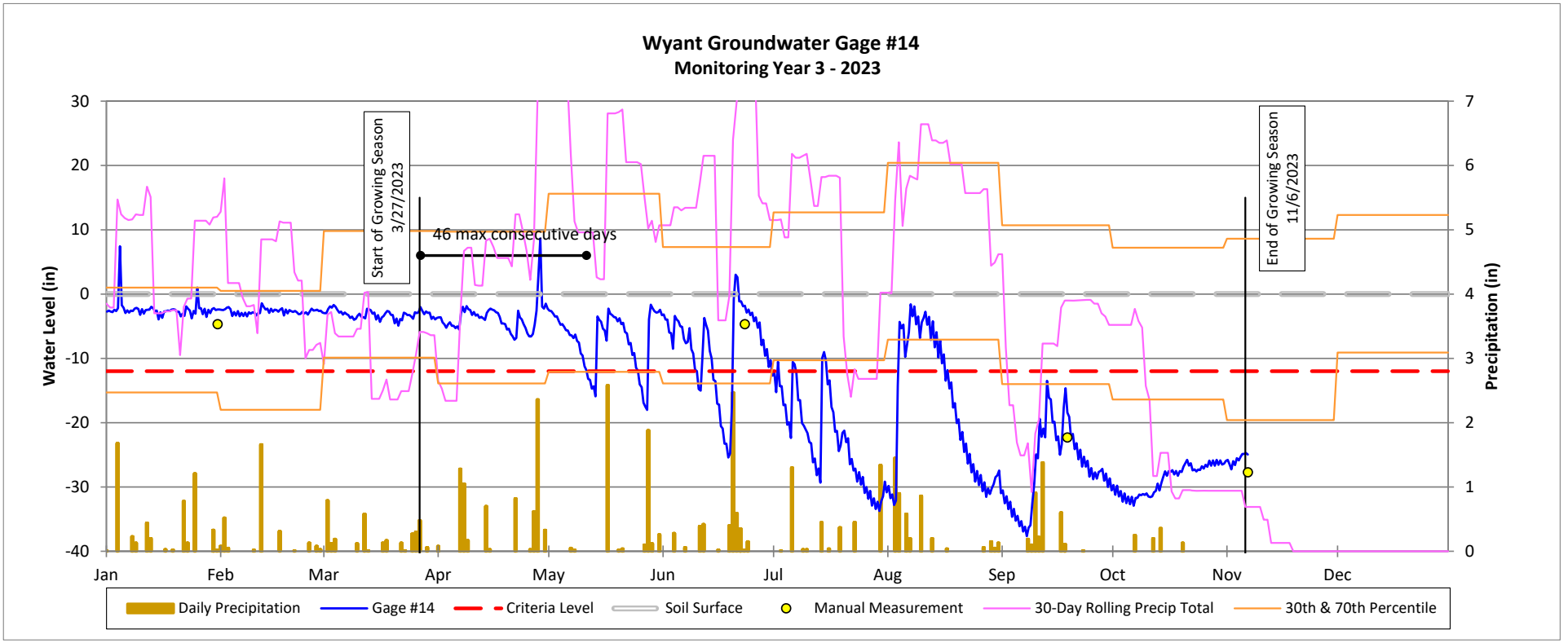
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Creation



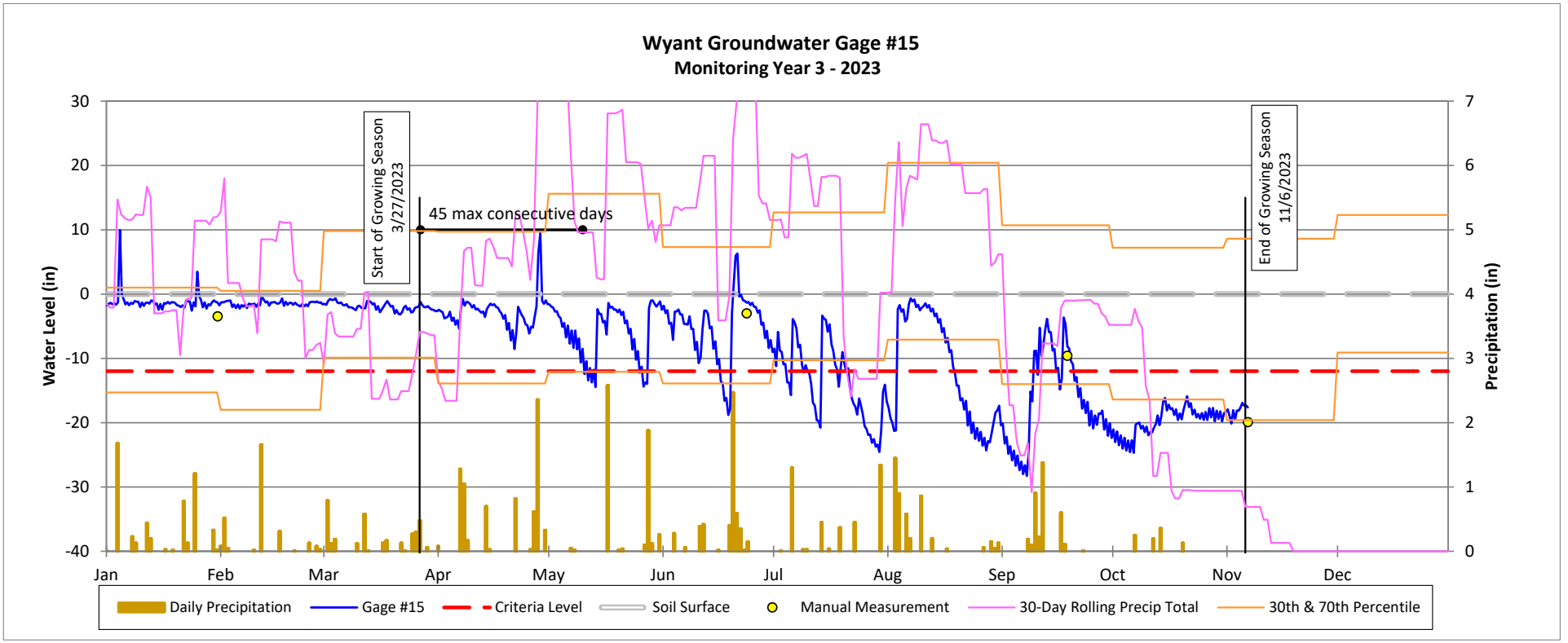
Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



Wetland Gage Plots

Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023
Wetland Re-establishment



Appendix E

Project Timeline and Contact Information

Table 14. Project Activity and Reporting History
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Activity or Report		Data Collection Complete	Completion or Delivery
404 Permit		April 2020	May 2020
Mitigation Plan Approved - Phase I		October 2018 - April 2020	April 2020
Mitigation Plan Approved - Phase II		January 2022	January 2022
Final Design - Construction Plans - Phase I		August 2020	August 2020
Final Design - Construction Plans - Phase II		January 2022	January 2022
Construction Completed - Phase I		March 2021	March 2021
Construction Completed - Phase II		April 2022	April 2022
Bare root and live stake plantings for reach/segments - Phase I		March 2021	April 2021
Bare root and live stake plantings for reach/segments - Phase II		April 2022	April 2022
Phase I - Baseline Monitoring (Year 0)	Stream Survey	April - June 2021	October 2021
	Vegetation Survey	April 2021	
	Remediation	N/A	N/A
	Encroachment		
Phase II - Baseline Monitoring (Year 0)	Stream Survey	May 2022	July 2022
	Vegetation Survey	April 2022	
	Remediation	N/A	N/A
	Encroachment		
Phase I - Year 1 Monitoring	Stream Survey	November 2021 - January 2022	February 2022
	Vegetation Survey	October 2021	
	Vegetation Ring Sprays	July 2021	N/A
	In-stream treatments	October 2021	
	Encroachment	N/A	
	Beaver Dam Removal	September 2021	
Year 2 Monitoring*	Stream Survey	September 2022 - October 2022	December 2022
	Vegetation Survey	September 2022 - October 2022	
	In-stream Treatments	July 2022	N/A
	Replanting	April 2022	
	Encroachment	N/A	
	Beaver Dam Removal	April 2022	
	Invasive Treatment	N/A	
Year 3 Monitoring	Stream Survey	May 2023	December 2023
	Vegetation Survey	August 2023	
	In-stream Treatments	N/A	N/A
	Bank Repair	June 2023	
	BMP Repair	June 2023	
	Beaver Dam Removal	February 2023, September 2023	
	Encroachment	N/A	
Year 4 Monitoring	Stream Survey		
	Vegetation Survey		
	Remediation		
	Encroachment		
Year 5 Monitoring	Stream Survey		
	Vegetation Survey		
	Remediation		
	Encroachment		
Year 6 Monitoring	Stream Survey		
	Vegetation Survey		
	Remediation		
	Encroachment		
Year 7 Monitoring	Stream Survey		
	Vegetation Survey		
	Remediation		
	Encroachment		

*Includes both Phase I and Phase II.

Table 15. Project Contact Table
Wyant Lands Mitigation Site
DMS Project No. 100067
Monitoring Year 3 - 2023

Designers Eric Nehaus, PE	**Wildlands Engineering, Inc.** 167-B Haywood Rd Asheville, NC 28806 828.207.8835
Construction Contractors	**Baker Grading & Landscaping, Inc.** 1000 Bat Cave Road Old Fort, NC 28762
Planting Contractor	**Bruton Natural Systems, Inc.** PO Box 1197 Fremont, NC 27830
Seeding Contractor	**Baker Grading & Landscaping, Inc.** 1000 Bat Cave Road Old Fort, NC 28762
Seed Mix Sources	**Green Resource LLC**
Nursery Stock Suppliers Bare Roots Live Stakes	**Bruton Natural Systems, Inc.**
Herbaceous Plugs	**Wetland Plants Inc.**
Monitoring Performers Monitoring, POC	**Wildlands Engineering, Inc.** Mimi Caddell 828.774.5547 x107

Appendix F

Correspondence

December 13, 2023
ATTN: Paul Wiesner
Western Regional Supervisor
NCDEQ – Division of Mitigation Service

RE: Draft Monitoring Year 3 (2023) report for the
Wyant Lands Mitigation Site
Catawba River Basin – CU# 03050102 – Lincoln County
DMS Project ID No. 100067 & 100595
Contract # 7244

Dear Paul Wiesner,

Wildlands Engineering, Inc. (Wildlands) has reviewed the NC Division of Mitigation Services (DMS) comments from the Draft Monitoring Year 3 (MY3) Report for the Wyant Lands Mitigation Site. The DMS's comments and Wildlands' responses are noted below.

- *Report Cover: Please update the DMS Project No. to: DMS Project No. 10067 & 100595.*

  Wildlands Response: Project No. has been updated on the report cover.

- *Table 1: Project Quantities and Credits; CCPV Maps (Figure 1) & Project Asset Map (Figure 2): There are no wetland IDs on the CCPV maps or asset map. How do the 5 wetland groupings correspond to the CCPV maps (Figure 1) & asset map (Figure 2)? Please identify the wetland groupings on the maps or provide some appropriate description of each grouping in the report text.*

  Wildlands Response: Wetland groupings in Table 1: Project Quantities and Credits were updated with their corresponding wetland mitigation categories (e.g., Re-establishment Phase I, Wetland Creation Phase II) for ease of understanding.

- *Table 3 – Project Attributes: Please correct the typo in the Supporting Documentation section and delete the repetitive information (Endangered Species Act & Historic Preservation Act); the project mitigation plan was approved by the IRT in 2019.*

  Wildlands Response: Repetitive information was removed, and the typo was corrected from the Supporting Documentation section of Table 3 – Project Attributes.

- *Section 2: Monitoring Year 3 Data Assessment: In the report text, please discuss the status of the livestock crossing beneath Wyant Road and any maintenance conducted in MY3 (2023) or any proposed maintenance in MY4 (2024).*

  Wildlands Response: A discussion about the livestock crossing has been included in the report text.

- *Section 2.3 Stream Assessment: Morphological surveys for MY2 (2022) were conducted in June 2022 for the Phase I cross-sections. Phase II cross sections 19 and 20 were completed in October 2022, six months from the as-built survey. Morphological surveys for MY3 (2023) were conducted in May 2023. Please consider collecting morphological data later in the growing season so it represents the full monitoring year. If collected earlier, data collection dates should be consistent each year to allow a full year between surveys.*

  Wildlands Response: For future monitoring reports, morphological surveys will be conducted as close to one year from the previous year's survey as possible to capture a full year between surveys.

- *Section 2.4 Stream Areas of Concern and Management Activity: It is stated "At the top of the project, there was a gully, approximately 60 linear feet (LF) and 6 inches in depth that formed adjacent to BMP 3." Please reference UT2 R1 in the updated report text.*

  Wildlands Response: Reference to UT2 R1 was added for clarity.

- *Section 2.8 Monitoring Year 3 Summary: Please correct the typo "UR2 Reach 1".*

  Wildlands Response: Typo was corrected.

- *General: Please update the visual assessment table and text as appropriate to reflect any encroachments observed during the 11/29/23 site visit; update the report text to describe other boundary action items planned for MY4 (2024), including internal fencing and agricultural debris removals, additional signage, etc.*

  Wildlands Response: The visual assessment table has been updated to include the 11/29/23 visit. The report text now includes the action items included in this comment letter that will be addressed in MY4.

<u>November 29, 2023 DMS Site Visit Comments:</u>

- *Minor evidence of livestock (cattle) encroachment was observed along UT3; however, no livestock were observed within the conservation easement. Please discuss in the report text and continue to work with the landowner to exclude cattle from the easement and repair any fencing as necessary.*

  Wildlands Response: Evidence of livestock observed during the November 29, 2023 site visit has been noted in the report. Wildlands will continue to communicate with the landowner about easement encroachments and fence repair to prevent future encroachments.

- *Minimal areas of Chinese Privet were observed within the conservation easement. Please continue to treat invasives within the easement for the remaining monitoring term.*

  Wildlands Response: Invasives will continue to be monitored and treated throughout the remaining monitoring term.

- *An active beaver dam was observed at the upstream extent of Wyant Creek R1 and several breached beaver dams were observed along Wyant Creek R4. As noted in the report text, please continue to monitor and remove beaver and beaver dams from the site for the remaining monitoring term. Please confirm that the landowner has been made aware that any beaver and/or beaver dam removal will be the landowner's responsibility upon transfer to DEQ Stewardship. The landowner will need to contact DEQ Stewardship prior to any beaver and/or beaver dam removal activities once the project has been transferred.*

  Wildlands Response: Beavers and beaver dams will continue to be removed from the Site for the remaining monitoring period. The landowner has been notified that any beaver and/or beaver dam removal will be the responsibility of the landowner upon transfer and that DEQ Stewardship must be notified prior to any removal activities.

- *Fescue was observed in some portions of the conservation easement, primarily adjacent to project fence lines. Please continue to observe and consider ring sprays if the fescue appears to be inhibiting the growth of the project's woody stems.*

  Wildlands Response: Wildlands will continue to monitor fescue within the conservation easement. If it is determined that fescue is suppressing tree growth, vegetation management will be considered, including ring sprays.

- *Please continue to add rock and seed to the livestock crossing beneath Wyant road (as necessary) to ensure its continued stability.*

  Wildlands Response: Wildlands will continue to monitor and add rock and seed to the livestock crossing as necessary.

November 29, 2023 Property Boundary Assessment Field Inspection Comments:

- *The easement corners were monumented with stamped aluminum caps. Approximately 15 monument caps were observed and were generally easy to locate as they were generally positioned within a couple of feet of their witness posts. Not all of the caps were field checked but the cap at platted corner 11 was not found by basic digging.*

  Wildlands Response: Wildlands will look for the missing corner cap and if not found, a cap with appropriate markings will be added.

- *Corners were witnessed by treated rounds, trees, U-channel and T-posts. Metal roofing screws were used to attach the conservation easement signs to treated posts, drive rivets were used for the U-channel, plastic insulators were used for T-posts and long aluminum roofing nails were used for attaching signs to trees. Signs were identified as missing from two corners as shown on the provided .kmz.*

  Wildlands Response: Corner signs that were identified as missing will be added.

- *In-line markings were only present for portions of the easement boundary. The maximum sign spacing specification is 200 feet maximum. The lengths of some of the line segments exceeded 200 feet by only a small margin and in-line were not installed at some of these*

locations. Signs were absent along the eastern boundary of the wetland area along Pott Creek. Many of the missing sign locations are shown on the provided .kmz for reference.

Wildlands Response: Wildlands will install additional signs in these areas to comply with the 200 feet maximum rule.

- *Internal fencing was present at three (3) locations along Wyant Creek.*

  Wildlands Response: Wildlands will remove fencing from within the conservation easement at these locations.

- *A low witness post with damaged sign is located at the northeast corner of the internal crossing on the west side of Wyant Road and may present a mowing hazard due to the low height.*

  Wildlands Response: Wildlands will fix the damaged sign and will mark with tall PVC for better visibility.

- *Metal agricultural debris is located a couple of feet across the easement line along UT2 R2.*

  Wildlands Response: Debris will be removed from the easement.

- *Short witness posts mark the easement corners in the unfenced portion of the easement around the main wetland area.*

  Wildlands Response: Noted.

- *Supplemental marking was installed on the south side of UT2 R3 at a small, mowed area near a shed building but no active easement encroachments were observed.*

  Wildlands Response: Noted.

- *A beaver dam was noted at the north end of Wyant Creek and a tree was located on the fence on the east side of the easement along Wyant Creek R1.*

  Wildlands Response: Wildlands will continue to monitor and remove any beaver and beaver dams from the easement during the monitoring period. Trees that have damaged any fence will be removed and fence will be repaired for the duration of the monitoring period.

November 29, 2023 Property Boundary Assessment Action Items:

- *Assess the easement boundary for missing signs and posts and install as necessary to meet specifications for both corner and in-line markings. Verify the in-line marking is installed at a frequency of 200 foot spacing or less. Short segments should have the signs installed equidistant from the corners, but signs must be installed at a spacing no greater than 200 feet.*

  Wildlands Response: Signs and posts will be installed along the easement boundary at a frequency of 200 feet. Updates will be included in the MY4 (2024) report.

- *Remove the internal fencing and agricultural debris from the easement.*

  Wildlands Response: Internal fencing and debris will be removed from the easement and updates will be included in the MY4 (2024) report.

- *Inspect the low post heights observed along the main wetland area and the internal crossing at Wyant Road to ensure the markings are adequate to protect the conservation easement. Repair damaged sign on the low post at Wyant Road and upgrade any posts as necessary to protect the conservation easement.*

  Wildlands Response: The damaged sign will be repaired and any signs or posts that are inadequate will be repaired, replaced, or modified to better protect the conservation easement. Any repairs or modifications will be noted in the MY4 report.

- *Monitor the mowed area near the shed at UT2 R3 where the supplemental marking has been installed and communicate with the landowner to prevent future encroachment.*

  Wildlands Response: This area will continue to be monitored and communication with the landowner about easement violations will continue.

- *Remove tree and repair fence located on the east side of the easement at Wyant Creek R1.*

  Wildlands Response: The fallen tree will be removed, and the fence will be repaired. The MY4 report will note tree removal and any fence repairs.

Digital Support File Comments:

- *Please note for future submission that any areas of concern or remediation (such as beaver dam locations) indicated on the CCPV should be included in the spatial digital submission. No need to revise the current submission.*

  Wildlands Response: Noted.

A copy of these DMS comments and our response letter will be included inside the front cover of the FINAL MY3 (2023) revised report as well as in the digital support files. Please let me know if you have any questions.

Sincerely,

Eric Neuhaus, PE

Project Manager
eneuhaus@wildlandseng.com