

BASIN K1 BIOINFILTRATION BASIN ANNUAL REPORT

KINDER MORGAN PORT OF PORTLAND TERMINAL 4, SLIP 3



MAUL
FOSTER
& ALONGI

Prepared for
KINDER MORGAN BULK TERMINALS, INC.

11040 NORTH LOMBARD STREET
PORTLAND, OR 97203
MULTNOMAH COUNTY

December 23, 2022
Project No. M1017.01.016

Prepared by
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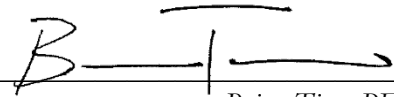
BASIN K1 BIOINFILTRATION BASIN ANNUAL REPORT
KINDER MORGAN PORT OF PORTLAND TERMINAL 4, SLIP 3

*The material and data in this report were prepared
under the supervision and direction of the undersigned.*

MAUL FOSTER & ALONGI, INC.



Brooke Harmon, PE
Project Engineer



Brian Tino, PE
Project Engineer

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1 INTRODUCTION

1.1 Purpose

Maul Foster & Alongi, Inc., has prepared this annual report on behalf of Kinder Morgan, Inc. (Kinder Morgan) consistent with the performance monitoring and reporting requirements outlined in the April 14, 2022 Kinder Morgan Port of Portland Terminal 4 Operation and Maintenance (O&M) Manual prepared for the Basin K1¹ stormwater treatment and infiltration system. The O&M Manual was approved by the Oregon Department of Environmental Quality (DEQ) on May 7, 2021. This annual report summarizes the performance monitoring of the Basin K1 stormwater treatment and infiltration system for the 2021-2022 operating year (July 1, 2021 through June 30, 2022).

1.2 Reporting Schedule

The O&M Manual requires either a comprehensive or annual report to be submitted to DEQ by October 1 for the next five years starting in 2022. Each report will cover the preceding operating year (July 1 through June 30). The original O&M Manual stated that a comprehensive report would be prepared for July 1, 2021 through June 30, 2022; however, in an email to DEQ on July 15, 2022, Kinder Morgan requested an alternative schedule due to the following system instrumentation troubleshooting that resulted in less than a year of performance monitoring data being available for the reporting year:

- The initial flow meter programing was set up such that the flow meter did not record readings under 100 gallons-per-minute (gpm). This programming error was corrected by the vendor in October 2022. Flows under 100 gpm, i.e., when only one pump was running, were not recorded prior to this correction.
- The transducer level in the flow-control manhole was installed with the bottom of the transducer at the overflow weir elevation but the sensor is 1.5 inches higher, as such the unit should have been installed 1.5 inches lower. The transducer was placed below the overflow weir elevation in December, but outside the stilling well. The transducer location was corrected by the contractor in January 2022. The overflow records from this period (August 31, 2021 to December 15, 2021 may not be accurate.
- The run time for one of the pumps in the pump station was recorded to be 10 times higher than the run time of the second pump and was not feasibly possible. The pump and Scada vendors were contacted to correct the programing and add additional relays to the panel to correct the system settings in March 2022. The total run time for this pump was not accurate prior to March.

¹ Kinder Morgan's Basin K1 was previously referred to as Basin M.
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Kinder Morgan proposed revising the reporting schedule to submitting annual reports for 2021-2022, 2023-2024 and 2024-2025, and comprehensive reports for 2022-2023 and 2025-2026. This revised reporting schedule was approved by DEQ on August 3, 2022.

1.3 Site Background

The Kinder Morgan facility encompasses approximately 9.8 acres and is located at the Port of Portland Terminal 4 in section 02, township 1 north, range 1 west of the Willamette Meridian. Kinder Morgan is located at 11040 North Lombard Street in Portland, Oregon and is bounded to the west by the Willamette River and to the east by North Terminal Road. The site is owned by the Port of Portland and leased by Kinder Morgan (see Figure).

Kinder Morgan is a river-dependent active bulk storage and transfer site that primarily handles soda ash. Soda ash is delivered by rail from mines, stored in the Soda Ash Building and loaded onto ships or rail.

Basin K1 is within the Slip 3 upland area, for which the Port of Portland (Port) entered into a Voluntary Cleanup Program (VCP) Agreement for Remedial Investigation, Source Control Measures, and Feasibility Study with DEQ on December 4, 2003 (LQVC-NWR-03-18) (ECSI #2356).

Stormwater runoff generated at Kinder Morgan discharges to the Willamette River between river miles 4 and 5, consistent with the National Pollutant Discharge Elimination System Stormwater Discharge Permit No. 1200-Z (1200-Z Permit) issued by the DEQ and administered by the City Bureau of Environmental Services (BES).

1.4 Stormwater Treatment and Infiltration System

The Basin K1 stormwater treatment and infiltration system consists of a flow- and spill-control manhole, pump station, sedimentation forebay, and bioinfiltration basin (see Appendix A). Stormwater runoff from Basin K1 is collected in catch basins and conveyed to a spill- and flow-control manhole. The manhole directs design flows to the pump station and traps leaks, spills, and sediment inside the manhole sump. Stormwater gravity-flows from the manhole to the pump station and is pumped to the pretreatment forebay for sedimentation. Pretreated stormwater is then conveyed to the vegetated bioinfiltration basin for treatment (biofiltration and adsorptive filtration) and infiltration. Flows in excess of the bioinfiltration basin capacity overflow from the manhole to the existing Willamette River outfall. Overflows from the bioinfiltration basin are not expected but would be routed to the river outfall.

2 OPERATION AND MAINTENANCE SUMMARY

2.1 Timeline

The following notable dates are associated with the first year of operation of the Basin K1 stormwater treatment and bioinfiltration basin.

- August 31, 2021: Pump station commissioning.
- September 10, 2021: Substantial completion of construction of the stormwater treatment and bioinfiltration basin.
- September 27, 2021: The sedimentation level gauge was installed in the basin and the beehive grate was installed on the overflow riser pipe.
- October 7, 2021: The initial flow meter programming was set up such that the flow meter did not record readings under 100 gpm, i.e., when only one pump was running. The pump vendor corrected this programming error and the flow meter has since been able to record flows less than 100 gpm.
- December 16, 2021: The basin irrigation sprinkler was observed to have fallen over and created a small (approximately 12-inch by 12-inch by 12-inch) scour hole in the basin. The contractor repaired the damage and added rock around the basin to prevent erosion. The transducer was removed from the stilling well in the flow-control manhole and determined to be installed at the incorrect elevation. Since the transducer could not be replaced without a confined space permit, the transducer was placed back in the manhole, but outside of the stilling well.
- January 7, 2022: The transducer was previously installed in the flow-control manhole stilling well with the bottom of the unit at the top of weir elevation; however, the sensor is 1.5 inches above that and as such the unit should have been installed 1.5 inches lower. The contractor lowered the transducer to ensure overflows were properly recorded.
- January 25, 2022: Erosion was observed on the bioinfiltration basin slopes and the contractor added additional rock to armor the slopes.
- February 8, 2022: An additional ladder rung was added to the manhole.
- March 3, 2022: The run time for one of the pumps in the pump station was recorded to be 10 times higher than the run time of the second pump and was not feasibly possible. The pump and Scada vendors were contacted to correct the programing and add additional relays to the panel to correct the system settings. Additionally, the flow rate observed while one pump was running was 40 gpm, when it was previously set to 80 gpm, the contractor adjusted the throttle valve to increase the flow rate to the design flow rate.

2.2 Inspections and Maintenance Activities

Inspections of the treatment and infiltration system are completed monthly documenting site conditions and maintenance (see Appendix B). No pump failures occurred during the first year of operation, and no major maintenance events were required. Relevant photographs are included in Appendix A.

3 QUANTITATIVE RESULTS

3.1 Summary of Available Data

Water surface levels were measured continuously at 15-minute intervals using pressure transducers in the manhole and basin. Pumped volume data were recorded continuously at one-hour intervals using a MagFlux electromagnetic flow meter. Data is logged on the High Tide Technologies HTT-1100 Scada system. Continuous hourly rain gage data was retrieved from the City's HYDRA rain gage network at the nearby Shipyard rain gage. Precipitation data along with timeseries summaries of basin water surface elevation (ponding above the media bed surface), and flow-control manhole water surface elevation relative to the overflow weir elevation are provided in the following Chart 1 and Chart 2, respectively. For consistency, the basin and manhole water level data were translated based on adjustments to the pressure transducer elevation, following the calibration for each transducer (adjustment of low amperage readings to zero).

Chart 1 – Manhole Water Level Above the Overflow Weir Elevation

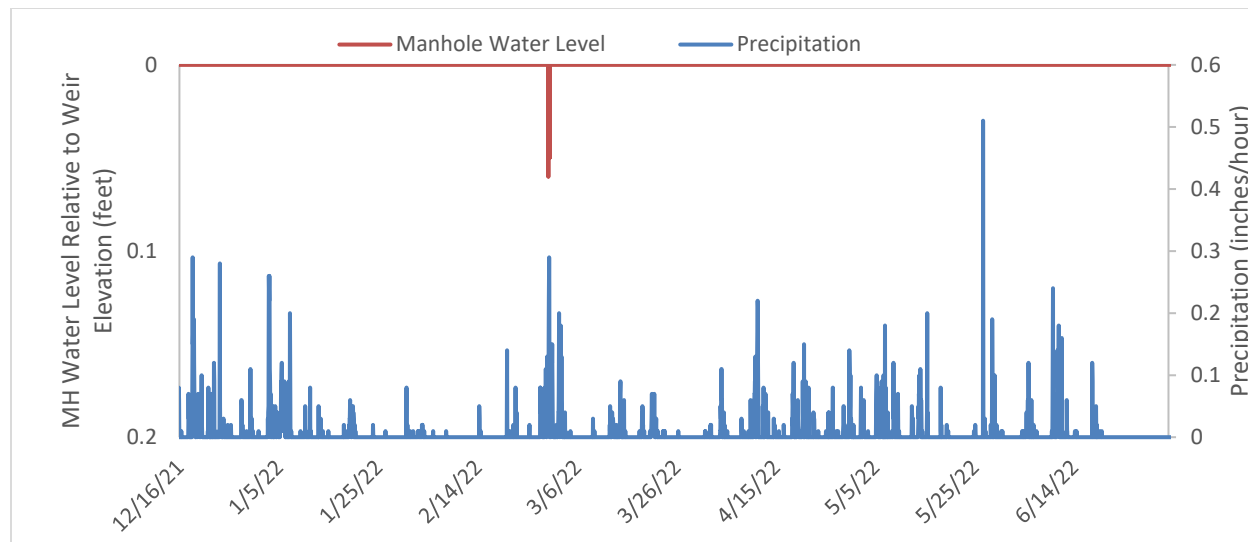
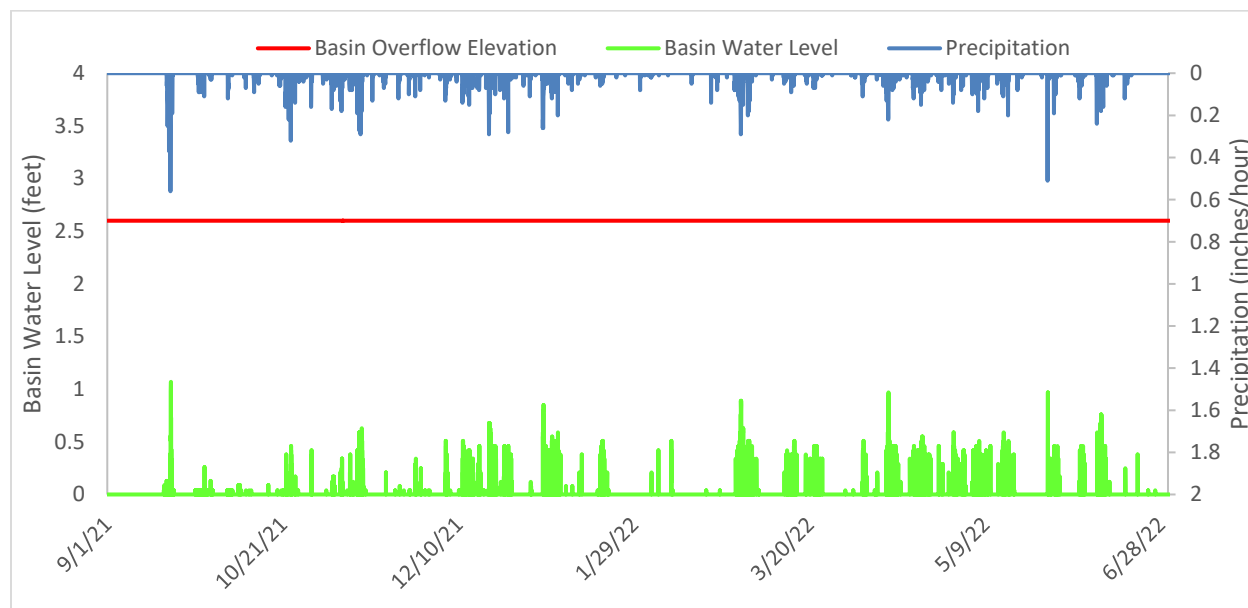


Chart 2 – Basin Water Level Relative to the Basin Overflow Elevation



3.2 Data Interpretation

Chart 1 indicates a bypass from the flow- and spill-control manhole occurred once between December 16, 2022 and June 30, 2022 when a large storm event occurred when the pumps were conveying less than the design flowrate.

Chart 2 shows that no overflow from the bioinfiltration basin occurred from the time of commissioning to the end of June 2022. The maximum ponding depth over the basin media bed was 1.03 feet. However, the water depth when pumping ceased was less than 12 inches; therefore the minimum and maximum infiltration rate when the depth above the media is at least 12 inches cannot be calculated.

Alternatively, an infiltration rate range of 23 to 40 inches per hour was estimated during an event on May 26, 2022 when the ponding depth was 10 inches when flows into the basin ceased. The range of measured infiltration rates was estimated based on basin water levels and pump station flow rates that are recorded in 15 minutes intervals. The higher end of the range does not include the 15-minute interval during which the water level dropped to zero and the lower end of the range includes this interval (in reality, water level in the basin dropped to zero sometime during this 15-minute interval, rather than the end or beginning). The maximum drawdown time observed after pumping stopped was less than 3 hours.

This range is greater than the conservative design rate of 20 inches per hour. The design rate included a factor of safety that accounts for the potential long-term reduction in infiltration rates from sedimentation and/or media compaction. The measured rates indicate that this reduction has not

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occurred and that the basin is capable of treating more than the design flow at this time and will retain the capacity to treat the design flow rates in the future, even if the infiltration rates are reduced due to sedimentation or compaction.

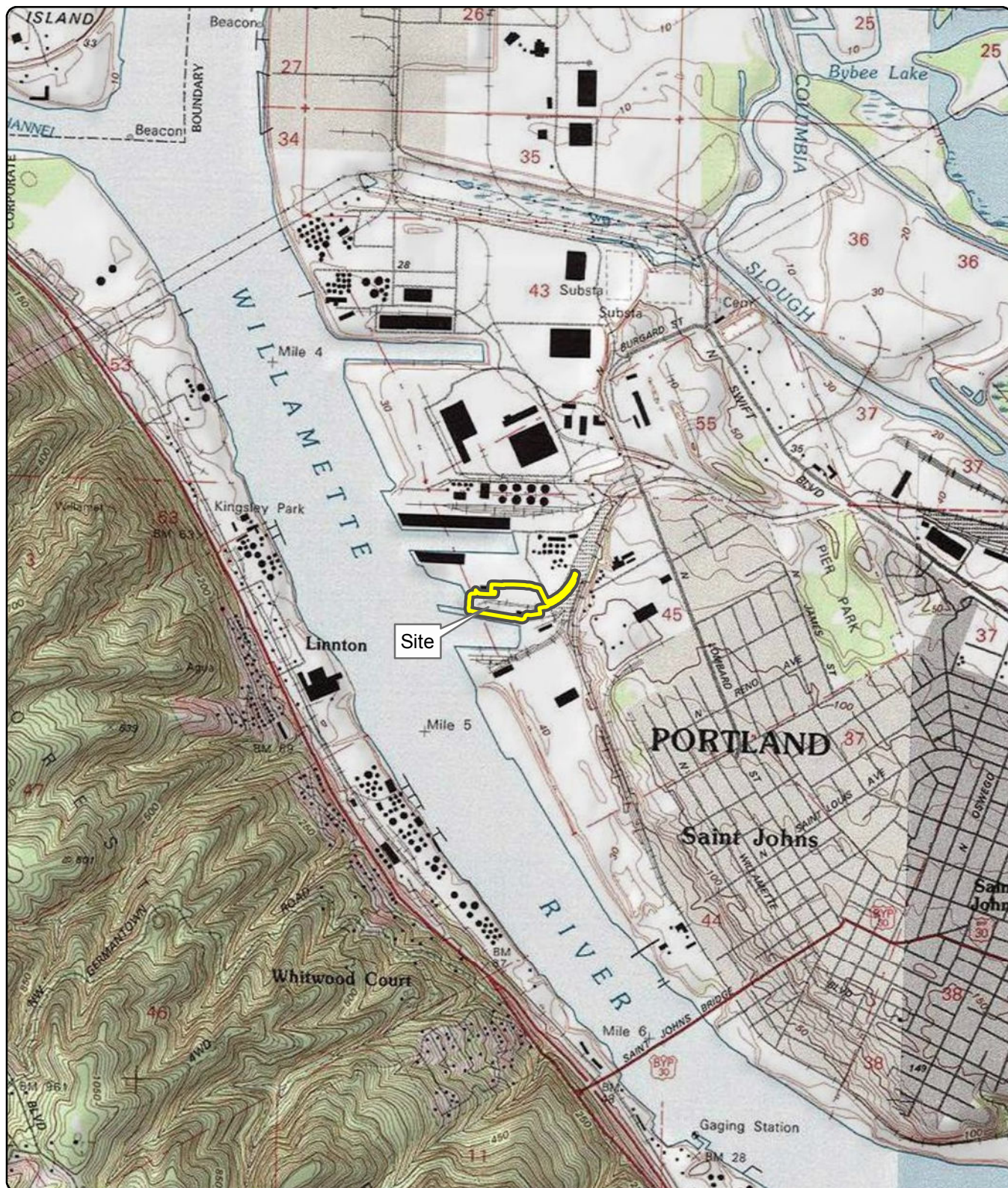
No erosion has been observed since the contractor armored the slopes above the basin in late January. Vegetation appeared healthy from when it was planted in August 2021 through June 2022.

4 SUMMARY AND RECOMENDATIONS

Based on the available data, the Basin K1 stormwater treatment and bioinfiltration system is operating as designed. Observed infiltration rates are higher than infiltration rates used to design the basin. Kinder Morgan will continue monitoring and maintaining the Basin K1 stormwater treatment and infiltration system consistent with the O&M Manual and submit a Comprehensive Report summarizing the July 1, 2022 to June 30, 2023 year by October 1, 2023.

FIGURE





Site Address: 11040 North Lombard Street,
Portland, Oregon
Source: Taxlot obtained from Metro RLIS,
US Geological Survey (1990) 7.5-minute
topographic quadrangle: Linnton
Section 33, Township 1 North, Range 1 West

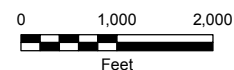


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This product is for informational purposes and may not have been prepared for, or be suitable
for legal, engineering, or surveying purposes. Users of this information should review or
consult the primary data and information sources to ascertain the usability of the information.

Figure
Site Location

Kinder Morgan
Portland, Oregon



APPENDIX A

PHOTO ARRAY



PHOTOGRAPHS

Project Name: Kinder Morgan Basin K1
Project Number: M1017.01.016
Location: Port of Portland, Terminal 4

Photo No. 1.

Description

Flow- and spill-control
manhole

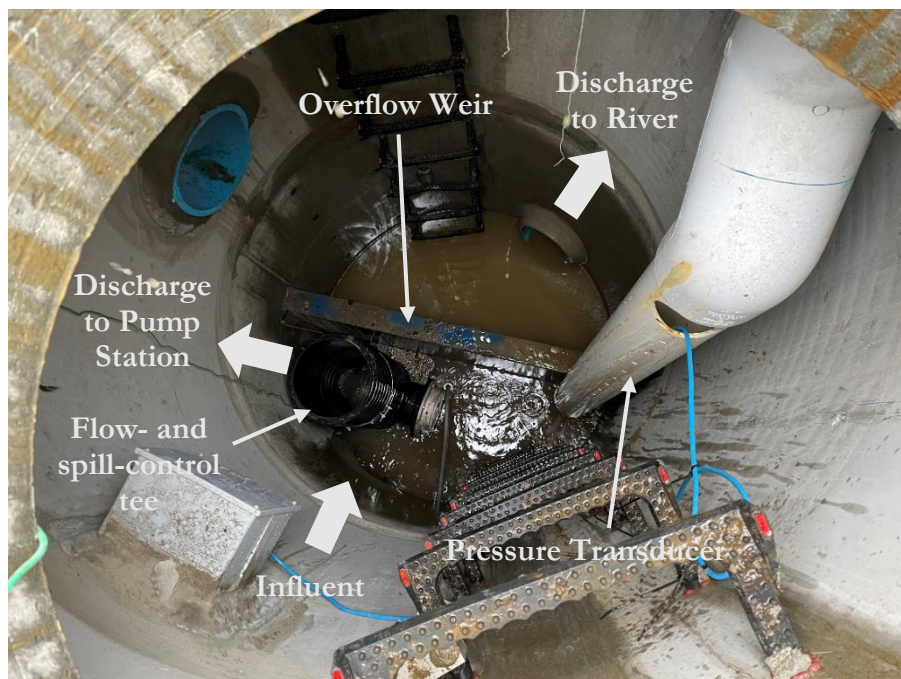


Photo No. 2.

Description

Sedimentation forebay



PHOTOGRAPHS

Project Name: Kinder Morgan Basin K1
Project Number: M1017.01.016
Location: Port of Portland, Terminal 4

Photo No. 3.

Description

Bioinfiltration basin

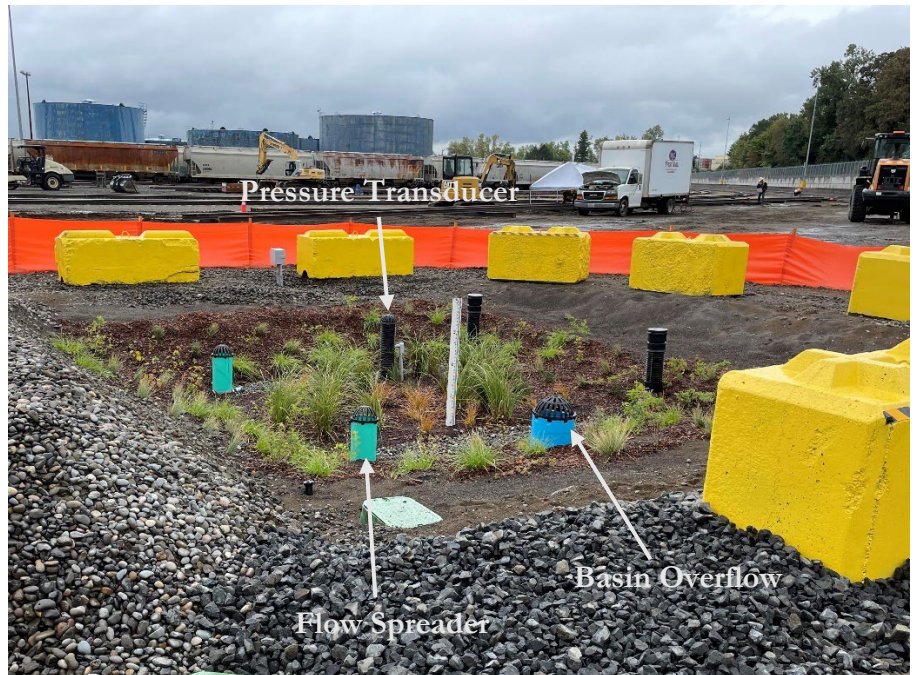


Photo No. 4.

Description

Erosion at the edge of the basin from sprinkler



PHOTOGRAPHS

Project Name: Kinder Morgan Basin K1
Project Number: M1017.01.016
Location: Port of Portland, Terminal 4

Photo No. 5.

Description

Erosion observed on the slopes above the basin



Photo No. 6.

Description

Additional rock added to armor slopes around the basin



APPENDIX B

INSPECTION RECORDS



Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 8/31/21

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
PUMP STATION COMMISSIONING		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u>Brooke Harmon</u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOLE HARMON
 Location/Facility ID: KINDER MORGAN TY
 Weather: MOSTLY SUNNY 54°F
 Date of Last Rainfall: 8/26/21

Date: 8/31/21
 Time: 1030

Amount: 0.02 inches

Reason for Inspection:
 (Circle One)

Routine

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
 1 = Monitor (potential for future problem) N/A = Not applicable
 2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
 Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
 Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
 Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
☐ Standing water / saturated patches
 Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
☐ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
 Other: _____

6) Emergency Overflow

- ☐ Structure damaged
☐ Structure clogged or obstructed
☒ Beehive grate displaced
 Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

1 = Monitor (potential for future problem exists)

2 = Routine Maintenance Required

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BRODIE HARMON

Date: 8/31/21

Location/Facility ID: KINDER MORGAN T4

Time: 1030

Weather: MOSTLY SUNNY 54°F

Date of Last Rainfall: 8/26/21

Amount: 0.02 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☐ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments:

WET WELL PUMP STATION COMMISSIONING

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

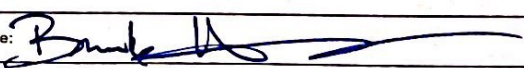
2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 9/27/21

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	SOME EROSION ON SLOPE NBAE BASIN (<2" DEEP)
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
WET WELL LID REPLACED W/ H2O RATED HATCH SEDIMENTATION GRAB ADDED TO BASIN BEEHIVE GRAB ADDED TO OVERFLOW		
Inspected By: <u>BROOKE HARRISON</u>	Signature: <u></u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

CONVEYANCES INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: 9/27/21

Location/Facility ID: KINDER MORGAN TY

Time: 1330

Weather: PARTLY CLOUDY 57°F

Date of Last Rainfall: 9/27/21

Amount: 0.50 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☐ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOKE HARMON Date: 9/27/21
 Location/Facility ID: KINDER MORGAN T4 Time: 1330
 Weather: PARTLY CLOUDY 57°F
 Date of Last Rainfall: 9/27/21 Amount: 0.50 inches

Reason for Inspection: Routine Complaint Major Event (spill or >1" in 24hrs)
 (Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
 1 = Monitor (potential for future problem) N/A = Not applicable
 2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
 Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
 Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
 Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
☐ Standing water / saturated patches
 Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
☐ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
 Other: _____

6) Emergency Overflow

- ☐ Structure damaged
☐ Structure clogged or obstructed
☒ Beehive grate displaced
 Other: _____

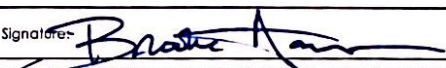
Inspection Summary and Comments: SAND ABOVE BASIN ERODED ON
EASTERN SIDE AND SETTLED ON FLOW SPREADER -
MONITOR OR ARMOR SLOPE TO PREVENT ADDITIONAL
EROSION

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified 2 = Routine Maintenance Required
 1 = Monitor (potential for future problem exists) 3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: OCT 6, 2021

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BROOKE HARMON</u>	Signature: 	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

CONVEYANCES INSPECTION FORM

Inspector's Name: BLODGE HARMON
 Location/Facility ID: KINDER MORGAN
 Weather: PARTLY CLOUDY 48°F
 Date of Last Rainfall: OCT 5, 2021

Date: OCT 6, 2021
 Time: 1000

Amount: 0.43 inches

Reason for Inspection: Routine Complaint Major Event (spill or >1" in 24hrs)
 (Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
 1 = Monitor (potential for future problem) N/A = Not applicable
 2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☒ Evidence of improper weir height (see Design Drawings)
- ☒ Sediment / debris build-up (dry season observation)
- ☒ Cracks / mechanical damage
- ☒ Inlet / outlet piping damaged
- ☒ Poor seal to piping
- ☒ Access problems
- Other: _____

2) Wet Well and Pumps

- ☒ Sediment / debris build-up (dry season observation)
- ☒ Cracks / mechanical damage
- ☒ Inlet / outlet piping damaged
- ☒ Poor seal to piping
- ☒ Access problems
- Other: _____

3) Valve Box

- ☒ Leaks / water present
- ☒ Sediment / debris present
- ☒ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☒ Clogged catch basins
- ☒ Sediment / debris build-up
- ☒ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified 2 = Routine Maintenance Required
 1 = Monitor (potential for future problem exists) 3 = Immediate Repair Necessary

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: OCT 6, 2021

Location/Facility ID: KINDER MORGAN T4

Time: 1000

Weather: PARTLY CLOUDY 48°F

Date of Last Rainfall: OCT 5, 2021

Amount: 0.43 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☒ Structure damaged
☒ Structure clogged or obstructed
☒ Scour / erosion present
 Other: _____

2) Sedimentation Forebay

- ☒ > 30% capacity sediment accumulation (dry season observation)
☒ Vectors / pests present
☒ Structural integrity
 Other: _____

3) Vegetation

- ☒ Trimming or detritus removal needed
☒ Loss of vegetation cover
☒ Noxious weeds
 Other: _____

4) Media Bed

- ☒ > 2" of sediment / debris accumulation
☒ Trash accumulation
☒ Crusting of surface of media bed
☒ Holes / loss of media / channelization/scour
☒ Evidence of burrowing animals / vectors / pests
 Standing water / saturated patches
 Other: _____

5) Side Slopes

- ☒ Rill / gully erosion
☒ Evidence of burrowing animals / pests
☒ Slope slippage
☒ Structural integrity
 Other: _____

6) Emergency Overflow

- ☒ Structure damaged
☒ Structure clogged or obstructed
☒ Beehive grate displaced
 Other: _____

Inspection Summary and Comments:

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 11/4/21

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	NO	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	NO	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	NO	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	NO	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	NO	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u>[Signature]</u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

CONVEYANCES INSPECTION FORM

Inspector's Name: BROCKE HARMON
Location/Facility ID: KINDER MORGAN TX
Weather: RAIN 55°F
Date of Last Rainfall: 11/4/21

Date: 11/4/21
Time: 1400

Amount: 0.30 inches

Reason for Inspection: (Routine)
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
1 = Monitor (potential for future problem) N/A = Not applicable
2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☒ Evidence of improper weir height (see Design Drawings)
- ☒ Sediment / debris build-up (dry season observation)
- ☒ Cracks / mechanical damage
- ☒ Inlet / outlet piping damaged
- ☒ Poor seal to piping
- ☒ Access problems
- Other: _____

2) Wet Well and Pumps

- ☒ Sediment / debris build-up (dry season observation)
- ☒ Cracks / mechanical damage
- ☒ Inlet / outlet piping damaged
- ☒ Poor seal to piping
- ☒ Access problems
- Other: _____

3) Valve Box

- ☒ Leaks / water present
- ☒ Sediment / debris present
- ☒ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☒ Clogged catch basins
- ☒ Sediment / debris build-up
- ☒ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified 2 = Routine Maintenance Required
1 = Monitor (potential for future problem exists) 3 = Immediate Repair Necessary

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOKE HARMON Date: 11/4/21
 Location/Facility ID: KINDER MORGAN TY Time: 1400
 Weather: RAIN 55°F
 Date of Last Rainfall: 11/4/21 Amount: 0.30 inches

Reason for Inspection: (Routine) Complaint Major Event (spill or >1" in 24hrs)
 (Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
 1 = Monitor (potential for future problem) N/A = Not applicable
 2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

☒ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
 Other: _____

2) Sedimentation Forebay

☐ > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
 Other: _____

3) Vegetation

☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
 Other: _____

4) Media Bed

6 > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
☐ Standing water / saturated patches
 Other: _____

5) Side Slopes

1 Rill / gully erosion
☐ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
 Other: _____

6) Emergency Overflow

☐ Structure damaged
☐ Structure clogged or obstructed
☐ Beehive grate displaced
 Other: _____

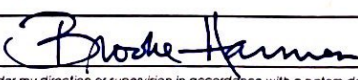
Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified 2 = Routine Maintenance Required
 1 = Monitor (potential for future problem exists) 3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 12/16/21

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	YES	SPRINKLER FELL OVER AND CREATED A 12" x 12" x 12" HOLE — NUTTER CONTACTED TO FIX
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
ADJUST PROBE IN MANHOLE BY		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u></u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BRODIE HARMON

Date: 12/16/21

Location/Facility ID: KINDER HOLLAN TY

Time: 930

Weather: FOGGY 37°F

Date of Last Rainfall: 12/15/21

Amount: 0.53 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
- ☐ Structure clogged or obstructed
- ☐ Scour / erosion present
- Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
- ☐ Vectors / pests present
- ☐ Structural integrity
- Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
- ☐ Loss of vegetation cover
- ☐ Noxious weeds
- Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
- ☐ Trash accumulation
- ☐ Crusting of surface of media bed
- ☐ Holes / loss of media / channelization/scour
- ☐ Evidence of burrowing animals / vectors / pests
- ☐ Standing water / saturated patches
- Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
- ☐ Evidence of burrowing animals / pests
- ☐ Slope slippage
- ☐ Structural integrity
- ☒ Other: SPRINKLER FELL OVER

6) Emergency Overflow

- ☐ Structure damaged
- ☐ Structure clogged or obstructed
- ☐ Beehive grate displaced
- Other: _____

Inspection Summary and Comments:

SPRINKLER FELL OVER + CREATED
HOLE - CONTRACTOR CONTACTED TO ADDRESS
ISSUE

OVERALL FACILITY RATING (Circle One)

☒ 0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: 12/16/21

Location/Facility ID: KINDER MORGAN TX

Time: 930

Weather: FOGGY 37°F

Date of Last Rainfall: 12/15/21

Amount: 0.53 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☒ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☒ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

1 = Monitor (potential for future problem exists)

2 = Routine Maintenance Required

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 1/25/2022

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	No	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	SLIGHT ORGANIC SHEEN (NOT TPH)
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
NUTTER ARMORED SIDE SLOPES ABOVE BASIN IN CORNER OF EROSION TRANSOUER PLACED BACK IN STILL WELL		
Inspected By: <u>BRODIE HARMON</u>	Signature: <u>Brodie Harmon</u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROCKE HARMON

Date: 1/25/2022

Location/Facility ID: KINDER MORGAN T4

Time: 1100

Weather: SUNNY w/ LOW FOG, 40°

Date of Last Rainfall: 1/20/22

Amount: 0.12 inches

Reason for Inspection: (Routine)
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
Other: _____

2) Sedimentation Forebay

- NA > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
☐ Standing water / saturated patches
Other: _____

5) Side Slopes

- 1 Rill / gully erosion
☐ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
Other: _____

6) Emergency Overflow

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Beehive grate displaced
Other: _____

Inspection Summary and Comments:

SOME SAND^{from} BETWEEN BASIN + ROCK OUT SIDE OF THE
FACILITY SETTLED ON TOP OF FLOW SPREADER ROCK -
WILL ASK CONTRACTOR ABOUT ADDING MORE ROCK TO PREVENT
FURTHER ISSUES

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: 1/25/2022

Location/Facility ID: KINDER MORGAN T4

Time: 1100

Weather: SUNNY w/ LOW FOG, 40°

Date of Last Rainfall: 1/20/22

Amount: 0.12 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- 0 Evidence of improper weir height (see Design Drawings)
NA Sediment / debris build-up (dry season observation)
0 Cracks / mechanical damage
0 Inlet / outlet piping damaged
0 Poor seal to piping
0 Access problems
Other: _____

2) Wet Well and Pumps

- NA Sediment / debris build-up (dry season observation)
0 Cracks / mechanical damage
0 Inlet / outlet piping damaged
0 Poor seal to piping
0 Access problems
Other: _____

3) Valve Box

- 0 Leaks / water present
0 Sediment / debris present
0 Cracks / mechanical damage
Other: _____

4) Upstream Catch Basins

- 0 Clogged catch basins
0 Sediment / debris build-up
0 Cracks / mechanical damage
Other: _____

Inspection Summary and Comments:

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: FEB 8, 2022

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?		
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
ADDITIONAL STEP/ LADDER RUNG ADDED TO MANHOLE		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u>[Signature]</u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: 2/8/22

Location/Facility ID: KINDER MORGAN TY

Time: 11:00

Weather: OVERCAST 41°F

Date of Last Rainfall: 2/7/22

Amount: 0.01 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
Standing water / saturated patches
Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
☐ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
Other: _____

6) Emergency Overflow

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Beehive grate displaced
Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: 2/8/22

Location/Facility ID: KINDER MORGAN T4

Time: 11:00

Weather: OVERCAST 41°F

Date of Last Rainfall: 2/7/22

Amount: 0.01 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☐ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments:

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

1 = Monitor (potential for future problem exists)

2 = Routine Maintenance Required

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: MARCH 1, 2022 11:00

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	-	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	-	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	-	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	-	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u></u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

BIOINFILTRATION BASIN INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: MARCH 1, 2022

Location/Facility ID: KINDER MORGAN TY

Time: 11:00

Weather: OVERCAST

Date of Last Rainfall: MARCH 1, 2022

Amount: 0.3 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- 0 Structure damaged
0 Structure clogged or obstructed
0 Scour / erosion present
Other: _____

2) Sedimentation Forebay

- NA > 30% capacity sediment accumulation (dry season observation)
0 Vectors / pests present
0 Structural integrity
Other: _____

3) Vegetation

- 0 Trimming or detritus removal needed
0 Loss of vegetation cover
0 Noxious weeds
Other: _____

4) Media Bed

- 0 > 2" of sediment / debris accumulation
0 Trash accumulation
0 Crusting of surface of media bed
0 Holes / loss of media / channelization/scour
0 Evidence of burrowing animals / vectors / pests
0 Standing water / saturated patches
Other: _____

5) Side Slopes

- 1 Rill / gully erosion
0 Evidence of burrowing animals / pests
0 Slope slippage
0 Structural integrity
Other: _____

6) Emergency Overflow

- 0 Structure damaged
0 Structure clogged or obstructed
0 Beehive grate displaced
Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROOKE HARMON

Date: MARCH 1, 2022

Location/Facility ID: KINDER MORGAN TX

Time: 11:00

Weather: OVERCAST

Date of Last Rainfall: MARCH 1, 2022

Amount: 0.3 inches

Reason for Inspection: (Routine)
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
1 = Monitor (potential for future problem) N/A = Not applicable
2 = Routine maintenance required

FEATURES

1) Intercept Manhole

0 Evidence of improper weir height (see Design Drawings)
NA Sediment / debris build-up (dry season observation)
0 Cracks / mechanical damage
0 Inlet / outlet piping damaged
0 Poor seal to piping
0 Access problems
Other: _____

2) Wet Well and Pumps

NA Sediment / debris build-up (dry season observation)
0 Cracks / mechanical damage
0 Inlet / outlet piping damaged
0 Poor seal to piping
0 Access problems
Other: _____

3) Valve Box

0 Leaks / water present
0 Sediment / debris present
0 Cracks / mechanical damage
Other: _____

4) Upstream Catch Basins

0 Clogged catch basins
0 Sediment / debris build-up
0 Cracks / mechanical damage
Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

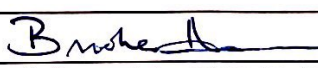
2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 4/28/22 1430

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	NO	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	NO	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	SLIGHT SHEEN, (POSSIBLY ORGANIC) NOTED IN MH. ADDED OIL ABSORBANT BOOM TO ADDED OIL UPSTREAM SIDE OF MH
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BROOKE HARRISON</u>	Signature: <u></u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

**BIOINFILTRATION BASIN
INSPECTION FORM**

Inspector's Name: BROOK HIRSHMAN

Date: 4/28/22

Location/Facility ID: KINDER MORGAN TX

Time: 1430

Weather: CLOUDY

Date of Last Rainfall: 4/27/22

Amount: 0.02 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- 0 Structure damaged
0 Structure clogged or obstructed
0 Scour / erosion present
Other: _____

2) Sedimentation Forebay

- 0 > 30% capacity sediment accumulation (dry season observation)
0 Vectors / pests present
0 Structural integrity
Other: _____

3) Vegetation

- 0 Trimming or detritus removal needed
0 Loss of vegetation cover
0 Noxious weeds
Other: _____

4) Media Bed

- 0 > 2" of sediment / debris accumulation
0 Trash accumulation
0 Crusting of surface of media bed
0 Holes / loss of media / channelization/scour
0 Evidence of burrowing animals / vectors / pests
0 Standing water / saturated patches
Other: _____

5) Side Slopes

- 1 Rill / gully erosion
0 Evidence of burrowing animals / pests
0 Slope slippage
0 Structural integrity
Other: _____

6) Emergency Overflow

- 0 Structure damaged
0 Structure clogged or obstructed
0 Beehive grate displaced
Other: _____

Inspection Summary and Comments:

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROCK HARMON

Date: 8/1

Location/Facility ID: KINDER MORGAN TV

Time: 1930

Weather: CLOUDY

Date of Last Rainfall: 4/27/22

Amount: 0.02 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
☒ Sediment / debris build-up (dry season observation)
☐ Cracks / mechanical damage
☐ Inlet / outlet piping damaged
☐ Poor seal to piping
☐ Access problems
Other: SLIGHT SHEEN ON SURFACE

2) Wet Well and Pumps

- ☒ Sediment / debris build-up (dry season observation)
☐ Cracks / mechanical damage
☐ Inlet / outlet piping damaged
☐ Poor seal to piping
☐ Access problems
Other: _____

3) Valve Box

- ☐ Leaks / water present
☐ Sediment / debris present
☐ Cracks / mechanical damage
Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
☐ Sediment / debris build-up
☐ Cracks / mechanical damage
Other: _____

Inspection Summary and Comments:

OIL ABSORBENT BOOM ADDED TO
MANHOLE

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

**BIOINFILTRATION BASIN
INSPECTION FORM**

Inspector's Name: BROCK HARMON

Date: 5/27/22

Location/Facility ID: KINDER MORGAN T4-BASIN K1

Time: 1500

Weather: 60°F / PARTLY CLOUDY

Date of Last Rainfall: 5/27/22

Amount: ~0.05 inches

Reason for Inspection:

Routine

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
- ☐ Structure clogged or obstructed
- ☐ Scour / erosion present
- Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
- ☐ Vectors / pests present
- ☐ Structural integrity
- 1 Other: DEAD ALGAE

3) Vegetation

- ☐ Trimming or detritus removal needed
- ☐ Loss of vegetation cover
- ☐ Noxious weeds
- Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
- ☐ Trash accumulation
- ☐ Crusting of surface of media bed
- ☐ Holes / loss of media / channelization/scour
- ☐ Evidence of burrowing animals / vectors / pests
- ☐ Standing water / saturated patches
- Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
- ☐ Evidence of burrowing animals / pests
- ☐ Slope slippage
- ☐ Structural integrity
- Other: _____

6) Emergency Overflow

- ☐ Structure damaged
- ☐ Structure clogged or obstructed
- ☐ Beehive grate displaced
- Other: _____

Inspection Summary and Comments:

REMOVE DEAD ALGAE FROM FOREBAY IF PRESENT
DURING SEASONAL MAINTENANCE

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

CONVEYANCES INSPECTION FORM

Inspector's Name: BROCKE HAZMAN Date: 5/27/22
Location/Facility ID: KM T4 BASIN K1 Time: 1500
Weather: 60 °F / PLY CLOUDY
Date of Last Rainfall: 5/27/22 Amount: 0.05 inches

Reason for Inspection: (Routine) Complaint Major Event (spill or >1" in 24hrs)
(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified 3 = Immediate repair necessary
1 = Monitor (potential for future problem) N/A = Not applicable
2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☐ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments:

OIL BOOM IS STILL IN MANHOLE - REMOVE ANYTIME

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified 2 = Routine Maintenance Required
1 = Monitor (potential for future problem exists) 3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 5/27/22 1500

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	—	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	POSSIBLE DEAD ALGAE IN FOREBAY - REMOVE w/ SEASONAL MAINTENANCE IF PRESENT
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	—	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	—	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	OIL BOON STILL IN MH FROM LAST MONTH
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	—	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BRODIE HARMON</u>		Signature: <u>Brodie Harmon</u>
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		

**BIOINFILTRATION BASIN
INSPECTION FORM**

Inspector's Name: BROOKE HAYMON

Date: 6/21/22

Location/Facility ID: KM TH BASIN K1

Time: 1130

Weather: SUNNY

Date of Last Rainfall: 6/18/22

Amount: ~0.1 inches

Reason for Inspection: Routine
(Circle One)

Complaint

Major Event (spill or >1" in 24hrs)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Inlet (Flow Spreader)

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Scour / erosion present
Other: _____

2) Sedimentation Forebay

- ☐ > 30% capacity sediment accumulation (dry season observation)
☐ Vectors / pests present
☐ Structural integrity
Other: _____

3) Vegetation

- ☐ Trimming or detritus removal needed
☐ Loss of vegetation cover
☐ Noxious weeds
Other: _____

4) Media Bed

- ☐ > 2" of sediment / debris accumulation
☐ Trash accumulation
☐ Crusting of surface of media bed
☐ Holes / loss of media / channelization/scour
☐ Evidence of burrowing animals / vectors / pests
☐ Standing water / saturated patches
Other: _____

5) Side Slopes

- ☐ Rill / gully erosion
☒ Evidence of burrowing animals / pests
☐ Slope slippage
☐ Structural integrity
Other: _____

6) Emergency Overflow

- ☐ Structure damaged
☐ Structure clogged or obstructed
☐ Beehive grate displaced
Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

1 = Monitor (potential for future problem exists)

2 = Routine Maintenance Required

3 = Immediate Repair Necessary

**CONVEYANCES
INSPECTION FORM**

Inspector's Name: BROOKE HARMON

Date: 6/21/22

Location/Facility ID: KM TH BASIN K1

Time: 1130

Weather: SUNNY

Date of Last Rainfall: 6/18/22

Amount: 10.1 inches

Reason for Inspection:

(Routine)

Complaint

Major Event (spill or >1" in 24hrs)

(Circle One)

INSPECTION SCORING - For each facility inspection item, insert one of the following scores:

0 = No deficiencies identified

3 = Immediate repair necessary

1 = Monitor (potential for future problem)

N/A = Not applicable

2 = Routine maintenance required

FEATURES

1) Intercept Manhole

- ☐ Evidence of improper weir height (see Design Drawings)
- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

2) Wet Well and Pumps

- ☐ Sediment / debris build-up (dry season observation)
- ☐ Cracks / mechanical damage
- ☐ Inlet / outlet piping damaged
- ☐ Poor seal to piping
- ☐ Access problems
- Other: _____

3) Valve Box

- ☐ Leaks / water present
- ☐ Sediment / debris present
- ☐ Cracks / mechanical damage
- Other: _____

4) Upstream Catch Basins

- ☐ Clogged catch basins
- ☐ Sediment / debris build-up
- ☐ Cracks / mechanical damage
- Other: _____

Inspection Summary and Comments: _____

OVERALL FACILITY RATING (Circle One)

0 = No Deficiencies Identified

2 = Routine Maintenance Required

1 = Monitor (potential for future problem exists)

3 = Immediate Repair Necessary

Stormwater Treatment System Inspection Record
Kinder Morgan Bulk Terminals, Inc.
Portland, Oregon

Inspection Date: 6/21/22 11:30 am

Checklist Item	(Yes/No)	Additional Information (e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date)
Pump Station Wet Well and Valve Vault		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well?	No	
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, valves, and fittings within the valve vault?	No	
Dry season. Drain pump station wet well and inspect for sediment accumulation. If more than six inches of solids is observed in the wet well, pressure wash wet the well and manage the wash water and solids consistent with applicable disposal regulations.	-	
Forebay and Bioinfiltration Basin		
Monthly. Inspect any accumulation of stormwater solids and debris. Inspect eroded damage over two inches deep on side slopes of the bioinfiltration basin. Inspect any Poisonous or nuisance vegetation, and noxious weeds (Himalayan blackberry etc.) are observed and remove via mechanical measures.	No	
Dry season. Inspect for sediment accumulation. If more than seven inches of sediment, trash, and/or debris is observed in the forebay (over the rock layer) during the dry season inspection, sediment will be removed using a vacuum truck.	-	
Dry Season. In the first three years (2021-2024), inspect if there is 80% vegetation coverage at the bottom of bioinfiltration basin and 70% at the sides. Inspect if there is 90% vegetation coverage after the first three years. Replant if needed.	-	
Flow-Control Manhole Maintenance		
Monthly. Are there any leaks, breaks, or evidence of damage in the piping, fittings within the flow-and-spill control manhole?	No	
Monthly. Inspect any oil, fuel, or other floating liquid in the manhole. If more than two inches of floatables is observed, schedule removal with a qualified vacuum truck service.	No	
Dry Season. Drain flow-control manhole and inspect for sediment accumulation. If more than one-foot of solids is observed in the manhole, schedule removal with a qualified vacuum truck service.	-	
Stormwater System Maintenance: Note stormwater treatment system maintenance activities performed this month.		
Inspected By: <u>BROOKE HARMON</u>	Signature: <u>Brooke Harmon</u>	
I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.		