City of Kimball, MN Stormwater Retrofit Phases I & II Operation & Maintenance Plan

Prepared for:
Clearwater River Watershed District
75 Elm Street East,
Box 481
Annandale, MN 55302

Prepared by:
WENCK Associates, Inc.
1800 Pioneer Creek Center
Maple Plain, MN 55359
Phone: 763-479-4200
Fax: 763-479-4242
## Table of Contents

1.0 PROJECT PURPOSE & BACKGROUND ........................................................... 1-1

2.0 PROJECT ELEMENTS .................................................................................... 2-1

3.0 PROJECT PARTNERS, ROLES & RESPONSIBILITIES ................................. 3-1

4.0 INSPECTION & MAINTENANCE ................................................................. 4-1

   4.1 General Condition ................................................................................ 4-1
   4.2 Native Vegetation ................................................................................ 4-1
   4.3 Sediment Accumulation ...................................................................... 4-1
   4.4 Basin Outlets ...................................................................................... 4-2
   4.5 Basin Inlets ........................................................................................ 4-2
   4.6 Erosion .............................................................................................. 4-2
   4.7 Floatables & Debris ............................................................................ 4-2
   4.8 Inspection Schedule ........................................................................... 4-2
Table of Contents (Cont.)

**TABLES**

Table 4-1: Inspection Schedule ........................................................................................................... 4-2

**FIGURES**

1. Stormwater Treatment Areas

**APPENDICES**

A  Phase I As-Built Drawings & BMP Locations  
B  Phase II As-Built Drawings & BMP Locations  
C  Blank Inspection Forms  
D  Completed Inspection & Maintenance Logs
1.0 Project Purpose & Background

The Kimball Phase I & Phase II Stormwater Retrofit projects were implemented to reduce nutrient and sediment load from urban sources in the upper Clearwater River Watershed District. Figure 1.1 shows the areas of the city that now route to stormwater treatment as the result of this project as well as BMP locations.

The City of Kimball, Minnesota and surrounding agricultural area drains, mostly untreated, into Willow Creek, a trout stream which empties into the Clearwater River Chain of Lakes. Multiple Best Management Practices (BMPs) were constructed to treat stormwater, recharge shallow groundwater, and more closely mimic the areas natural hydrology. The improvements are designed to reduce temperature in Willow Creek and reduce nutrient loadings to downstream lakes.

The District was awarded two grants by the Board of Water and Soil Resources through the Clean Water Legacy Funds. These funds, along with matching funds by the City of Kimball and the Clearwater River Watershed District (CRWD) allowed design and construction of the project in two phases:

▲ Phase I located on the east side of Highway15 on the south edge of the City of Kimball.
▲ Phase II work is mostly on the west side of Highway 15 on the south edge of the City of Kimball and included some work to improve treatment efficiency of Phase I by reducing drainage area to that project.

The completed phases targeted and achieved treating runoff from the 1.25 inch precipitation event- also known as the water quality event. Total phosphorus (TP) removal efficiencies afforded by the BMPs range from 50% for bio-filtration areas to 90% for stormwater capture & infiltration/reuse project elements. In addition to sediment and phosphorus load reductions, temperatures in Willow Creek should also be improved for trout habitat given the focus on infiltration. The estimated improvements do not take into account infiltration and evapotranspiration in the downstream wetlands riparian to Willow Creek.
2.0 Project Elements

The elements of each phase of the project and their purpose are listed below. Each element corresponds to a location on the site map.

Phase I: The project, completed in 2009, includes:
1. A pretreatment raingarden west of the sand volleyball court/ hockey rink. The raingarden contains two cells for sediment capture, filtration and infiltration.
2. A Large capture / infiltration / re-use basin east of the rink. This basin captures a large portion of the runoff volume from the drainage area north of the basin, east of Highway 15. Some of the captured water infiltrates, recharging stormwater to reduce temperature and improves quality of discharge to nearby Willow Creek (a trout stream). The captured water is also available to irrigate the nearby baseball field which reduces runoff volumes and improves water quality downstream. A pump & filters were installed so the captured stormwater can be used for irrigation.
3. A stormwater re-use area where the captured stormwater is used to irrigate a baseball field that was previously irrigated solely by groundwater treated to drinking water standards by the City of Kimball.

Phase II: The project, completed in 2015, includes the following elements:
1. Stormwater pond with pre-treatment cell and filtration berm outlet on east side of the Hendricks’s Sand and Gravel parcel.
2. Vegetated swale to provide emergency overflow for the basin and additional treatment.
3. Wetland restoration with low flow treatment filter.
4. Swale to route & pretreat stormwater to vegetated area and then to wetland and away from class 5 parking lot which exported significant sediment to a ditch with direct connection to Willow Creek.
5. A SAFL Baffle was installed upstream of the Phase I rain garden to capture sediment and assist in establishment of native plantings. This will capture additional sediment and reduce maintenance costs and impacts of sediment on native plants.
6. Stabilize Magnus Johnson Street Grit Chamber outlet to Willow Creek.
7. Two upsized grit chamber systems on the existing stormwater infrastructure to provide pretreatment for runoff from city streets.
8. A stormwater bypass to draw stormwater from east of Highway 15 to the treatment basins on the west. This project element improves function of Phase I by reducing the treatment volumes closer to the 1.25 inch event, and allows for further treatment of water east of Highway 15.
9. The irrigation system in Phase I was optimized to improve the efficiency of water reuse- reducing discharge downstream.
10. Constructed sediment capture area north of Highway 55 east of the Implement Yard to capture sediment from the nearby equipment lot prior to discharge into Willow Creek.

The BMPs from both phases are integrated to work in several treatment trains to reduce nutrient and sediment load to downstream wetlands and eventually to Willow Creek and Lake Betsy. The treatment trains are described below:
**Phase I- Kimball Park Treatment Train**
This treatment train captures water from the 9.4 acre drainage area west of Highway 15 and south of Hazel Avenue. Flow is routed through a swale, into the SAFL BAFFLE, then to the 2-cell raingarden prior to discharge to the stormwater basin on the east side of the hockey rink. Some stormwater infiltrates, the remainder is used to irrigate an adjacent ball field. An emergency overflow rock swale is located on the east side of the basin.

**Phase II- Hendricks’s West Treatment Train**
This treatment train captures water from the 25.2 acre drainage area south of Highway 55 and on the western side of the school property. Another drainage area enters from the north, but due to significant wetland storage, this area does not discharge in the design event. Flow is routed through a swale, into low flow channel with filtration system. Larger flows are stored in the created wetland area which was formerly a field with debris. This flows into another vegetated swale before discharging into the wetlands upstream of the creek to filter/infiltrate prior to discharge to Willow Creek.

**Phase II- Hendricks’s East Treatment Train**
This treatment train piggy-backs on street and storm sewer work implemented by the City of Kimball. One pipe was upsized and extended to bring water from the drainage area east of Highway 15 to constructed BMPs. The upsized pipe brings water to a grit chamber system (which was upsized with grand funds) prior to discharging into a double cell stormwater basin with a filter outlet before discharging into the wetlands upstream of the creek to filter/infiltrate prior to discharge to Willow Creek. This water would have discharged directly to the creek untreated pre project.

**Phase II- Localized Sediment Reduction BMPs**
Because the City of Kimball is built out, the opportunities for extensive construction of BMPs was not available for every watershed. So some BMPs were located to provide additional sediment removal:

▲ A grit chamber outlet to a stream at the downstream edge of Magnus Johnson Street was restored and stabilized. This reduces sediment transport to the wetland downstream which empties into Willow Creek.
▲ A sediment pre-treatment cell was installed on the north side of Highway 55 to capture runoff from a Class 5 parking lot which was exporting significant sediment downstream.
▲ An additional grit chamber was upsized at Cherry Street.

All told, the estimated load reductions based on design volumes for the 1.25 inch event and general BMP efficiencies for infiltration/ filtration, sedimentation are conservatively estimated at 50 to 80%. Load reductions from infiltration / evapotranspiration of treated stormwater in repairing wetlands are not accounted for so estimated load reductions are conservative.

As-builts for the Phase I are located in Appendix A. As-builts for Phase II are Appendix B. Blank inspection forms are Appendix C. Keep completed inspection and maintenance records in Appendix D (currently blank).
3.0 Project Partners, Roles & Responsibilities

The District’s project partners in this project are the City of Kimball, the DNR and Stearns County.

**Project Contacts:**

**Clearwater River Watershed District:**
*Role: Project owner, project coordinator, project inspector, conduct project maintenance as required*
Cole Loewen
District Administrator
Clearwater River Watershed District
320.274.3935

**Wenck Associates, Inc:**
*Role: Project engineer, project inspector*
Rebecca Kluckhohn, P.E.
Wenck Associates, Inc.
763.479.4224

**City of Kimball:**
*Role: Conducts on-going sediment removal in grit chambers & SAFL Baffle. Maintains underground stormwater conveyance system. Monitor and maintains phase I stormwater basin and pretreatment cells. Operate irrigation system for reuse of captured stormwater.*
Tammy Konz- Mayor
Ed Borman- Maintenance Staff/ Irrigation System Operation
320.398.2725

**Board of Water and Soil Resources:**
*Role: Representative of grand funding agency*
Jason Weinerman
Board Conservationist
1601 Minnesota Drive
Brainerd, MN 56401
218.203.4477

**Traut Wells:**
*Role: Contractor available for irrigation system inspection & maintenance*
141 28th Ave S.
Waite Park, MN 56387
Ph: 320-251-5090
Email: sprink@trautwells.com

**Prairie Restorations, Inc.:**
*Role: Contractor available for native vegetation inspection & maintenance*
31646 128th Street,
Princeton, MN 55371
Geislinger and Sons:
Role: Contractor available for maintenance, sediment removal for SAFL Baffle and Grit Chambers
511 Central Ave S, Watkins, MN 55389
(320) 764-2006
4.0 Inspection & Maintenance

This section documents inspection and maintenance requirements for the various project elements.

4.1 GENERAL CONDITION

General inspection elements include a site visit and photographs of the entire site, the inlets, outlets, any erosion areas and native vegetation. Note the general condition of the BMP including standing water and overall functionality. Note the most recent precipitation and the general weather conditions on site. The inspector should complete the blank worksheets in Appendix C for each project element. Document, on the same sheet, the maintenance performed (if any). Maintain inspection logs and pay requests for work completed in the binder (Appendix D). Inspections will be conducted quarterly to annually and maintenance will be prioritized in the context of all District projects. The District prepares an annual inspection report. Results of the inspections will also be documented here.

4.2 NATIVE VEGETATION

The basins are intended to capture sediment and sustain aesthetically appealing native vegetation at high density. Vegetation in park settings should be maintained at a higher level. It requires regular inspection, sediment removal and vegetative maintenance by a professional native landscaper. The current maintenance contract is with Prairie Restorations, Inc.

Native areas should be inspected and maintained to ensure they are maintained free of noxious weeds and trash and bare spots.

Mowed borders to the native vegetation create a fresh edge to the native area and assists with aesthetics. City of Kimball staff will conduct mowing as needed. Areas in park settings may be maintained at a higher level to encourage more flowering plants.

Maintenance can include spraying for noxious weeds, reseeding bare spots, and prescribed burns. Prescribed burns would be conducted by a contractor with native vegetation maintenance expertise. Contracts should require them to obtain any necessary permits required for burning from local and state officials.

4.3 SEDIMENT ACCUMULATION

The basins are designed to accumulate sediment, and will, from time to time require removal of accumulated sediment. Fore bays and pre-treatment areas fill up first. Maintenance on fore bays will be more frequent than maintenance on main basins. Regular maintenance of fore bays will reduce maintenance costs for the main basins.

Basins should be checked for accumulation of sediment per the schedule attached. Care should be taken by contractors to avoid compaction of the subgrade as many of the ponds have an infiltration component.
To quantify the accumulated sediment, survey the bottom elevations of the pond in transects and compare measured bottom elevations to as-built plans. This will provide a quantity of sediment removed. Depending on the quantity of sediments, testing and permits may be required for disposal.

Contractors performing maintenance should be provided a drawing of the site with limits of work clearly defined so they do not unnecessarily damage native vegetation areas or compact infiltration areas. While the phase I stormwater reuse / infiltration basin is the responsibility of the City of Kimball, it is expected the City and the CRWD will work together to ensure the basin and its pretreatment raingarden will be maintained appropriately.

4.4 **BASIN OUTLETS**

Pond outlets should be inspected for erosion and condition of rip rap near the structure. Bare geotextile or bare soil should be covered with riprap as specified in original plans. Check to see if outlets are free-flowing, are clogged or if debris has accumulated.

4.5 **BASIN INLETS**

Pond inlets should also be inspected for erosion and clogging. Check to see if inlets are free-flowing, are clogged or if debris has accumulated.

4.6 **EROSION**

Inspect the BMP for areas of bare soil or erosion and note them. Identify the source of the erosion and photograph it. With erosion, it may be necessary to simply reseed the area, or additional rip rap, geotextile, or regrading may be required.

4.7 **FLOATABLES & DEBRIS**

Floatables consist of trash, downed branches and other debris that compromises the aesthetics or function of the BMP. These should be removed by the inspector where possible, or arrange for city staff or a contractor to perform the work.

4.8 **INSPECTION SCHEDULE**

The results of the inspection will dictate maintenance requirements. After the first several rounds of inspection, it may be possible to predict frequency of maintenance. During the beginning of the project, BMPs should be inspected following large rain events in addition to the schedule in table 4-1 below:

<table>
<thead>
<tr>
<th>Phase Letter</th>
<th>Project Element</th>
<th>Sediment Accumulation</th>
<th>Native Vegetation</th>
<th>Outlet</th>
<th>Floatables</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Phase I Raingarden pretreatment</td>
<td>Quarterly</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>I</td>
<td>Phase I Re-use / infiltration Basin</td>
<td>Annually</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>I</td>
<td>Phase I Irrigation Pump</td>
<td>Annually</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>I</td>
<td>Phase I Irrigation Line</td>
<td>Annually</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>I</td>
<td>Phase I Irrigation Mechanical</td>
<td>Annually</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>II</td>
<td>Hendricks Pre-treatment cell west</td>
<td>Monthly to quarterly</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Quarterly</td>
</tr>
<tr>
<td>II</td>
<td>Hendricks Basin west &amp; filters</td>
<td>Annually</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>II</td>
<td>Hendricks Basin east &amp; filters</td>
<td>Annually</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>II</td>
<td>Highway 5S Sediment Capture Basin</td>
<td>Annually</td>
<td>Spring &amp; Fall</td>
<td>Annually</td>
<td>Annually</td>
</tr>
<tr>
<td>II</td>
<td>SAFLE Baffle &amp; Grit Chambers</td>
<td>Monthly to quarterly</td>
<td>NA</td>
<td>Annually</td>
<td>Annually</td>
</tr>
</tbody>
</table>
Stormwater Treatment Areas
Phase II, Area 1: Ponding Area with Pretreatment & Filter Berm

Phase II, Area 2: Vegetated Filter Swale to Connect Storage Area & Treat Stormwater

Phase II, Area 3: Wetland Restoration & Storage, with Low Flow Filtration Treatment

Phase II, Area 4: Seep to Route Stormwater to Vegetated Area & Away from Class 5 Parking Lot

Phase II, Area 5: Added SAFI Baffle Pretreatment to Phase I BMP

Phase II, Area 6: Stabilize Stormwater Outlet

Phase II, Area 7: Updated Grit Chamber Treatment Systems to City of Kimball Work

Phase II, Area 8: Routed Stormwater to Phase II Treatment Areas, and Away from Phase 1 to Improve Treatment Efficiencies in Phase 1 BMP and Treatment More Stormwater Runoff

Phase II, Area 9: Irrigation System Optimization

Phase II, Area 10: Hwy 55 Sediment Capture Basin

Phase I, Area 1: Double-cell Bioretention Area/Pretreatment

Phase I, Area 2: Stormwater Capture, Storage & Reuse Basin with Pump and Controls

Phase I, Area 3: Stormwater Reuse Area (Formerly Irrigated Entirely with Treated Groundwater)

Phase I, Area 4: Swale to Route Stormwater to Vegetated Area and Away From Class 5 Parking Lot

Phase I, Area 5: Added SAFI Baffle Pretreatment to Phase I BMP

Phase I, Area 6: Stormwater Capture, Storage & Reuse Basin with Pump and Controls

Phase I, Area 7: Updated Grit Chamber Treatment Systems to City of Kimball Work

Phase I, Area 8: Stormwater Capture, Storage & Reuse Basin with Pump and Controls

Phase I, Area 9: Irrigation System Optimization

Phase I, Area 10: Hwy 55 Sediment Capture Basin

Legend

- **Phase I**
- **Phase II**
- **Drainage Areas**
- **Post Implementation Flow Direction**
- **Pre Implementation Flow Direction**
- **Streams**
- **Parcels**
- **Culverts**
Appendix A

Phase I As-Built Drawings
Appendix B

Phase II As-Built Drawings
EROSION AND SEDIMENT CONTROL PRACTICES
Prior to any site disturbance the erosion prevention measures, including silt fence and rock entrances will be installed at the site as shown on Sheets C-202 through C-203.

All exposed soil areas within 7 days or as soon as possible must have temporary erosion protection (slash mulch, erosion control blanket, seed) or permanent cover year round.

CONTRACTOR shall implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion when practical.

The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from the construction site, or divers water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets. The following measures will be taken as sediment control practices in order to minimize sediments from entering surface waters:
1. Installation of sediment control practices on all down gradient perimeters prior to land disturbing activities.
2. Minimize vehicle tracking by use of the rock construction entrances.
3. Street sweeping of tracked sediment when necessary.

Dewatering is not anticipated to complete this project.

Because the project does not disturb more than 5 acres, temporary sedimentation basins will not be required.

IMPAIRED WATERS, SPECIAL WATERS, AND WETLANDS

This Project is located within 1 mile of a special water (Trott Stream - Willow Creek) (Figure 3). This Project is located not within 1 mile of an impaired water Because of the proximity of the project to a trout stream during construction:

1. All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.
2. Temporary sediment basins are required to handle runoff for common drainage locations that serve an area with 5 or more acres disturbed at one time.
3. Buffer Zone: A undisturbed buffer zone of not less than 100 lineal feet form the trout stream shall be maintained at all times.

Final Stabilization
All areas disturbed by construction will receive seed and mulch or sod according to the plans and specifications and within the specified vegetative time schedule. Final stabilization will occur when the site has a uniform vegetative cover with a density of 70% over the entire disturbed area. All temporary synthetic erosion prevention and sediment control BMPs (such as silt fence) must be removed as part of the site final stabilization. All sediment must be cleaned out of conveyances and temporary sedimentation basins if applicable.

Notice of Termination (NOT) must be submitted within 30 days of final stabilization.

Record Retention
The SWPPP, all changes to it, and inspection and maintenance records must be kept on-site during construction. The OWNER must retain a copy of the SWPPP along with the following records for three (3) years after submittal of the Notice of Termination.
1. Any other permits required for the project
2. Records of all inspection and maintenance conducted during construction;
3. All permanent operations and maintenance agreements that have been implemented, including all right of way, contract, covenants and other binding requirements regarding perpetual maintenance; and
4. All required calculations for design of the temporary and permanent stormwater management systems.

Pollution Prevention Measures
Solid Waste
Solid waste, including but not limited to, collected asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other waste must be disposed of properly and must comply with MPCA disposal requirements.

Hazardous Materials
Hazardous materials, including but not limited to oil, gasoline, paint and any hazardous substance must be properly stored including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MCPA regulations.

Washing of Construction Vehicles
External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

Concrete Washout Area
Concrete is anticipated during portions of this work. A onsite washout facility will not be allowed.

Certificate of Completion
In accordance with Part III.A.2.a.i of the General Permit Authorization to Discharge Stormwater Associated with Construction Activity under the NPDES, the preparer of this document was trained under the University of Minnesota Erosion and Sediment Control Certification Program. Ms. Heather Libby's certification in Design of SWPPP is valid through May 31, 2014.
HAZEL AVE

STREET REPAIR COMPLETED ACROSS HIGHWAY 15

RECORD PLANS

CONTRACTOR: KUENCHLE

DATE: 06/29/19

RECORD DRAWINGS ARE BASED ON INFORMATION OBTAINED THROUGH ON-SITE OBSERVATION OF CONSTRUCTION AND FIELD SURVEY DATA COLLECTED BY JMM.
**NOTE:**
1. REEDING MATERIAL FOR GARDEN MULCH SHALL BE APPROXIMATELY
   3" SHREDDED WOOD MULCH TYPE B
2. IMPORTED TOPSOIL, SOIL AMENDMENT MAY NOT BE USED IN GARDEN AREAS
3. AVOID COMPACTING OF NATIVE MATERIALS DURING CONSTRUCTION. ENSURE NATIVE MATERIAL IS DRAINED BEFORE EFFECTS OF COMPACTION

**SEWER SCHEDULE**

<table>
<thead>
<tr>
<th>STRUCTURE</th>
<th>TYPE</th>
<th>DTL PLATE</th>
<th>CASTING</th>
<th>DIA</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH-101</td>
<td>MH</td>
<td>R-1642 B</td>
<td>4'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB-101A</td>
<td>CB</td>
<td>R-3067 V</td>
<td>2'x5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB-101B</td>
<td>CB</td>
<td>R-3067 V</td>
<td>2'x5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MH-102</td>
<td>MH</td>
<td>R-1642 B</td>
<td>4'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB-102A</td>
<td>CB</td>
<td>R-3067 V</td>
<td>2'x5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBMH-103</td>
<td>CBMH</td>
<td>R-3067 V</td>
<td>4'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBMH-104</td>
<td>CBMH</td>
<td>R-3067 V</td>
<td>4'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB-105</td>
<td>CB</td>
<td>R-3067 V</td>
<td>2'x5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FES-106</td>
<td></td>
<td>R-3067 V</td>
<td>2'x5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCS-107</td>
<td>grate</td>
<td>20'</td>
<td></td>
<td></td>
<td>INSTALL &quot;T-SECTION&quot;</td>
</tr>
<tr>
<td>FES-108</td>
<td></td>
<td>30'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FES-109</td>
<td></td>
<td>30'</td>
<td></td>
<td></td>
<td>W/TRASHGUARD</td>
</tr>
<tr>
<td>GC-110</td>
<td>MH</td>
<td>R-1642 B</td>
<td>8'</td>
<td></td>
<td>SAFL BAFFLE W/ 8' SUMP (CO #1)</td>
</tr>
</tbody>
</table>

**RECORD PLANS**

CONTRACTOR: ALFREDO

DATE: 06/28/15

RECORD DRAWING: WENCK CONSULTANTS, INC.

CLEARWATER RIVER WATERSHED DISTRICT

C-904
CITY OF KIMBALL
PHASE II STORMWATER IMPROVEMENTS
KIMBALL, MINNESOTA

STRUCTURE NUMBER

SAFL Baffle Installation
Structure Diameter (W) = 96 inches
Rim Elevation = 1127.00 feet
Inlet Pipe is 18" HDPE at Invert Elevation 1124.25 feet
Outlet Pipe is 18" HDPE at Invert Elevation 1124.25 feet
SAFL Baffle Bottom Elevation = 1123.25 feet
SAFL Baffle Width (W) = 96 inches
SAFL Baffle Height (H) = 36 inches
Width of SAFL Baffle is adjustable from 86 to 96 inches
Appendix C

Inspection Form (Blank)
### BMP INSPECTION FORM

**Project Name:**

**Owner:**

**Project Element:**

**Inspector:**

**Date:**

**Recent Precipitation:**

**REASON FOR INSPECTION**

- [ ] Routine
- [ ] Water Quality Storm
- [ ] Response to Complaint
- [ ] Initial
- [ ] Follow-up:
- [ ] Other: ________

**INSPECTION RESULTS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Check all that apply</th>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apparent problems</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Unauthorized modification</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>BMP present</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Trash</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Erosion/ scouring</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Accumulated sediment</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Full vegetative cover</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Nuisance vegetation present</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Outlet clogged</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Flow</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Standing water</td>
<td></td>
</tr>
</tbody>
</table>

**FIELD NOTES:**


**CORRECTIVE ACTION NEEDED**


Inspection Forms (Completed)
<table>
<thead>
<tr>
<th>State</th>
<th>City</th>
<th>Toll Free</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINNESOTA</td>
<td>Maple Plain</td>
<td>763-479-4200</td>
<td>763-479-4200</td>
</tr>
<tr>
<td></td>
<td>Golden Valley</td>
<td>763-252-6800</td>
<td>763-252-6800</td>
</tr>
<tr>
<td></td>
<td>New Hope</td>
<td>800-368-8831</td>
<td>800-368-8831</td>
</tr>
<tr>
<td></td>
<td>Woodbury</td>
<td>651-294-4580</td>
<td>651-294-4580</td>
</tr>
<tr>
<td>COLORADO</td>
<td>Denver</td>
<td>602-370-7420</td>
<td>602-370-7420</td>
</tr>
<tr>
<td></td>
<td>Roswell</td>
<td>678-987-5840</td>
<td>678-987-5840</td>
</tr>
<tr>
<td></td>
<td>Fort Collins</td>
<td>970-223-4705</td>
<td>970-223-4705</td>
</tr>
<tr>
<td>GEORGIA</td>
<td>Roswell</td>
<td>678-987-5840</td>
<td>678-987-5840</td>
</tr>
<tr>
<td>NORTH DAKOTA</td>
<td>Fargo</td>
<td>701-297-9600</td>
<td>701-297-9600</td>
</tr>
<tr>
<td></td>
<td>Mandan</td>
<td>701-751-3370</td>
<td>701-751-3370</td>
</tr>
<tr>
<td>SOUTH DAKOTA</td>
<td>Pierre</td>
<td>605-222-1826</td>
<td>605-222-1826</td>
</tr>
<tr>
<td>WYOMING</td>
<td>Cheyenne</td>
<td>307-634-7848</td>
<td>307-634-7848</td>
</tr>
<tr>
<td></td>
<td>Sheridan</td>
<td>307-675-1148</td>
<td>307-675-1148</td>
</tr>
</tbody>
</table>

Responsive partner.
Exceptional outcomes.