

Herriman City E. Coli TMDL Compliance Plan

The Jordan Valley Municipalities Permit (Permit) was updated on August 16, 2023, to include Jordan River E. coli TMDL requirements. This TMDL Compliance Plan addresses the pollutant reduction requirements of the TMDL for Herriman City. This plan supplements and builds on the six Minimum Control Measures (MCMs) identified in Part 4.2 of the Permit. It is organized based on the new requirements in Part 3.2 of the Permit. Existing MCM Best Management Practices (BMPs) that will be updated and new MCM BMPs that will be added, are identified herein and are incorporated into the Herriman City Storm Water Management Plan (HC SWMP).

1. PUBLIC EDUCATION AND OUTREACH

a. State Requirements

MS4 Permit Part 3.2.2.1: Identify potential sources of E. coli in the MS4 and target specific audiences that may be contributing to the E. coli sources. Provide and document education and outreach given to the target audiences on the impacts to water quality associated with these types of discharges and BMPs that can be implemented to reduce the discharge of E. coli.

MS4 Permit Part 3.2.2.1.1: The Co-Permittee can meet the requirements of permit part 3.2.2.1. through contribution to a collaborative program (e.g., storm water coalition) that evaluates, identifies, and targets sources, as well as, provides outreach that addresses E. coli.

b. HC Compliance Plan for:

Permit Part 3.2.2.1 – Salt Lake County Storm Water Coalition (see SWMP Section 3.2.1.1 and 3.2.1.2) Herriman City plans to meet the requirements of permit part 3.2.2.1 through contribution to and participation in the Salt Lake County Storm Water Coalition. The HC stormwater committee will work with the coalition to evaluate, identify, and target sources, and provide outreach that addresses E. coli.

Permit Part 3.2.2.1.1 – Publish Articles & Electronic Media (see SWMP Section 4.2.1.2). Herriman City will include information that addresses E. coli in articles published in the newsletter and in public electronic media posts. This is an ongoing effort at Herriman City that will continue throughout the permitting period.

2. INVENTORY OF SOURCES OF E. COLI WITHIN THE MS4

a. State Requirements

MS4 Permit Part 3.2.2.2: The Co-Permittee must maintain a written or mapped inventory of areas in the MS4 that are potential sources of E. coli (areas with septic, dense waterfowl areas, dog parks, etc.).

MS4 Permit Part 3.2.2.2.1: The Co-Permittee must create a plan to prioritize reduction activities to address the areas and sources identified in the inventory. The plan must include BMPs the permittee will implement over the permit term (structural and non- structural).

MS4 Permit Part 3.2.2.2.2: The Co-Permittee must add the inventoried areas to the priority areas identified in permit part 4.2.3.3.1. and begin inspecting the additional priority areas annually at a minimum and documenting the inspections on an inspection form.

MS4 Permit Part 3.2.2.2.3: The Co-Permittee must add the inventoried areas to the priority areas identified in permit part 4.2.6.6.2. for street sweeping and storm sewer system maintenance and begin maintaining the areas at the same frequency. The Permittee's road and parking lot sweeping and storm drain system maintenance SOPs should identify all priority areas (including E. coli sources) and must include a schedule that includes priority area frequency.

b. HC Compliance Plan for:

Permit Part 3.2.2.2 – Identify Priority Areas Herriman City will develop and maintain an inventory of potential E. coli sources within the MS4. The inventoried areas will be added to the Priority Areas Map found in Appendix A of the HC SWMP. This effort will be included as part of the next reporting period (i.e. before October 1st, 2024).

Permit Part 3.2.2.2.1 – Create a Plan Herriman City has developed this Compliance Plan by 1) identifying sources of focus for the reporting year (see the attached E. coli Source Focus Checklist), and 2) identifying the reduction activities as shown in the attached E. coli Sources and BMP worksheet. This effort will be revisited each year of the permit term.

Permit Part 3.2.2.2.2 – Priority Area Inspections Herriman City will add the inventoried areas to the High Priority Map in Appendix A of the HC SWMP and to the inspection schedule for annual inspection, at a minimum (see updated HC SWMP sections 4.2.3.3.2 and 4.2.3.3.3). The updated map and inspection schedules are planned to be updated on or before June 30th, 2024.

Permit Part 3.2.2.2.3 – Prioritizing Street Sweeping & Storm Drain Maintenance Herriman City will add the prioritized areas from 3.2.2.2 to the street sweeping and storm drain maintenance schedule, as discussed in Section 4.2.6.6.2 of the HC SWMP, and update the existing SOPs to include those areas and specify the appropriate frequency. This effort is planned to be complete on or before June 30th, 2024.

3. MS4 OWNED/OPERATED FACILITIES & OPERATIONS

a. State Requirements

MS4 Permit Part 3.2.2.3: The Co-Permittee must evaluate their written inventory of potential “high priority” permittee owned and/or operated facilities (Permit Part 4.2.6.1.) and identify sites that have potential sources of E. coli. Permittees must add to their inventory any Permittee owned or operated dog parks, parks with open water, sites with septic, or properties that are known potential sources of E. coli. Sites that have been identified as potential sources of E. coli must have BMPs (structural or nonstructural) that reduce the potential of the discharge of E. coli.

MS4 Permit Part 3.2.2.4: The Co-Permittee must evaluate the potential E. coli generating activities below to determine whether existing SOPs should target reduction of E. coli discharge or if additional SOPs should be developed for the reduction of E. coli discharge from the MS4:

- *Roads, highways, and parking lots: Surface cleaning and controlling litter*
- *Parks and open space: Lake and lagoon maintenance*
- *Parks and open space: Mowing/Trimming/Planting*
- *Storm water collection and conveyance system: Inspection and Cleaning of Stormwater Conveyance Structures, Controlling Illicit Connections and Discharges, Controlling Illegal Dumping*
- *Material storage areas: Solid Waste Collection, Controlling Litter, Controlling Illegal Dumping*
- *Storm water collection and conveyance system: Water line Maintenance, Sanitary Sewer Maintenance, Spill/Leak/Overflow Control, Response, and Containment.*

b. HC Compliance Plan for:

Permit Part 3.2.2.3 – Assessment of City-Owned and Operated Facilities Currently, the only High Priority site identified in the HC SWMP is the Butterfield Park and Public Works Facility. Herriman City will assure that the following are included in the inventory High Priority Sites of city- owned or operated facilities: 1) owned/operated dog parks, 2) owned/operated parks with open water, 3) owned/operated sites with septic, and 4) owned/operated properties that are known potential sources of E. coli. The stormwater committee will evaluate the inventory of city- owned or operated facilities and identify sites that have potential sources of E. coli. A new post construction SWPPP will be developed for all sites added to the list of High Priority inventory. These efforts are planned to be complete on or before June 30th, 2024.

Permit Part 3.2.2.4 -Storm Water Quality SOPs for Maintenance Activities The Herriman City SOP’s will be reviewed, updated, and implemented to address potential E. coli generating activities identified in Part 3.2.2.4. Additional SOP’s will be developed as needed. This effort will be completed on or before June 30th, 2024.

4. LID CONTROLS THAT TARGET E. COLI

a. State Requirements

MS4 Permit Part 3.2.2.5: The Co-Permittee must promote the use of Low Impact Development (LID) controls for which E. coli (listed a bacteria) has a medium or high pollutant removal effectiveness, as identified in the Guide to Low Impact Development within Utah, Appendix C on the division's website:

<https://documents.deq.utah.gov/waterquality/stormwater/updes/DWQ-2019-000161.pdf>.

b. HC Compliance Plan for:

Permit Part 3.2.2.5 – Promote LID BMPs that Focus on E. coli Herriman City Standards and Specifications Manual will be updated and to include verbiage that promotes LID BMPs with a medium or high pollutant removal effectiveness. This will be reflected in section 4.12 (Water Quality). These efforts are planned to be complete on or before June 30th, 2024.

5. INCORPORATION OF E. COLI CRITERION IN RETROFIT RANKING PLAN

a. State Requirements

MS4 Permit Part 3.2.2.6: The Co-Permittee must add potential E. coli reduction as a criterion for ranking when evaluating the Permittees retrofit plan (Permit Part 4.2.6.9).

b. HC Compliance Plan for:

Permit Part 3.2.2.6 – Retrofit Plan Update The recently completed Herriman City Stormwater Retrofit Plan will be re-evaluated to assure that E. coli contamination potential is a factor of priority ranking. The results of the Retrofit Plan will be used to identify sites that have potential sources of E. coli. These efforts are planned to be complete on or before June 30th, 2024.

Checklist for *E. coli* Source Inventory

Category					
MS4 Infrastructure	Inventory status (select from dropdown)	Mapped	Priority	Implementation	Public outreach component?
Impervious surface runoff	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Illegal dumping	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Street litter/decaying plant matter	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Illicit connections to MS4	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Excessive irrigation/overspray	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Biofilms/regrowth in MS4	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Leaky sewer pipes	Not planned this permit cycle	No	Low	None this cycle	No
Grass areas draining to MS4s	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Municipal Sanitary Infrastructure					
Combined sewer overflows (CSOs)	Not applicable	No	Low	Covered by SVSD	No
Sanitary sewer overflows (SSOs)	Not applicable	No	Low	Covered by SVSD	No
Sanitary sewer inflow and infiltration (I&I)	Not applicable	No	Low	Covered by SVSD	No
Illicit sanitary connections to MS4s	Not applicable	No	Low	Covered by SVSD	No
Other Human Sanitary Sources					
Porta-potties (poorly maintained)	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Leaky sewer pipes	Not applicable	No	Low	Covered by SVSD	No
Leaky/failing septic systems	Planned this permit cycle	Yes	High	See Updated SWMP	No
Homeless encampments	Not applicable	-	-	-	-
Dumpsters	Planned this permit cycle	No	Medium	See Updated SWMP	Yes
Trash cans	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Garbage trucks	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Domestic pets					
Dog parks	Planned this permit cycle	Yes	High	See Updated SWMP	Yes
Dogs, cats, etc. residential	Planned this permit cycle	No	High	See Updated SWMP	Yes
Urban wildlife					
Rodents/vectors	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Birds/bird congregation areas (gulls, geese, pigeons)	Planned this permit cycle	Yes	Medium	See Updated SWMP	Yes
Open space	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Other urban sources					
Landfills	Not applicable	-	-	-	-
Food processing facilities	Not applicable	-	-	-	-
Outdoor dining	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Restaurant grease bins	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Bars/stairwells (washdown areas)	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Road construction	Not planned this permit cycle	No	Low	No additional action	No
Urban non-stormwater discharges					
Power washing	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Car washing	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Pools/hot tubs	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Reclaimed water/gray water	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Recreational sources					
Bathers/boaters	Not planned this permit cycle	No	Low	None this cycle	None this cycle
RVs (mobile)	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Agricultural sources					
Livestock/manure storage	Planned this permit cycle	Yes	Medium	See Updated SWMP	Yes
Livestock, pasture	Planned this permit cycle	Yes	Medium	See Updated SWMP	Yes
Livestock, corrals	Planned this permit cycle	Yes	Medium	See Updated SWMP	Yes
Livestock (CAFOs)	Not applicable	-	-	-	-
Manure spreading	Planned this permit cycle	Yes	Medium	See Updated SWMP	Yes
Municipal biosolids reuse	Not applicable	-	-	-	-
Reclaimed water/gray water	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Irrigation tailwater	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Slaughterhouses	Not applicable	-	-	-	-
Other sources					
Grazing	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Streambank erosion	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Wildlife populations	Not planned this permit cycle	No	Low	None this cycle	None this cycle
Other (describe in notes)	-	-	-	-	-
Other (describe in notes)	-	-	-	-	-

E. coli Sources, Audiences, & Potential BMP Worksheet

(Reference MS4 Permit Part 3.2.2.1. & 3.2.2.1.1.)

Source 1: Septic systems

Audience: Private property owners

WQ Impacts: Septic system waste contains E. coli which is an illness-causing waterborne pathogen which degrades water quality at elevated concentrations.

BMPs:

- Encourage and educate regular septic system maintenance.
- Remind and encourage connection to the sewer system
- Work with SL County Health Department to account for all known septic systems

Distribution: Letter to residents with septic tanks, & social media posts.

Source 2: Private Dumpsters

Audience: Commercial, Industrial, and Institutional Property Owners

WQ Impacts: Precipitation mixed with waste from dumpsters, if not properly contained or otherwise managed can allow E. coli to enter waterways. E. coli which is an illness-causing waterborne pathogen which degrades water quality at elevated concentrations.

BMPs:

- Ensure lids on dumpsters
- Include inspections on dumpsters during Long-Term Stormwater Inspections.
- Encourage infiltration BMPs around dumpsters

Distribution: Social media posts, and Notes on inspections from the city.

Source 3: Dog Parks

Audience: Herriman City Parks & Recreation Department & Resident Patrons

WQ Impacts: Pet waste contains E. coli which is an illness-causing waterborne pathogen.

BMPs:

- Collect and dispose pet waste on a more recurring basis (Parks Department).
- Place signs to remind patrons of the expectation to pick-up waste.
- Add infiltration to list of retrofit projects
- Adjust standards to not allow Dog Parks in flood control facilities.

Distribution: Social media posts for patrons and additional signage in public areas.

Source 4: Dogs, Cats, etc. (Residential)

Audience: All Herriman City Residents

WQ Impacts: Pet waste contains *E. coli* which is an illness-causing waterborne pathogen.

BMPs:

- Semi-annual social media posts specific to the importance of pet waste management.

Distribution: Social media posts, and Newsletter

Source 5: Dense Waterfowl Areas

Audience: All Herriman City Residents & Reservoir Patrons

WQ Impacts: Waterfowl waste contains *E. coli* which is an illness-causing waterborne pathogen which degrades water quality at elevated concentrations.

BMPs:

- Map target locations of dense waterfowl.
- Send semi-annual social media posts about the importance of not feeding waterfowl.
- Provide additional signage at strategic locations that state “Do Not Feed Ducks or Geese.”

Distribution: Social media and hard signage in strategic locations.

Source 6: Livestock Manure Storage and Corals

Audience: Property Owners with Livestock

WQ Impacts: Agricultural waste contains *E. coli* which is an illness-causing waterborne pathogen which degrades water quality at elevated concentrations.

BMPs:

- Map agricultural properties with livestock that are on or adjacent to receiving waters.
- Mail educational brochures to all identified properties. Content to include suggested practices of owning and managing livestock in a way that mitigates *E. coli* contamination to receiving waters.
- Semi-annual social media posts about the importance of best management practices of ownership of livestock on or around receiving waters.

Distribution: Social media and hard copy distribution via mail.
