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CDPHE
Attn: Nathan Moore
Quality Control Division, WQCD- P-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

2. Article Number
(Transfer from service label)

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PS Form 3811, July 2013

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CDPHE
Attn: Nathan Moore
Water Quality Control Division, WQCD- P-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530



Public Health

Environmental Health Division

February 20, 2018

Colorado Department of Public Health and Environment (CDPHE)
ATTN: Nathan Moore
Water Quality Control Division, WQCD – P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Certified Mail – 7013 2630 0001 6395 5126

RE: Permit Certification No. COR-090020, Boulder County – 2017 Annual Report (MS4)

Dear Mr. Moore:

Please find enclosed Boulder County's completed 2017 Annual Report for Municipal Separate Storm Sewer System (MS4) general permit (Certification No. COR – 090020). The Annual Report was completed in accordance with Part I.I.1.b of the MS4 Permit.

Per your guidance email (dated 1/11/17 from Nathan Moore, Clean Water Compliance Unit Manager), Part 7.D of the annual report form may be left blank for reporting years 2016 and 2017. Since the compliance deadlines have not yet passed for this and other program components, Boulder County is leaving the following blank: Parts 7.D.iii through 7.D.v, Parts 7.F.ii through 7.F.v, and Parts 7.G.ii through 7.G.iv.

Also included is a second memorandum that is being submitted to you for *E. coli* TMDL annual reporting regarding a portion of Boulder Creek Segment 2b in accordance with Part III.A.2 of the MS4 Permit.

Please contact me at 303-441-1157 if you have any questions concerning the report or Boulder County stormwater quality program.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Coulson".

Scott Coulson, CFM
Stormwater Quality Program Manager

cc: Erin Dodge, Boulder County Public Health
MS4 Permit file



COR090000 Renewal Permittees Annual Report Form

Municipal Separate Storm Sewer Systems (MS4s) General Permits Revised 10/2017

<p>Part 1: Permit Identification</p> <p>General Permit Number: COR090000</p> <p>Certification Number: COR09 <u>090020</u></p>	<p>Part B: Reporting Period Jan 1 through Dec 31 (Check one. Report is due by March 10 of the following year.)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%; text-align: center;"><input checked="" type="checkbox"/> 2017</td> <td style="width: 15%; text-align: center;"><input type="checkbox"/> 2018</td> <td style="width: 15%; text-align: center;"><input type="checkbox"/> 2019</td> <td style="width: 15%; text-align: center;"><input type="checkbox"/> 2020</td> <td style="width: 15%; text-align: center;"><input type="checkbox"/> 2021</td> </tr> </table>		<input checked="" type="checkbox"/> 2017	<input type="checkbox"/> 2018	<input type="checkbox"/> 2019	<input type="checkbox"/> 2020	<input type="checkbox"/> 2021
	<input checked="" type="checkbox"/> 2017	<input type="checkbox"/> 2018	<input type="checkbox"/> 2019	<input type="checkbox"/> 2020	<input type="checkbox"/> 2021		
<p>Part 2: Permittee Information (If there are any changes, please submit a Change of Contacts form)</p> <p>Organization: <u>Boulder County</u></p> <p>Mailing Address: <u>Board of County Commissioners</u> <u>P.O. Box 471</u></p> <p>City: <u>Boulder</u> State: <u>CO</u> Zip: <u>80306</u></p>							
<p>Part 3: Site Contact Information (If there are any changes, please submit a Change of Contacts form)</p> <p>Facility Contact Name: <u>Scott Coulson</u></p> <p>Title: <u>Stormwater Quality Program Manager</u></p> <p>Telephone No: <u>303-441-1157</u></p> <p>Email Address: <u>scoulson@bouldercounty.org</u></p>							
<p>Part 4: Facility Information</p> <p>Have any areas been added or removed from the permit area due to annexation or other legal means? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If YES, provide the web address for an online map, below, or check "attached" below and attach an updated map labeled as "Part 4" that identifies the jurisdictional boundaries.</p> <p>Provide the map's web address or indicate if a map is attached (if applicable): <input type="checkbox"/> Attached <u>http://maps.boco.solutions/propertysearch/ - shows real-time updates to jurisdiction by parcel</u></p>							
<p>Part 5: Notice of Reliance on Third Party</p> <p>Is the permittee relying on another entity to satisfy any of the permit obligations (if applicable) that has not been reported to the division in a previous report or permit application (including reports under previous permit terms). <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES, attach a short narrative labeled as "Part 5" identifying the permit requirement and the entity relied on.</p>							



Part 7 - Program Implementation Report

(Part 6 of the report was only applicable to the 2016 report and has been removed)

7.A) Compliance Schedule = required Annual Report Notifications

For all compliance schedule actions completed by January 1 of the year the report is due (including those actions completed prior to the reporting period), identify the date of completion. Refer to Part I.H of the permit.

Only complete those rows for which the deadline was met during the reporting period.

This table reflects all compliance schedule items for the permit term, which includes permit conditions that do not need to be met during the current reporting period.

Permit Condition	Action	Deliverable	Deadline	Date of Completion/Implementation
I.A.3.a.ii(B)	County growth area maps (Part I.A.3.a.ii(B)) - Completed January 1, 2017 Refer to Part I.H of the permit, not a required element for reporting in the annual report.			
I.C.1, and PDD content requirements in Parts I.D and E	Complete PDD (contents must reflect terms and conditions that are in effect, i.e., following the associated compliance schedule deadline)	Notification in annual report Due March 10, 2019	Completed January 1, 2019	
I.E.2.a.ii,iii,v I.E.3.a.ii,iii I.E.4.a.ii,iii	Complete all applicable changes to the regulatory mechanism(s): Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.1.a.i	Illicit Discharges: Begin providing information targeting business(es) and the general public	Notification in annual report Due March 10, 2019	Begin implementation July 1, 2018	
I.E.1.a.ii	Education and Outreach Activities: Begin providing annual public education and outreach from Table 1.	Notification in annual report Due March 10, 2019	Begin implementation January 1, 2018	
I.E.1.a.iii(A)	Nutrients: Determine targeted sources of nutrients.	Notification and list of targeted sources in annual report Due March 10, 2018 Attach List to March 10, 2018 Annual Report following completion, labeled as "PART 7.A - Nutrient Targets"	Completed January 1, 2018	1/1/2018
I.E.1.a.iii(B)	Nutrients: Begin providing education and outreach to the targeted sources	Notification in annual report Due March 10, 2019	Begin implementation July 1, 2018	
I.E.2.a.iv(A) and (B)	Tracing an Illicit Discharge: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2018	Completed January 1, 2018	1/1/2018
I.E.2.a.vi	Removing an Illicit Discharge, Enforcement Response: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2018	Completed January 1, 2018	1/1/2018
I.E.2.a.viii	Priority Areas: Identify any new priority areas	Notification in annual report Due March 10, 2018	Completed January 1, 2018	1/1/2018
I.E.2.b.vi	Removing and Illicit Discharge: Ensure documentation is recorded.	Notification in annual report Due March 10, 2018	Completed January 1, 2018	1/1/2018
I.E.3.	Begin implementing the permittee's current construction sites program in the county growth areas.	Notification in annual report Due March 10, 2020	Completed January 1, 2019	
I.E.3.a.i	Excluded Activities for County Growth Areas: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	



7.A) CONTINUED: Compliance Schedule = required Annual Report Notifications

Permit Condition	Action	Deliverable	Deadline	Date of Completion/Implementation
I.E.3.a.iv	Control Measure Requirements: Ensure control measure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.3.a.v(B) through (C)	Site Plans: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.3.a.vi(B) through (E)	Site Inspection: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.3.a.vii(B)	Enforcement Response: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.3.b.vi	Site Inspection: Ensure requirements are met; revise implementation and documentation if necessary, ensure documentation is recorded.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.4.	Begin implementing the permittee's current post- construction sites program in the county growth areas.	Notification in annual report Due March 10, 2020	Completed January 1, 2019	
I.E.4.a.i	Excluded Sites: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.4.a.iv	Control Measure Requirements: Ensure new control measures meet one of the design standards	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.4.a.v	Site Plans: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.4.a.vi and vii	Construction Inspection and Acceptance and Post Acceptance Oversight: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.4.a.viii	Enforcement Response: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.5.a.ii	Municipal Facility Runoff Control Measures: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in Annual report Due March 10, 2018	Completed July 1, 2017	6/29/2017
I.E.5.a.ii(C)	Municipal Facility Runoff Control Measures: Ensure inspection requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	
I.E.5.a.iv	Nutrient Source Reductions: Ensure requirements are met; revise implementation and documentation if necessary.	Notification in annual report Due March 10, 2021	Completed July 1, 2020	
I.E.5.a.v.	Outdoor Bulk Storage	Notification in annual report Due March 10, 2022	Completed July 1, 2021	
I.E.5.b.i	Municipal Facility Runoff Control Measures: Ensure documentation is recorded.	Notification in annual report Due March 10, 2020	Completed July 1, 2019	



7.C) Assessment and Modifications

i. The results of the assessment of the effectiveness of the control measures.

Provide a narrative based on the assessment required in Part I.G.1.b of the Permit. The permit does not identify the scope or scale of information required beyond this information, the permittee may determine the extent and nature of information provided to meet this requirement.

Provide information below, or check “attached” and **attach the information** labeled as “PART 7.C.i”

Attached

Boulder County has assessed the implementation of the control measures required by the permit and found the county to be in compliance with the requirements in Part I.E and III, and compliance schedules in Part I.H of the permit. It is Boulder County’s understanding that the implementation of control measures consistent with the requirements of the permit constitutes an effective method to achieve the effluent limits of the permit.

ii. The results of the permit modification assessment and if any parts of this permit need to be modified or a condition of the permit may not be practicable.

Provide a narrative based on the assessment required in Part I.G.1.c of the Permit. The permit does not identify the scope or scale of information required beyond this information, the permittee may determine the extent and nature of information provided to meet this requirement.

Provide information below, or check “attached” and **attach the information** labeled as “PART 7.C.ii”

Attached

Boulder County has assessed the permit and did not identify any permit modifications that may be needed.



7.D) *Program Elements - Public Education and Outreach (Part I.E.1)

*All of 7.D is not required prior to the Jan 1, 2018 deadline for implementing in accordance with I.E.1.a.i, ii, & iii

iii. List of the education and outreach activities completed in accordance with Part I.E.1.a.i. - Illicit Discharges Education and Outreach.

Provide list below.

Per guidance email (dated 1/11/17) from Nathan Moore, Clean Water Compliance Unit Manager, Part 7.D of the annual report form may be left blank for reporting years 2016 and 2017. Since the compliance deadlines have not yet passed for this and other program components, Boulder County is leaving the following blank: Parts 7.D.iii through 7.D.v, Parts 7.F.ii through 7.F.v, and Parts 7.G.ii through 7.G.iv.

iv. List of the education and outreach activities completed in accordance with Part I.E.1.a.ii. - Education and Outreach Activities Table, referencing the activities in Table 1 of the Permit.

The permittee must implement at least four education and outreach activities (bulleted items) and at least two must be from the Active and Interactive Outreach column. Check those activities conducted in the table below.

Passive Activity

Check all activities implemented during report year

- Bus shelter/bench advertisement
- Billboard/dasher board advertisement
- Vehicle/bus advertisement
- Radio/television/movie theater advertisement
- Newspaper advertisement
- Distribute educational materials by brochure
- Distribute educational materials by fact sheet
- Distribute educational material by utility bill insert
- Publish article (hard copy or electronic)
- Storm drain marking by permittee staff that maintains 25% of permittee maintained inlets.
- Stormwater related signage
- Web site

Active and Interactive Outreach Activity

Check all activities implemented during report year

- Ongoing advertisement/promotion of a stormwater hotline number or other method to report an illicit discharge
- Ongoing advertisement/promotion on how to get more information about the stormwater program
- Ongoing social media program
- Web site that is interactive or contains stormwater information that includes actions that can be taken to reduce stormwater pollution
- Newsletter (hard copy or electronic)
- Promotion of existing local stormwater/environmental events or program that help protect water quality
- Distribute promotional items or giveaways
- Participate in or sponsor a water festival which involves populations that exist within the permit boundary
- Participate in or sponsor a waterway clean-up and trash removal event
- Participate in or sponsor a service project
- Participate in or sponsor a stormwater or environmental presentation
- Participate in or sponsor a stormwater or environmental event
- Participate in or sponsor community project based programs that investigate watershed health and meet applicable school Science, Technology, Engineering and Math (STEM) standards

Continued on Next Page



**Active and Interactive Outreach Activity Column,
Continued**

- Participate in or sponsor a household hazardous waste event
- Participate in or sponsor an Adopt-a-Street program
- Participate in or sponsor an Adopt-a-Waterway program
- Participate in or sponsor an Adopt-a-Storm Drain program
- Provide ongoing access to motor vehicle fluids recycling program
- Stormwater booth at a community event
- Conduct a stormwater survey
- Storm drain marking program performed by the public/community
- Pet waste stations
- Participate in, plan, or present stormwater materials to schools
- Stormwater demonstration projects that show control measures or other pollutant reduction methods

v. A list of the education and outreach activities completed in accordance with Part I.E.1.a.iii. - nutrients and targeted sources

Provide list below, including the pollutant sources targeted for each activity.



7.E) Program Elements - Illicit Discharge Detection and Elimination

vi. Provide the total number of unresolved reports/identification of illicit discharges.

An unresolved illicit discharge is one that has been identified or reported to the permittee and the requirements for removing the illicit discharge were not met during the reporting period. Refer to requirements for removing an illicit discharge in Part I.E.2.a.vi of the new permit. For the period prior to implementing a program to meet Part I.E.2.a.vi in accordance with the compliance schedule, refer to the permittee's CDPS Stormwater Management Program Description from the previous permit term.

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7.F) Program Elements - Construction Sites

The permittee can define what constitutes an individual "site" and "inspection" for reporting below as appropriate for the permittee's own program.

i. **Applicable construction sites:** Provide the total number of applicable construction sites during the year.

"Applicable construction sites" are sites for which "applicable construction activities," as defined in the permit, occurred during the reporting year.

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ii. ***Routine Inspections:** Provide the total number of Routine Inspections performed during the year.

Routine Inspections are inspections of applicable construction activities that meet the inspection scope requirements in Part I.E.3.a.vi(C) and for which documentation is recorded in accordance with in Part I.E.3.b.vi.

***Not required prior to the July 1, 2019 deadline for documenting in accordance with I.E.3.b.vi.**

iii. ***Reduced Site Inspections:** Provide the total number of Reduced Site Inspections performed during the year.

Reduced Site Inspections are inspections of applicable construction activities that meet the inspection scope requirements in Part I.E.3.a.vi(D)(1), (2), (3) and (4) for which documentation is recorded in accordance with in Part I.E.3.b.vi.

***Not required prior to the July 1, 2019 deadline for documenting in accordance with I.E.3.b.vi.**

iv. ***Compliance Inspections:** Provide the total number of Compliance Inspections performed during the year.

Compliance Inspections are inspections, operator reporting, or other action(s) to assess the control measure has been implemented or corrected of applicable construction activities that meet the inspection scope requirements in Part I.E.3.a.vi(E) and for which documentation is recorded in accordance with in Part I.E.3.b.vi.

***Not required prior to the July 1, 2019 deadline for documenting in accordance with I.E.3.b.vi.**

v. COUNTY PERMITTEES ONLY

***County Growth Area Excluded Construction:** Where any construction activities excluded from being applicable construction activities in accordance with Part I.E.3.a.i(B) (1) or (2)? YES NO

If YES, **attach** a list of the excluded construction sites. Include recordkeeping information required by Part I.E.3.b.i. Label the attachment as "Part 7.F.v Excluded Growth Area Construction."

***Not required prior to the January 1, 2019 deadline for implementing in growth areas.**





Public Health

Environmental Health Division

PART 7.A – Nutrient Targets, Permit Certification No. COR-090020, Boulder County MS4

Target Pollutant/ Source	Target Audiences	Outreach Activity	Distribution Mechanism
Source: Sewage, Greywater, Pet Waste	Fairgrounds Campground Users	Postcard/Handout	Campgrounds host provides to campers
Source: Pet Waste	Dog Owners	Pet Waste Stations and signage	Boulder County Fairgrounds stations and signage
Fertilizer, Lawn Waste, Pet Waste	Website users	Website page – Nutrient Focused	KICP Website
Fertilizer, Lawn Waste, Pet Waste	Local Population	Newspaper Advertisement - Nutrient Focused	Newspaper Advertisement
Fertilizer, Lawn Waste	K-12 Students	Presentation to Schools- Nutrient Info Included	Educational Activities with Nutrient Messaging
Fertilizer, Lawn Waste	General Population	Distribute promotional giveaways- Nutrient Seed Fact Sheet	Presentation to Schools
Fertilizer, Lawn Waste	General Population	Participate in or sponsor a stormwater or environmental presentation	Landscape Seminars



Public Health

Environmental Health Division

TO: Nathan Moore, Colorado Department of Public Health and Environment (CDPHE)

FROM: Boulder County Board of County Commissioners (BOCC)

DATE: February 20, 2018

PREPARED BY: Scott Coulson, Stormwater Quality Program Manager, Boulder County Public Health (BCPH)

RE: Permit Certification No. COR-090020, Boulder County MS4 – TMDL annual reporting required under Part III for January 1, 2017 to December 31, 2017

Certified Mail No.: 7013 2630 0001 6395 5126

Total Maximum Daily Load (TMDL) implementation requirements are now integrated into the Phase II Municipal Separate Storm Sewer System (MS4) Permit (No. COR-090000) that became effective July 1, 2016. This memorandum is being submitted to you for *E. coli* TMDL annual reporting regarding a portion of Boulder Creek Segment 2b (hereinafter referred to as *E. coli* TMDL segment) in accordance with Part III.A.2 of the MS4 Permit.

Boulder County is using contemporary methods (as described in paragraph three below) to better understand the county's contributing drainage area to the *E. coli* TMDL segment. The *Colorado E. coli Toolbox: A Practical Guide for Colorado MS4s* (2016, hereinafter referred to as the Colorado *E. coli* Toolbox) explains that the initial starting point for effective *E. coli* load reduction is developing a reasonable understanding of the sources of *E. coli* in the watershed, as well as understanding sources of flows transporting *E. coli* to the Boulder Creek receiving water.

During this reporting year, Boulder County's consultant utilized geographic information systems (GIS) analysis to delineate the county's contributing drainage area to the *E. coli* TMDL segment. Ground surface elevations were obtained from a recent floodplain study and used as input into the GIS Arc Hydro program. Please see Part III.A.2.b below for more a detailed methods description. The resulting delineation is shown in the attached contributing drainage area map and further explained below.

Based on the delineation analysis, the county's contributing drainage area to the *E. coli* TMDL segment that is regulated by the MS4 Permit is 30.38 acres. Within this area, the San Lázaro Mobile Home Park (22.51 acres) is the only area of developed land. The mobile home park has central sewer service provided by the San Lázaro Wastewater Treatment Facility; it is outside the MS4 Permit area and has been assigned its own wasteload allocation (WLA). There is also a light industrial parcel to the southwest along the BNSF railroad, but it is undeveloped. We confirmed that the other light industrial/commercial area to the southeast is not within the contributing drainage area.

The remaining land in the county's MS4 contributing drainage area (7.12 acres) is owned and operated by City of Boulder Open Space and Mountain Parks (OSMP) and is protected as a riparian area from future development. This OSMP land has restricted access to avoid the spread of New Zealand Mudsnaills, and the county believes that the risk of gastrointestinal illness is low due to the lack of public recreation in Boulder Creek at this location. In addition, the City of Boulder annexed a number of OSMP parcels upstream of N. 57th Street, effectively removing them from the county's contributing drainage area to the *E. coli* TMDL segment.

In summary, Boulder County's intent was to conduct the GIS analysis to better determine what actions the county can take to reduce *E. coli* loading. The results of the delineation analysis clearly indicate that efforts in the county's MS4 contributing drainage area should be centered on the San Lázaro Mobile Home Park as it is the only area of developed land. Furthermore, Boulder County has a small portion of land in its MS4 contributing drainage area

(30.38 acres), and it is possible that upstream sources may influence *E. coli* levels within unincorporated Boulder County.

Part III.A.2.a. For the first annual report only: A description of all control measures planned by the permittee to reduce the discharge of *E. coli* to COSPBO02 from 13th Street to South Boulder Creek, including specific target dates for implementation.

This information was submitted in the first annual report (2016), and an update on implementation is provided in Table III.A.2.b below.

Part III.A.2.b. A description of all control measures implemented by the permittee to reduce the discharge of *E. coli* to COSPBO02 from 13th Street to South Boulder Creek.

Table III.A.2.b is used to report completion dates for implemented control measures under Part III.A.2.b. The completion date is left blank in the table where the target date has not yet passed. Additional description on the applicable control measures is provided in the paragraphs following the table.

Table III.A.2.b. Control measures implemented by Boulder County to reduce *E. coli* to COSPBO02

Reporting Year 2 (2017)				
Number	Name	Description/Notes	Tentative Implementation Target Date	Date of Completion
1	Drainage area delineation	Delineate the contributing drainage area to the <i>E. coli</i> TMDL segment (and contributing drainage area regulated by the MS4 permit) based on best available technology.	August 2017	August 31, 2017
2	GIS analysis of land use	GIS desktop analysis to assess land use and potential pollutant sources (parcel-level) in contributing drainage area.	August 2017	August 31, 2017
3	Onsite identification of potential pollutant sources	Walk stream section from the South Boulder Creek confluence upstream to 55 th Street. Assess this section for the potential pollutant sources listed in the Colorado <i>E. coli</i> Toolbox (Table 2, p. 15)	December 2017	April 12, 2017 & April 25, 2017
4	Assess point source and non-point source integration	Assess feasibility of integrating our point source and 319 plan non-point source strategies in a holistic manner	May 2018	
5	Continue participation in KICP on the "Doo Good" pet waste outreach program	The "Doo Good" pet waste campaign was revised in 2014 and has been ongoing ever since. More information is available on the KICP website: http://www.keepitcleanpartnership.org/pollution-prevention/scoop-the-poop/	Ongoing	Ongoing



Public Health
Environmental Health Division

Number	Name	Description/Notes	Tentative Implementation Target Date	Date of Completion
6	Distribute bacteria reduction information	Distribute bacteria reduction information to residential or business areas identified as a potential pollutant source. Sample fact sheet available on the KICP website: http://www.keepitcleanpartnership.org/wp-content/uploads/pdfs/FINAL_Ecoli_FactsheettoWeb.pdf	June 2019	
7	Post-construction stormwater management controls	Require post-construction stormwater management controls for applicable development sites in the contributing area to the <i>E. coli</i> TMDL segment. The Boulder County Storm Drainage Criteria Manual (SDCM) has been updated and became effective in November 2016. Section 1204.2 of the SDCM requires BMP selection based on effectiveness at treating the pollutants of concern using data from the International Stormwater BMP database.	July 1, 2019 to be consistent with the compliance schedule deadline for base design standard	

For Control Measure 1, Boulder County's consultant utilized GIS analysis to delineate the county's contributing drainage area to the *E. coli* TMDL segment. Ground surface elevations were obtained from a 2013 City of Boulder digital elevation model (DEM) and used as input into the GIS Arc Hydro Tools version 1.2 for ArcGIS 9.2 program. Basins draining into the confluence of Boulder Creek and South Boulder Creek were delineated from the elevation data using the adjoint catchment tool in ArcHydro. These basins were merged together to form a full contributing drainage area, which was then clipped to the unincorporated Boulder County boundary to show only the area included in this TMDL. The resulting delineation is shown in the attached contributing drainage area map.

The results of Control Measure 2 (GIS analysis of land use), are described in paragraphs four through six above.

For Control Measure 3 (onsite identification of potential pollutant sources), the Boulder County Stormwater Quality Program Manager conducted field exercises on two separate dates in April 2017 to assess this section of Boulder Creek for the potential pollutant sources listed in the Colorado *E. coli* Toolbox (Table 2, p. 15).

Importantly, these field exercises did not indicate clear and significant pollutant sources in Boulder County's contributing drainage area. This field work was performed in conjunction with GIS analysis on the *E. coli* TMDL segment conducted by the county's consultant. In relation to pollutant sources, the area along the Boulder Creek Path is frequented by residents and their dogs (pet waste). In addition, numerous geese and other waterfowl were observed, and residents described having raccoon problems (urban wildlife and waste). There were no signs of true homeless encampments, but some indications of use by the transient population were observed. The only other potential pollutants observed were a few dumpsters and trash cans that are used for pet waste disposal and others that may attract urban wildlife.

For Control Measure 5, Boulder County continued ongoing participation in Keep it Clean Partnership (KICP) on the "Doo Good" pet waste outreach program. For example, ads were published in Boulder Valley Humane Society's online newsletter, on local RTD routes, and in the local Chinook coupon book.

Part III.A.2.c. An identification of all illicit discharges identified by the permittee determined or suspected by the permittee to contribute to discharges from the MS4 in exceedance of 126 colony-forming units (CFU) of bacteria per 100 milliliters of water (the *E. coli* water quality standard). The first annual report shall include information on discharges identified prior to the effective date of the permit.

Boulder County has not identified illicit discharges that may potentially contribute to exceedances of the *E. coli* water quality standard.

Part III.A.2.d. An indication of if the illicit discharges identified in Subsection "c" have been eliminated. If the discharge has not been eliminated, a description of any planned control measure that the permittee intends to take to address the discharge must be included.

No illicit discharges are identified in Subsection "c" above.

Part III.A.2.e. A description of monitoring activities conducted, or planned, to meet the requirements of Part III.A.1 and identify progress towards meeting the WLA in the COSPB02 from 13th Street to South Boulder Creek *E. coli* TMDL.

Boulder County is not a water, sewer, or drainage utility and does not currently have the capabilities or resources to conduct analytical monitoring; however, we recognize that a robust analytical monitoring program may be necessary to characterize individual discharges of *E. coli*. As noted in the recommendations listed in the 2011 TMDL report, a key aspect of implementation success is collaboration between local jurisdictions. The county intends to continue its collaboration with the City of Boulder, which has been graciously conducting monitoring that may assist with further characterization.

If you have any questions about anything in this memorandum, please contact Scott Coulson directly at 303-441-1157 or via email at scoulson@bouldercounty.org.

CERTIFICATION

"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 fine and imprisonment for knowing violations."



Signature of Permittee (legally responsible person)

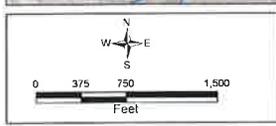
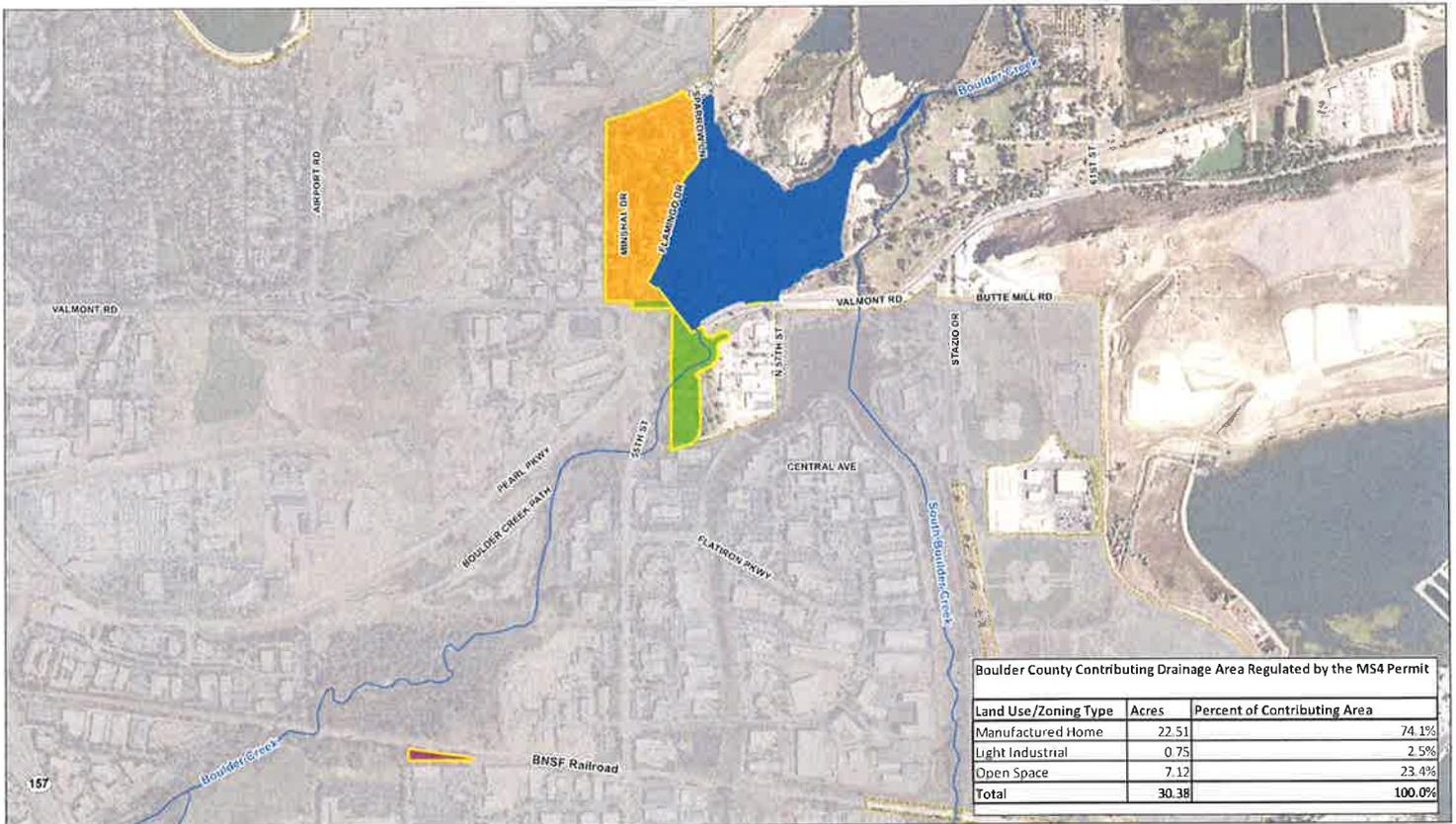
Cindy Domenico



Date Signed

cc: Boulder County Public Health Water Quality Program Coordinator Erin Dodge
MS4 Permit file

**Chair, Board
of County Commissioners**



- Legend**
- Streams
 - Contributing Drainage Area Regulated by MS4 Permit
 - Boulder County Contributing Drainage Area Addressed by The 319 Plan
 - City of Boulder
 - Open Space
 - Light Industrial
 - Manufactured Home

The Boulder Creek E. coli TMDL Segment Land Use/Zoning Areas

