

**JEFFERSON CITY, MISSOURI**

**STORM WATER MANAGEMENT  
PROGRAM PLAN**

**PERMIT CYCLE 2  
2008 - 2013**

# City of Jefferson



John Landwehr  
Mayor

Department of Community Development  
320 East McCarty Street  
Jefferson City, Missouri 65101

Patrick E. Sullivan, P.E.: Director  
Phone: (573) 634-6410  
Fax: (573) 634-6562

October 10, 2007

Missouri Department of Natural Resources  
Water Pollution Control Branch - Permit Section  
PO Box 176  
Jefferson City, MO 65102-0176  
(Hand Delivered)

**Subject: Transmittal of Permit Renewal Document for Jefferson City Small MS4, Cole & Callaway Counties, Permit No: MOR040049, Treatment: STO R**

Attached are the completed forms K and M along with their accompanying documentation, the City's outfall map and five-year storm water management program plan.

If you have any questions concerning this permit renewal application, or would like to arrange a time to discuss it further please contact Matt Morasch or Don Fontana at 573-634-6410.

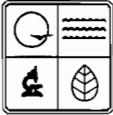
Sincerely,

A handwritten signature in black ink, appearing to read "P. Sullivan", with a long horizontal line extending to the right.

Patrick E. Sullivan, P.E.  
Director of Community Development



"building a better community"



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
 PO BOX 176, JEFFERSON CITY, MO 65102  
**FORM K - APPLICATION FOR INDIVIDUAL SMALL MS4 GENERAL PERMIT (FORM M MUST ALSO BE SUBMITTED)**

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

**THIS IS FOR A STORMWATER ONLY DISCHARGE PERMIT.**

1.00  
 a. This municipality/area is now operating a separate storm sewer system under Missouri Operating Permit Number (NPDES) MO - R040049 or  
 b. This is a new permit;

2.00 NAME OF MUNICIPALITY/AREA MS4  
 CITY OF JEFFERSON - In Cole and Callaway Counties

2.10 ADDRESS (HEADQUARTERS PHYSICAL LOCATION)	STREET	CITY	STATE	ZIP CODE
320 65101	E. MCCARTY	JEFFERSON CITY	MO	

**3.00 OWNER**

NAME	TELEPHONE NUMBER
CITY OF JEFFERSON	573-634-6410

ADDRESS	STREET	CITY	STATE	ZIP CODE
320 65101	E. MCCARTY	JEFFERSON CITY	MO	

**4.00 CONTINUING AUTHORITY**

NAME	TELEPHONE NUMBER
CITY OF JEFFERSON	573-634-6410

ADDRESS	STREET	CITY	STATE	ZIP CODE
320 65101	E. MCCARTY	JEFFERSON CITY	MO	

**5.00 MUNICIPALITY/ AREA CONTACT**

NAME	PHONE
PATRICK E. SULLIVAN, P.E.	573-634-6410
	FAX 573-634-6562

TITLE  
 DIRECTOR OF COMMUNITY DEVELOPMENT

6.00 FOR EACH KNOWN STORMWATER OUTLET GIVE LEGAL DESCRIPTION (ATTACH ADDITIONAL SHEETS AS NECESSARY)  
 Stormwater Outlet Number see ¼ \_\_\_ ¼ \_\_\_ Sec. \_\_\_ T \_\_\_ R \_\_\_ County attached  
 Lat \_\_\_\_, Long \_\_\_\_

6.10 FOR EACH KNOWN STORMWATER OUTLET LIST THE NAME OF THE RECEIVING WATER  
 Outlet Number ATTACHED Receiving Water \_\_\_\_  
 Outlet Number \_\_\_ Receiving Water \_\_\_\_  
 Outlet Number \_\_\_ Receiving Water \_\_\_\_

7.00 ATTACH A USGS 1" - 2000' SCALE MAP SHOWING THE LOCATION OF THE MUNICIPALITY/AREA IN RELATION TO THE LOCAL ROAD SYSTEM. INDICATE ON THE MAP THE MUNICIPALITY/AREA BOUNDARIES, THE RECEIVING STREAM(S); ALL KNOWN STORMWATER OUTLETS; AND THE MAP SECTION, TOWNSHIP, AND RANGE.

8.00 I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THE APPLICATION, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE, COMPLETE AND ACCURATE, AND IF GRANTED THIS PERMIT, I AGREE TO ABIDE BY MISSOURI CLEAN WATER LAW AND ALL RULES, REGULATIONS, ORDERS AND DECISIONS, SUBJECT TO ANY LEGITIMATE APPEAL AVAILABLE TO AN APPLICANT UNDER THE MISSOURI CLEAN WATER LAW OF THE MISSOURI CLEAN WATER COMMISSION.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE
PATRICK E. SULLIVAN, P.E.	573-634-6410

SIGNATURE	DATE SIGNED
	10-10-07



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
PO BOX 176 JEFFERSON CITY, MO 65102

**FORM M – APPLICATION FOR STORM WATER PERMIT (FORM K OR L MUST BE INCLUDED)  
UNDER THE GENERAL PERMIT: SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)**

1. NAME OF MUNICIPALITY/AREA(S) TO BE COVERED BY THIS PERMIT

CITY OF JEFFERSON

2. PHYSICAL LOCATION OF MUNICIPALITY/AREA(S) (ADDRESS ASSIGNED)

320 E. MCCARTY, JEFFERSON CITY, MO 65101 (IN COLE AND CALLAWAY COUNTIES)

3. TOTAL AREA OF MUNICIPALITY/AREA (S) \_\_\_\_ ACRES OR 37 SQUARE MILES.

4. A STORM WATER MANAGEMENT PROGRAM (SWMP) MUST BE DEVELOPED FOR THIS MUNICIPALITY/AREA. (THIS PROGRAM MUST BE DEVELOPED IN ACCORDANCE WITH REQUIREMENTS & GUIDELINES SPECIFIED WITHIN THE GENERAL PERMIT FOR STORM WATER DISCHARGES FROM MS4 ACTIVITIES. THE APPLICATION WILL BE CONSIDERED INCOMPLETE IF THE SWMP HAS NOT BEEN DEVELOPED IN ACCORDANCE WITH THE TERMS OF THE GENERAL PERMIT. A COPY OF THE SWMP MUST BE SUBMITTED ALONG WITH THIS APPLICATION.)

5. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR PUBLIC EDUCATION AND OUTREACH. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

6. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR PUBLIC INVOLVEMENT AND PARTICIPATION. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

7. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

8. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR CONSTRUCTION SITE STORM WATER RUNOFF CONTROL. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

# City of Jefferson



~~John Landwehr~~  
Mayor

Department of Community Development  
320 East McCarty Street  
Jefferson City, Missouri 65101

2007 OCT 10 P 3:39

Patrick E. Sullivan, P.E.: Director  
Phone: (573) 634-6410  
Fax: (573) 634-6562

October 10, 2007

MO DEPT OF NATURAL RES  
ADVISORY BOARD

Missouri Department of Natural Resources  
Water Pollution Control Branch - Permit Section  
PO Box 176  
Jefferson City, MO 65102-0176  
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Sincerely,

Patrick E. Sullivan, P.E.  
Director of Community Development

RECEIVED

OCT 10 2007

WATER PROTECTION PROGRAM



"building a better community"

9. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR POST CONSTRUCTION STORM WATER MANAGEMENT. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

10. SUMMARIZE THE MEASURES FROM THE SWMP THAT WILL BE USED FOR POLLUTION PREVENTION AND GOOD HOUSEKEEPING. (ATTACH ADDITIONAL SHEETS IF NECESSARY)

SEE ATTACHED

11. THE MUNICIPALITY/AREA(S) IS WITHIN 100 FEET OF: (CHECK EACH THAT APPLIES) FOR THOSE IDENTIFIED AS PRESENT, PLEASE IDENTIFY THEIR LOCATION IN AN ATTACHMENT.

- WATER CLASSIFIED IN CSR 20-7.031 WATER QUALITY STANDARD AS A PUBLIC DRINKING WATER SUPPLY LAKE (L1), OUTSTANDING NATIONAL OR STATE RESOURCE WATERS, OR STREAMS DESIGNATED FOR COLD-WATER SPORT FISHERY;
- STREAMS, LAKES, OR RESERVOIRS IDENTIFIED AS CRITICAL HABITAT FOR ENDANGERED SPECIES AS DETERMINED BY THE MISSOURI DEPARTMENT OF CONSERVATION AND/OR THE US FISH AND WILDLIFE SERVICE; OR

12. IS THE DISCHARGE FROM THE MS4 WITHIN 100 FEET OF WATERS CLASSIFIED AS MAJOR RESERVOIRS (L2) OR PERMANENT FLOW STREAMS (P), EXCEPT THE MISSOURI AND MISSISSIPPI RIVERS, OR WITHIN TWO STREAM MILES UPSTREAM OF BIOCRITERIA REFERENCE LOCATIONS AS DEFINED IN 10 CSR 20, CHAPTER 7?

YES  NO

IF YES, PLEASE LIST THESE RECEIVING WATERS IN AN ATTACHMENT.

13. IS ANY PART OF THE AREA(S) DEFINED AS WETLAND?

YES  NO

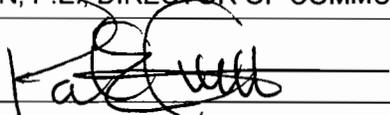
NOTE: A CLEAN WATER ACT, SECTION 404 PERMIT MAY BE REQUIRED FOR THE DEVELOPMENT IN WETLAND AREA(S) FROM THE US ARMY CORPS OF ENGINEERS.

14. DOES ANY OF THE STORM WATER DISCHARGE TO A SINKHOLE, LOSING STREAM, OR ANY OTHER TOPOGRAPHICAL FEATURE THAT WOULD BE A DIRECT CONDUIT TO GROUND WATER?

YES  NO

IF YES, PLEASE IDENTIFY THE LOCATION(S) OF THESE GEOLOGIC FEATURES IN AN ATTACHMENT.

15. I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THIS APPLICATION, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, SUCH INFORMATION IS TRUE, COMPLETE AND ACCURATE, AND IF GRANTED THIS PERMIT, I AGREE TO ABIDE BY MISSOURI CLEAN WATER LAW AND ALL RULES, REGULATIONS, ORDERS AND DECISIONS, SUBJECT TO ANY LEGITIMATE APPEAL AVAILABLE TO AN APPLICANT UNDER THE MISSOURI CLEA WATER LAW OF THE MISSOURI CLEAN WATER COMMISSION (ATTACH ADDITIONAL PAGES IF ADDITIONAL SIGNATURES ARE REQUIRED FOR A CO-PERMIT).

NAME(S) AND OFFICIAL TITLE(S) PATRICK E. SULLIVAN, P.E. DIRECTOR OF COMMUNITY DEVELOPMENT	TELEPHONE NUMBER(S) 573-634-6410
SIGNATURE(S) 	DATE SIGNED 10-10-07

JEFFERSON CITY, MO OUTFALL DESCRIPTIONS

10/10/07

Number	1/4-1/4	1/4	Section	Township	Range	County	Receiving Water
1	SW	SW	23	44N	12W	Cole	Moreau River
2	SW	SW	23	44N	12W	Cole	Moreau River
3	NW	SW	23	44N	12W	Cole	Moreau River
4	SW	NW	23	44N	12W	Cole	Moreau River
5	SW	NW	23	44N	12W	Cole	Wears Creek
13	NE	SW	10	44N	12W	Cole	Frog Hollow
14	NW	NE	15	44N	12W	Cole	Frog Hollow
15	SW	NE	17	44N	12W	Cole	Frog Hollow
17	NW	SE	17	44N	12W	Cole	Frog Hollow
18	NE	SW	17	44N	12W	Cole	Frog Hollow
19	NW	NE	20	44N	12W	Cole	Frog Hollow
24	NE	SE	18	44N	12W	Cole	Moreau River
25	NW	SE	18	44N	12W	Cole	Moreau River
26	NW	SE	18	44N	12W	Cole	Moreau River
27	NW	SE	18	44N	12W	Cole	Moreau River
28	SW	NE	18	44N	12W	Cole	Moreau River
29	NW	NE	18	44N	12W	Cole	Lake Claradean (Dickerson Creek)
30	NW	NW	17	44N	12W	Cole	Binder Lake (Dickerson Creek)
31	NE	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
32	NE	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
33	NE	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
34	SE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
35	NE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
36	NE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
37	NE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
38	NW	NE	8	44N	12W	Cole	Grays Creek
39	NW	SE	5	44N	12W	Cole	Grays Creek
40	NW	SE	5	44N	12W	Cole	Grays Creek
41	NW	SE	5	44N	12W	Cole	Grays Creek
42	NE	SE	5	44N	12W	Cole	Grays Creek
43	NW	SE	5	44N	12W	Cole	Grays Creek
44	SE	NE	5	44N	12W	Cole	Grays Creek
45	SW	NW	4	44N	12W	Cole	Grays Creek
46	SE	NW	4	44N	12W	Cole	Grays Creek
47	SE	NW	4	44N	12W	Cole	Grays Creek
48	SE	NW	4	44N	12W	Cole	Grays Creek
50	SW	NE	4	44N	12W	Cole	Grays Creek
51	SE	NE	4	44N	12W	Cole	Grays Creek
52	NW	NW	3	44N	12W	Cole	Grays Creek
53	SE	SE	33	45N	12W	Cole	Grays Creek
54	SE	SE	33	45N	12W	Cole	Grays Creek

## JEFFERSON CITY, MO OUTFALL DESCRIPTIONS

10/10/07

55	SE	SE	33	45N	12W	Cole	Grays Creek
56	NW	NW	34	45N	12W	Cole	Grays Creek
57	SW	SW	27	45N	12W	Cole	Grays Creek
58	NW	SW	27	45N	12W	Cole	Grays Creek
59	NW	SW	27	45N	12W	Cole	Grays Creek
60	SW	SE	27	45N	12W	Cole	Grays Creek
61	NW	NW	35	45N	12W	Cole	Grays Creek
62	NW	NW	35	45N	12W	Cole	Grays Creek
63	SE	NW	35	45N	12W	Cole	Missouri River
64	NW	NE	9	44N	11W	Callaway	Turkey Creek
65	NW	SE	10	44N	11W	Callaway	Missouri River
66	NW	NW	23	44N	11W	Callaway	Missouri River
67	NW	NW	23	44N	11W	Callaway	Missouri River
68	SW	NW	23	44N	11W	Callaway	Missouri River
69	NW	SW	23	44N	11W	Callaway	Missouri River
94	SW	SE	22	44N	11W	Cole	Moreau River
95	SE	SW	22	44N	11W	Cole	Moreau River
96	NW	SE	21	44N	11W	Cole	Moreau River
97	NW	SE	20	44N	11W	Cole	Moreau River
98	NW	SE	20	44N	11W	Cole	Moreau River
99	NE	SW	20	44N	11W	Cole	Moreau River
100	NW	SW	20	44N	11W	Cole	Moreau River
101	NW	NW	29	44N	11W	Cole	Moreau River
102	NW	NW	29	44N	11W	Cole	Moreau River
103	NW	SW	29	44N	11W	Cole	Moreau River
104	SW	SE	30	44N	11W	Cole	Moreau River
105	NW	NE	25	44N	12W	Cole	Moreau River
106	SE	SW	24	44N	12W	Cole	Moreau River
107	SW	SW	24	44N	12W	Cole	Moreau River
108	SW	SW	24	44N	12W	Cole	Moreau River
111	SW	SE	23	44N	12W	Cole	Moreau River
112	SE	SW	23	44N	12W	Cole	Moreau River
113	NE	NW	15	44N	12W	Cole	Frog Hollow
116	SW	SW	17	44N	12W	Cole	Moreau River
118	SW	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
119	SW	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
120	NE	SW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
121	NE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
122	NE	NW	8	44N	12W	Cole	Binder Lake (Dickerson Creek)
123	NW	SE	5	44N	12W	Cole	Grays Creek
124	NW	NW	14	44N	11W	Callaway	Rivaux Creek
125	SW	NW	14	44N	11W	Callaway	Rivaux Creek
126	SW	NW	14	44N	11W	Callaway	Rivaux Creek
127	SE	NE	14	44N	11W	Callaway	Rivaux Creek

JEFFERSON CITY, MO OUTFALL DESCRIPTIONS

10/10/07

132	SE	NE	23	44N	11W	Callaway	Missouri River
133	NE	NE	27	44N	10W	Callaway	Missouri River
134	Located within Private Survey #2611					Cole	Osage River
135	Located within Private Survey #2611					Cole	Osage River
136	Located within Private Survey #2611					Cole	Osage River
137	SW	SE	20	44N	10W	Cole	Osage River
138	SE	SW	20	44N	10W	Cole	Osage River
139	SE	SW	20	44N	10W	Cole	Osage River
140	NE	NW	29	44N	10W	Cole	Osage River
141	NW	NW	29	44N	10W	Cole	Osage River
142	NW	NW	29	44N	10W	Cole	Osage River
143	NW	NW	29	44N	10W	Cole	Osage River
148	NW	NE	30	44N	10W	Cole	Rising Creek
149	SE	NW	30	44N	10W	Cole	Rising Creek
150	SE	NW	30	44N	10W	Cole	Rising Creek
151	SE	NW	30	44N	10W	Cole	Rising Creek
152	SE	NW	30	44N	10W	Cole	Rising Creek
153	SE	NW	30	44N	10W	Cole	Rising Creek
154	SW	NE	25	44N	11W	Cole	Rising Creek
155	NE	NW	25	44N	11W	Cole	Rising Creek
156	NW	NW	25	44N	11W	Cole	Rising Creek
157	NW	NW	25	44N	11W	Cole	Moreau River
158	NE	NE	26	44N	11W	Cole	Moreau River
159	NW	NE	26	44N	11W	Cole	Moreau River
160	NW	NE	26	44N	11W	Cole	Moreau River
161	SE	SW	23	44N	11W	Cole	Moreau River
162	SW	SW	23	44N	11W	Cole	Moreau River
163	SW	SW	23	44N	11W	Cole	Moreau River
164	SW	SW	23	44N	11W	Cole	Moreau River
165	SW	SW	23	44N	11W	Cole	Moreau River
166	SW	SW	23	44N	11W	Cole	Moreau River
167	SE	SE	22	44N	11W	Cole	Moreau River
168	SE	SW	22	44N	11W	Cole	Moreau River
169	NE	SW	22	44N	11W	Cole	Moreau River
170	NE	SE	21	44N	11W	Cole	Boggs
171	NW	SE	20	44N	11W	Cole	Moreau River
172	NE	NW	25	44N	12W	Cole	Moreau River
174	SE	SE	15	44N	12W	Cole	Wears Creek
175	SE	SE	15	44N	12W	Cole	Wears Creek
176	SW	SW	14	44N	12W	Cole	Wears Creek
177	SW	SW	14	44N	12W	Cole	Wears Creek
178	SW	NW	16	44N	12W	Cole	Wears Creek
179	SW	NW	16	44N	12W	Cole	Wears Creek
180	SE	NE	17	44N	12W	Cole	Wears Creek
181	SE	NE	33	45N	12W	Cole	Grays Creek
182	NE	NE	33	45N	12W	Cole	Grays Creek
183	NW	SW	25	44N	12W	Cole	Moreau River
184	SW	SW	25	44N	12W	Cole	Moreau River
185	NE	SW	25	44N	12W	Cole	Moreau River
186	NE	SE	26	44N	12W	Cole	Moreau River
187	NW	SE	26	44N	12W	Cole	Moreau River
188	SW	SW	11	44N	12W	Cole	Wears Creek

JEFFERSON CITY, MO OUTFALL DESCRIPTIONS

10/10/07

189	SW	SW	11	44N	12W	Cole	Wears Creek
190	SE	SE	10	44N	12W	Cole	Wears Creek
191	SW	SW	11	44N	12W	Cole	Wears Creek
192	NE	SW	20	44N	12W	Cole	Moreau River
193	NE	SW	20	44N	12W	Cole	Moreau River
194	SE	NW	4	44N	12W	Cole	Grays Creek
195	SW	NE	4	44N	12W	Cole	Grays Creek
196	SW	SE	22	44N	11W	Cole	Moreau River
197	SW	SE	22	44N	11W	Cole	Moreau River
198	SW	SE	22	44N	11W	Cole	Moreau River
199	SE	SW	22	44N	11W	Cole	Moreau River
200	SE	SW	22	44N	11W	Cole	Moreau River
201	SE	SW	22	44N	11W	Cole	Moreau River
202	NE	NW	22	44N	12W	Cole	Wears Creek
203	SE	SW	15	44N	12W	Cole	Wears Creek
204	SE	SW	15	44N	12W	Cole	Wears Creek
205	NE	SW	15	44N	12W	Cole	Wears Creek
206	NE	SW	15	44N	12W	Cole	Wears Creek
207	SW	SE	33	45N	12W	Cole	Grays Creek

Note: Outfalls #6-7, #128-131, and #144-147 were removed in 2006; #8-10, #20-23, #49, #109-110, #117, and #173 were removed in 2005; Outfalls # 13, 14, 16, 114 & 115 were removed in 2004; Outfalls #70 - #93 were removed in 2003 - all removals were based on annexations to the City limits. It is our intent to keep the reporting clear by not re-using numbers previously reported as outfalls.

Jefferson City, Missouri  
Storm Water Management Program Plan 2008-2013

INTRODUCTION

The City of Jefferson made great gains in its Storm Water Management Program (SWMP) during the first five-year MS4 permit cycle by implementing new codes and developing a complete system inventory and master plan of its storm water system. This next five-year storm water management program plan seeks to build on those successes by beginning the implementation phase of the new codes and further refinement of the City's processes in their documentation and implementation procedures for the program.

The City is committed to pursuing an efficient, well maintained and compliant storm water system. Currently the SWMP is implemented by the City's Department of Community Development's, Public Works Service Group. The City employs one full time professional engineer/certified erosion and sediment control professional to oversee the permit and its requirements. This position is supported by other Divisions of the City including Planning, Engineering, GIS, Public Works Inspections, Building Regulation Inspections and the Street Division.

Funding for the positions to implement the SWMP is stable and comes from the City's General Fund. Funding for the major costs of the program's implementation including capital improvement and major storm sewer maintenance comes from the City's ½ cent Capital Improvement Sales Tax, in which \$200,000 per year over the next five years is available for stormwater related issues.

In the next five-years the City will be pursuing more extensive funding resources dedicated to its SWMP. This last year the City's Mayor appointed a Storm Water Advisory Committee (SWAC) to research the possibility of increasing funding to storm water related activities. The SWAC, made up of three citizen representatives and two City Council representatives, has been meeting monthly to discuss storm water issues and is on track to provide a final recommendation on the funding issue to the Mayor by this years end.

The following SWMP plan outlines how the City intends to comply with the six minimum control measures required to be implemented by it's Phase II National Pollutant Discharge Elimination System Permit. The City believes the activities outlined in this plan are compliant with the current Code of State Regulations and generally following EPA/MDNR guidelines on the subject.

## **MCM #1: Public Education and Outreach on Stormwater Impacts**

**10 CSR 20-6.200 (5) (A) 1. states** "... The public education program should inform individuals and households about impacts of storm water discharges on water bodies and steps which can be taken to reduce or prevent storm water pollution."

MCM #1 will consist of the following for Permit Years 1 through 5:

The Public Education component of the City of Jefferson will be to maintain a library of storm water educational brochures, topics will consist of:

- a) Lawn and Garden Activities
- b) Household Hazardous Waste Disposal
- c) Solid Waste Management
- d) Illicit Discharges
- e) Erosion Control and Streambank Stabilization
- f) Storm Drain Stenciling
- g) Storm Water Management

The Public Awareness component of the City of Jefferson will consist of the following:

- a) Display Brochures at City Hall
- b) Post Brochures on the City Web Site
- c) Distribute Storm Water Educational Materials at two Community Events per year (Jefferson City Home Show – January, and Earth Day – April)
- d) Issue two Press Releases per year on Storm Water Related Topics to Local Radio, T.V., and Print Media (May and October).

- Examples Attached -





### Water Quality

**Program Summary:** In March 2003, Phase II of the National Pollution Discharge Elimination System (NPDES) of the federal Clean Water Act went into effect. Phase II brought about the requirement for all communities with greater than 10,000 people to develop a permitted program to address stormwater quality. This permit is called a Municipal Separate Storm Sewer (MS4) permit referencing the fact that the City's sanitary sewers are separate from the storm sewers (don't run in the same pipes and stormwater is not treated along with the sanitary sewage). The City submitted their proposed program by the March 10, 2003 deadline and received their final permit later that year. Under the program the City has five years to implement the program.

The permit requires the City to have a program to address six areas of water quality management called minimum control measures. Click below to see the City's goals and progress in each of these areas

- [Public Education](#)
- [Public Involvement](#)
- [Illicit Discharge Detection and Elimination](#)
- [Construction Site Runoff Control](#)
- [Post-Construction Site Runoff Control](#)
- [Good Housekeeping Municipal Practices](#)
- [More Information](#)

**CITIZEN INFORMATION SERIES INDEX**

Series No.	Topic
CDCI - 001	Community Development
CDCI - 002	Firearms & Hunting Regulations
CDCI - 003	Voluntary Annexation
CDCI - 004	Code Enforcement
CDCI - 005	Trash Service and Recycling
CDCI - 006	Temporary Food Permits
CDCI - 007	Animal Protection & Control
CDCI - 008	Banner Regulations
CDCI - 009	Basement Finishing Regulations
CDCI - 010	Building in Historic Districts
CDCI - 011	Building Permits
CDCI - 012	Deck Requirements
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CDCI - 015	Home Occupation Regulations
CDCI - 016	Room Additions
CDCI - 017	Sign Regulations
CDCI - 018	Swimming Pools, Spas, Hot Tubs
CDCI - 019	Opening a New Business
CDCI - 020	Board of Adjustment Applications
CDCI - 021	Planning & Transportation
CDCI - 022	Rezoning
CDCI - 023	Subdivisions
CDCI - 024	Accessory Structures
CDCI - 025	Flood Plain Management
CDCI - 026	Zoning District Regulations
CDCI - 027	Transit—Handi Wheels
CDCI - 028	Public Works
CDCI - 029	Sidewalk Regulations
CDCI - 030	Storm Water Management
CDCI - 031	Street Light Regulations
CDCI - 032	Grading Permits
CDCI - 033	Right-of-Way and Easements
ITCI - 034	Geographic Information System (GIS)
CDCI - 035	Residential Parking District Regulations
CDCI - 036	Sewer Connection & Extension Regulations
CDCI - 037	JC Regional Water Reclamation Facility
CDCI - 038	Household and Commercial Grease
CDCI - 039	Mosquito Control
CDCI - 040	Jefferson City Memorial Airport
CDCI - 041	JEFFTRAN
CDCI - 042	Veteran's Plaza
CDCI - 043	Electrical Permits
CDCI - 044	Plumbing Permits
CDCI - 045	Environmental Code Enforcement



CITY OF JEFFERSON  
 Department of Community Development  
 320 East McCarty Street  
 Jefferson City, MO 65101

CDCI-030



**Storm Water Management**

**CITIZEN**

**INFORMATION**

**SERIES**



For More Information:

[www.jeffcitymo.org/CD](http://www.jeffcitymo.org/CD)

573.634.6410

PLEASE  
 PLACE  
 STAMP  
 HERE



# Storm Water Management

## What is Stormwater?

**Stormwater** runoff is the direct result of rain or snowfall. This water is collected in various inlets or pipes and carried to the Missouri River through a network of pipes, ditches and creeks.

The City is responsible for the operation and maintenance of all pipes, inlets and improved channels within public drainage easements.

Under recent changes to the federal Clean Water Act, the City also must address improvements to water quality through programs to reduce pollution carried in stormwater runoff.

## Is the water treated before it goes in the river?

No! Water collected off the streets and yards in pipes and inlets is directly discharged to creeks and rivers.

## What is allowed to go in the inlets?

Only stormwater! Please do not put yard waste, paint, motor oil, grease, or any other substance in the storm drainage system. To do so is a violation of City Code.

## What about the ditch in my yard?

Many folks have some kind of drainage ditch on their property. Most of the smaller ditches are property owner's responsibility to maintain and keep clear for water to pass through. If it is lined with concrete and needs repair or maintenance, please notify the Street Division. As these ditches often lead to a bigger system downstream, please do not place yard waste or other trash in these ditches as this material often is the cause of clogged pipes.

## What about downspouts?

Downspouts can either be tied into the drainage system, tied into the curb, or discharged onto grass (preferred). They should be directed to the front or rear of the property, but not discharged any closer than 10 feet from the adjoining property.

## What about erosion?

Erosion is the loss of soil from the movement of water over the surface, the repair of erosion is the property owner's responsibility. However, the City staff offers consultation and recommendations for ways to prevent erosion and deal with its effects. Additionally, the City makes an effort to address erosion directly caused by the discharge of the public drainage system.

## Who do I call?

All divisions can be reached through calling the main Department of Community Development phone number at 634-6410.

- Clogged pipe or inlet, flooded street: Street Division
- Downspout concern: Building Regulations Division
- Water coming into my home through a window, door or over foundation: Stormwater Division
- Water coming into my home through floor drain: Wastewater Division
- Dumping in storm drains: Environmental Health Services Division
- General stormwater concerns: Stormwater Division

For additional information see Chapter 31 of the City Code.

Citizen Information Brochures  
may be obtained from the  
Department of Community Development  
320 E. McCarty St., Jefferson City, MO 65101  
Office hours are 8 am - 5 pm, Mon - Fri.  
573.634.6410  
[www.jeffcitymo.org/CD](http://www.jeffcitymo.org/CD)



## **MCM #2: Public Involvement and Participation**

**10 CSR 20-6.200 (5) (A) 2. states** "... A program must be developed which at a minimum complies with state and local public notice requirements."

MCM #2 will consist of the following for Permit Years 1 through 5:

a) Public Meetings / Citizen Panels ... The City of Jefferson will solicit citizen and other interested parties' input on storm water issues and topics at its monthly Public Works and Planning Committee meetings.

b) Storm Drain Stenciling ... The City of Jefferson has storm drain stenciling materials for interested volunteer groups to use.

- Examples Attached -



## Notice of Meeting and Tentative Agenda

### Public Works and Planning Committee

Thursday, October 18, 2007

7:45 a.m.

John G. Christy Municipal Building, 320 East McCarty Street  
Boone/Bancroft Room (Upper Level)

### TENTATIVE AGENDA

1. Introductions
2. Approval of the minutes of the September 20, 2007 meeting
3. Old Business
  - \*\*1. Sidewalk Replacement Program requested by Councilman Jim Penfold
  - \* 2. Potential Sidewalk Ordinance Changes (Janice McMillan)
4. New Business
  - \* 1. Street Name Changes requested by the Masonic Lodge #43 (Janice McMillan)
    - a. Mahan Place to Smith Court
    - b. Smith Place to Masonic Court
  - \*2. Change Order to Review Temporary Parking with Jefferson Asphalt (Matt Morasch)
  - ✓3. Sewer Repayment for Extensions (Eric Seaman)
  - ✓4. Amendment to Chapter 18 Miscellaneous Offenses - False Reports (Drew Hilpert)
5. Other Business 
  1. Citizen opportunity to address Council/Staff on Stormwater Issues and Topics (Matt Morasch)
6. Adjournment

✓ next City Council agenda if approved by the Public Works & Planning Committee

\* future City Council agenda if approved by the Public Works & Planning Committee

\*\* staff direction requested

### **Minimum Control Measure #3: Illicit Discharge Detection and Elimination**

**10 CSR 20-6.200 (5) (A) 3. states** "... Discharges to MS4s of wastewater other than those consisting entirely of storm water are considered "illicit discharges" except for discharges permitted under other state operating permits or directly from fire fighting activities. A program to detect and eliminate such discharges must be developed."

MCM #3 will consist of the following for Permit Years 1 through 5:

- a) The City of Jefferson will maintain its illicit discharge Code to comply with this permit.
- b) The City of Jefferson will maintain a GIS map of all storm sewer lines, inlets and outfalls, and its sanitary sewer systems within the City Limits.
- c) Once per year (July or August) the City of Jefferson will formally inspect major storm water conduits within the City Limits, including Wears Creek, East Wears Creek, North Wears Creek, Boggs Creek, and Grays Creek for dry weather illicit discharges.
- d) Upon finding any illicit discharges under item c) above, the City of Jefferson will determine the source of discharge by either closed circuit television inspection, visual inspection, smoke testing and/or dye testing, and work through its Code to eliminate the discharge.

- Examples Attached -

# Illicit Discharge Hotline Incident Tracking Sheet

**Incident ID:**

**Responder Information**

Call taken by:

Call date:

Call time:

Precipitation (inches) in past 24-48 hrs:

**Reporter Information**

Incident time:

Incident date:

Caller contact information (*optional*):

**Incident Location** (*complete one or more below*)

Latitude and longitude:

Stream address or outfall #:

Closest street address:

Nearby landmark:

**Primary Location Description**

**Secondary Location Description:**

Stream corridor  
(*In or adjacent to stream*)

Outfall

In-stream flow

Along banks

Upland area  
(*Land not adjacent to stream*)

Near storm drain

Near other water source (storm water pond, wetland, etc.):

Narrative description of location:

**Upland Problem Indicator Description**

Dumping

Oil/solvents/chemicals

Sewage

Wash water, suds, etc.

Other:

**Stream Corridor Problem Indicator Description**

Odor:  None

Sewage

Rancid/Sour

Petroleum (gas)

Sulfide (rotten eggs),  
natural gas

Other: Describe in "Narrative" section

Appearance:  "Normal"

Oil sheen

Cloudy

Suds

Other: Describe in "Narrative" section

Floatables:  None:

Sewage (toilet paper, etc)

Algae

Dead fish

Other: Describe in "Narrative" section

Narrative description of problem indicators:

Suspected Violator (name, personal or vehicle description, license plate #, etc.):

### Investigation Notes

Initial investigation date:	Investigators:
<input type="checkbox"/> No investigation made	Reason:
<input type="checkbox"/> Referred to different department/agency:	Department/Agency:
<input type="checkbox"/> Investigated: No action necessary	
<input type="checkbox"/> Investigated: Requires action	Description of actions:
Hours between call and investigation:	Hours to close incident:
Date case closed:	
Notes:	

DRAFT



## Outfall Reconnaissance Inventory Field Sheet

### Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow?  Yes  No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 2 – Easily detected <input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 2 – Clearly visible in sample bottle <input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 2 – Cloudy <input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen) <input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

### Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present?  Yes  No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Resisting Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

### Section 6: Overall Outfall Characterization

Unlikely  Potential (presence of two or more indicators)  Suspect (one or more indicators with a severity of 3)  Obvious

### Section 7: Data Collection

1. Sample for the lab?  Yes  No
2. If yes, collected from:  Flow  Pool
3. Intermittent flow trap set?  Yes  No If Yes, type:  OBM  Caulk dam

### Section 8: Any Non-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



## ARTICLE IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION

### Section 31-400 General.

- A. Purpose. The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Jefferson through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:
- (1) To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user
  - (2) To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system
  - (3) To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance
- B. Applicability. This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted.
- C. Ultimate Responsibility. The standards set forth in this article and promulgated pursuant to this article are minimum standards. Compliance with this article does not insure that there will be no contamination, pollution or unauthorized discharge of pollutants into the waters of the United States. This article shall not create liability on the part of the City or any agent or employee of the City for any damages that result from any discharges, reliance on this article or any administrative decision made under this article.

### Section 31-410 Prohibitions.

- A. Illegal Discharges. Except as provided in subsection (b), it shall be unlawful for any person to discharge or cause to be discharged into the municipal separate storm sewer system or into any water course any material other than stormwater.

The following discharges are exempt from the discharge prohibitions established by this article:

1. Waterline flushing or other potable water sources;
2. Landscape irrigation or lawn watering;
3. Diverted stream flows;
4. Rising groundwater;
5. Groundwater infiltration;
6. Uncontaminated pumped groundwater;

7. Foundation or footing drains excluding active groundwater de-watering systems;
8. Crawlspace pumps, air conditioning condensation;
9. Springs;
10. Non-commercial washing of vehicles;
11. Natural riparian habitat or wetland flows;
12. Swimming pools if de-chlorinated to less than 1 ppm chlorine;
13. Fire fighting activities;
14. Other water not containing pollutants;
15. Discharges specified by the Director as necessary to protect public health and safety;
16. Dye testing if notification is given to the Director before the test; and
17. Any non-storm water discharge permitted under an NPDES permit, waiver or waste discharge order issued to the discharger and administered under the authority of the Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the municipal separate storm sewer system.

B. Illicit connections.

1. It shall be unlawful for any person to construct, use, maintain or have an illicit connection.
2. This section expressly applies to illicit connections made in the past even if the connection was permissible under law or practices applicable or prevailing at the time of connection.

C. Waste disposal prohibitions.

It shall be unlawful for any person to place, deposit or dump or to cause or allow the placing, depositing or dumping any refuse, rubbish, yard waste, paper litter or other discarded or abandoned objects, articles and accumulations containing pollutants into the municipal separate storm sewer system or into any waterway.

D. Connection of sanitary sewer prohibited.

It shall be unlawful for any person to connect a line conveying sewage to the municipal separate storm sewer system or to allow such a connection to continue.

E. Industrial or construction activity discharges.

It shall be unlawful for any person subject to an industrial activity or construction NPDES storm water discharge permit to fail to comply with all provisions of such permit.

F. Continuing violation.

Each day that a violation of this article continues shall be deemed a separate offense.

**Section 31-420 Notification of Spills.**

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the City in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Department of Community Development within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

**Section 31-430 Regulations and Monitoring.**

- A. The City Council may, by ordinance, adopt standards identifying best management practices (BMP) for any activity, operation or facility which may cause or contribute to pollution of storm water, the storm drain system, waters of the state or waters of the United States. These standards shall be on file in the office of the Director. It shall be unlawful for any person undertaking any activity or owning or operating any facility subject to such standards to fail to comply with the standards.
- B. The owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal separate storm sewer system or water courses through the use of structural and non-structural BMPs. Any person responsible for property which is or may be the source of an illicit discharge may be required to implement additional structural and non-structural BMPs to prevent further discharge. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity to the extent practicable shall be deemed in compliance with provisions of this section. These BMPs shall be a part of the storm water pollution prevention plan as necessary for compliance with the requirements of the NPDES permit.

**Section 31-440 Nuisance declared.**

- A. Any discharge in violation of this article is a nuisance.
- B. Any illicit connection is a nuisance.

## MCM #4: Construction Site Stormwater Runoff Control

**10 CSR 20-6.200 (5) (A) 4. states** "... A program to control discharges of storm water and sediment from construction sites and activities must be developed. The program must be designed to protect receiving waters from sediment and other pollutants such as petroleum products, solid wastes, fertilizers, pesticides, and other construction related chemicals."

MCM #4 will consist of the following for Permit Years 1 through 5:

- a) The City of Jefferson will maintain its construction site stormwater runoff control Code to comply with this permit.
- b) The City of Jefferson employs two review engineers to review all subdivision construction plans and commercial site plans to ensure all construction sites have appropriate erosion and sediment control plans.
- c) The City of Jefferson employs four construction inspectors who regularly inspect all active construction sites for compliance with their erosion and sediment control plans.
- d) Upon finding any compliance issues with c) above, the City of Jefferson will work within its Code to mitigate the issue.
- e) The City of Jefferson will maintain a storm water complaint phone line and a web based complaint form for reporting and tracking citizen concerns.

- Examples Attached -

The screenshot shows a web browser window with the address bar displaying "http://www.jeffcity.org/forms/complaintform.asp". The page content includes a header stating "This form will be emailed to: Department of Community Development, City of Jefferson". Below this is a form with the following fields:

- First Name:
- Last Name:
- Phone:
- Address:
- City:
- State:
- Zip:
- Email:  (E-mail)
- Message:

A "Send Email" button is located at the bottom right of the form area.



## ARTICLE V. EROSION AND SEDIMENT CONTROL

### Section 31-500 General.

Grading, erosion control practices, sediment control practices, and waterway crossings shall be adequate to prevent transportation of sediment from the site to the satisfaction of the Community Development Department.

### Section 31-510 Clearing and Grading.

- A. Clearing and grading of natural resources, such as forests and wetlands, shall not be permitted, except when in compliance with all other chapters of this Code.
- B. Clearing techniques that retain natural vegetation and retain natural drainage patterns shall be used.
- C. Phasing shall be required on all sites disturbing greater than *thirty* acres, with the size of each phase to be established at plan review.
- D. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.
- E. Cut and fill slopes shall be *no greater than 2:1*, except as approved by the Community Development Department to meet other community or environmental objectives.

### Section 31-520 Erosion Control.

- A. Soil must be stabilized within 120 days of clearing or inactivity in construction, unless otherwise authorized.
- B. If vegetative erosion control methods, such as seeding, have not become established, the Community Development Department may require that the site be reseeded, or that a non-vegetative option be employed where possible.
- C. On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in KC - APWA Division 5100 shall be used to ensure stabilization.
- D. Soil stockpiles must be stabilized or covered at the end of each work day unless otherwise protected from allowing sediment to leave the site.
- E. Techniques shall be employed to prevent the blowing of dust or sediment from the site.
- F. Techniques that divert upland runoff past disturbed slopes shall be employed.

### Section 31-530 Sediment Controls.

- A. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.

- B. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long term stormwater management.
- C. Adjacent properties shall be protected by the use of a vegetated buffer strip, in combination with perimeter controls.

**Section 31-540 Waterways and Watercourses.**

- A. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from the U.S. Army Corps of Engineers.
- B. When in-channel work is conducted, the channel shall be stabilized before, during and after work.
- C. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in KC - APWA Division 5600 .
- D. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels.

**Section 31-550. Construction Site Access.**

- A. A temporary access road or driveway shall be provided at all sites where a land disturbance permit is required.
- B. Other measures may be required at the discretion of the Community Development Department in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.
- C. Regardless of the amount of land disturbance at a particular site, it shall be the responsibility of the permit holder and/or property owner to ensure streets open to the public surrounding a permitted site are kept free of excessive debris and sediment throughout the term of the permit. Upon notification from the Director that a problem exists, the permit holder and/or property owner shall immediately remedy the issue. If the permit holder and/or property owner fails to remedy such issue, the Director may temporarily suspend the permit until the problem has been resolved. If a permit holder and/or property owner does not address the issue after requested, the Director may choose to remedy the situation and bill the permit holder and/or property owner for any reasonable associated costs. The permit will remain suspended until said bill is paid. Alternatively, the permit holder and/or property owner may request a hearing with the Director to contest the abatement costs.

**Section 31-560 Inspection.**

- A. General: The Director may periodically inspect development sites. Through such periodic inspections, the Director shall ensure that the Stormwater Pollution Prevention Plan (SWPPP) is properly implemented and any necessary amendments thereto made in order to protect the environment and the public's health, safety and welfare. The erosion and sediment control measures for the site must be maintained by the developer until the site is stabilized.
- B. The permittee shall notify the Department of Community Development at least two (2) working days

before the following:

1. Start of Construction
  2. Site Clearing has been completed
  3. Rough Grading has been completed
  4. Final Grading has been completed
- C. The permittee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved erosion and sediment control plan(s) or in the Stormwater Pollution Prevention Plan (SWPPP). The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional control measures and/or maintenance of existing measures. All inspections shall be documented in written form and kept readily available.

**Section 31-570 Violations and Penalties.**

- A. The Director may suspend or revoke any permit associated with the site or any permit associated with the person(s) holding the permit(s) for the site for non-compliance with this article.
- B. Procedure
1. Upon discovery of a violation of this article, the contractor will be notified and given up to seven (7) days to remedy the violation. The owner may request a hearing before the Director to review any violation notice within the given time frame. If such a request is made, the Director shall promptly set a hearing on the matter. The hearing shall be conducted by the Director. Any person aggrieved by a decision of the Director may appeal his decision to the Circuit Court of Cole County.
  2. If the violation has not been remedied within the time frame set forth in the notice, the permit(s) will be suspended. Once the violation has been remedied, the suspension will be lifted.
  3. If the violation for which the permit(s) was suspended is not corrected within 30 days, the permit(s) shall be revoked and the violation deemed a nuisance.
  4. After three (3) suspensions of a permit for the same site for similar violations, the permit(s) will be revoked. All applicable procedures from other chapters will have to be followed for re-issuance of the permit(s). Additionally, any remediation or abatement costs will be required to be paid prior to re-issuance.

## ARTICLE VI. VARIANCES

### Section 31-600 General.

Where undue hardships or practical difficulties may result from strict compliance with this chapter, except where said hardships or practical difficulties relate to Article III: Floodplain Management, the developer may petition for a variance. The Director may recommend, and the council may approve, variances so that substantial justice may be done and the public interest secured; provided, that any such variance shall not have the effect of nullifying the intent and purpose of this chapter; and further provided, that the council shall not grant variances unless they find and determine that:

1. The granting of the variance will not be detrimental to the public safety, health or welfare, or injurious to other property or improvements.
2. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought, are not applicable generally to other property, and are not self-imposed.
3. Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a \*mere inconvenience, if this chapter was strictly interpreted and carried out.

\*Editor's note: Word "more" changed to "mere" administratively to correct grammatical error.

### Section 31-610 Conditions.

In recommending variances and exceptions, the Director may recommend and the council may require such conditions as will, in the judgment of each, secure substantially the objectives of the standards or requirements of this chapter.

### Section 31-620 Procedures.

A petition for a variance shall be submitted at the time of filing for a preliminary plat or for application for a building permit. The petition shall state fully the grounds for the request and all facts relied upon by the practitioner.

(Ord. No. 10557, § 2, 1-6-86; Ord. 13301, 11-5-2001; Ord. 14154, §2, 2-5-2007)

**NOTES**

<sup>1</sup>. **Cross references** - Buildings and building regulations, Ch. 8; health and sanitation, Ch. 15; sewers and sewage disposal generally, Ch. 29; discharge of stormwater to public sewer prohibited, § 31-89(b); streets and sidewalks, Ch. 32.

## **MCM #5: Post-Construction Stormwater Management in New Development and Redevelopment**

**10 CSR 20-6.200 (5) (A) 5. states** "... A program must be developed to address storm water runoff from new development and redevelopment projects that result in land disturbance of greater than or equal to one (1) acre, including projects less than one (1) acre that are part of a larger common plan of development or sale, and discharge into the MS4".

MCM #5 will consist of the following for Permit Years 1 through 5:

- a) The City of Jefferson will continue to implement it's natural stream buffer protection Code requiring a 25 foot riparian zone plus a 35 foot building setback for the purpose of filtering pollutants and controlling streambank erosion.
- b) The City of Jefferson will continue to implement it's restriction of runoff Code, requiring storm water retention/detention basins when peak discharges from a development exceed the capacity of the receiving storm water conduits.
- c) The City of Jefferson will continue to implement it's Planning and Zoning Codes for cluster type developments, which encourage open space.

- Examples Attached -

## ARTICLE II. STORMWATER MANAGEMENT

### Section 31-200 General Requirements.

#### A. Design Criteria

1. **Storm Drainage Systems and Facilities:** The design procedures stipulated in the KC-APWA 5600 shall be followed insofar as it is applicable. Written justification for all deviations must be prepared and submitted in accordance with the variance procedures set forth in this chapter.
2. **Erosion and Sediment Control:** The design procedures stipulated in the latest edition of the KC-APWA 5100 shall be followed insofar as it is applicable. Written justification for all deviations must be prepared and submitted in accordance with the variance procedures set forth in this chapter.

B. **Standard Drawings:** The City of Jefferson Standard Details, as amended from time to time, as well as the Kansas City Metro Chapter of the American Public Works Association, Division 5300, Standard Drawings (KC-APWA 5300) shall be referenced as necessary for design and construction. When the two documents conflict, the City of Jefferson Standard Details shall rule.

C. **Plan Requirements:** Plans shall include all drawings, narratives and computations as outlined in KC-APWA 5100 and 5600.

D. **Drainage onto sidewalks.** Tributary areas where sidewalks exist or are proposed, and which drain across a public sidewalk, must not exceed three thousand (3,000) square feet of impervious area, including roofs discharging upon paved areas, or nine thousand (9,000) square feet of sodded areas, or in proportional amounts for a combination of such areas. Paved, roofed or other impervious areas exceeding three thousand (3,000) square feet shall be provided with drains for discharge into storm conduits, channels, or street gutters.

E. **Downspouts.** Downspouts shall not be discharged directly onto sidewalks or entrance ways. When downspouts are connected to the gutterline of the street or the public drainage system, they shall be connected by a method approved by the Director. Downspouts shall not discharge within the building setback unless there is a drainage swale established to carry the water to the front or rear of the property or closest natural drainage course. Downspouts may also discharge within the building setback if discharging into a rain garden, rain barrel or other stormwater management practice.

F. **Flow toward streets.** Any concentration of surface flow in excess of two (2) cubic feet per second (cfs) for the ten-year frequency rain shall be intercepted before reaching the street right-of-way and shall be carried by an enclosed storm drain to connect with a drainage structure at the low point in the street right-of-way or to discharge to a watercourse.

G. **Parking lots and garages.** Adequate provisions shall be made for the disposal of stormwater from parking lots and garages. Plans shall be submitted for approval to the Director to ensure measures are taken to limit the flow of water onto adjoining property or adjacent sidewalks or streets in a quantity that would be detrimental to or inconvenient to persons using the streets or sidewalks.



H. Natural Stream Protection On Developments Platted after April 1, 2007.

1. Natural streams containing an ordinary high water mark with a drainage area of 50 acres or greater shall be buffered by a natural stream protection buffer consisting of a twenty-five (25) foot riparian zone plus a thirty-five (35) foot building setback.
2. If a channel enclosure or relocation of such a drainageway is permitted by the City the riparian zone shall not be required and building setbacks will revert to those dictated by zoning.
3. Riparian zones shall remain undisturbed to the maximum extent practicable. This zone prohibits any land disturbance, clearing, grubbing, or any other construction activities except as necessary for utility construction, greenways and road access. Naturally occurring vegetation within the riparian zone shall not be removed, diminished, inhibited, mowed or substantially altered from its natural state or growth. Such construction shall minimize disturbance of the stream and riparian zone.
4. Adjustments in widths of the riparian zone or adjacent building setback may be made when approved by the Director when local conditions justify deviation from the standard widths.
5. Wherever the designated riparian zone must be disturbed, mitigation measures shall be taken to re-establish vegetative filtration and stream stabilization to the maximum extent practicable.

**Section 31-210 Permit Required.**

- A. No stormwater drainage facility shall be constructed, altered or reconstructed without first obtaining a permit. All such construction shall comply with the general requirements and design procedures, as set forth in this chapter, and the criteria of the KC-APWA 5600. Stormwater drainage facilities shall comport with the stormwater management plan. No clearing, grading, borrowing or filling of land shall be done without obtaining a permit from the Director.
- B. No clearing, grading, borrowing or filling of land shall be done without obtaining a permit from the Director. All such work shall comport with the stormwater management plan as well as an approved erosion and sediment control plan. No permit may be issued pursuant to this subsection for clearing, grading, borrowing or filling of land on tracts greater than one (1) acre except in conjunction with a building permit issued in accordance with the provisions of Chapter 8 of the Code of the City of Jefferson, Missouri, or in conjunction with an approved site development plan. Every permit issued under this subsection for clearing, grading, borrowing or filling of land not in conjunction with a building permit shall expire within one (1) year from the date of issuance. No grading permit is required for the following activities:
  1. Any emergency activity which is immediately necessary for the protection of life, property or natural resources.
  2. Existing nursery and agricultural operations conducted as a permitted main or accessory use.
  3. Minor construction that does not substantially alter the lay of the land or increase the impervious surface by more than 10%.

- C. The Director shall promulgate rules and regulations governing the issuance of the permits required by this section.
- D. Duties of property owners and developers; detailed plan required.
  - 1. Prior to the issuance by the city of a building permit for any low-density residential construction, the staff of the Department of Community Development shall visit the site and prepare the permit noting any special conditions to be met for storm drainage. This shall be accomplished within three (3) working days after receipt of the application.
  - 2. Prior to the issuance by the city of a building permit for any other type of construction, the property owner, the developer or their agent shall have a detailed drainage plan approved by the Director in accordance with this chapter. The property owner, developer or their agent shall, at his own expense, submit necessary plans, designs and specifications to the Director for review and approval.
  - 3. Provisions of this section for plan requirement shall be waived provided no land is disturbed and no trees, shrubs, grass or vegetation is destroyed or removed for construction, reconstruction, repair or alteration of any building provided the improvement does not alter or increase the flow of water.
- E. Review and approval
  - 1. The Community Development Department will review each application for a permit to determine its conformance with the provisions of the Code. Within thirty (30) days after receiving an application, the Community Development Department shall, in writing:
    - a. approve the permit application; or
    - b. approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this regulation, and issue the permit subject to these conditions; or
    - c. disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.
  - 2. Failure of the Community Development Department to act on original or revised applications within thirty (30) days of receipt shall authorize the applicant to proceed in accordance with the plans as filed unless such time is extended by agreement between the applicant and the Community Development Department. Pending preparation and approval of a revised plan, development activities shall be allowed to proceed in accordance with conditions established by the Community Development Department.
- F. Modifications to the plan
  - 1. Major amendments of any approved plan shall be submitted to the Community Development Department and shall be processed and approved, or disapproved, in the same manner as the original plans.
  - 2. Field modifications of a minor nature may be authorized by the Community Development Department by written authorization to the permittee.

**Sec. 31-220. Developments.**

- A. Conformance with stormwater management plan. Drainage plans submitted by developers must be developed in conformance with the stormwater management plan in effect at the time of the submission.
- B. Restriction of runoff. The city may require that storm drainage systems for tributary areas upstream of existing storm drainage facilities include on-site stormwater detention facilities limiting the peak discharge to that which would have occurred for the existing land use type prior to a zoning change or prior to development of the area. The city may waive such requirements for detention facilities when the developer makes satisfactory arrangements to improve or provide a downstream drainage system of adequate hydraulic capacity for peak rates of discharge to the system, including discharge from the developer's site, to a point downstream where the rate of total runoff from the site is ten (10) percent or less of the total runoff rate conveyed by the downstream system measured at the time of system peak rate. The City at its option may allow downstream system improvements, detention and/or fees in-lieu-of construction that provide the same level of control.
- C. Stormwater management plan facilities. Drainage plans and facilities constructed by developers for developments encompassing more than forty-three thousand five hundred sixty (43,560) square feet in total area, including areas not directly subject to improvements, must include any improvements not previously constructed, which are planned as part of the stormwater drainage system on the affected property pursuant to the stormwater management plan. For purposes of this paragraph, the stormwater management plan in effect at the time of submission of the drainage plan shall govern. Also for purposes of this paragraph, the affected property shall include any adjacent property under common ownership with, and within one hundred (100) feet of the limits of, the parcel of property being developed. Where the cost of such stormwater-related improvements exceeds ten (10) percent of the total cost of the development, excluding the cost of land, the developer may petition for city participation in financing and/or contribution to the funding of the improvements.
- D. Alternative improvements. In reviewing petitions for variances from the requirements of this section, the city will consider alternative improvements or types of improvements proposed by developers which the city deems to be equivalent for the purpose of stormwater management.

**Section 31-230. Construction requirements.**

- A. Location of structures. In addition to any other requirements set forth by ordinance for construction in designated flood hazard areas, the following restrictions for construction adjacent to all watercourses and other drainage facilities shall apply:
  - 1. No house or building and no other structure shall be constructed within thirty (30) feet of the ordinary high water mark of a watercourse or other drainage facility nor shall any such structure be constructed with openings at an elevation below four (4) feet above the highest bank of a watercourse or top of other drainage facilities which traverse or are adjacent to the parcel being developed.
  - 2. The Director may vary the above requirements upon visiting the building site for low-density residential construction or reviewing plans for any other construction should such revisions not diminish the overall intent of this chapter.

- B. Existing storm drains. No cuts shall be made nor fill deposited over existing storm drains nor shall existing storm drains be altered without the approval of the Director.

**Section 31-240 Easements and maintenance.**

- A. Easements. Whenever improvements to land are made, easements for the stormwater drainage system including structural facilities, engineered channels and overflow paths, shall be provided across private property. Easements through existing developments may be obtained as deemed necessary by the Director. Drainage easements shall include access from a convenient public street or parking lot. The minimum width of easements for stormwater drainage shall be fifteen (15) feet. Where a storm drain consists of a closed conduit, the width shall be the greater of fifteen (15) feet or the sum of the conduit diameter and twice the cover depth over the conduit. Where the drainage system consists of an engineered channel, easements shall be as wide as the top of bank width plus ten (10) feet each side.
- B. Maintenance.
1. Public Stormwater Improvements. Maintenance of stormwater sewers, lined drainage channels, detention facilities and related facilities located within public drainage easements shall be the responsibility of the city.
  2. Natural Channels. The city may undertake all maintenance activities, deemed necessary by the Director, of natural watercourses and other unlined drainage channels located within public drainage easements; however, assumption of such maintenance activities does not relieve the property owner of the responsibility for normal maintenance including debris removal, cutting of vegetation, repair of erosion and removal of silt.
  3. Private Stormwater Improvements. Maintenance of stormwater facilities located on private property and not within any public drainage easements shall be the responsibility of the property owners and shall include debris removal and cleaning, cutting of vegetation, repair of erosion, removal of silt and maintenance of structural facilities.
  4. Private Detention Facilities.
    - a. Responsibilities. Owners of land containing private detention facilities shall maintain the facility as it was designed in order to continue the mitigation of the stormwater impacts. This maintenance shall include removal of overgrown vegetation, repair of erosion, repairs to any inlet/outlet structures, and removal of excess silt or any other maintenance deemed necessary to provide the design storage capacity.
    - b. Nuisance declared. Failure to provide necessary maintenance shall be deemed a nuisance.
    - c. Stormwater Pollution Prevention. Any owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit

authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliant with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

**Section 31-250 Interference and damage.**

No person shall damage or discharge or place any substance into the drainage system which will or may cause obstruction to flow or other interference with the operation of the stormwater drainage system. Any person violating this section or damaging the stormwater drainage system shall be liable to the city for all expense, loss or damage incurred by the city due to such violation or damage, in addition to any other penalties set forth herein.

**Section 31-260 Inspection.**

The Director or his designated representative may periodically inspect development sites. Through such periodic inspections the Director shall ensure that the drainage plan is properly implemented. The improvements shall be maintained by the developer or owner until such time, if any, maintenance is taken over by the city.

**Section 31-270 Remedial work.**

If it is determined that development is not proceeding in accordance with the approved drainage plan, the Director shall issue a written stop-work order to the developer detailing the nature and location of the noncompliance and specifying what remedial work is necessary to bring the project into compliance. The developer shall immediately stop work on all aspects of the development except the required remedial action, which shall begin. The developer shall complete the remedial work within a reasonable time after receipt of said order. Upon satisfactory completion of the remedial work, the Director shall issue a notice of compliance and the development may proceed.

**Sec. 35-53. Multi-family residential design standards.**

**A. General Density.** Maximum height, as well as the minimum lot size, depth, width and building setbacks for multiple family developments shall comply with the applicable zoning district standards and the standards established in Exhibit 35-51A.

**B. Principal Buildings/Lot.** Multi-family residential uses may have more than one building located on the lot provided that the minimum distance between multi-family buildings on the same lot shall be 15 feet plus an additional 5 feet for each story in the tallest building when the tallest building has two or more stories.

**C. Private Open Space.**

1. A minimum of 25 percent of the site shall be developed with usable open space throughout the site to provide for active recreational needs of residents. Usable open space excludes parking areas, required landscape areas, land within a designated floodway, and water bodies. Open space shall measure at least 25 feet across its narrowest dimension. Open space may be held in common by owners within the development, or may be privately owned for use by the residents of the development.
2. The Director may waive up to 50 percent of the open space requirement if the development satisfies one of the following criteria.
  - a. All units are located within 1,000 feet of a public park as measured along a public sidewalk, trail or bikeway; or
  - b. The development abuts or includes, on-site, a portion of the City's trail system; or
  - c. The development includes active recreation amenities for residents such as pools, tennis courts or playgrounds.



**Sec. 35-54. Cluster subdivision and compact housing provisions.**

**A. Purpose and Intent.** Cluster Subdivisions and Compact Housing Developments may be authorized according to the provisions of this Section to preserve environmentally-sensitive areas, open space and agricultural lands. The intent of this Section is to authorize a developer to decrease lot sizes and leave the land "saved" by so doing as open space or conservation areas, thereby lowering development costs and increasing the amenity of the project without increasing the density beyond what would be permissible if the land were subdivided into the size of lots required by the underlying zoning district.

**B. Applications.**

1. **Cluster Subdivision.** (Where subdivision of land is involved; processed concurrently with major or minor subdivision). Applications for cluster subdivision shall be simultaneously processed as a (i) Special Exception Use Permit under the Zoning Code in conformance with Section 35-73.D, and (ii) according to the requirements for major or minor subdivision, as appropriate. All such submissions shall be labeled "Cluster Subdivision."
2. **Compact Housing Development.** (Where subdivision of land is not involved). Applications for compact housing developments shall be processed as a Special Exception Use Permit in conformance with Section 35-73.D. All such submissions shall be labeled "Compact Housing Development."

**C. Permitted Zoning Districts.** A developer may create a cluster subdivision or compact housing development in a standard residential zoning district which includes lots that are smaller and arranged differently than those required by the underlying zoning district regulations if the application conforms to this Section.

**D. Housing Types.** Housing types within a cluster subdivision or compact housing development shall be as authorized by the underlying zoning district, shown in Exhibit 35-28, Land Use Matrix; and subject to Exhibit 35-54A and the additional standards of this Section.

**E. Project Size and Density.** There is no minimum or maximum acreage limitation for a cluster subdivision. The maximum allowable residential density shall not exceed the maximum density allowed in the underlying zoning district. Maximum allowable residential density shall be calculated by using Exhibit 35-51A, Units/Acre.

**F. Lot Dimension and Setback Requirements.**

1. There are no prescribed minimum lot dimensions. Lot widths and depths shall be sufficient to accommodate the use and minimum building setbacks required for the housing type.
2. Zero lot line development may transfer all or part of the side setback to one side; such that one side may be zero if the opposite side setback is 20 feet. No mechanical equipment, roof overhang, or object attached to or associated with the dwelling unit may overhang the lot line.
3. No side setback is required on the interior or "attached" side of an attached dwelling.
4. For buildings containing more than one dwelling unit, the front, side and rear yard setbacks listed in Exhibit 35-54A shall be measured from the perimeter of the building.
5. A minimum of 20 feet must be provided between multiple family buildings on the same parcel or lot.
6. The preliminary and final subdivision plats shall indicate all setback lines for all proposed buildings and upon all proposed lots, including designation of all "zero" lot lines.

**Exhibit 35-54A: Lot and Setback Standards for Cluster Subdivision Developments<sup>1</sup>**

Housing Type	Minimum Building Setback (Feet)		
	Front <sup>2</sup>	Side	Rear
Single Family Detached	20	10	20
Zero Lot Line Single Family Detached <sup>3</sup>	20	0/20	20
Single Family Attached <sup>4</sup>	20	0/10	20
Duplex	20	10	20
Multiple-family <sup>5</sup>	20	10	20
Townhouse	20	0/10	20

Notes: <sup>1</sup> See the underlying zoning district regulations for maximum density allowed.

<sup>2</sup> See Section 35-51.B.5 for garage setback requirements.

<sup>3</sup> Reflects transfer of all of the required side setback to one side;

<sup>4</sup> Reflects the "0" setback on "attached" side of an attached dwelling; 10' setback on the opposite side.

<sup>5</sup> See Section 35-54.F for setbacks required between multiple family buildings on the same parcel.

**G. Required Open Space, How Calculated.** The amount of open space or conservation area which must be set aside shall be determined as follows:

**1. Cluster Subdivisions.**

The amount of open space or conservation area which must be set aside in cluster subdivisions shall be based on the difference between the total area contained within all cluster lots and the total area which would have been contained within an equivalent number of standard lots based on the minimum lot requirements of Exhibit 35-51 A according to the zoning district in which the project is located. All lot reductions shall be compensated for by an equivalent amount of land in open space or common area to preserve and maintain in accordance with the provisions of this Section.

**2. Compact Housing Development.**

All land within a compact housing development not covered by buildings, parking lots or streets shall be reserved as common land and open space.

**H. Open Space Standards.**

**1. Ownership and Maintenance of Open Space.**

a. The developer shall provide for the ownership and continued maintenance of all open space created under one or more of the methods stated below. City approval of the form of dedication or conveyance shall be required:

- (1) offer to dedicate land to the public;
- (2) convey open space to be held in common; or
- (3) where agricultural land is to be preserved, create an agricultural easement over that portion of the property to be protected.

- b. Open space which is to be held in common shall be owned and maintained by an organization established by the applicant and approved by the City. The applicant shall submit covenants and restrictions regarding permanent maintenance of the open space, including provisions addressing:
        - (1) maintenance duties of the organization;
        - (2) the manner in which lot owners will be assessed by the organization;
        - (3) conditions of default; and
        - (4) the manner of enforcement by the City.
      - c. Open space which is to be dedicated for public use shall be located to provide access to or provide protection of adjacent public lands.
  - 2. **Open Space Allocation.** Open space shall be provided for each phase of a development. If common open space will not be provided proportionally by phase, the applicant shall execute a reservation of common open space by grant of an easement or covenant in favor of the City, authorizing the City to dedicate all or a portion of such reserved area to common open space in the event that the development is not completed.
  - 3. **Open Space Design and Improvements.**
    - a. Open space areas shall be linked to existing and planned public open space and greenways wherever possible.
    - b. Open space areas shall be arranged to maximize access and use by residents of the cluster development.
    - c. Where open space improvements are provided, a safe, secure and barrier-free system of trails, paths, walkways and bikeways shall be designed. Walkways and bikeways may link with recreation areas, schools, commercial areas and public facilities.
    - d. Improvements may include paved pedestrian paths located in public rights-of-way, pedestrian easements, paved bikeways, or other agreed-upon improvements.
- I. Project Landscaping and Compatibility Requirements.**
- 1. **Development Buffer.** The perimeter of a cluster subdivision or compact housing development shall be buffered from adjacent residential property with a Type A Bufferyard. Project landscaping design shall be established in conjunction with the preliminary plat approval.
  - 2. **Design and Installation.**
    - a. A project landscape, open space and screening plan shall be prepared and shall include the following information:
      - (1) Location of all plant materials including a key that indicates type and size referenced to a landscape schedule.
      - (2) Landscape schedule showing species, size, color, and quantity of landscape materials shown on plan.
      - (3) General information about planting, erosion control, scheduling of installation and irrigation.
      - (4) Location of berms or screening walls.
    - b. The applicant will be required to establish a permanent ground cover in the landscape area to stabilize the soil to prevent erosion.
    - c. Berms or screening walls where proposed or required shall be as approved by the City and completed prior to the issuance of any residential building permits within the project. Material

colors for screening walls shall be limited to earthtone colors. The color shall be uniform for the entire length of the wall.

- d. All landscaping plants shall be maintained in in sound, healthy, and vigorous living condition.

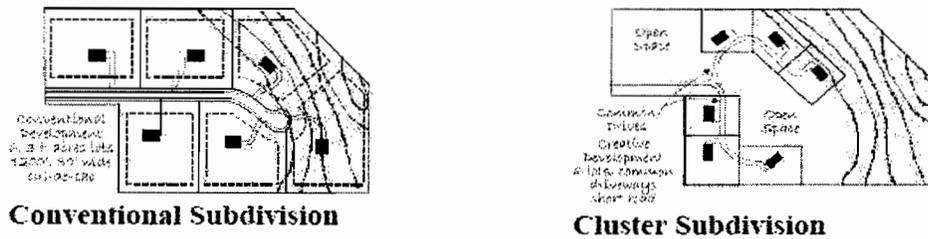
**J. Off-Street Parking.**

Off-street parking shall be provided in accordance with Section 35-58.

**K. Phasing.** An applicant may propose that a cluster subdivision or compact housing development project be developed in phases, or the City may require the applicant to divide the project into phases in order to meet requirements and standards contained in these regulations. Each phase must be self sufficient, meeting the requirements, standards and conditions applicable to that portion of the project, including open space provisions. Each phase of the project shall be supported by adequate public facilities.

**Exhibit 35-54B:**

**Conventional and Cluster Subdivision Compared**



*Exhibit 35-53B shows a comparison of a conventional subdivision lot layout and a cluster subdivision with open space on the same acreage.*

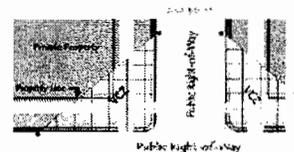
**Sec. 35-55. Visual clear zones (Sight Triangles).**

**A. General.** All intersections of public rights-of-way and driveway intersections with public rights-of-way shall have a visual clear zone (VCZ) that is free of any obstruction to vision of a motorist or pedestrian. The VCZ shall include an area within the public right-of-way and on private property as described below. The VCZ shall be kept clear of visual obstructions between three feet and ten feet above the curb line. Where there is no curb, the height shall be measured from the crown of the street. The VCZ shall be kept free of obstructions that include but are not limited to trees, shrubs, fences, walls and signs. See Exhibit 35-55A. The types of VCZ are addressed below.

**B. Visual Clear Zones.**

1. **At Street Intersections/Corner Lots.** The VCZ shall be a triangular area formed by lines that follow the back of curb, or street pavement edges where there is no curb, and a line connecting them 35 feet from their point of intersection at the corner, including the straight-line extension of the hypotenuse to the center of the street right-of-way.
2. **At Driveway Intersections With Public Streets.** The VCZ at driveway intersections shall be a triangular area formed by lines that follow the back of curb, or pavement edges where there is no curb, and a line connecting them 35 feet from the driveway's intersection

**Exhibit 35-55A - Visual Clear Zone**



## **MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations**

**10 CSR 20-6.200 (5) (A) 6. states** "... A program must be developed which addresses pollution prevention and good housekeeping from municipal operations. The program must include a training component and have the ultimate goal of preventing or reducing impacts from storm water runoff from all municipal operations including those not currently required to be permitted as storm water associated with industrial activities."

MCM #6 will consist of the following for Permit Years 1 through 5:

- a) The City of Jefferson will continue to implement it's street sweeping program. The City employs a four person crew to sweep all City streets four times a year.
- b) The City of Jefferson will continue to implement it's storm water inlet cleaning program. The City of Jefferson - Street Division dispatches twenty three employees to clean debris and accumulated litter from all grated inlets after each storm event.
- c) The City of Jefferson will continue to maintain storage of it's salt stockpiles under cover to prevent runoff.
- d) The City of Jefferson will maintain it's covered vehicle wash stations for City equipment and vehicles. Wash water is transmitted to the sanitary sewer system.

- Examples Attached -



City of Jefferson covered vehicle wash station



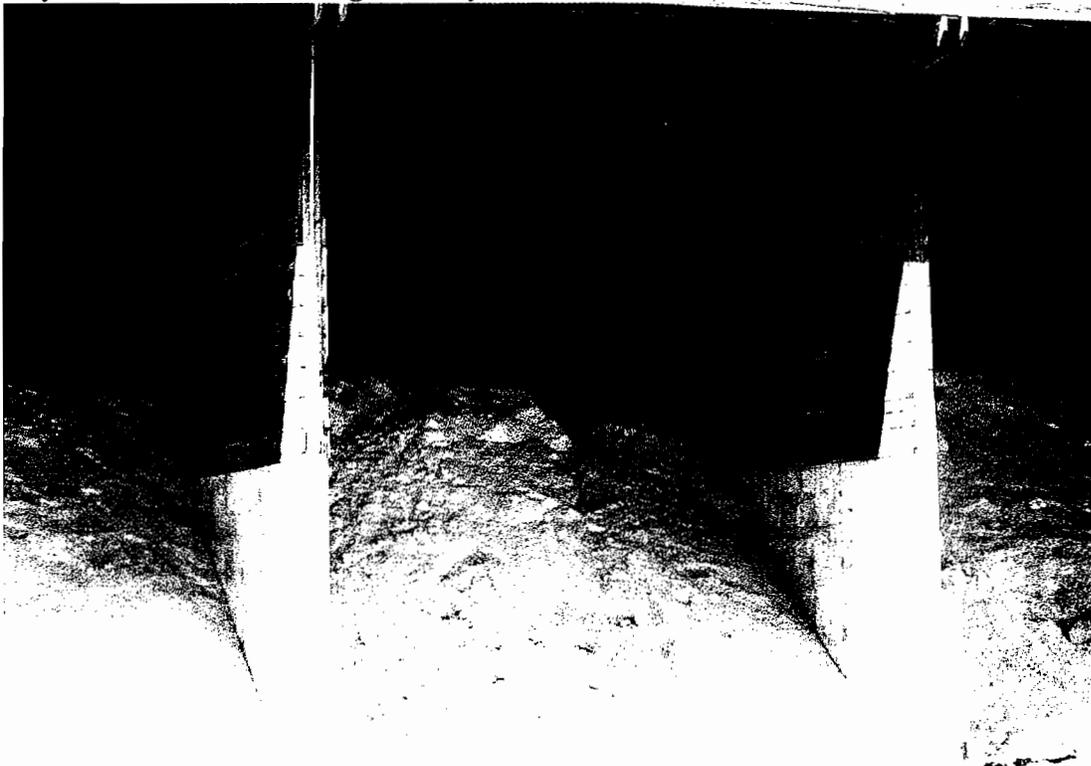
City of Jefferson Street Sweeper



City of Jefferson Street Sweeper Emptying Storage Bin



City of Jefferson Salt Storage Facility



City of Jefferson Salt Storage Facility