



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-5035

Engineering Services

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MEMORANDUM

TO: Robert Ellis, P.E.
City Engineer

FROM: Dion Lowe, P.E.
Project Engineer

SUBJECT: Stormwater Management Plan

DATE: July 24, 2007

Major Drainage Overview Report Project No. DR07-1614

This project will summarize select information in a GIS format from the 20 adopted drainage basin design plans. This information will be summarized in a way that provides easier access and interpretation of these drainage facilities to both the Public Works Department and other City departments. Some of the drainage basin design plans are almost 30 years old. This project will update the information we have on the majority of the major drainage facilities in Rapid City. The table located below shows the number of major drainage facilities described in the basin plans.



EQUAL OPPORTUNITY EMPLOYER

DRAINAGE BASIN	DETENTION POND	RCP PIPES, BOX CULVERTS, OPEN CHANNELS, ETC.
Arrowhead	18	44
Haines Avenue	15	35
Race Track Draw	4	24
Perrine	10	18
South Truck Route	12	21
South Robbinsdale	9	18
Red Rock Canyon	4	31
Meade-Hawthorne	11	42
Knollwood	6	23
Wonderland Drive	13	31
Red Dale	2	94
E. Hwy 79/Landfill	26	85
County Heights	4	22
Old Lime Creek	15	39
South Canyon/Lime Creek	23	46
Deadwood Avenue	13	12
Morningside	3	18
Jackson Boulevard	5	28
Downtown Area	6	61
Unnamed Tributary	5	13
TOTAL	204	705

The major drainage facilities which have not been constructed will be defined as a proposed drainage facility. The final product will include GIS data layers describing the drainage elements and photos of the existing drainage elements collected during the field survey.

Additional information collected during this project which will assist the Public Works Department and other City departments in planning will be:

- 1) A rating for each drainage facility for the loss of life potential, loss of property potential and nuisance flooding. These ratings will help the City prioritize major drainage projects.
- 2) Creek or lake outfall identifications and descriptions. These storm system outlets which discharge directly to our creeks and lakes are required by the Phase II Program to be identified and monitored.

This project is set to be completed by August 31, 2007.

A list of the drainage projects assigned for design and construction through 2011 is also attached.

City of Rapid City, SD

Capital Plan, July 2007

2007 thru 2011

PROJECTS BY FUNDING SOURCE

Source	Project#	Priority	2007	2008	2009	2010	2011	Total
8911 - Drainage								
Lime Creek Metering Dam (Elem 388) Construction	50009	4					515,000	515,000
Box Culvert @ Cambell (Element 5)	50020	2					390,000	390,000
Box Culvert @ SD 44 East of Cambell (Element 3)	50021	3					285,000	285,000
Dover Drainage Improvements	50025-1452	2	38,000	250,000				288,000
Downtown Area Improvement Project - Phase 3 Const.	50119-1170	2					238,000	238,000
Lemmon Ave. Reconst., College to Monroe	50120-1068	n/a	352,148					352,148
Elm Ave. Reconstruction South - Phase 3	50130-1075	2			481,800			481,800
Robbinsdale Reconstruction Project - Engineering	50134-1494	2	28,000	70,000	65,000	60,000	60,000	283,000
Downtown Area Improvement Project - Phase 2 Const.	50138-1432	2			112,800			112,800
Centre St. Reconst., LaCross to Cambell	50141-990	4				300,000		300,000
E. North Reconstruction, Rapid Creek to Cambell	50142-1511	4		6,000	106,000	106,000	100,000	318,000
Elk Vale Rd., I-90 to City Limits - Exit 61	50143-1502	n/a	12,000					12,000
Meade Street Reconstruction - Phase 1	50145-1333b	6	529,776					529,776
Van Buren St., Milwaukee to LaCross	50149-1362	n/a	19,353					19,353
Red Rock Estates Detention Ponds	50259-1182	1	100,000					100,000
Knollwood Outfall, Elements 2 & 20	50312-1390	2	724,910					724,910
Mt View Drainage Improvements	50349	2					385,000	385,000
Jackson Blvd Reconst. Mt. View to Rapid Creek	50351-1509a	3			35,000	400,000		435,000
W. Chicago Street/Drainage Reconst, Seeaire- Wedge	50364-1187	2					225,000	225,000
44th St. Reconstruction; W. Chicago to W. Main	50365-1435	2	85,915	275,000				360,915
Metering Dam Expansion, SLR & Minnewasta	50384	2	75,000	250,000				325,000
Robbinsdale Pk Detention Pond Improvements	50403	3	20,000	300,000				320,000
St. Andrew Reconstruction	50410-1604	1	7,537	57,000				64,537
Viewfield Detention Dam Outlet Structure	50412	3	52,000	123,000				175,000
Meade Street Reconstruction - Phase 2	50416-1333c	2		1,433,100				1,433,100
Silver St. & Gold St. Utilities Reconstruction	50418	3	160,000					160,000
Robbinsdale Reconstruction Project - Phase Three	50421-1494	2				460,000		460,000
Robbinsdale Reconstruction Project - Phase Two	50424-1494	2			440,000			440,000
LaCrosse/Philadelphia Drainage Improvements	50438-1157	2	33,141	210,000				243,141
Promise Rd Detention Pond	50440	1	150,000					150,000
S. Robbinsdale Channel Improvements, Elems. 2 & 4	50556-1485	6	92,156					92,156
East Blvd. Quincy to Rapid Creek Reconstruction	50565	4					10,000	10,000
Canyon Lake Dam Maintenance	50576-1433	1	45,475					45,475
Elk Street Drainage Improvement	50597-1621	2	93,750					93,750
Soo San Water Main & Lime Creek Elem. 382	50598-1562	n/a	558,124					558,124
43rd Court Watermain Reconstruction	50606-1529	1	119,584					119,584
Robbinsdale Reconstruction Project - Phase One	50626	2	170,000					170,000
Downtown Area Improvement Project - Phase 1 Const.	50627-1077	n/a	257,790					257,790
Soo San Drive Box Culvert	50633	6	2,294					2,294
Elm Ave. Reconstruction North - Phase 4	50643-1076	2				234,900		234,900
Lacrosse St. Drainage - Secondary Basin Outfall	50680-1646	2	9,000					9,000
E. Nebraska St. Drainage Improvement	50684	1	59,875					59,875
Parkview Drainage Improvement Project	50690	1	15,000					15,000
Contingency/Inflation Funding for 8911 - Drainage	8911Inflat	1		62,500	65,000	68,000	72,000	267,500

Source	Project#	Priority	2007	2008	2009	2010	2011	Total
8911 - Drainage Total			3,810,828	3,036,600	1,305,600	1,628,900	2,280,000	12,061,928
GRAND TOTAL			3,810,828	3,036,600	1,305,600	1,628,900	2,280,000	12,061,928

Report criteria:

All Project Types

Project Status: Active

All Departments

All Categories

Priority Level: Encumbered or 1 Urgent or 2 Very Important or 3 Important or 4 Less Important or 6 Complete

Source Type: 8911 - Drainage

All Last Revised data

All Project Manager data

All data

All data



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TO: Robert Ellis, P.E.
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SUBJECT: Phase II Stormwater Program Update

DATE: July 24, 2007

Phase II Stormwater Program

The City of Rapid City completed and submitted an application package for the General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems by the March 10, 2003 deadline. This package included a Notice of Intent, municipal map and Stormwater Management Program proposal. The Department of Environment and Natural Resources reviewed and approved the proposal, and assigned the City permit number SDR41A007 on April 25, 2003. This permit is effective until December 31, 2007.

Some of the goals described in the Stormwater Management Program which the City has accomplished or are in progress are:

1. Collaborate with 4th grade teachers and schools to incorporate water resource education modules into the study program.
2. Advertise and track Rapid City Cleanup activities.
3. Continue with web page development and updates.
4. Brochure distribution.
5. Host official public information meetings.
6. Develop and distribute Phase II information sheet for City industrial pretreatment inspector and DENR hazardous waste inspector.
7. Begin storm drain stenciling.



EQUAL OPPORTUNITY EMPLOYER

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8. Begin series of articles in Journal discussing Rapid Creek water quality and Dr. Scott Kenner studies.
9. Establish a stormwater hotline.
10. Review existing City ordinances.
11. Develop standard operating procedure for all City departments to respond to hazardous and non-hazardous spills within the City.
12. Contact all parties interested in drainage criteria review and revision.
13. Form workgroup to review assigned sections of Drainage Criteria Manual.
14. Develop procedures for plan review, permit issuance, site inspection, and enforcement.
15. Review all and draft any necessary ordinances or regulatory methods related to construction and post-construction stormwater runoff.
16. Compile and complete draft of Drainage Criteria Manual.
17. Develop standard inspection forms for all construction and post construction runoff.
18. Develop storm sewer cleaning procedures.
19. Develop procedures for snow and sweeping operations, pesticide, herbicide, and fertilizer application and use.
20. Develop runoff control plans for 25% of the facilities listed in the inventory and ranking.
21. Develop procedures for requiring water quality BMPs on all new flood control projects.
22. Continue pollution prevention activities consistent with written procedures.

A Stormwater Steering Committee, which is made up of 16 people which includes consultants, developers, aldermen, and contractors, has been established to help guide the Stormwater Management Program and accomplish all of the goals outlined in the program. This committee is currently looking at a proposed Stormwater Quality Manual draft and three (3) new proposed stormwater runoff control ordinances. The present goal of this committee is to send a final draft of the Stormwater Quality Manual and the three (3) stormwater runoff control ordinances to the Public Works Committee and the Council for approval sometime late this summer.