

OPERATIONS AND MAINTENANCE ANNUAL REPORTING TABLE FOR STORMWATER NPDES PERMIT

TASK	1996	1997 (Jan-Aug) (1997 Report)	1997 (Jan-Dec) (1998 Report)	1998 (Jan-Dec) (1999 Report)	1999 (Jan-Dec) (2000 Report)	2000 (Jan-Dec) (2001 Report)	2001 (Jan-Dec) (2002 Report)	2002 (Jan-Dec) (2003 Report)	2003 (Jan-Dec) (2004 Report)
MAINTAIN DRAINAGE FACILITIES (INVENTORY)									
• curb & gutter lineal feet(Roads)	6,280,889	5,315,105	5,315,105	3,878,642	3,668,024	3,441,640	3,459,334	3,413,517	3,421,345
• catch basins (Roads)	54,779	32,808	32,808	33,452	31,902	30,377	30,389	30,490	30,695
• paved ditch lineal feet (Roads)	148,617	169,302	169,302	112,691	96,901	92,438	90,258	88,236	88,611
• open ditch lineal feet (Roads)	8,226,256	7,838,016	7,838,016	7,116,780	7,087,728	6,547,000	6,530,503	6,538,337	6,648,285
• cross culverts (Roads) & access tiles (duplicated numbers in previous budget) cross culverts = 24,517	62,723	47,381	47,381	46,185	45,131	41,210	41,049	40,951	41,246
• bridges (Roads)	223	195	195	185	184	179	177	178	187
• mowable slopes pass miles(Roads)	4,291	4,779	4,779	4,163.2	4,136	3,936	3,971	3,963	4,254
• residential R/D facilities (WLRD)	1,196	1,466 (incl. City contracts)	1371	1371	1371	393	1536	1593	1612
• commercial & multifamily R/D facilities (WLRD)	1,455	1,427 (incl. City contracts)	1139	1136	1136	1137	1167	1261	1303
• commercial & multifamily conveyance- only facilities (WLRD)	300	325	390	420	460	458	463	474	478
• regional R/D facilities (WLRD)	124	118	131	170	180	186	190	195	199
MAINTAIN DRAINAGE FACILITIES (MAINTENANCE)									
ALL TYPES OF FACILITIES									
Apply K.C. Ord 5824, Sections 7B, 9A, & 9D (R/D maintenance)	yes	yes	yes	yes	yes	yes	yes	yes	yes
Apply SWDM standards to new County BMP facilities	yes	yes	yes	yes	yes	yes	yes	yes	yes
Investigate all R/D complaints	yes	1260 drainage complaints, 150 R/D related	YTD 180 incl. 18 R/D related	940 drainage complaints, 217 R/D related	918 drainage complaints, 256 R/D related	531 incl. 176 R/D related	878, 142 R/D related	742, 207 facility related	577, 177 Facility Related
Investigate and prioritize drainage problems		60 corrective WOs issued		65 corrective wo's issued	50 corrective WO's issued	34 corrective WO's issued	40 corrective WO's issued	101 corrective WO's issued	63-corrective WQ's issued
RESIDENTIAL R/D									
Inspect new residential systems for maintenance needs during first 2 years after construction @ 4x/yr	yes	65 facilities	70 facilities	80 facilities	80 facilities	95 facilities	130 facilities	107	163 facilities
Evaluate need of each existing residential R/D w/MIS for assessment	yes	yes	yes	yes	yes	yes	yes	yes	yes
Schedule R/D assessments considering seasonal workload ("phased assessments")		yes	yes	yes	yes	yes	yes	yes	yes

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COMMERCIAL FACILITIES									
Inspect conveyance-only commercial drainage systems	Yes (0.9 FTE)	Yes (0.9 FTE)	yes (0.9 FTE)	new facilities only (30)	new facilities only (30)	Program discontinued for CY 2000	Program discontinued for CY 2001	Program discontinued for CY 2002	Program discontinued for CY 2003
Use MIS to inventory facilities and organize work program (includes laptop hookups for field technicians)	yes	yes	yes	yes	Yes	yes	yes	yes	yes
Self-inspection & maintenance of privately owned commercial and multifamily R/D facilities	yes	904 in program	907	900 in program	No (County inspected 1136 facilities, incl. City contracts)	No self- inspection. (County inspected 1136 facilities, incl. City contracts.)	No self inspection. (County inspected 1167 facilities incl. City contracts.)	No self inspection (County inspected 1240 facilities incl. City contracts.	No-self inspection- (County inspected 1303 facilities incl City contracts
REGIONAL R/D									
Annual inspections of regional R/D	yes	yes	yes	yes	yes	yes	yes	yes	yes
Inspect regional R/D facilities needing frequent maintenance before anticipated storms and after all major storms	yes	yes	yes	yes	yes	yes	yes	yes	yes
FACILITIES WITHIN ROAD RIGHTS-OF-WAY									
Routine Maintenance¹		Proposed	Actual	Actual	Actual	Actual	Actual	Actual	Actual
• curb & gutter (Roads)	11,186 linear ft	559	1,274	1,960	1,697	1,556	1,336	3,127	2,863
• hand ditching (Roads)	1,558 linear ft	5,487	1,487	638	1,674	552	2,181	1,230	1,953
• drainage tile (Roads)	15,427 linear ft	6,070	25,826	20,255	13,115	5,628	8,716	9,312	5,178
• vactor catch basin/manhole (Roads)	7,646	8,599	5,775	3,399	2,664	5,029	3,279	2,717	3,217
• blade ditching/ shoulder pulling (Roads)	750,010 linear ft	556,041	637,592	742,303	342,510	629,010	706,169	885,932	529,990
• clean drain systems—equip (Roads)	126,003 linear ft	93,378	125,435	94,662	72,605	159,444	200,567	87,173	58,981
• clean drain systems—hand (Roads)	6,958	9,211	4,698	5,345	3,253	1,285	3,293	4,059	4,715
• drainage preparation (Roads)	942 man hours	1,105	523	248	519	261	408	522	660
• repair catch basins (I & II)(Roads)	579	164	435	11,056	212	163	211	49	138
• repair headers/trash rack (Roads)	183	166	94	20	24	4	7	20	28
• bucket ditching (Roads)	239,532 linear ft	272,763	273,729	196,381	63,544	56,444	142,208	120,859	137,807
• replace catch basins (I & II)(Roads)	133	95	174	844	124	49	84	94	58

¹ Figures in this section and those that follow do not include city contracts. Figures for 1996 submitted with 1997 report and for 1997 with the 1998 report. no partial year data available.

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• replace catch basin lids (Roads)	208	161	172	164	191	139	100	213	153
• hydroseeding (Roads)	65,550 square yds	219,464	19,394	15,919	12,135	21,417	22,835	54,385	24,600
• ditchmaster ditch clean (Roads)	228,870 linear ft	228,870	0	14,828	0	1,724	0	0	0
IMPROVEMENTS TO EXISTING ROAD DRAINAGE SYSTEM									
• linear feet of pipe		14,419	6,874	8,516	5,615	11,743	10,130	8,428	7,059
• new catch basins		203	107	116	102	166	135	143	124
• \$'s of erosion control			N/A	\$256,052	\$181,749	\$438,639	\$73,995	\$82,936	60,896
REMOVE SNOW AND ICE FROM ROADS									
Use salt and sand combination		8,984	6,502	16,897	6,505	11,319	9,965	22,407	13,187
BMPs to minimize water quality impacts (sweep sand off road ASAP after storm)	yes	yes	yes	yes	yes	yes	yes	yes	Yes
USE ROADS MAINTENANCE BMPs									
Finish BMP manual for K.C. Road Maintenance Operations	no	yes (revisions on-going based on testing & cost)			Developing Tri-County Road Maintenance Manual. After Tri-County Manual Developed, King County Will use Tri-County as minimum requirements.	Plan to adopt BMP Manual as revised in the tri-county negotiations for protection of Salmon and bull trout this year. (Timing is uncertain.)	Regional Road Maintenance ESA Program Guidelines currently published in the Federal Register with Public comment closed 2/25/02	Regional Road Maintenance ESA Program Guidelines currently published in the Federal Register with Public comments currently being added.	Regional Road Maintenance ESA Program Guidelines has been approved. The Biological Opinion was received on August 5, 2003 by NMFS.
Evaluate BMPs for cost-effectiveness				yes	Yes – ongoing	Yes – ongoing	Yes – ongoing	Yes – ongoing	Yes – ongoing
Implement BMPs for ESC on Road's projects		full implementation for CIPs; partial implementation for maintenance (need 10% budget increase for full implementation)		yes	Environmental Supervisor position created. to provide field support and supervises BMP Implementation on Maintenance Projects.	Environmental Supervisor filled. Provides field support and supervises BMP Implementation on Maintenance Projects.	Environmental Supervisor filled. Provides field support and supervises BMP Implementation on Maintenance Projects.	Environmental Supervisor filled. Provides field support and supervises BMP Implementation on Maintenance Projects.	Environmental Supervisor and Environmental Unit Staff Provide Field Support and Supervises BMP Implementation on Maintenance Projects.

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MAP STORMWATER DRAINAGE FACILITIES									
Map facilities in public road rights-of-way		(see map - facilities completed)	continuing	continuing	continuing	continuing	Continuing	Continuing	Continuing
Work with WLRD on complete connectivity between right-of-way and off-right-of-way drainage systems. [WLRD withdrew from the mapping program in 1995.]			no	no	no	no	no	Reinstated Nov 2002	Continuing
Develop GIS macro for mapping R/D facilities and complaints		near completion	in progress	in progress	in progress	in progress	Complete	Complete	Complete
DISPOSE OF VACTOR WASTE									
Provide a network of vactor waste receiving stations for public & private sector	none	<ul style="list-style-type: none"> • 1 liquid-only for KC gov't users in Shoreline • 1 liquid and solid for all w/ GRCC training opens in Renton in Oct. if Council agrees on rate structure. Delayed due to flood repairs. 		<ul style="list-style-type: none"> • 2 liquid and solid construction in 98 open in 1999 • 1 liquid and solid for all w/ training opened in Renton in July. 	2 stations to open mid 1999 one in south and one in north.	<ul style="list-style-type: none"> • North end site, Bruggers Bog, to open in the summer. Includes disposal of solids and liquids. • South end site, Star Lake, to open in 2001. Delay due to permit issues with municipalities 	<ul style="list-style-type: none"> • North End station, Bruggers Bog and Renton Station open. Includes disposal of solids and liquids. • South end site, Star Lake, to open in 2002. Delay due to permit issues with municipalities. 	<ul style="list-style-type: none"> • North End station (Brugger's Bog) and Renton Station open. Includes disposal of solids and liquids. 	<ul style="list-style-type: none"> • South end site, Star Lake, opened to KC and WSDOT use only in late March of 2002. No plan to open to any other users. Includes disposal of solids and liquids. Preliminary Feasibility Studies Conducted on Redmond Site.
Improve disposal process:									

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<ul style="list-style-type: none"> solids to vendors who recycle and reuse end product 	yes	yes	yes	yes	yes	Yes	Yes	Yes	Street Waste Materials Screened, Bioremediated and Tested for Contaminants. Clean soils used in Roads Mine Reclamation Projects. Contaminated Materials Consigned to Contractors for Thermal Desorption or Bioremediation.
<ul style="list-style-type: none"> portable water treatment plant for remote sites where sewer connections are not cost-effective 	yes	yes	yes	yes	yes	Continuing	Discontinued with the opening of the North End station and the anticipated opening of the south end station.	No. No sewer connection at Star Lake. Liquid is transported by 6,000 gal. wastewater tanker to KC Renton Decant station for disposal.	Portable Treatment Plant Sold. Bog and Renton Station Connected to Sewer. Decant Liquids from Star Lake Station, and Cadman and Summit Ponds transported by 6,000 gal. Wastewater Tanker to Renton Decant station for disposal to Sewer.

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<ul style="list-style-type: none"> recycle treated water in vactors and street sweepers 	no	not yet—portable treatment plant purchased, storage tanks not yet constructed (budgeted funds diverted to flood damage—may yet construct for KC govt. use only in Issaquah & Summit areas		Planting operation undergoing tests for DOE approval for three sites Summit, Cadman, and Issaquah	To be operated at South County station opening in mid 1999.	Due to budget cuts from I-695 funding for this effort may be lost. Liquids are currently planned to be trucked from these sites to locations where they can be decanted to sewer.	Experimental studies were conducted to determine cost and effectiveness of use for recycled water from the wastewater treatment plant in Renton. Water was used in dust control, watering newly planted vegetation, charging Renton's decant settling vault, and use in sweeper trucks.	Did not use recycled water from Metro's wastewater treatment plant to recharge Renton Decant Station settling vault. Not cost effective.	Did not use recycled water from Metro's wastewater treatment plant to recharge Renton Decant Station settling vault. Not cost effective.
<ul style="list-style-type: none"> course for operators required before County facilities can be used 		yes		yes	yes	yes	Yes	Yes	Yes
<ul style="list-style-type: none"> offer required course through GRCC 		yes		no	no	no	No	No	No
Joint venture vactor station in south K.C. (w/WSDOT & cities)				no	no	no	No	Yes. See Star Lake above.	Yes. See Star Lake above.

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<i>OBSERVE NPDES INDUSTRIAL STORMWATER PERMITS</i>									
Use BMPs in SWPPPs for operating facilities and mining/filling sites		yes	yes	yes	yes	yes	yes	Yes	Yes
Monitor consistent with the permit monitoring plans		yes	yes	yes	yes	yes	yes	Yes	Yes
Recycle road maintenance waste material (debris)		yes, as feasible	yes	yes	yes	yes	yes	Yes	Yes
Use BMPs as per SWPPPs for storage and handling of road debris		yes	yes	yes	yes	yes	yes	Yes	Yes
<i>PRACTICE INTEGRATED VEGETATION MANAGEMENT</i>									
Implement plan policies in road rights-of-way			yes	yes	yes	yes	yes	Yes	Yes
Develop cost estimates for full implementation of the IVMP	no		yes	yes	yes	yes	yes	Yes	Yes
Fund the IVMP	no		yes	yes	yes	yes	yes	Yes	Yes
<i>OTHER ACHIEVEMENTS</i>									
Study impacts of road shoulder types to water quality & quantity (Roads, WSDOT, UW)	continuing	done (8 ft porous pavement shoulder will detain and treat a high percentage of roadway runoff)		Working with regulatory agencies to adopt as BMP		Negotiating as time permits.	Included as part of the BMP Case Studies in the Regional Road Maintenance ESA Program Guidelines	Included as part of the BMP Case Studies in the Regional Road Maintenance ESA Program Guidelines.	Included as part of the BMP Case Studies in the Regional Road Maintenance ESA Program Guidelines.