Table 2
Summary of Annual/Periodic Operation and Maintenance Requirements & Costs
Bassett Creek Flood Control Project, MN
March 12, 2014

		Annual Operation & Maintenance			Five Year Operation & Maintenance		Significant Rehabilitation of Structure [6]	End of Design Life	
		Annual Inspection & Report [1]	Debris Removal [2]	Brushing & Tree Removal [3]	Five-Year Inspection & Report [4]	General Maintenance & Repairs [5]		Estimated Year of Replacement [7]	Replacement of Structure [9]
Minneapolis									
A	Tunnel								
	1 Phase 1 - Second Street Tunnel (Mn/DOT)					$439,100	$5,030,400	2029	$61,944,784
	2 Phase 2 - 3rd Avenue Tunnel (BCWMC)					$150,900	$1,728,400	2040	$12,378,834
	3 Phase 3 - Double Box Conduit and Inlet Structure				$13,900	$524,600	$6,010,500	2042	$60,309,774
	Minneapolis Subtotal:				**$13,900**	**$1,114,600**	**$12,769,300**		**$134,633,400**
Golden Valley									
B	Golden Valley Country Club Embankment	$1,500	$1,800	$1,800		$14,600	N.A	2031	N.A.
	Golden Valley Country Club Control Structure	$1,500	$1,800	$1,800		$14,600	$491,521	2044	$1,966,083
C	Hwy 55 Control Structure	$1,500	$1,800			$14,600	$115,295	2044	$461,180
D	Wisconsin Avenue Control Structure	$1,500	$1,800			$14,600	$108,547	2037	$434,189
E	Road Crossings								
	1 Regent Avenue	$700	(8)			(8)	$123,964	2031	$495,854
	2 Noble Avenue	$700	(8)			(8)	$123,964	2031	$495,854
	3 Westbrook Road	$700	(8)			(8)	$217,982	2043	$871,929
	Golden Valley Subtotal:	**$8,100**	**$7,200**	**$3,600**		**$58,400**	**$1,181,272**		**$4,725,089**
Crystal									
F	Edgewood Embankment and Control Structures	$1,500	$1,800	$4,400		$14,600	$95,039	2031	$380,155
G	Markwood Channel & Culverts	$1,500	(8)			(8)	$61,982	2031	$247,927
H	Hwy 100 Control Structure & BC Park Pond	$1,500	$1,800	$1,800		$117,100	$975,180	2031	$3,900,720
I	Road Crossings								
	1 32nd Avenue	$700	(8)			(8)	$95,039	2031	$380,155
	2 Brunswick Avenue	$700	(8)			(8)	$95,039	2031	$380,155
	3 34th Avenue	$700	(8)			(8)	$95,039	2031	$380,155
	4 Georgia Avenue	$700	(8)			(8)	$78,510	2031	$314,041
	5 36th/Hampshire Avenue	$700	(8)			(8)	$157,021	2031	$628,082
	6 Douglas Drive	$700	(8)			(8)	$108,547	2037	$434,189
	Crystal Subtotal:	**$8,800**	**$3,500**	**$6,100**		**$131,700**	**$1,761,395**		**$7,045,580**
Plymouth									
J	Medicine Lake Outlet Structure	$1,500	$1,800	$1,800			$115,879	2046	$463,515
K	Plymouth Creek Fish Barrier	$1,500	$1,800	$1,800			$64,142	2037	$256,566
	Plymouth Subtotal:	**$1,500**	**$1,800**	**$1,800**			**$180,020**		**$720,081**
Total Bassett Creek Flood Control Project Costs		**$18,400**	**$12,500**	**$11,500**	**$13,900**	**$1,304,700**	**$15,890,000**		**$147,120,000**

(1) Inspection & report; Inspection at tunnel only includes inlet structure and approach channel
(2) BCMWC Responsible for Maintenance. Work assumed to be performed by City and reimbursed by BCWMC.
(3) BCMWC Responsible for Maintenance. Work assumed to be performed by City and reimbursed by BCWMC.
(4) Five year inspection required for above-water portion of Bassett Creek Tunnel
(5) General Maintenance includes: sediment removal, erosion repair, riprap replacement, sod & vegetation and other misc. maintenance items.
Does not include gate at Wisconsin Ave. (Note: Bassett Creek Park Pond is assumed to be dredged every 10 years at cost of $230,000 assuming a type 1 material and $500,000 for a type 2 material that requires disposal in a landfill)
Lowering the middle pool (if approved by Corps, Coast Guard, DNR etc.) could decrease dewatering costs up to $45,000.
(6) Includes all items in 1-year and 5-year O &M repairs plus void fill in Minneapolis tunnels, partical structure demo and replacement, Wiscsonsin Avenue gate upgrades for construction costs in 2014.
(assume one repair project per project feature in addition to 5-yr maintenance)
(7) Assumes a 50 year life of project
(8) Assumes City shall be responsible for maintenance of all road crossings and the Markwood channel modificatons and storm sewer components.
(9) Cost includes total replacement of structure at the end of design life assuming 3% inflation and construction technology, means, and methods remain as they are today (2014).