Lake Ballinger/McAleer Creek Watershed Forum Capital Improvement Plan

Action or Project		Priority	Description	Lake Ballinger/Hall Creek		McAleer Creek		Project Information			Service Criteria[1]			Goal	Issues	Projected Outcome
				Watershed Issue A	Watershed Issue B	Watershed Issue C	Watershed Issue D	Projected Planning Level Cost	Potential Funding Options[3]	Project Lead Agency[4]	1	2	other			
Lower McAleer Creek								**(2009 dollars)**								
Phase I	**Forum Project** Model the McAleer Creek flood plain in Lake Forest Park and Shoreline to update FEMA flood plain mapping information	A1	Accurately model flow and determine flood plain elevations for McAleer Creek from Lake Ballinger to Lake Washington - develop modeling and flood plain management guidelines to assist the Cities of Shoreline and Lake Forest Park with future development or redevelopment and to leverage FEMA funds for flood proofing program. **This portion of the FEMA flood plain mapping project will assume flows from Lyon Creek have been redirected or minimized.**			X		$750,000 to $1,000,000	Grant	Lake Forest Park, Shoreline			X	Revise existing flood plain maps to accurately reflect existing conditions and to develop modeling and flood plain management guidelines	Joint project in Shoreline and Lake Forest Park	Give accurate guidance to cities with development and redevelopment in the affected flood plain
	Private Project Develop and implement flood proofing program	A2	Leverage FEMA funds for flood proofing program			X		$2,000,000 to $3,000,000	Grant	Lake Forest Park			X	Develop flood proofing program to prevent structure flooding	Privately initiated flood proofing program with possible City assistance	Developing an effective flood proofing program
	Lyon Creek Bypass/Lyon Creek Channel Modifications	B	Forum to provide encouragement to Lake Forest Park to seek funds to eliminate the Lyon Creek overflow to McAleer Creek during storm events			X		$3,100,000	Lake Forest Park	Lake Forest Park	X	X		Minimize the impact of Lyon Creek on McAleer Creek during storm events	No financial commitment on the part of upstream Forum jurisdictions	Reduce overflow from Lyon Creek during storm events to minimize flooding at Sheridan Beach
	McAleer Creek Bypass Intake Retrofit	C	Retrofit McAleer Creek Bypass Intake to optimize facility function			X		$213,000	Grant	Lake Forest Park	X	X		Reduce the occurrence and severity of flooding in the Sheridan Beach Neighborhood of Lake Forest Park along McAleer Creek	Project benefits residents in Lake Forest Park only.	Would remove 30 cfs from McAleer Creek through the Sheridan Beach Neighborhood during the 100-yr event
Phase II	Upgrade/Replace Culverts on McAleer Creek	D	Enhance and replace four culverts on McAleer Creek in Lake Forest Park			X		$1,000,000	Grant	Lake Forest Park	X	X		Reduce localized flooding in Lake Forest Park.	Project benefits residents in Lake Forest Park only.	Up to 10 residences in Lake Forest Park would be protected from localized flooding.
	McAleer Creek Flood Berms	E	Install berms or other flood proofing along McAleer Creek in Lake Forest Park			X		$830,000	Grant	Lake Forest Park	X			Keep structures from flooding during 100 year events	Permitting, work on private property	Minimize flooding during 100 year events
	Basin Wide LID Retrofits	F	Retrofit existing city parcels and right of way with Low Impact Development BMP's	X	X	X	X	$5,000,000 to $10,000,000 over 20 years	Appropriations or grant	Lake Forest Park, Shoreline	X	X		Reduce flooding and improve water quality	Long term - 20 year plan	Eliminate 100 year flooding events, improve on fecal, temperature and chemical issues in McAleer Creek
Upper McAleer Creek/Lake Ballinger/Hall Creek																
Phase I	**Forum Project** Model the Hall Creek and Lake Ballinger flood plain in Edmonds and Mountlake Terrace to update FEMA flood plain mapping information	A1	Accurately model flow and determine flood plain elevations for Hall Creek and Lake Ballinger - develop modeling and flood plain management guidelines to determine the most advantageous elevation of Lake Ballinger weir	X				$750,000 to $1,000,000	Grant	Mountlake Terrace, Edmonds			X	Revise existing flood plain maps to accurately reflect existing conditions and to develop modeling and flood plain management guidelines	Joint project in Mountlake Terrace and Edmonds	Give accurate guidance to cities with development and redevelopment in the affected flood plain while managing the level of Lake Ballinger and developing a flood proofing program
	Private Project Develop and implement flood proofing program	A2	Leverage FEMA funds for flood proofing program	X				$1,000,000 to $2,000,000	Grant	Edmonds			X	Develop flood proofing program to prevent structure flooding	Privately initiated flood proofing program with possible City assistance	Developing an effective flood proofing program
	McAleer Creek Weir															
	Action I	**B**[2]	Install new weir gate	X	X			$25,000	Mountlake Terrace	Mountlake Terrace	N/A	N/A	N/A	Restore weir to 1995 maintenance status	MLT maintenance issue	Meet existing maintenance requirements
	Action II	B1	Lower weir structure to first Nile culvert - **1.5 feet lower** - install new weir foundation and dredge creek channel to lake	X				$500,000	Grant	Mountlake Terrace, Edmonds	X			Keep lake level below 279.3	Would require readjudiction of the Superior Court Order regarding lake level	Would reduce by 59% the length of time that the lake would be above 279.3
	Action II	B1	Lower weir structure to first Nile culvert - **1.5 feet lower** - install new weir foundation and dredge creek channel to lake	X				$500,000	Grant	Mountlake Terrace, Edmonds		X		Keep lake level below 277.4	Would require readjudiction of the Superior Court Order regarding lake level	Would reduce by 74% the length of time the lake would be above 277.4
	Action III	B2	Lower weir structure by **3.75 feet** - install new weir foundation and dredge creek channel to I-5	X				$1,000,000	Grant	Mountlake Terrace, Edmonds	X			Keep lake level below 279.3	Would require readjudiction of the Superior Court Order regarding lake level	Would reduce by 93% the length of time the lake would be above 279.3
	Action III	B2	Lower weir structure by **3.75 feet** - install new weir foundation and dredge creek channel to I-5	X				$1,000,000	Grant	Mountlake Terrace, Edmonds		X		Keep lake level below 277.4	Would require readjudiction of the Superior Court Order regarding lake level	Would reduce by 99% the length of time the lake would be above 277.4
Phase II	Hall Creek Detention	C	Install detention or infiltration system upstream of Lake Ballinger	X				$12,000,000 not including land acquisition	Grant, appropriations, city CIP funds	Mountlake Terrace	X			Keep lake level below 279.3	Large site footprint of 2.7 acres - cost of land acquisition not included	Would reduce by 64% the length of time the lake would be above 279.3
	Basin Wide LID Retrofits	D	Retrofit existing city parcels and right of way with Low Impact Development BMP's	X	X	X	X	$5,000,000 to $10,000,000 over 20 years	Grant, appropriations, city CIP funds	Each city in upper basin	X	X		Reduce flooding and improve water quality	Long term - 20 year plan	Eliminate 100 year flooding events, meet Lake Ballinger TMDL limits and improve on fecal, temperature and chemical issues in McAleer Creek

[1] Service levels are listed in Section 3 of the Strategic Action Plan, page 15 - 20

[2] Weir gate replacement is contingent on decisions made about the ultimate level of the lake

[3] Future governance agreement will incorporate and identify potential funding sources

[4] A member agency representing the interests of the Lake Ballinger/McAleer Creek Forum