Miller and Walker Creek Basin Plan Public Meeting

March 18, 2004

6:30 – 8:30 PM

Criminal Justice Training Center

19010 1st Avenue South

Burien, WA 98148

Agenda

6:30 – 6:45 Registration, pick up materials

6:45 – 8:00 Presentation

8:00 – 8:30 Questions

Project Management Team

City of Burien •Steve Clark •Dan Bath	King County •Curt Crawford
City of Normandy Park •Steve Bennett •Roger Kuykendall	Port of Seattle •Bob Duffner
City of SeaTac •Dale Schroeder •Don Monaghan	WSDOT •Mehrdad Moini

Purpose of this meeting

- Update of activities
- Present draft basin plan goals
- Discuss technical options to meet goals
- Answer questions and solicit your comments

Update of activities

- Public meeting on October 2, 2003
- Further goal definition
- Hydrologic modeling
- Identification of projects

Guidelines for basin plan goals

- Must meet Clean Water Act requirements
  - Maintain or restore “existing” uses (November 1975)
  - Achieve applicable numeric water quality standards
- Must meet Endangered Species Act requirements
  - None now, but future listings could include Miller and Walker Creek
- Duty to protect public health and safety

Clean Water Act Requirements

The designated uses of Miller and Walker Creek in existence as of November 1975 shall be maintained or, if necessary, restored. These designated uses may include salmon and trout spawning, core rearing, and migration; extraordinary primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values. In addition, applicable numeric water quality standards shall be met.

Specific management goals for Flow Regime, Water Quality, and Habitat are proposed for achieving compliance with the above requirements. These goals are on the next four slides.

Overall goals for basin as presented at last public meeting

- Increase fish usage
- Improve water quality in the basin
- Control flooding and hazardous erosion in the stream and throughout the basin

Draft Management Goals - Flow Regime

Flow Regime Goal

- *Improve the current flow regime in Miller and Walker Creek to more closely approximate the flow regime expected under a land coverage of 75% forest, 15% grass, and 10% impervious area.*
- *Fulfillment of this goal will reduce peak flows and erosive work to a level that allows for protection and restoration of stream characteristics necessary to support fish use. These flow characteristics will also decrease any current flooding or hazardous erosion risk.*

Draft Management Goals – Water Quality

Water Quality Goal

- *Improve existing water quality by reducing pollutants in storm water run-off. In highly developed areas where metal pollution is likely to be a problem, achieve 50% removal of total zinc and 80% removal of total suspended solids. In less intensively developed areas where metal pollution is less likely to occur, achieve 80% removal of total suspended solids.*
- *Fulfillment of this goal will reduce the discharge of pollutants to the maximum extent practicable, which complies with current Clean Water Act requirements for municipal storm water.*

Draft Management Goals – Habitat

Habitat Goals

- *Protect existing areas of high-quality habitat.*
- *Improve degraded habitat by reducing erosive flows, thereby allowing formation of in-stream food sources and spawning areas, and restoring the most important areas of habitat.*
- *Fulfillment of the goal should result in an increase in anadromous fish usage from its current level of approximately 200 returning spawners per year to approximately 2000 returning spawners per year (an approximate 10-fold increase for the combined Miller and Walker basins).*

Technical options to meet goals

- Flow regime improvements
- Water quality improvements
- Habitat improvements
- Monitoring and stewardship

Miller Creek Flow Regime Technical Options

Problem	Option	Pros	Cons	Public Cost
Flow regime Need to reduce flooding and erosion in basin to limit private property damage and protect and restore stream habitat	Regulations only Level 2 (75/15/10) detention standard	• Large improvement in flow regime • Easy to implement • No expenditure of limited public funds • Consistent with Port's detention requirements • Appropriate restoration standard for urbanized basin	• **Will not reach goal flows for basin** • Only new development and re-development pays • Cost could be impediment to development • May take a long time for improvements to occur	$0
	Detention facilities and regulations Miller Creek Regional Detention Facility – increase by 40 ac-ft to 130 ac-ft Ambaum Pond – increase from 2.5 ac-ft to 15 ac-ft City Light Property – 12 ac-ft plus Level 2 (75/15/10) detention standard	• **Will reach goal flows for basin** • More equitable cost share between public and private • Can see benefits to stream sooner	• Requires public funding source • Cities incur additional operation and maintenance responsibility and liability • Limited space to expand or construct new detention facilities • Miller Creek RDF option may increase wildlife hazard potential and liability for partnering agencies. FAA would not approve any unmitigated increase in wildlife hazard – need to coordinate with Port	Miller Creek RDF - $400,000 Ambaum Pond - $600,000 City Light - $1,200,000 Total $2,200,000

Walker Creek Flow Regime Technical Options

Problem	Option	Pros	Cons	Public Cost
Flow regime Need to reduce flooding and erosion in basin to limit private property damage and protect and restore stream habitat	Regulations only Level 2 (75/15/10) detention standard	• Large improvement in flow regime • Easy to implement • No expenditure of limited public funds • Consistent with Port's detention requirements • Appropriate restoration standard for urbanized basin	• **Will not reach goal flows for basin, but stream looks to be in good shape** • Only new development and re-development pays • Cost could be impediment to development • May take a long time for improvements to occur	$0
	Low-impact development retrofits and regulations Infiltrate run-off from roofs, driveways, parking lots, roads, and sidewalks if not already done	• **May reach goal flows for basin** • Should be relatively easy to do in Walker Creek because of outwash • Provides water quality benefits	• Need access to private property • Potentially strong public opposition • Question about responsibility for future operation and maintenance	$?

Miller Creek Water Quality Technical Options

Problem	Option	Pros	Cons	Public Cost
Water quality Need to improve water quality to meet Clean Water Act requirements and support habitat Recommend minimizing use of galvanized materials	Regulations only Require new development and re-development to provide enhanced treatment for high-impact land uses	• Will remove not only 80% TSS but also 50% of dissolved metals, a primary pollutant in the basin	• Treatment will only be provided as development and re-development occurs, will likely take a long time	$0
	Paint existing galvanized highway guardrails, remove stream from asphalt ditch, and regulations Paint guard rails along 2 miles of highway; remove asphalt ditch along part of 509	• Will treat polluted water from existing development • Runoff from galvanized surfaces a major source of zinc • Reduces PAH input to stream (from asphalt) and provides habitat improvement	• Guardrail coating requires periodic maintenance • Access could be an issue • Need to ensure not to damage road prism	$1,000,000
	Future retrofits identified through monitoring	• Specific projects can be designed to treat specific areas of need	• Need to wait for data analysis • Need to continue to fund monitoring	$?

Miller Creek Water Quality Technical Options

Problem	Option	Pros	Cons	Public Cost
Water quality Need to improve water quality to meet Clean Water Act requirements and support habitat Recommend minimizing use of galvanized materials	Treatment facilities and regulations Construct capital projects to provide water quality treatment (see below)	• Provides treatment on a sub-basin level • No need to wait for development to occur	• Expensive • Treatment may not be as effective as treatment at the source	
	1. Hermes Depression Move intake lines to pumps to floating platform	• Existing large detention area • Relatively simple modifications	• Ensure that flood protection capacity is not reduced	$100,000
	2. Ambaum Pond Create an additional 10 ac-ft of dead storage or large sand filter treatment	• Basin draining to facility has large number of pollutant sources – treatment here will benefit basin	• Space is extremely limited • Need to acquire adjacent property	$500,000
	3. City Light Property Include a treatment facility in addition to the detention – facility would be either dead storage or sand filter	• Provides treatment at a site in combination with detention	• Need property owner willing to sell	$250,000

Walker Creek Water Quality Technical Options

Problem	Option	Pros	Cons	Public Cost
Water quality Need to improve water quality to meet Clean Water Act requirements and support habitat Recommend minimizing use of galvanized materials	Regulations only Require new development and re-development to provide enhanced treatment for high-impact land uses	• Will remove not only 80% TSS but also 50% of dissolved metals, a primary pollutant in the basin	• Treatment will only be provided as development and re-development occurs, will likely take a long time	$0
	Paint existing galvanized highway guardrails, and regulations Paint guard rails along 2 miles of highway	• Will treat polluted water from existing development • Runoff from galvanized surfaces a major source of zinc	• Guardrail coating requires periodic maintenance • Access could be an issue • Need to ensure not to damage road prism	$300,000
	Future retrofits identified through monitoring	• Specific projects can be designed to treat specific areas of need	• Need to wait for data analysis • Need to continue to fund monitoring	$?
	Determine wq protection needed for headwater wetland	• Need to ensure that appropriate wq protections are in place – potential that bog wq protection may be needed	• May require additional treatment regulations in areas draining to wetland – could increase compliance costs for nearby property owners	$1000

Miller Creek Habitat Management Technical Options

Problem	Option	Pros	Cons	Public Cost
Habitat management Need to protect existing areas of good habitat and restore degraded areas	Estuary enhancement	• Could create habitat that is very limited in Puget Sound • Would benefit fish, amphibians, and birds	• Could adversely impact private property if not well designed and constructed – need to cooperate with property owners to avoid problems	Unknown at this time – dependent on design
	Replace or repair culvert under 1st Av S	• Would allow fish passage into relatively good habitat areas upstream	• Of limited value without estuary project • This option may increase wildlife hazard potential and liability for partnering agencies. FAA would not approve any unmitigated increase in wildlife hazard	$500,000 - $1,000,000
	Purchase property or conservation easements whenever possible	• Will provide habitat and allow options for future management strategies	• Jurisdictions have limited funds • Often difficult to convince elected officials of importance of preservation	Variable

Miller Creek Habitat Management Technical Options

Problem	Option	Pros	Cons	Public Cost
Habitat management Need to protect existing areas of good habitat and restore degraded areas	Add riser to sewer manhole Sewer manhole submerged in Miller Creek just downstream of 1st Av S culvert – contact SWSSD to address	• Prevents de-watering of stream and excessive I/I in sewer	• Requires coordination with sewer district and work in the stream	$50,000
	Remove concrete weirs Weirs in stream bed just downstream of submerged sewer manhole	• Weirs are a probable fish passage barrier and have destroyed habitat	• Weirs supposedly provide protection for sewer line • Requires coordination with sewer district and work in the stream	$350,000

Walker Creek Habitat Management Technical Options

Problem	Option	Pros	Cons	Public Cost
Habitat management Need to protect existing areas of good habitat and restore degraded areas	Estuary enhancement	• Could create habitat that is very limited in Puget Sound • Would benefit fish, amphibians, and birds	• Could adversely impact private property if not well designed and constructed – need to cooperate with property owners to avoid problems	Unknown at this time – dependent on design
	Headwater wetland purchase **IN PROCESS**	• Will permanently protect wetland flow, water quality, and habitat functions	• Need to have willing property seller • Regulations could be relied on to protect – why purchase?	$425,000
	Headwater wetland delineation	• Will allow type of wetland to be determined and boundaries mapped	• Small public cost to perform	$5,000
	Purchase property or conservation easements whenever possible	• Will provide habitat and allow options for future management strategies	• Jurisdictions have limited funds • Often difficult to convince elected officials of importance of preservation	Variable

Miller and Walker Creek Monitoring & Stewardship Technical Options

Problem	Option	Pros	Cons	Public Cost
Monitoring and <u>stewardship</u> Need to gather basic information to develop management strategies and assess effectiveness; need to involve public by providing good information and offering options for local involvement	Flow, water quality, <u>and habitat monitoring</u> Establish an on-going environmental monitoring program to collect basic hydrologic information (precipitation and stream flow), water quality data (temp, DO, hardness, fecals, nutrients, metals), and habitat data (fish counts, B-IBI)	• Will allow evaluation of effectiveness of regulations, capital projects, and operations and maintenance practices • Only way to be able to tell if stream is improving or not	• Requires on-going financial commitment • Often difficult to convince elected officials of its importance	$50,000 Annual Cost
	<u>Basin stewardship</u> Fund a half-time position to coordinate public outreach and information, including an annual report on basin condition and coordination of volunteer activities	• Offers one-stop shopping for citizens interested in the health of the basin • Serves as a point of coordination within and between agencies • Provides good public relations	• Requires on-going financial commitment • Often difficult to convince elected officials of its importance • Potential to cause conflict between jurisdictions because must be advocate for stream, not employers	$50,000 Annual Cost

Questions to consider

- Do Lot A property owners believe that estuary modifications are possible that will both protect their property rights and improve fish habitat?
- What do you think are the relative priorities of all of the projects suggested?
- How much additional funding to support these projects are you willing to provide through increases in taxes and fees?