

ADDENDUM

Date: June 28, 2022
To: Patrick Johnson, City of Edmonds
From: Rebecca Dugopolski, Mindy Fohn, and Katie Wingrove, Herrera Environmental Consultants, Inc.
Subject: Addendum to the City of Edmonds Receiving Water Conditions and Stormwater Management Influence Assessment

ADDENDUM TO APPENDIX A

The project team was notified by a City of Edmonds citizen that the Washington State Department of Fish and Wildlife (WDFW) Fish Passage Crossing Web map tool was updated after publication of the original City of Edmonds Receiving Water Conditions and Stormwater Management Influence Assessment Technical Memorandum (Receiving Water Assessment Technical Memorandum) prepared by Herrera Environmental Consultants on March 21, 2022. The updates to the fish passage barriers were significant, so the project team has decided to prepare an addendum to the Receiving Water Assessment Technical Memorandum and to fold this updated information into the receiving water prioritization process that is due for completion by June 30, 2022.

WDFW data included in the original Receiving Water Assessment Technical Memorandum was exported in January 2022. It is recognized that this database is updated at intermittent intervals, and potential users are not notified. The fish passage barrier data presented in this addendum was exported on May 2, 2022. This addendum provides an updated version of Table A-3 with updated fish passage barrier information included in the following columns:

- # of Barriers per Stream Mile
- # of Barriers in Basin
- # of Complete Barriers in Basin
- Description of Complete Barriers in Basin within City



Table A-3. Assess Stormwater Management Influence.

Metric/Basin	Existing Landscape Condition						
	% Total Impervious Area (TIA)	Roads		Road Crossings (Fish Passage Barriers)			Habitat Fragmentation - Furthest Downstream Fish Barrier
		Road Density (linear feet per acre)	Highways	# of Barriers per Stream Mile	# of Barriers in Basin	# of Complete Barriers in Basin	Description of Complete Barriers in Basin within City
Metric Description	% impervious surface based on processed NLCD grids	Length of roads (including highways) per acre	List of highways that cross through the basin	Mapped WDFW fish passage barriers related to road crossings	Subset of mapped barriers that are not passable by fish		
Data Source	2019 MRLC NLCD Impervious Layer	Merged King County and Snohomish County road shapefiles	WSDOT highway mapping	WDFW Web Map Tool, extracted data Jan 2022; King County stream layer (modified/ simplified) Updated May 2, 2022	WDFW Web Map Tool, extracted data Jan 2022; King County stream layer (modified/ simplified) Updated May 2, 2022	WDFW Web Map Tool, extracted data Jan 2022; King County stream layer (modified) Updated May 2, 2022	WDFW Web Map Tool, extracted data Jan 2022; King County stream layer (modified) Updated May 2, 2022
City only or Basin wide Metric?	Basin wide	Basin wide	Basin wide	Basin wide	Basin wide	Basin wide	Basin wide
Deer Creek	20.4%	81	None	0	0	0	No mapped total barriers
Hall Creek-Ballinger	50.0%	136	I-5 SR-99 SR-104	4.3	28	11	Total/partial barrier mapping on McAleer Creek at I-5 (outside Edmonds) may block access to/from Lake Washington
Lund's Gulch	34.7%	96	SR-99	1.3	3	0	No mapped total barriers
Northstream-Fruitdale	37.2%	121	SR-524	6.4	9	6	Unknown % passable at Fruitdale and Northstream Creek mouths. Total barriers nearby upstream.
Perrinville	40.8%	126	SR-524	3.6	3	1	Total barrier on Perrinville Creek at Talbot Road
Shell Creek	47.5%	144	SR-524	6.1	10	4	Total barrier on Shell Creek at 7th Ave N culvert Total barrier on Hindley Creek near confluence with Shell Creek (culvert at Brookmere Dr)
Southwest Edmonds	44.0%	122	None	Not Applicable	8	4	Not Applicable - no channel in City limits
Stilthouse-Terrace	28.2%	107	None	6.0	9	7	Total barrier at mouth of Outfall Creek Unknown % passable at Stilthouse and Terrace Creek mouths Upstream total barriers on Stilthouse and Terrace
Edmonds Marsh	51.1%	142	SR-524 SR-104	6.8	15	11	Total barrier on Shellabarger Creek at SR-524 (owned by WSDOT) Total barrier on Willow Creek at Pine St culvert (owned by City)

Table A-3. Assess Stormwater Management Influence.

Metric/Basin	Existing Landscape Condition (continued)				
	Habitat Fragmentation - Furthest Downstream Fish Barrier (continued)	Riparian Buffer		Tree Canopy Loss	Recent Redevelopment/ Development Patterns
	Length of stream prior to first complete barrier (linear feet)	% Development in Riparian Buffer	% Canopy Cover in Riparian Buffer	Area with 50% or Greater Canopy Loss (%)	% of Basin with Recent Redevelopment or Development
Metric Description	Identify first full barrier and measure downstream linear feet	% development in riparian buffer (includes streams, lakes, and wetlands)	% forest cover in riparian buffer (includes streams, lakes, and wetlands)	Includes areas with 50% or greater canopy loss from 2006 to 2017	Area with redevelopment or development activity from 2006-2017
Data Source	WDFW Web Map Tool, extracted data Jan 2022; King County stream layer (modified) Updated May 2, 2022	2019 NLCD - Development Codes 21, 22, 23, 24 Buffer: DNR stream typing; City GIS data: wetlands and waterbodies	2019 NLCD - Forest Codes 41, 42, 43 (excludes wetlands, marsh, shrub) Buffer: DNR stream typing; City GIS data: wetlands and waterbodies	WDFW Puget Sound High Resolution Change Detection (HRCD) 2006 - 2017 Change Data layer	WDFW Puget Sound High Resolution Change Data (HRCD) 2006 - 2017 Change Detection layer, includes "Development" and "Redevelopment" change categories
City only or Basin wide Metric?	Basin wide	Basin wide	Basin wide	Basin wide	Basin wide
Deer Creek	No mapped total barriers	18.9%	81.1%	1.17%	1.90%
Hall Creek-Ballinger	17,971	63.6%	6.3%	0.78%	2.09%
Lund's Gulch	No mapped total barriers	19.3%	75.6%	2.83%	4.13%
Northstream-Fruitdale	Fruitdale: 420 Northstream: 1305 (Unknown barriers at creek mouths)	60.1%	39.5%	1.01%	1.23%
Perrinville	575	40.8%	56.4%	0.73%	1.54%
Shell Creek	Shell Creek: 2810 Hindley Creek: 377	66.4%	30.2%	0.77%	1.32%
Southwest Edmonds	Not Applicable - no channel in City	56.6%	38.5%	0.49%	2.11%
Stilthouse-Terrace	Stilthouse Creek: 935 Terrace Creek: 458 (Unknown barriers at creek mouths) Outfall Creek: 0	59.6%	40.0%	0.69%	0.73%
Edmonds Marsh	Shellabarger Creek: 3,490 Willow Creek: 1,558	76.2%	5.3%	0.62%	1.33%

Table A-3. Assess Stormwater Management Influence.

Metric/Basin	Existing Landscape Condition (continued)				Future Development		
	Stormwater Infrastructure	Stormwater Infrastructure		% of Basin that is Flow Control Exempt	Drinking Water Resources	Buildable Lands Projection	Areas with Higher Projected Population Growth
	Length of Stormwater Pipe (linear feet)	# of MS4 Outfalls to Streams	# of MS4 Outfalls to Shoreline/ Marine Discharge		% of Basin within 10-year Travel Time for WHPA	% of Basin that is Redevelopable	% of Basin with Projected Population Growth Greater Than 1.25%
Metric Description	City MS4	MS4 outfalls in riparian buffer	MS4 outfalls to lakes and Puget Sound	Acres of FC Exempt/ total acres	Area that is sensitive for drinking water	From Snohomish County Buildable Lands Report	Area by block group with projected population growth greater than 1.25% from 2021-2026
Data Source	City GIS data: Edmonds STORM_LINE mapping	City GIS data: "STORM_CULVERTS" point layer, modified to classify as Riparian, Marine, or Other & filtered to remove BNSF-owned outfalls according to STORM_LINE jurisdiction field.	City GIS data: "STORM_CULVERTS" point layer, modified to classify as Riparian, Marine, or Other & filtered to remove BNSF-owned outfalls according to STORM_LINE jurisdiction field.	City GIS data: Watershed layer indicating "Puget Sound" or "Puget Sound Piped" drainage	WSDOH Wellhead Protection Area Map, 10-year Travel Time layer	Snohomish County Buildable Lands Report and associated GIS layers	ESRI 2021-2026 USA Population Growth (Block group scale)
City only or Basin wide Metric?	City	City	City	Basin wide	Basin wide	Basin wide	Basin wide
Deer Creek	9,326	1	0	0%	65.6%	1.90%	47.2%
Hall Creek-Ballinger	119,915	14	0	0%	4.0%	2.50%	17.2%
Lund's Gulch	2,533	1	1	0%	0%	0%	68.3%
Northstream-Fruitdale	92,914	2	1	48.7%	0%	3.20%	0%
Perrinville	58,088	5	0	0%	0%	1.70%	4.7%
Shell Creek	192,492	16	2	10.2%	0%	5.30%	6.9%
Southwest Edmonds	19,231	0	0	0%	10.4%	0.40%	17.2%
Stilthouse-Terrace	53,222	1	3	35.7%	0%	1.90%	1.1%
Edmonds Marsh	192,578	16	16	54.1%	5.1%	5.50%	35.3%

