

**Lake Washington Ship Canal Project Master Plan 2025**

**Attachment A – Understanding Vertical Datums at the LWSC Project**

**EAXX-202-00-G3P-1735821983**

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Geodesists and surveyors use datums to create starting or reference points for floodplain maps, property boundaries, construction surveys, levee design, or other work requiring accurate coordinates that are consistent with one another. There are two main datums in the United States. Horizontal datums measure positions (latitude and longitude) on the surface of the Earth, while vertical datums are used to measure land elevations and water depths.

Vertical elevations and points associated with elevations on the ground, in relation to water management, in surveys, or in plans and designs may be in reference to a variety of datums including:

The U.S. Army Corps of Engineer Datum (COE) established in 1919, based on the Mean Lower Low Water (MLLW) mark established via a series of short tidal observations and subsequently held fixed;

The Sea Level Datum of 1929, based on tide gages and other benchmarks for adjustments. The datum is not based on mean sea level, the geoid, or any other equipotential surface and was renamed in 1973 to the National Geodetic Vertical Datum (NGVD) of 1929;

The North American Vertical Datum (NAVD) 88, established in 1991 by the minimum-constraint adjustment of geodetic leveling observations in Canada, the United States, and Mexico. NAVD 88 was affirmed as the official vertical datum in the National Spatial Reference System (NSRS) for the Conterminous United States and Alaska in 1993.

The differences between the datums become relevant when conversations are held or work is conducted around the Lake Washington Ship Canal (LWSC) Project that relate to ground surface elevations, lake elevations, or elevations of the top of infrastructure. Infrastructure at the LWSC Project may be tied to the COE Datum. The U.S. Geological Survey (USGS) lake and river gage elevations within the region are tied to NGVD 29 while the U.S. Army Corps of Engineer (USACE) gages at the LWSC Project are tied to the COE Datum, and property surveys conducted after 1993 are tied to NAVD 88. Agencies, surveyors, and property owners may be using NGVD 29 and NAVD 88 and the differences between the all the datums can be a significant source of confusion. These differences need to be considered during any dealings with elevations as it is imperative that all parties are working with the same datum. Since the adoption of NAVD 88 in 1991, many of the USACE surveys completed for the LWSC Project refer to it, and surveyors use it for clients along the shoreline. Restrictions such as those found in Federal Emergency Management Agency (FEMA) flood maps are tied to the NAVD 88 datum. Therefore, when dealing with vertical datums, first confirm which datum is in use and then make adjustments as necessary. Conversion data for the three datums are identified below:

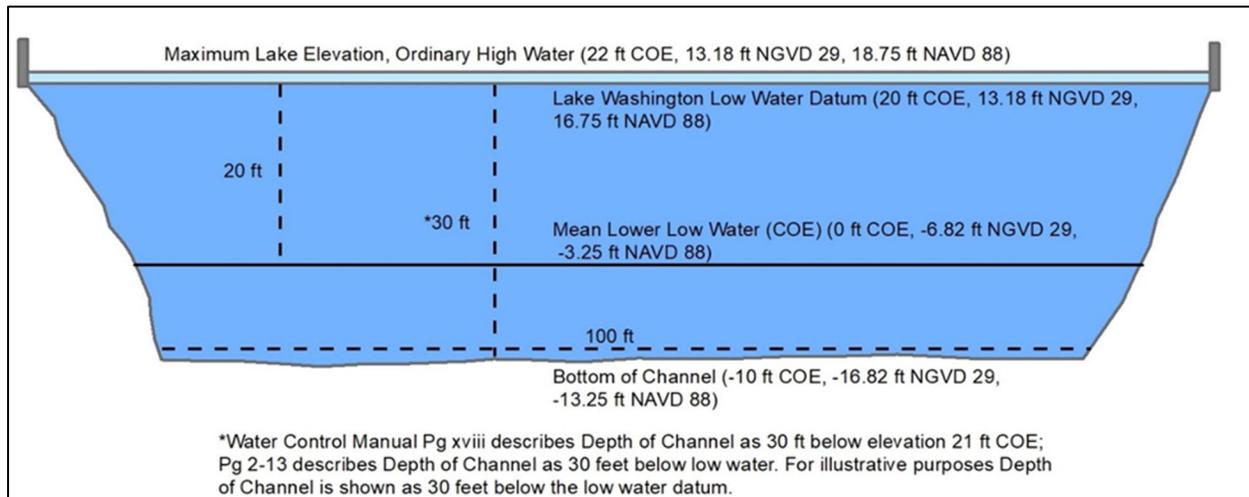
Data conversion from the COE Datum:  
To NGVD 29 – subtract 6.82 feet.  
To NAVD 88 – subtract 3.25 feet.

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Data conversion from NGVD 29:  
To the COE Datum – add 6.82 feet.  
To NAVD 88 – add 3.57 feet.

Data conversion from NAVD 88:  
To the COE Datum – add 3.25 feet.  
To NGVD 29 – subtract 3.57 feet.

For example: if the USGS gage located on the Cedar River at Renton, Washington, is reading a gage height in feet of 9.89 feet NGVD 29, then the gage height in feet in the COE Datum is  $9.89 + 6.82 = 16.71$  feet, and in the NAVD 88 datum is  $9.89 + 3.57 = 13.46$  feet. Figure 1 shows the relationship of the various datums to a cross section of the Ship Canal upstream of the Locks at Montlake Cut.



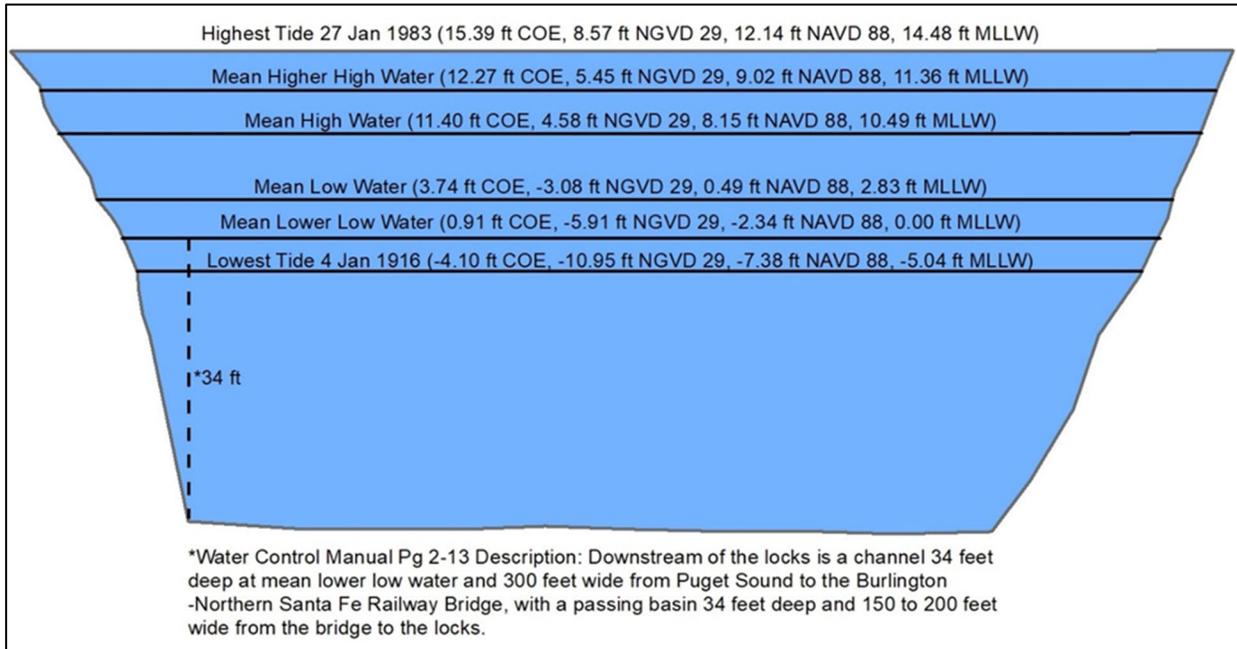
**Figure 1. Cross-section of the Ship Canal upstream of the Locks at the Montlake Cut. Depths and widths based on the LWSC Water Control Manual, 2017.**

Downstream of the locks a fourth datum is commonly referenced. The National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS) operates a gaging station (9447130) that references to MLLW Datum, among others. The datums are based on tidal observations with averages calculated over periods of time; since there are no tidal influences above the Locks, the tidal-based datums do not apply there. The MLLW Datum conversion data includes the following:

Data conversion from the MLLW Datum:  
To the USACE Datum (COE) – add 0.91 feet.  
To NGVD 29 – subtract 5.91 feet.  
To NAVD 88 – subtract 2.34 feet.

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Figure 2 shows the relationship of the various datums to a cross section of the channel downstream of the locks.



**Figure 2. Cross section of Channel Below the Locks. Depths and widths based on the LWSC Water Control Manual, 2017.**

The zero-foot Locks datum is equivalent to minus 0.91 feet MLLW.

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**Attachment B – Lists of Prior Design Memorandum, National Environmental  
Policy Act Documents, and Studies**

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**DESIGN MEMORANDUMS**

Following is a list of previously issued Design Memorandums for Lake Washington Ship Canal Project.

DESIGN MEMO No.	SUBJECT	DATE ISSUED
1	Bank Erosion	April 1959
(no number)	Centralized Control	June 1964
2	Downstream Waiting Pier	January 1966
3	Fish Ladder Rehabilitation	August 1972
	Supplement 1 Fish Ladder Rehabilitation	September 1974
4	Electrical Distribution Rehabilitation	September 1973
5	Master Plan	April 1977
5	Large Lock Downstream Miter Gate Rehabilitation	September 1977
	Supplement 1 Locks Entryway Development	April 1979
6	Entryway Development	August 1979
7	Emergency Closure System – Major Rehabilitation Program	December 1981
8	Earthquake Analysis Chittenden Lock and Dam	1982
9	Master Plan	February 1994
*end 1999* (this index system is no longer used)		

**NEPA DOCUMENTS**

Following is a list of prior NEPA documents for Lake Washington Ship Canal Project.

Document type: EA – Environmental Assessment  
EIS – Environmental Impact Statement

Decision Document FONSI – Finding of No Significant Impact  
ROD – Record of Decision  
SOF – Statement of Findings

DATE	SUBJECT
1972	Operations & Maintenance and Proposed Fish Ladder Improvements EA
1977	Test Production Dredging by Hopper Dredge EA & SOF
1984	Downstream Guard Gates Project EA

DATE	SUBJECT
1985	Saltwater Barrier EA & FONSI
1988	Spillway Gate Seal EA
1990	Rehabilitation of Large Lock Features EA
1991	Underground Storage Tank Removal EA & FONSI
1999	Smolt Passage Section 1135 Restoration EA
2001	Fremont Cut Vegetation Rehabilitation Plan Environmental Assessment
2001	LWSC Section 216 Ecosystem Restoration & Flood Damage Reduction Study General Investigation (date approximate)
2008	Diffuser Well EA
2011	Monolith Erosion Repair EA
2014	King County Fremont Siphon Section 408
2020	Hiram M. Chittenden Locks (Locks) Urgent Interim Scour Repair EA
2022	Hiram M. Chittenden Locks Large Lock Center Gate Project EA

## STUDIES AND TECHNICAL REPORTS

DATE	SUBJECT
1983	Tech Report No. 1 Emergency Closure System and Flood Control Regulation Gate for Hiram M. Chittenden Locks at Lake Washington Ship Canal
1994	California Sea Lions and Steelhead Trout at the Chittenden Locks
1995	Implementation and Assessment of the Acoustic Barrier at the Hiram M. Chittenden Locks Using Calibrated Measurements of the Sound Field (NOAA)
1996	Sound Level Contours Produced by the 1995 Acoustic Barrier at the Hiram M. Chittenden Locks (NOAA)
1997	Characteristics of the 1996-1997 Acoustic Barrier at Hiram M. Chittenden Locks (NOAA)
2000	Characteristics of the 1999 Acoustic Barrier at Hiram M. Chittenden Locks (NOAA)
2000	Seward Park Rehabilitation Study: Juvenile Salmonid Use of Shoreline Habitats in Seward Park, King County, Washington Planning Assistance to the States Report
2001	Acoustic and Video Measurements of Fish Passage at the Hiram M. Chittenden Locks: A Year 2000 Focus on the Saltwater Drain and Spill Bay #2
2001	Fish Passage Investigations at the Hiram M. Chittenden Locks, Seattle, WA in 2000
2001	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: Year 2000 Pilot Study Results
2001	Seward Park Rehabilitation Study: Juvenile Salmonid Use of Shoreline Habitats in Seward Park

DATE	SUBJECT
2002	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 2 <sup>nd</sup> Year (2001) Pilot Study Results
2003	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 3 <sup>rd</sup> Year (2002) Pilot Study Results
2004	Lake Washington Ship Canal Water Quality Monitoring and Analysis Plan
2005	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 4 <sup>th</sup> Year (2003) Pilot Study Results and Synopsis of 2000-2003 Findings
2005	Salmon Bay Natural Area Pre-Restoration Monitoring 2004
2005	Effectiveness of Strobe Lights for Reducing Juvenile Salmonid Entrainment into a Navigation Lock, Johnson et al., North American Journal of Fisheries Management, 25(2), 491-501
2006	Salinity Monitoring at the Lake Washington Ship Canal 2005: Data Review and Quality Assurance
2007	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 5 <sup>th</sup> & 6 <sup>th</sup> Year (2004-2005) Pilot Study Results
2008	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 7 <sup>th</sup> & 8 <sup>th</sup> Year (2006-2007) Study Results
2008	Synthesis of Salmon Research and Monitoring, Investigations Conducted in the Western Lake Washington Basin
2010	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 9 <sup>th</sup> & 10 <sup>th</sup> Year (2008-2009) Study Results
2010	Salmon Bay Estuary Synthesis Report Including Assessment of Proposed Daylighting Wolfe Creek Project; Lake Washington, Cedar, Sammamish Watershed (WRIA 8)
2011	Movement and Habitat Use of Chinook Salmon Smolts in the Lake Washington Ship Canal, 2007-2008 Acoustic Tracking Studies
2013	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 11 <sup>th</sup> through 13 <sup>th</sup> Year (2010-2012) Study Results
2013	Tech Memo No. 1 Evaluation of Adult PIT Tag Detection Data in the Fish Ladder at the Hiram M. Chittenden Locks, 2004-2012
2014	Commodore Park Great Blue Heron Colony Report
2014	Lake Washington Ship Canal False Locking Study 2013: Temperature, Salinity, and Dissolved Oxygen Monitoring
2014	Migratory Behavior and Habitat Use of Bull Trout Near Shilshole Bay
2015	Lake Washington Ship Canal False Locking Study 2014: Temperature, Salinity, and Dissolved Oxygen Monitoring
2017	Economic Impacts of the Hiram M. Chittenden Locks
2017	Evaluation of Adult PIT Tag Detection Data in the Fish Ladder at the Hiram M. Chittenden Locks 2013-2016

DATE	SUBJECT
2017	PIT Tagging of Juvenile Salmon Smolts in the Lake Washington Basin: 14 <sup>th</sup> through 16 <sup>th</sup> Year (2013-2015) Study Results
2017	Summary of Database for PIT Tagging in the Lake Washington Basin: Juvenile Tagging and Detections and Adult Detections in Fish Ladder through 2016
2017	Coho Salmon Smolt Injury and Survival Through New and Existing Fish Bypass Flumes
2018	Hiram M. Chittenden Large Lock PIT Tag Detection System
2019	Behavioral thermoregulation by adult Chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) in estuary and freshwater habitats prior to spawning. Fishery Bulletin, 117(3), 258-275.

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**Attachment C – List of Bird Species at the Lake Washington Ship Canal**

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Lake Washington Ship Canal’s (LWSC) green spaces and waters provides nesting, loafing, and feeding habitat for many species of birds, both year-round residents as well as migratory species. The following tables provides information on birds and well as where they might be found. Table 1 defines the occurrence, habitat and location codes which are used in Table 2. Table 2 is a compilation list from birds observed by visitors and staff at LWSC as well as a list of birds graciously provided by Constance Sidles and Brendan McGarry of the Seattle Audubon Society.

The occurrence codes for birds on Table 2 are based on observations in the immediate vicinity of the LWSC Project and may be at variance to other checklists which reflect a wider distribution. The species habitats are taken from the species life history information, so may vary slightly within an urban environment. The locations for each species are where a visitor might best view the species.

**Table 1. Definitions for occurrence, habitat, and location codes for the LWSC Project bird list.**

Occurrence Key	Habitat Key	Location Key
C - Common U - Uncommon Y - Year-round M - During migration O - Occasional R - Rare W - Winter Residents S - Spring and Summer	SW - Saltwater FW - Freshwater MF - Mudflats M- Marsh F - Forest ST - Shrubby Thickets PG - Parks and Gardens GS - Gravel Shores A - Aerial G - Grasslands	L - Locks, including the Garden  S - Shilshole Bay and Tidelands  U - Union Bay (also Portage Bay and Lake Union) includes land edges nearby

**Table 2. List of bird species observed at the LWSC Project lands.**

Common Name	Occurrence	Habitat	Location
Greater White-fronted Goose	RW	FW, M, PG	L, S, U
Canada Goose	CMW	M, PG	L, S, U
Cackling Goose	MW	SW, FW, M, PG	L, S, U
Brant	MW	SW, FW, M, PG	L, S, U
Wood Duck	RS	FW, M	U

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<b>Common Name</b>	<b>Occurrence</b>	<b>Habitat</b>	<b>Location</b>
Northern Shoveler	UW	FW, M	U
Gadwall	CW	FW, M, SW	L, S, U
American Wigeon	CW	FW, M, SW	L, S, U
Eurasian Wigeon	OW	FW, M	U
Mallard	CY	FW, M, SW	L, S, U
Northern Pintail	UW	FW, M	U
Green-winged Teal	CY	FW, M, MF	L, U
Ring-necked Duck	OW	FW, M	U
Greater Scaup	CW	FW, SW	L, S, U
Lesser Scaup	CW	FW, SW	L, S, U
Tufted Duck	RW	FW	L
Bufflehead	C\OW	FW	L, U
Common Goldeneye	OW	SW, FW	L, S, U
Barrow's Goldeneye	CW	SW, FW	L, S
Harlequin Duck	RS	FW, M	U
Surf Scoter	OW	SW	S
White-winged Scoter	RW	SW	S
Black Scoter	OW	SW	S
Hooded Merganser	CY	FW, SW	L, U
Common Merganser	OY	FW, SW	L, U
Red-breasted Merganser	CW	SW	L, S
Pied-billed Grebe	UY	FW, SW	L, U
Horned Grebe	OW	FW, SW	L, U, S
Eared Grebe	RW	SW, FW	S, L
Red-necked Grebe	OW	SW, FW	S
Western Grebe	CW	FW, SW	S
Rock Pigeon	CY	F, PG	L, U
Band-tailed Pigeon	CY	F, PG	L, U, S
Eurasian Collared-Dove	CY	F, PG	L, U
Mourning Dove	CY	F, PG	L, U
Black Swift	RM	F	L, U
Vaux's Swift	RY	F	L, U
Anna's Hummingbird	OY	PG, F, ST	L, S
Rufous Hummingbird	CS	PG, F, ST	L, U, S
American Coot	CY	FW, SW, M	U, S
Killdeer	CY	PG, MF	L, U

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<b>Common Name</b>	<b>Occurrence</b>	<b>Habitat</b>	<b>Location</b>
Semipalmated Plover	CM	SW	S
Black Turnstone	OW	SW, MF, GS	S
Least Sandpiper	OW	SW, FW, MF, GS	S
Western Sandpiper	CM	SW, FW, MF, GS	S
Spotted Sandpiper	OS	SW, FW, MF, GS	S, U
Greater Yellowlegs	CM	SW, FW, MF	U, S
Pigeon Guillemot	RW	SW	L, S
Marbled Murrelet	OW	SW	S
Rhinoceros Auklet	OW	SW	L, S
Bonaparte's Gull	CM	SW	L, S
Heerman's Gull	RY	SW	L, S
Mew Gull	CY	SW	L, S
Ring-billed Gull	OM	SW, FW	L, S, U
Western Gull	CY	SW, FW	L, S
Glaucous-winged Gull	CY	SW, FW, MF	L, S, U
California Gull	CM	SW, FW, MF	L, S, U
Herring Gull	UY	SW, FW	L, S
Iceland Gull (formerly Thayer's)	CW	SW, FW	L, S
Caspian Tern	RM	SW, FW	S
Common Tern	OW	SW, FW	L, S
Common Loon	RW	SW, FW	S
Red-throated Loon	UW	SW, FW	S
Pacific Loon	UW	SW, FW	S
Brandt's Cormorant	UY	SW, FW	S
Pelagic Cormorant	OW	SW, FW	S
Double-crested Cormorant	OW	FW, SW	S
Brown Pelican	OW	SW, MF	S
American White Pelican	OW	FW, SW	S
Great Egret	RM	FW, MF, SW	S
Great Blue Heron	CY	FW, SW, M	L, S, U
Green Heron	OY	FW, SW, M	L, S, U
Turkey Vulture	OY	F, PG, G	L, S, U
Osprey	OS	FW, SW	L, S, U
Sharp-shinned Hawk	OW	F, FG, ST	L, U, S
Cooper's Hawk	UY	F, PG	L, U, S
Red-tailed Hawk	UY	F, M	L, U, S

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<b>Common Name</b>	<b>Occurrence</b>	<b>Habitat</b>	<b>Location</b>
Bald Eagle	OY	F, MF, FW, SW	L, U, S
Barred Owl	OY	F	L
Belted Kingfisher	CY	SW, FW	L, S, U
Red-breasted Sapsucker	UY	F, PG	L
Downy Woodpecker	OY	F, ST, PG	L, S, U
Hairy Woodpecker	UY	F	L, S, U
Pileated Woodpecker	RY	F	L, U
Northern Flicker	OY	F, ST, PG	L, U
Merlin	OY	F, PG	L, S, U
Peregrine Falcon	RS	F, A	U
Warbling Vireo	OS	F, PG	L, U
Hutton's Vireo	OY	F	L, U
Steller's Jay	UY	PG, F, ST	L, U
California Scrub-Jay	CY	ST, F, PG	L, U
American Crow	CY	F, PG, ST	L, S, U
Northwestern Crow	CY	GS, MF, SW (A)	S, L
Common Raven	CY	F, PG, GS, MF, SW (A)	S, L, U
Northern Rough-winged Swallow	CS	F, FW	L, U
Purple Martin	RS	SW (A)	L, U
Tree Swallow	CS	A, PG,	L, U, S
Violet-green Swallow	CS	A, PG	L, U, S
Barn Swallow	RS	A, PG, MF	L, U, S
Cliff Swallow	CS	A, M, MF	U, L, S
Black-capped Chickadee	CY	ST, PG, F	L, U
Chestnut-backed Chickadee	CY	F, ST, PG	L, U
Bushtit	CY	ST, F, PG	L, U
Golden-crowned Kinglet	RY	F, ST, PG	L, U
Ruby-crowned Kinglet	UW	F, ST, PG	L, U
Red-breasted Nuthatch	CY	F, ST	L
Brown Creeper	UY	F, PG	L
Pacific Wren	CY	F, ST	L, U
Bewick's Wren	OY	PG, ST, F	L, U
European Starling	CY	PG	L, U
Varied Thrush	OS	PG, ST, F	L
Swainson's Thrush	CS	F, ST, PG	L, U
Hermit Thrush	UM	F, ST, PG	L, U

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<b>Common Name</b>	<b>Occurrence</b>	<b>Habitat</b>	<b>Location</b>
American Robin	CY	PG, F, ST	L, U
Cedar Waxwing	RS	F, ST, PG, M	L, U
Bohemian Waxwing	RS	F, ST, PG	L, U
House Sparrow	CY	PG, ST	L, U
Evening Grosbeak	CW	F, ST, PG	L, U
House Finch	CY	F, ST, PG	L, U
Purple Finch	UY	F, ST, PG	L, U
Red Crossbill	OY	F, ST, PG	L, U
Pine Siskin	UW	F, ST, PG	U, L
American Goldfinch	US	ST, G	U, L
Common Redpoll	OW	ST, F, PG	L, U
Chipping Sparrow	RS	ST, F, PG	L, U
Fox Sparrow	CW	F, ST, PG	L, U
Dark-eyed Junco	CY	F, ST, PG	L, U
White-crowned Sparrow	CW	F, ST, PG, G	L, U
Golden-crowned Sparrow	UW	ST, PG	L, U
Savannah Sparrow	CS	G	L, U
Song Sparrow	CY	F, ST, PG, G	L, U
Spotted Towhee	OY	ST, PG, F	L, U
Red-winged Blackbird	CY	M, ST	U
Brown-headed Cowbird	UY	F, ST, PG	L, U
Brewer's Blackbird	OY	PG, ST	L, U
Orange-crowned Warbler	CS	PG, ST, F	L, U
Yellow Warbler	CS	PG, ST, F, M	L, U
Townsend's Warbler	OS	F	L, U
Yellow-rumped Warbler	OS	F, ST, PG	L, U
Wilson's Warbler	CS	F, ST, PG	L, U
Western Tanager	UY	F, ST, PG	L, U
Black-headed Grosbeak	US	F, ST, PG	L, U

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**Attachment E – Visitor Use Survey at the Lake Washington Ship Canal**

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Summary of Recreation Area Survey June – August 2018

Customer Satisfaction Item	No. of Visitor Responses	Response Distribution (Percent)						Mean Response (1-5 Scale)
		Very Good (5)	Good (4)	Average (3)	Poor (2)	Very Poor (1)	Total	
<b>Facilities:</b>								
Suitability of park facilities for my recreational equipment and activities	93	71%	28%	1%	0%	0%	100%	4.7
Restroom cleanliness and availability of conveniences	86	55%	34%	10%	1%	0%	100%	4.4
Appearance of park grounds	98	77%	21%	1%	1%	0%	100%	4.7
Adequacy of signs providing directions and information	98	73%	26%	1%	0%	0%	100%	4.7
Parking space availability during my visit	87	54%	30%	11%	5%	0%	100%	4.3
Condition of roads and parking areas in the park	94	65%	32%	1%	2%	0%	100%	4.6
<b>Employees:</b>								
Availability of park rangers and staff	95	76%	23%	1%	0%	0%	100%	4.7
Helpfulness of park rangers and staff	94	81%	18%	1%	0%	0%	100%	4.8
<b>Environmental Setting:</b>								
Attractiveness of surrounding scenery and landscape	98	85%	12%	2%	1%	0%	100%	4.8
Quality of land and water resources for my activities	94	85%	14%	1%	0%	0%	100%	4.8
<b>Overall:</b>								
Waiting times needed to access park facilities and services	89	74%	25%	1%	0%	0%	100%	4.7
Feeling of safety and security in the park	98	79%	19%	1%	1%	0%	100%	4.8
Value received for any visitor fees paid	65	77%	23%	0%	0%	0%	100%	4.8
Overall satisfaction with my visit to this area	98	80%	20%	0%	0%	0%	100%	4.8

**What do you like most about this area:**

- Beautiful garden and lots of things going on. Rangers are friendly and helpful  
*HIRAM*  
*NDEN LOCKS- RECREATION FACILITIES*

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- The benches *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Natural beauty *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Katie McGillvray and Michael Vigil *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- fish *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- The locks and being able to see the salmon *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- gardens *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Customer service received by park ranger *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Gardens :) *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Walk here regularly, enjoy botanical garden *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Boats *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- I like the interaction with the tourists so encourage "regulars" to be patient with the tourists. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- the locks and seeing the fish/animals *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Everything *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Quiet, nice area to walk and relax. Enjoyed scenery *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Scenery *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Very informative! *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- The Locks, salmon ladder and fauna *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- The music *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Serenity *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- How diverse the plant life is in the park *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Commitment of USACE-NWS to recreation :) *HIRAM M. CHITTENDEN LOCKS RECREATION FACILITIES*
- Gorgeous gardens, loved the Boeing Employees Band *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Lots of space to lay out *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- I've been coming here for years, since I was a child. I love watching boats come and go through the locks. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- plants and landscape and locks *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- I love the onsite rangers. It was wonderful! Thank you! *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

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- Wildlife *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Grew up in Fremont. Lots of activities, walking, sounds, smells, environment is lovely. Trees marked as to type. WONDERFUL!! *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Uniqueness of locks operations *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- trains *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Very interesting, keep the conservation, locks are amazing. and the rose garden was a highlight. :) *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- tugboats *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- salmon *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- watching salmon *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Beautiful, interesting. I love watching the boats come through, fish ladder and using park to cross through to discovery park. *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Cool and green on a hot day *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Water life *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Seeing the boats *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Fish Ladder *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- the boats *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- The scenery and wildlife *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- All of the park and fish locks *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Flowers everywhere! *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Beautiful surroundings, very interesting to watch boats and lock operations, great easy-going family friendly vibe. A great place to visit! *HIRAM M. CHITTENDEN LOCKSRECREATION FACILITIES*
- Outside, nature, history of locks *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Love it all! *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- salmon *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- garden *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- boats :) *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Very green. Well maintained. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- fish ladder and lock *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Watching the locks *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Everything *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

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- Seeing all the boats *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Seeing all forms of transportation coming together at locks and the wildlife - salmon, birds, couple sightings of sea lions. A very dynamic operation amid beautiful gardens A+! *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Friendly staff *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**What improvements would you like to see in this area:**

**FAC - Buildings Restrooms/Shower Houses**

- Men's room at fish ladder smelled of urine. *HIRAM M. CHITTENDEN LOCKS RECREATION FACILITIES*
- The bathrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- more restrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- new restrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- bathrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Restrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**FAC - Other Facilities**

- more bike racks *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- tables to eat at *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- a cafe *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- picnic tables needed *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Cleaner bathrooms, more bike racks on south side, traffic is terrible to navigate for bike commuters *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**FAC - Roads & Parking**

- Parking biggest shortage *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- parking *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**OTHER - Miscellaneous Comments**

- Nice! Continue recreational efforts *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Beautiful, very clean *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- A garden tour would be nice *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Complete the Gilman trail - Ballard bypass *HIRAM M. CHITTENDEN LOCKS RECREATION FACILITIES*
- Less Children *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

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- Very satisfied for most part. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**OTHER - No Comment or Suggestion Offered**

- N/A *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- nothing, very nice and cool *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- I have none :) *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- none *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- none. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- none *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- None *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- none *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- None, it's honestly an awesome park *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- N/A *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- none *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**SVC - Facility Cleaning**

- Goose feces all over park *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Restrooms need an upgrade. Buy tissue paper for restroom that is not so thin and shreadable. *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*
- Cleaner salmon ladder and soap in the restrooms *HIRAM M. CHITTENDEN LOCKS RECREATION FACILITIES*
- Cleaner bathrooms *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

**SVC - Visitor Assistance**

- MORE RANGERS *HIRAM M. CHITTENDEN LOCKS- RECREATION FACILITIES*

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Summary of Visitor Center Survey June – August 2018  
Lake Washington Ship Canal Visitor Center

**How *important* were each of the following to your visit?**

Customer Satisfaction Item	No. of Visitor Responses	Response Distribution (Percent)					Total	Mean Response (1-4 Scale)
		Very Important (4)	Important (3)	Somewhat Important (2)	Not Important (1)			
<b>Facilities:</b>								
Exhibits	161	65%	29%	6%	1%	100%	3.6	
Restrooms	153	45%	38%	14%	3%	100%	3.3	
Parking	147	45%	33%	18%	5%	100%	3.2	
Accessibility to persons with disabilities	135	56%	24%	13%	7%	100%	3.3	
<b>Programs &amp; Services:</b>								
Interpretive presentations & films	153	39%	46%	12%	3%	100%	3.2	
Guided tours	148	36%	32%	26%	5%	100%	3.0	
Pamphlets & brochures	154	31%	33%	25%	11%	100%	2.8	
Having staff available for assistance	158	53%	36%	9%	2%	100%	3.4	
Having staff available for assistance	158	53%	36%	9%	2%	100%	3.4	
Bookstore	148	30%	28%	33%	9%	100%	2.8	
<b>Overall:</b>								
Learning opportunities	157	67%	26%	6%	1%	100%	3.6	
Exhibits & activities for children	132	61%	23%	11%	5%	100%	3.4	

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How *satisfied* were you with each of the following today?

Customer Satisfaction Item	No. of Visitor Responses	Response Distribution (Percent)					Total	Mean Response (1-4 Scale)
		Very Good (5)	Good (4)	Average (3)	Poor (2)	Very Poor (1)		
<b>Facilities:</b>								
Exhibits	154	57%	40%	3%	0%	0%	100%	4.5
Restrooms	133	51%	44%	3%	1%	1%	100%	4.4
Parking	134	42%	40%	13%	4%	0%	100%	4.2
Accessibility to persons with disabilities	113	50%	46%	2%	2%	0%	100%	4.5
<b>Programs &amp; Services:</b>								
Interpretive presentations & films	124	55%	40%	6%	0%	0%	100%	4.5
Guided tours	69	65%	32%	3%	0%	0%	100%	4.6
Pamphlets & brochures	141	50%	46%	4%	0%	0%	100%	4.5
Availability of visitor center staff	155	78%	21%	1%	1%	0%	100%	4.8
Helpfulness of visitor center staff	157	84%	15%	1%	1%	0%	100%	4.8
Items for sale in the bookstore	130	40%	48%	9%	2%	1%	100%	4.2
<b>Overall:</b>								
Learning experience	154	61%	37%	2%	0%	0%	100%	4.6
Exhibits & activities for children	124	49%	44%	7%	0%	0%	100%	4.4
Overall satisfaction with the visitor center	156	64%	33%	3%	0%	0%	100%	4.6

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## INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Seattle District, is initiating an effort to update the Lake Washington Ship Canal (LWSC) Project Master Plan. Master plans are required for civil works projects and other fee-owned lands for which the USACE has administrative responsibility for management of natural and manmade resources. The Master Plan is the strategic land-use management document that guides comprehensive management and development of all project recreational, natural and cultural resources throughout the life of the USACE project. USACE invited participation of agencies, Indian Tribes, non-governmental organizations (NGOs), and the public to identify significant issues related to the proposed project during a public scoping period that occurred between June 5 and July 31, 2020. A news release for the scoping period is provided in Supplement A. The purpose of this document is to provide a summary of comments received during the public scoping period and describe the proposed action and alternatives.

As required by the National Environmental Policy Act (NEPA) and subsequent implementing regulations promulgated by the Council on Environmental Quality (CEQ), the preparation of an Environmental Assessment (EA) is needed to determine whether an action proposed by USACE constitutes a “. . . major Federal action significantly affecting the quality of the human environment . . .” and whether an environmental impact statement is required. The EA is prepared pursuant to NEPA, CEQ regulation (40 CFR, 1500-1517), and the USACE implementing regulation, Policy and Procedure for Implementing NEPA, Engineering Regulation (ER) 200-2-2 (USACE 1988). The EA covers the action of adopting the proposed Master Plan. Future site-specific development, operations and maintenance actions that may transpire following adoption of the Master Plan, will undergo separate (tiered) analysis as required by NEPA.

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action, such as the revision of a Master Plan. According to the NEPA, the scoping process should be conducted early in the planning stage of the project. The purposes of the scoping process are as follows:

- To determine the resource issues, depth of analysis, and significance of issues to be addressed in the EA;
- To identify how the project would or would not contribute to cumulative effects in the project area;
- To identify reasonable alternatives to the proposed action that should be evaluated in the EA;
- To solicit, from participants, available information on the resources at issue; and,
- To determine the resource areas and potential issues that do not require detailed analysis during review of the project.

This document contains: (1) the purpose and need for the proposed action; (2) a description of scoping effort; (3) a summary of comments received, (4) resources proposed for analysis and (5) a description of the proposed action and alternatives.

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## **PURPOSE AND NEED FOR THE ACTION**

The purpose of the LWSC master plan is to guide USACE to preserve, conserve, restore, maintain, manage, and develop USACE project lands and associated resources pursuant to Federal laws. The current master plan is over 20 years old and does not include updated information on recreation and public use, cultural resources, invasive and endangered species, wildlife habitat value, jurisdictional wetlands, and other environmental features like the Carl S. English Jr. Botanical Garden (Garden). The Garden is an important feature of the LWSC National Historic District. Thus, there is a need to update the master plan to ensure USACE meets the legal requirements defined in appropriate laws and regulations, as well as to guide managers in future decision making and to provide the public the knowledge and information on how USACE proposes to manage the project lands. The updated LWSC master plan is to provide a comprehensive description of the project, a discussion of factors influencing resource management and development, identification and discussion of site-specific problems, a synopsis of public involvement and input to the planning process, and descriptions of past, present, and proposed development.

## **SCOPE OF ANALYSIS**

The EA would analyze the potential environmental effects of at least two alternatives that include the Proposed Action and a No-Action Alternative. The EA would analyze direct effects (i.e., those caused by the action and occurring at the same time and place) and indirect effects (i.e., those cause by the action and occurring later in time or farther removed in distance, but that are still reasonably foreseeable). The potential for cumulative effects (i.e., effects resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions) would also be addressed, and mitigation measures to avoid, minimize, rectify, reduce, or compensate for impacts would be identified, where appropriate.

The No Action Alternative is included as a means of comparison to the action alternative to help distinguish the relative merits and disadvantages between alternatives. For any alternative to be acceptable for consideration it must meet the purpose and need for action.

## **RELATIONSHIP TO STATUTES, REGULATIONS, AND POLICIES**

The intent of the EA is to comply with NEPA by assessing the potential impacts of actions taken from updating the Master Plan on resources in Washington State. Additional guidance for NEPA compliance and for assessing impacts is provided in the CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508).

USACE decisions that affect environmental resources and conditions also occur within the framework of numerous laws, regulations, and Executive Orders (EO). Some of these authorities prescribe standards for compliance; others require specified planning and management actions, the use of which is designed to protect environmental values potentially affected by proposed training operations. Laws and related regulations

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bearing on the proposed USACE actions include, but are not limited to the Clean Air Act, Clean Water Act, Coastal Zone Management Act, Endangered Species Act, Migratory Bird Treaty Act, Marine Mammal Protection Act, National Historic Preservation Act, Noise Control Act, and Pollution Prevention Act.

EOs that have bearing on proposed USACE actions include, but are not limited to, EO 11990 Protection of Wetlands, EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, EO 13007 Sacred Indian Sites, EO 13045 Protection of Children from Environmental Health Risks and Safety Risks, and EO 13186 Responsibilities of Federal Agencies to Protect Migratory Birds.

### **SUMMARY OF COMMENTS RECEIVED**

Supplement B contains all comments received during the scoping period. A total of 22 individuals and 3 NGOs provided comments that fell into six categories as follows:

1. Pedestrian and Bicycle Access (14 comments);
2. Infrastructure improvements (11 comments);
3. Recreation (4 comments);
4. Education and Tours (5 comments);
5. Vegetation and Garden (4 comments); and,
6. Hours of Operation (1 comment).

#### *Pedestrian and Bicycle Access*

The majority of comments received spoke to the need of providing both pedestrian and bicycle access, and many these commenters said that access through the LWSC was not only for recreation, but was also an essential component for commuters within the city. Many commenters felt having bicycles and skateboards on the same pathways as foot traffic was dangerous and suggested separating the pathways, including suggestions to build a separate bridge for commuters across the Hiram M. Chittenden Locks (Locks). Other commenters suggested banning bicycles from the garden loop roadway. Commenters also felt that the hours needed to be extended.

#### *Infrastructure improvements*

Most comments regarding infrastructure improvement focused on updating the visitor center, and providing safer pathways and stairs. For instance, one commenter noted that the tiled pathways can be difficult for seniors with walkers. Another commenter mentioned that the stalls in the bathrooms could be larger to accommodate an infant changing area or a senior with a walker. A couple of commenters want the fish passage viewing center to be improved, and one commenter felt the fish ladder needed to be improved and that this more of a priority than to improve the viewing area. One suggestion was to erect a small café or tap house with outdoor seating so the public could watch the operation of the Locks. Other suggestions included having the Locks generate power as well as provide for navigation and installing a boom to capture floating debris before it enters Puget Sound.

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*Recreation*

Most commenters stated how much they enjoyed the outdoor concerts and the outdoor experience the USACE grounds provide and they want more of the same. One commenter suggested broadening the performing art to include opera, ballet and theatre.

*Education and Tours*

Commenters really enjoyed their experiences with the Rangers and staff and want to see more programs and tours, especially tours focused on the history of the LWSC, gardens, and fish passage. A commenter suggested placing historic signage on building exteriors. Another commenter suggested developing a program focused on activities for children.

*Vegetation and Garden*

The Garden and green space along the LWSC is perceived as an essential space by many of the commenters, as it provides a peaceful space to connect with nature. Commenters wanted to see more trees and an expansion of ornamental plantings along the LWSC. One commenter wanted improvements to the rose garden.

*Hours of Operation*

Several commenters expressed concern that the Locks and access across the grounds could be closed to the public. Suggestions were made to increase the hours of access, especially during the summer months and for commuters.

## **RESOURCES PROPOSED FOR ANALYSIS**

The following is a preliminary list of environmental issues to be addressed in the EA. These issues have been identified through analysis of past projects and on-going operations. This list is not intended to be exhaustive or final, but contains those issues raised to date that could have direct, indirect or cumulative effects. After the scoping process is complete, the Army would review the list and determine the appropriate level of analysis needed to address each issue in the EA. Resources to be analyzed are as follows:

- Land Use
- Cultural Resources
- Recreation and Visual Resources
- Vegetation
- Fish and Wildlife
- Proposed, Threatened and Endangered Species
- Environmental Justice
- Socioeconomics

## **DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

The focus of the LWSC 2021 master plan is tied to the Natural Resources Management Program of USACE. This master plan will not encompass the navigation, flood control

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or fish passage missions at the LWSC. Topics in the 2021 master plan to be evaluated under the EA include:

- Carl S. English Botanical Garden
- Visitor Center
- Fish Ladder viewing Area
- Recreation Management
- Cultural/Historic Properties Management
- Public tours
- Public Use
- Partners
- Commuters
- Special events
- Special use permits
- Facilities

*Alternative 1: No Action Alternative*

Analysis of the No Action Alternative is required by the CEQ (40 CFR Part 1500-1508). The No Action Alternative serves as the baseline condition for analysis of other alternatives. The No Action Alternative being evaluated should be viewed as "no change" from current management direction or level of management intensity. Therefore, the No Action Alternative may be thought of in terms of continuing with the present course of action (under the existing 1994 Master Plan) until that action is changed (under the revised 2021 Master Plan). Because Master Plans provide the basis for evaluating contemporary recreation or land management proposals, the 1994 document does not account for the many substantial changes that have occurred. The existing Master Plan can provide only minimal support to development and management of the project.

Under the No Action Alternative, development and management of the project area would likely take the same general direction outlined in the proposed updated Master Plan and therefore, would generally share the same environmental consequences. However, future developments or resource management policies would require approval on a case-by-case basis without the benefit of evaluation in the context of a revised overall plan.

*Alternative 2: Master Plan Balancing Visitor Use and Conservation of Natural Resources (Agency Proposed Preferred Alternative)*

Under the Proposed Preferred Alternative, USACE would seek to replace the 1994 Master Plan, balancing recreation/visitor use with conservation of natural resources. The Balanced Master Plan would address important updates in response to changes in regional demographics, recreation use and demand, amenities within the project, current environmental conditions, and pertinent laws and policies. The preferred alternative would provide strategic comprehensive management and development of all project recreational, natural, and cultural resources throughout the life of the USACE

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project. It would also guide planning for efficient and cost-effective management and development for comprehensive use, responsible stewardship, and sustainability.

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SUPPLEMENT A – SCOPING PERIOD NEWS RELEASE



# NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

For Immediate Release:  
June 5, 2020

Contact:  
Dallas Edwards, 206-764-6958  
Dallas.D.Edwards@usace.army.mil

## Army Corps seeking public input for Lake Washington Ship Canal Master Plan

SEATTLE – The U.S. Army Corps of Engineers, Seattle District, is seeking public input for updating the Lake Washington Ship Canal (LWSC) Master Plan. The plan includes land management of Corps properties at the Hiram M. Chittenden Locks (Ballard Locks) and along the Lake Washington Ship Canal.

During the scoping period for master plan's environmental assessment – June 1 through July 31– the public is encouraged to submit ideas and comments regarding management of natural and recreational resources that should be included in the Master Plan. Comments may be submitted via email at: [LWSC.masterplan@usace.army.mil](mailto:LWSC.masterplan@usace.army.mil)

With the current limitations on how information can be distributed due to the COVID-19 public health crises, the public is highly encouraged to review the information available on the LWSC Master Plan webpage at: <https://www.nws.usace.army.mil/Home/Master-Plans/LWSC-Master-Plan>.

The focus of the LWSC Master Plan revision is tied to the Natural Resources Management Program of the Corps of Engineers. We are accepting public comments on our Recreation, Cultural/Historic Resources and Natural Resources Management programs at LWSC. This plan will not encompass the navigation mission at the LWSC.

Topics in the master plan include:

- Carl S. English Botanical Garden
- Visitor Center
- Fish Ladder viewing Area
- Recreation Management
- Cultural/Historic Properties Management
- Public tours
- Public Use
- Partners
- Commuters
- Special events
- Special use permits
- Facilities

The current Master Plan was approved approximately 20 years ago and must be brought up-to-date. While the overall purpose and running of the Locks and its land has not changed, the Master Plan is a tool for the responsible stewardship of the natural and cultural resources within the area of responsibility of the LWSC.

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U.S. ARMY CORPS OF ENGINEERS – Seattle District  
4735 E. Marginal Way South, Seattle, WA 98134  
[www.nws.usace.army.mil](http://www.nws.usace.army.mil)

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**SUPPLEMENT B – COMMENTS RECEIVED AND REPOSES**

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Email Received Monday 6/22/2020 2:50 PM

Dear Master Plan Committee,

DYNW has been a key non-profit partner with the ACOE in general and LWSC specifically for at least 40 years. I think our views on the public facing elements of LWSC are well known to most of you. But I will summarize our basic points here.

The ACOE operates what amounts to one of the largest pieces of public land in the city of Seattle. DYNW understands that maximizing and accommodating the local and visiting public's use of this land and facilities is not always uppermost in the ACOE's mission. Managing the waterway for commerce, personal watercraft and fish is higher on the scale. However, for DYNW our mission is the public, as follows:

Discover Your Northwest promotes the discovery of Northwest public lands, enriches the experience of visitors, and encourages stewardship of these special places today and for generations to come.

So for us, we want to encourage the ACOE to place as high a priority as possible on the public's access, educational opportunities and enjoyment of this tremendous asset.

I'll walk down the topics as you have presented them:

- Carl S. English Botanical Garden

I would refer you to the master plan created by Stephen J. Munro for his master's thesis at UW. I don't think you can do better for a long range planning document than this.

- Visitor Center

DYNW and the Corps Foundation have a plan for the renovation of the visitor center, prepared by Jones and Jones architects. I am attaching that plan if you haven't seen it.

- Fish Ladder viewing Area

DYNW and the Foundation project to renovate the Fish Ladder viewing Area is about 2 weeks from completion. I hope you all can see it soon! It looks amazing in there.

- Recreation Management

Lucky for you there are no campgrounds to worry about! My only suggestion is for more interpretive signs along the canal walkways. Most people have no idea they are on ACOE managed land.

- Cultural/Historic Properties Management

There isn't a lot of this but some more acknowledgement that these were Native American lands and homes would be helpful.

- Public tours

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Stacey Gilbert's crew does a great job with this. And they could expand their offerings if the contract was expanded.

- Public Use

More is better! as I stated above.

- Partners

Besides DYNW (of course) and the Corps Foundation, your best partner is probably Friends of the Ballard Locks. Susan Connole has done wonderful work over the years. We could probably expand some relationships. Center for Wooden Boats and MOHAI are two orgs we should look at for more partnership opportunities.

- Commuters

I hope it will not be long before people can once again commute from Magnolia to Ballard over the dam and locks. I don't see any reason for this to change. I would not want to see people riding their bikes through the site. I'm sure you'll get some comments to that effect. Resist!

- Special events

We had a HUGELY successful centennial event in 2017. It was a lot of work. Ask Jim Jacobson. But we could do events like that more often. And the weekend concert series is very popular and needs to continue.

- Special use permits

We need to do a better job with this. People stage unpermitted weddings and other events all the time in the garden. It usually comes down to people not understanding who the authority is. They think they are in a city park.

- Facilities

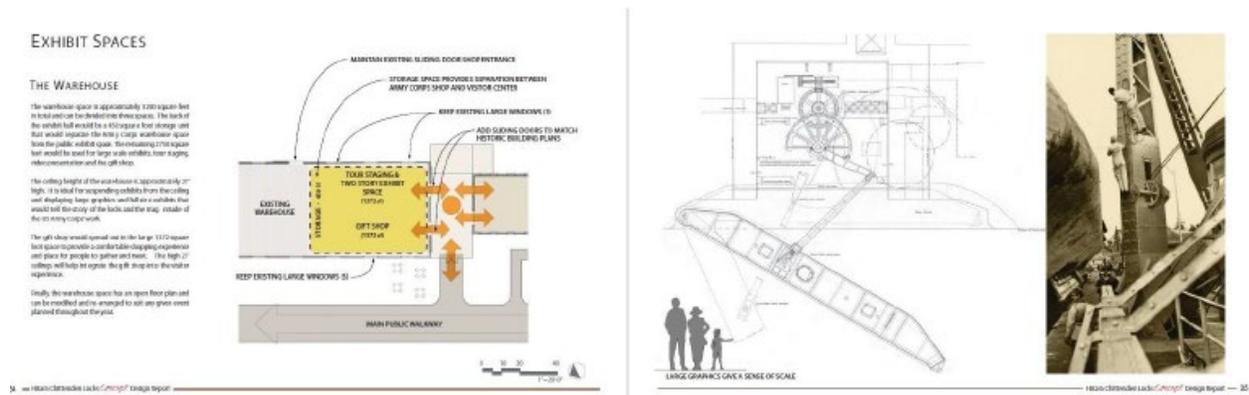
Our main focus, now that the Fish Ladder viewing Area has been renovated, should be the Visitor Center. If the ACOE does not go with our concept the building still needs a solid capital investment.

Thank you for this opportunity to comment.

Jim Adams  
Executive Director  
Discover Your Northwest  
Seattle, WA  
206 220-4245



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**Response:**

The USACE thank Discover Your Northwest (DYNW) and the Corps Foundation for their demanding work to renovate the Fish Ladder Gallery that will be enjoyed by visitors for many years into the future. Thank you for providing the plan developed by DYNW and the Corps Foundation for the renovation of the Visitor Center. The USACE is appreciative of all the partners and volunteers who take an interest in the Project as this is central to its success.

As part of the Master Plan process, the Historic Properties Management Plan will also be prepared. In its preparation, a Landscape Management Plan is being prepared for the Carl S. English Botanical Garden (Garden). The Operating Project is also considering preparing a Vegetative Management Plan that will not only consider the Garden, but will also consider the vegetative resources along the entire LWSC Project, including the Fremont and Montlake Cuts.

Improving the signage and providing more educational material on the LWSC Project is identified as a development need in the Master Plan. Also identified in the Master Plan was a need for more educational materials regarding the Native American Peoples, such as the Muckleshoot and Suquamish Tribes and their traditional fishing practices. The USACE will continue to work with all its partners to develop these materials.

The USACE did receive several comments regarding the bicycle access on the Locks site. For safety reasons, the USACE require all visitors to dismount their bicycles or skateboards while touring the Locks site.

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WATER RESOURCE INVENTORY AREA (WRIA 8) SALMON RECOVERY COUNCIL



July 30, 2020

- Beaux Arts Village
- Bellevue
- Bothell
- Clyde Hill
- Edmonds
- Hunts Point
- Issaquah
- Kenmore
- Kent
- King County
- Kirkland
- Lake Forest Park
- Maple Valley
- Medina
- Mercer Island
- Mill Creek
- Mountlake Terrace
- Mukilteo
- Newcastle
- Redmond
- Renton
- Sammamish
- Seattle
- Shoreline
- Snohomish County
- Woodinville
- Woodway
- Yarrow Point
  
- Cedar River Council
- Forterra
- Friends of the Issaquah Salmon Hatchery
- Greater Seattle Chamber of Commerce
- Mid-Sound Fisheries Enhancement Group
- Mountains to Sound Greenway Trust
- Northwest Marine Trade Association
- Sno-King Watershed Council
- Trout Unlimited/ Water Tenders
  
- Alderwood Water and Wastewater District
- King Conservation District
- National Oceanic and Atmospheric Administration
- US Army Corps of Engineers
- Washington Departments: Ecology, Fish and Wildlife, Natural Resources
- Washington Association of Sewer and Water Districts

Katherine Cousins  
 Fish Biologist and LWSC Master Pan Project Manager  
 United States Army Corps of Engineers  
 4735 E. Marginal Way S, Building 1202  
 Seattle, WA 98134

RE: Comments on Lake Washington Ship Canal Master Plan update

Dear Ms. Cousins,

Thank you for the opportunity to provide input for updating the Lake Washington Ship Canal (LWSC) Master Plan. We are writing on behalf of the Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Salmon Recovery Council (Council). The WRIA 8 Council is comprised of 28 local governments and representatives from businesses, community groups, concerned citizens, and state and federal agencies working collaboratively since 2000 to recover Chinook salmon, listed as Threatened under the Endangered Species Act (ESA). The WRIA 8 Council guides implementation of the *WRIA 8 Chinook Salmon Conservation Plan (WRIA 8 Plan)* including habitat goals and recovery actions that support long-term, sustainable, and harvestable runs of Chinook salmon in the watershed. The WRIA 8 Plan is approved by the National Oceanic and Atmospheric Administration (NOAA) as a component of the *Puget Sound Salmon Recovery Plan*. Although Chinook salmon are our primary focus, many of our objectives are intended to benefit other salmonids including coho, sockeye, and steelhead.

The LWSC and Hiram M. Chittenden Locks (Locks) are essential to our region's economy, transportation, and salmon recovery efforts. For salmon recovery, conditions at the Locks and in the LWSC present key constraints, which should be identified and addressed in the LWSC Master Plan. The Locks physically separate the freshwater LWSC from saltwater in the Puget Sound creating extremely abrupt changes in salinity, temperature, and dissolved oxygen conditions for migrating salmon. The Locks increase vulnerability to predation from pinnipeds (seals and sea lions) capitalizing on salmon blocked, slowed, or trapped at the Locks and associated facilities.

Improving salmon habitat conditions at the Locks and LWSC is of paramount importance to recovery efforts in the WRIA 8 watershed. Every salmon in WRIA 8 must pass through the Locks and LWSC twice in its life, both as a juvenile migrating out to the sea and as an adult returning to spawn. Recovering sustainable and harvestable salmon populations, supports local, state, and federal investment of more than \$130 million in habitat restoration since 1999

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and will increase numbers of Chinook salmon – the primary food source of endangered Southern Resident orca. Protecting and supporting salmon recovery is imperative to meet federal trust responsibilities under treaties between the U.S. government and two federally recognized tribes that protect tribal rights to conduct subsistence and commercial fishing activities.

In addition to migration constraints, juvenile salmon survival is impacted by conditions at the Locks and LWSC. Recent studies suggest predation by introduced invasive warmwater fishes may be a key limiting factor (R. Tabor, unpublished data). These predators can exhibit increased metabolism in the warm waters of the LWSC. High levels of artificial light pollution at the Locks and throughout the LWSC adversely impact juvenile salmon survival by altering behavior in ways that make them more susceptible to predation and increasing the length of time predators actively feed (Tabor et al. 2004, Celedonia et al. 2008, Tabor et al. 2017).

The 1994 LWSC Master Plan did not adequately address the role of the LWSC and Locks in supporting salmon recovery and overlooked several crucial limiting factors for salmon health and survival. Since the finalization of the 1994 Master Plan, Puget Sound Chinook were listed as Threatened under the Endangered Species Act, steelhead are now functionally extirpated from the watershed, and sockeye populations have plummeted. Annual Chinook counts continue to be below the 25 year average of 9,700, and the 2019 sockeye count of under 18,000 fish was the lowest on record. To achieve the primary goals of the LWSC Master Plan update, it is essential that the updated 2021 LWSC Master Plan includes a comprehensive assessment of how the Locks and LWSC affect salmon health and survival and a description of the need for planning and salmon-related infrastructure improvements, outreach programming and monitoring.

#### **Facility Repairs and Infrastructure Upgrades**

Locks facility improvements and upgrades that support fish passage and migration should be central to planning and implementation of the LWSC Master Plan including:

- Complete design and replacement or removal of the saltwater drain intake exclusion structure as a permanent solution to keep fish from becoming trapped and killed.
- Upgrade and modernize the fish ladder to improve adult salmon migration and help minimize risk of pinniped predation.
- Address issues with intermittent failure of the freshwater attraction valve in the ladder system delaying migration or trapping salmon in the ladder and increasing risk of predation.
- Design a system for monitoring flows and gate openings so issues with the attraction flow and fish passage barriers can be promptly identified and addressed.

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- Assess the effectiveness of the design and configuration of recently installed smolt flume upgrades at the Locks, which are an important improvement for juvenile fish passage.
- Continue regular operations and maintenance work that supports fish passage, including scraping barnacles from the Locks filling culverts.

#### **Salmon Habitat and Migration**

Structure and operation of the Locks drives physical, biological, and chemical conditions experienced by migrating adult and juvenile salmon. We request consideration and analysis of habitat alterations and recovery needs including:

- Identify solutions to decrease water temperatures and increase dissolved oxygen directly upstream of the Locks and in the LWSC to reduce these critical barriers to salmon health and migration.
- Identify solutions to address abrupt changes in salinity, temperature and dissolved oxygen conditions at the Locks and impacts to migrating salmon.
- Identify solutions to prolonged Chinook holding at the salt-water drain just upstream of the Locks. Currently, this area provides a limited cold-water refuge for migrating salmon as they journey to their natal streams.
- Employ commonsense reductions in nighttime artificial lighting at the Locks and throughout the LWSC to reduce non-target, unintentional, and often unnecessary impacts of light pollution on salmon and other biological resources.
- Increase natural habitats and engineered habitat enhancements (e.g., overhanging vegetation) along the shores of the LWSC and downstream of the Ballard Locks to improve habitat and water quality conditions for migrating juvenile salmon.
- Consider impacts of climate change on future Locks operations and fish passage needs.

#### **Outreach and Monitoring Salmon Populations**

The Locks serve as an important facility for educating local residents and visitors about salmon biology and recovery efforts. Annually, more than 1.25 million people from across the globe visit the Locks, making them one of the top tourist destinations in the greater Seattle region and an invaluable source of education for people of all ages. The LWSC Master Plan should highlight the continued important educational function of the Locks and LWSC, including:

- Continue and enhance coordination with partners (tribes, local governments, etc.) and support monitoring salmon populations.
- Improve outreach and education facilities to enhance visitor experience and educational opportunities, such as the current effort to upgrade the fish ladder viewing window area.

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- Continue support and grow partnerships with outreach and education programs at the Locks.

Thank you for the opportunity to provide input on updates to the LWSC Master Plan. We appreciate the Corps' ongoing partnership in recovering salmon in WRIA 8, and we strongly support the Corps' Seattle District in developing, updating, and annually requesting funds to implement a comprehensive suite of prioritized Locks and LWSC facility improvement projects, which will improve fish passage and salmon survival. We look forward to continued coordination to improve salmon survival and migration and enhance education and outreach programming to raise public awareness of salmon as an important natural and cultural resource at the Locks and LWSC.

Sincerely,



John Stokes  
Chair, WRIA 8 Salmon Recovery Council  
Councilmember, City of Bellevue



Mark Phillips  
Vice-Chair, WRIA 8 Salmon Recovery Council  
Councilmember, City of Lake Forest Park

Cc: Jon Hofstra, Ship Canal Operations Manager, Army Corps of Engineers  
Jason Mulvihill-Kuntz, WRIA 8 Salmon Recovery Manager  
WRIA 8 Salmon Recovery Council

References:

Celedonia, M.T., Tabor, R.A., Sanders, S., Damm, S., Lantz, D.W., Lee, T.M., Li, Z., Pratt, J.M., Price, B.E., and Seyda, L. 2008. Movement and habitat use of Chinook salmon smolts, northern pikeminnow, and smallmouth bass near the SR 520 bridge, 2007 acoustic tracking study, annual report (No. WA-RD 694.1). Washington State Dept. of Transportation.

Tabor, R.A., Brown, G.S. and Luiting, V.T., 2004. The effect of light intensity on sockeye salmon fry migratory behavior and predation by cottids in the Cedar River, Washington. *North American Journal of Fisheries Management*, 24(1), pp.128-145.

Tabor, R.A., Bell, A.T., Lantz, D.W., Gregersen, C.N., Berge, H.B. and Hawkins, D.K., 2017. Phototactic behavior of subyearling salmonids in the nearshore area of two urban lakes in western Washington state. *Transactions of the American Fisheries Society*, 146(4), pp.753-761.

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**Response:**

The USACE appreciates the time and effort that WRIA 8 took to provide thoughtful comments during Master Plan public scoping. Several suggestions in the WRIA 8 comment letter, including regional water quality, shoreline management, the operation and maintenance of LWSC Project Operations facilities (i.e., dam and/or spillway), and the operation and maintenance of the fish ladder are relevant to the region, but are not addressed here because they are beyond the scope of the LWSC Master Plan (EP 1130-2-550), are necessary for safe operations, or are on privately owned land. This includes items listed under “Facility Repairs and Infrastructure Upgrades” and “Salmon Habitat and Migration.” However, feedback from technical experts on these topics is appreciated and will be considered for future project planning and implementation, as appropriate.

The Master Plan is a land-use management document that guides efficient and cost-effective management, development, and use of project lands. All three items under “Outreach and Monitoring Salmon Populations” are within the scope of the LWSC Master Plan. The USACE is committed to continuing and enhancing coordination with partners such as Tribes and local governments through frequent communication and open dialogue. Monitoring salmon populations has occurred at the LWSC for several decades and the USACE will continue to facilitate this important work by the Lake Washington co-managers and scientific researchers.

The public viewing gallery provides an educational opportunity for visitors, both from within and outside this region. Improvements are either in the planning state or underway. For example, educational information and exhibits are currently in the design phase for Fish Viewing Gallery (see Section 5.1.3 of the Master Plan). Development needs for outreach and education at the Locks, Fremont Cut, and Montlake Cut will be described in Chapter 5 of the Master Plan.

Finally, the USACE believes that partnerships for outreach and education are a significant benefit to the LWSC. Section 6.2 of the Master Plan will discuss recommendations for future partnership and volunteer programs and opportunities.

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Table 1. Summary of Email Comments Received and Responses.

Date Received	Subject Category	Comment
6/9/2020	Education and tours	I think that the historical aspects of the Park and the Locks should continue to be described for the visitors. America needs to spend a lot of resources on maintenance and upgrading of public facilities of all kinds, including these locks, and letters from members of the public can help in this regard.
	Response	Thank you for your comment. The USACE continues to work with partners to preserve the Historic District.
6/9/2020	Education and tours	I would like the naturalists or the lead gardener to continue to lead tours of the Carl English Gardens and to give more detailed expositions of the biogeographical regions where they are from. Perhaps this latter could be in a video offered at the Visitor's Center.
	Response	Comment acknowledged
6/12/2020	Education and tours	Could there be programs or tours for children? Can they learn about the Indians fishing? Is there a way they can feel involved in the Locks?
	Response	USACE works with many Project partners including the Muckleshoot and Suquamish Tribes to improve educational information for the public. Providing information regarding the Tribal fishing was identified as a development need in the Master Plan.
6/18/2020	Education and tours	My only overall recommendation is that the visitor service functions need to be held on equal footing with the other program areas. Specific recommendations are below. <b>VISITOR CENTER AND SERVICES</b> – Continue current operations of both the visitor center and interpretative ranger led tours. While examining the most recent (I believe) 1994 LWSC Master Plan, it appears that interpretative tours may be a relatively new service provided by the Corps via a private contractor. The Visitor Center and interpretive services program are managed to provide interpretive exhibits and information for project visitors. The center features exhibits on the history and operation of the locks and ship canal and the role of the Corps in the Pacific Northwest and nation. The Visitor Center interprets project purposes and resources and enhances visitor understanding and appreciation of the Corps' various missions. Outside exhibits and the guided and self-guided tour programs also play an

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		<p>important role in interpreting the project to visitors. This structure is listed in the Historic District designation. FISH VIEWING GALLERY – Anadromous fish are an important ecological, cultural, and economic resource to the Pacific Northwest region. The public viewing gallery, one of the main visitor attractions at the project, provides an educational opportunity for visitors from within and outside this region. In the upcoming master plan development, the goal should be to maintain the public viewing gallery and associated interpretive exhibits to enhance the visitor's understanding and appreciation of the fish migration and the purpose and function of the fish ladder. While the project has had to solicit its own outside funds to upgrade the facility, it would be beneficial if the Corps could also assess how it could financially contribute to improving the viewing gallery so as to achieve the highest interpretative standards to maintain (fulfill) the Corps' interpretative mission.</p>
	Response	<p>USACE works with many Project partners to improve educational information for the public. It is agreed that more information regarding the socioeconomic contribution the LWSC provides to the City of Seattle could be provided.</p>
7/30/2020	Education and tours	<ul style="list-style-type: none"> <li>• Update Visitor Center (VC) brochure, include statistics, make it customer-oriented not a Public Relations piece;</li> <li>• Close VC restrooms, antiquated, unsanitary, constant maintenance disruptive to VC operations</li> <li>• Place historic signage on building exteriors, 25-word historic information</li> <li>• Encourage public use of buildings, invite garden/history/public groups to use site for lectures, meetings, etc.</li> </ul>
	Response	<p>USACE works with many Project partners including Master Gardeners, researchers and other botanical gardens to improve educational information for the public. One of the development needs identified in the Master Plan was to implement an integrative educational outreach program.</p>

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<b>Date Received</b>	<b>Subject Category</b>	<b>Comment</b>
6/9/2020	Increase hours of operation	The one suggestion I have is to change the hours of use, especially in the summer, for pedestrian traffic.
	Response	Comment acknowledged and we will take this suggestion into consideration.
6/13/2020	Infrastructure Improvement	The west bank of terraces is difficult to access and has no shade. The wooden stairs at the extreme west end are rotting away.
	Response	Comments acknowledged and considered in Section 8.5 of the Master Plan.
6/13/2020	Infrastructure Improvement	There is a strange widening of the path at the top of this bank of terraces, which was designed for some forgotten use (holding back the bank?) – could it be replaced by stairs?
	Response	All changes such adding stairs could change the historic appearance of the Project and must be planned, designed, and constructed consistent with the Department of the Interior Standards for Rehabilitation. Such developments must also follow Section 106 of the National Historic Preservation Act.
6/13/2020	Infrastructure Improvement	The erratic paving in the nursery is difficult for seniors to walk on – some tile would be nice!
	Response	Comment acknowledged and will be discussed in Section 8.5 of the Master Plan.
6/13/2020	Infrastructure Improvement	The fish ladder is a gloomy place, cold, dark and damp – are you going to give it a floor, murals, easier to see info panels, wider entrance?
	Response	The Fish Gallery was renovated in 2020 and so should be less “gloomy” in appearance. Improving public information, such as interpretative signs, has been identified as a development need for the Master Plan.
6/13/2020	Infrastructure Improvement	Better benches everywhere to replace those uncomfortable little cement things – since the park is closed at night, homeless people do not camp on them.
	Response	The LWSC is designated as a Historic District and as such there are limitations on removing or changing the appearance of the cement benches as this would change the historic appearance of the Project. Still, more comfortable seating could be considered in other areas.
6/13/2020	Infrastructure Improvement	The little museum in the Visitor Center is interesting and should be more visible and more accessible.

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<b>Date Received</b>	<b>Subject Category</b>	<b>Comment</b>
	Response	The USACE and partners are working toward renovating the Visitor Center (See Section 5.1.8 in the Master Plan).
6/13/2020	Infrastructure Improvement	All washrooms very much appreciated, and they are kept clean and stocked, but the stalls in the Women's on the lock bank are very small....difficult for a mother with small child or a senior with a walker.
	Response	Comment acknowledged (see Sections 5.1.7 and 8.5 of the Master Plan).
7/3/2020	Infrastructure Improvement; fish passage and viewing	The fish passage facility needs to be improved, first for the fish and second for the visitors. This is an important asset in our region, brings many visitors, and educates all of us. Fish passage needs to be a priority.
	Response	Comment acknowledged (see Section 5.1.3 of the Master Plan).
7/3/2020	Infrastructure Improvement; include power generation	It is time for the locks to generate power using micro-turbines. Failing to use this source of energy is wasteful.
	Response	Power generation is not part of the Project's current authority. Changes in Project authority would be needed from Congress.
7/27/2020	Infrastructure Improvement; debris boom	My proposal for the Master Plan is to consider deploying a floating trash boom during peak flow months to decrease the amount of trash flowing into Puget Sound. This was the one thing that saddened me on my daily walks was to see the plastic, buoys, and fiberglass piling up along the flood gates on its way out to the Sound. A significant amount of this garbage could be blocked by either positioning a boom upstream from the flood gates where the warning signs are hung via cable or below the flood gates in the spillway.
	Response	Comment acknowledged (see Section 5.1.2 of the Master Plan).
6/9/2020	Infrastructure; small café	Put in a small cafe or tap house with outdoor seating so visitors could grab a drink, small snack, and sit out and view the ships coming and going through the canal.
	Response	Comment acknowledged and is discussed in Section 5.1.5 of the Master Plan.
6/9/2020	More recreation; concerts	I like the open-air concerts, and hope they can continue.

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Date Received	Subject Category	Comment
	Response	The USACE hopes to continue open-air events when it is safe to do so, and in accordance to public safety guidance and recommendations, and following all state and federal regulations.
6/13/2020	More recreation; concerts	More classical music at the concerts, please! Even some light opera, ballet, some Shakespeare.
	Response	Comment acknowledged.
6/12/2020	More Recreation; concerts	To sit on the grass, under the trees, with people of all ages, family groups, tourists from all over the world, all quietly enjoying the music together – this is Heaven on Earth! Please – more of same! I very much appreciate the presence of the rangers, to make sure there is no drinking or bad behavior. Between concerts, I often bring a camp chair and my lunch and a book, find a shady spot in the garden or up on the hill and camp for a few hours. I love this park! As Seattle’s population grows, I hope there will still be plenty of quiet corners. And I have spent hours just watching the boats go through the locks.
	Response	Comment acknowledged.
6/15/2020	More Recreation; concerts	I really enjoy the weekend concerts offered both Saturday’s & Sunday’s and would like to see those events continued. Enjoyed by all age groups, especially the elderly & families with kids!
	Response	Comment acknowledged.
6/9/2020	Pedestrian and bike access; manage this better	My suggestion: please improve the experience when bikes and pedestrians mix on the lock door walkways (the moving walkways atop the actual lock doors.)
	Response	All visitors with bicycles to the Locks site are required to dismount at entrances to the Locks site and to walk through.
6/9/2020	Pedestrian and bike access	The public needs pedestrian access across the locks. This is not just a recreational use; this is an essential component of the commute for many Seattle residents. I am very concerned that this does not seem to be a priority and no effort has been made to communicate a plan or even that a plan is being worked on.

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Date Received	Subject Category	Comment
	Response	At present, the USACE are unable to build a separate bridge for commuters across the Locks as this is not part of the Project's current authority. Changes in authority would be required through Congress.
6/9/2020	Pedestrian and bike access	During the present COVID-19 crisis, I think traffic crossing the locks should be open to commuters, especially bicycle commuters when downtown offices re-open, perhaps providing them with an easily recognized sticker for their bikes (admission of self-interest: I'd like one of those stickers so I can drive my electric wheelchair across the locks to monitor the heron colony.) My reasoning is that this would alleviate some of the traffic congestion down-town, because former bicycle commuters will otherwise drive to work in single occupancy vehicles.
	Response	At present providing access for commuter traffic is not part of the LWSC Project's Congressionally authorized mission. New authorities would be needed from Congress.
6/9/2020	Pedestrian and bike access	Hello, submitting an idea to construct a new pedestrian bridge, with two-way bicycle lanes and a common pedestrian lane. Thought is to partner with City of Seattle to connect the Ballard Locks ACE [sic] site with Commodore Park, with either enough clearance for tall ships, or would need a draw/raising component.
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a commuter route for residents is not part of the Project's authorization. New authority would be needed from Congress.
6/12/2020	Pedestrian and bike access	I live nearby and visit the Locks frequently, by bicycle and on foot. I also use it to get back and forth between Ballard and Magnolia. But in the summer months, I avoid the crossing because of crowding and people standing on the narrow walkway on the locks themselves. I know the attraction of watching the boats, but even frequent reminders from the staff don't seem to help much to remind folks to keep moving (many of our visitors are not native English speakers). It's a tricky maneuver at the best of times to get a bike across without accidentally bumping someone. But it's also the safest and most convenient way to get between Ballard and Magnolia. I

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Date Received	Subject Category	Comment
		don't know what you can do about the situation, but anything to help would be appreciated.
	Response	The LWSC Project is not authorized to provide separate passage for commuters. The Project is authorized to provide recreational access to view the lockages, fish passage, gardens and learn about the history of the Project.
6/9/2020	Pedestrian and bike access	Please figure out a way to allow bikes through without requiring them to walk the entire way.
	Response	At present, there is no way to separate bicycle and pedestrian traffic. For safety reasons visitors on bicycles are required to dismount while on the site. The addition of more bicycle racks could allow visitors to lock their bicycles while touring the site and is discussed in Section 5.1.6 of the Master Plan.
6/9/2020	Pedestrian and bike access	I've been using the Ballard Locks as a safe way to cross the ship canal in the west end of the city for the past 29 years. Although it is not possible to cross by bike now due to COVID, for many this has been an important bike route. Please consider bikes using this as a through route & not only a destination when redesigning.
	Response	The LWSC Project is not specifically authorized to provide pedestrian or bicycler commuter routes. The Project is authorized to provide recreational access to view the lockages, fish passage, gardens and learn about the history of the Project.
6/12/2020	Pedestrian and bike access	People who ride bikes or skateboards in the park are a pest and a danger, and the rangers do the best they can to make them walk. Between concerts, I often bring a camp chair and my lunch and a book, find a shady spot in the garden or up on the hill and camp for a few hours. I love this park! As Seattle's population grows, I hope there will still be plenty of quiet corners. And I have spent hours just watching the boats go through the locks.
	Response	Comments acknowledged.

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Date Received	Subject Category	Comment
6/19/2020	Pedestrian and bike access	As the Master Plan for the LWSC is being considered, I would like to advise that the movement of people and bikes be emphasized. For the same reasons that the ship canal is the vital link for boats, the Locks must be for people on foot and bikes. Our region deserves thorough and complete infrastructure to allow people to get around without cars, and the Locks represent a crucial geographic link North-South that will facilitate this non-SOV mobility. These facilities won't come at the expense of proper water way management, rather complimenting them with additional functionality.
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a commuter route would require new authority from Congress.
7/1/2020	Pedestrian and bike access	<p>I represent Ballard-Fremont Greenways, a neighborhood chapter of the Seattle Neighborhood Greenways coalition &lt;<a href="http://seattlegreenways.org/">http://seattlegreenways.org/</a>&gt;. We are advocates for safe streets in the Ballard and Interbay neighborhoods, especially for those infrastructure investments that improve safety and accessibility for cyclists and pedestrians of all ages and abilities. We have been working closely with the Ballard Interbay Regional Transportation System &lt;<a href="http://www.seattle.gov/transportation/projects-and-programs/current-projects/ballard-interbay-regional-transportation-system">http://www.seattle.gov/transportation/projects-and-programs/current-projects/ballard-interbay-regional-transportation-system</a>&gt; team from SDOT to provide input on future plans for the Interbay corridor and a regular topic of conversation is the crossing at the Ballard Locks. Based on current limitations of the crossing at the Ballard Locks, here are some general recommendations:</p> <ol style="list-style-type: none"> <li>1. The crossing of the Locks should support cyclists and pedestrians of all ages and abilities</li> <li>2. Cyclists should be able to bike the entire length of the grounds and not be required to dismount unless there is no other safe option</li> <li>3. Hours of operation should be extended to better support cyclists and pedestrians who use the Locks for crossing the Ship Canal plus a suggestion to partner with SDOT to better integrate the Locks into the Interbay neighborhood</li> </ol>

**Lake Washington Ship Canal Project Master Plan 2025**  
**Attachment F – Scoping for the Master Plan**  
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Date Received	Subject Category	Comment
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a commuter route would require a new authority from Congress.
7/3/2020	Pedestrian and bike access	Bicycle and scooter commuting through the locks needs to be improved. This is a valuable corridor that needs to be improved with speedier access on both sides of the locks. Separate paths for commuters and gawkers should be established.
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a commuter route would require new authority from Congress.
6/14/2020	Pedestrian and bike access; keeping access open even in difficult times	My request is that the new Master Plan put far more priority on keeping the Locks open to pedestrians, at least for through-travel across the canal. (comment focuses on the Locks shutdown due to the COVID-19 pandemic forcing people to use alternative routes to cross the channel)
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a specific commuter route for residents would require a new authority from Congress.
6/19/2020	Pedestrian and bike access; separate lanes for bikes and foot traffic	I am a resident of Ballard who frequently runs and bikes through the Ballard locks. As we evaluate the master plan, I would love for a better way to get through the locks without having to negotiate the crossings with tourists. A special dedicated lane for runners and bicyclists would be much appreciated.
	Response	LWSC authorized uses include navigation, flood control, recreation and other purposes such as fish passage. Providing a commuter route is not part of the Project's authorization, to do so would require a new authority from Congress.
7/30/2020	Pedestrian and bike access	Consider banning bicycles, at least from the garden/loop road.

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Date Received	Subject Category	Comment
	Response	Comment acknowledged. As discussed in Section 5.1.7 of the Master Plan, providing more bicycle racks for visitors may assist in reducing this issue.
6/9/2020	Vegetation and gardens	Please plant a LOT OF TREES!! It's good for the environment and the water and it looks good too.
	Response	As the Gardens are a Historic District subject to National Historic Preservation Act, all developments, including the planting of trees, must follow Section 106 of the Act. This means that expansions of ornamental plantings or the planting of more trees might not be possible as it may change the historic nature of the Garden.
6/9/2020	Vegetation and gardens	This garden is one of my favorite places, and I usually visit at least once a week, year-round. I especially love the beautiful international collection of trees. Having a beautiful place like this to go in the city is important for people's physical and mental health. I know many people love to walk there, either alone or with friends and family. I can't wait for it to be open again.
	Response	Comment acknowledged.
6/13/2020	Vegetation and garden	The rose garden is underwhelming and could use a redesign – get rid of the ugly beauty bark and frame the roses with green lawn.
	Response	All changes to the Garden must be in compliance with Section 106 of the National Historic Preservation Act. A redesign of the rose garden can be considered as long as the design does not change the historic nature of the Garden.
7/20/2020	Vegetation and garden	I would like to encourage the committee to remain committed to the Carl S. English Botanical Garden. I think it is important to preserve this historical collection of woody plants and make commitments to maintain the garden and continue to add new plants and garden spaces to this regional treasure. The collection contains rare early examples of western North American native plants along with exotic specimens rarely found in Seattle. The collections that exist today have been highly influential to the development of gardening in the Seattle area. Many regional nurseries and notable plantsmen and plants women has been inspired by these gardens. I would encourage you to give special consideration to this and the ability of the gardens to influence today's

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		<p>gardeners. It is important to have the collection be vibrant and evolving adding. The extremely mild climate of the Lake Washington Ship Canal allows for experimentation on cultivating marginally hardy species and allows the planting of newly discovered trees and shrubs to be trialed.</p> <p>I would also like the committee to consider expanding the ornamental plantings along the LWSC that were originally planted by the Seattle Garden Club. We now have access to many more plants that are completely drought tolerant that can add seasonal beauty to this landscape and increase the diversity of interesting trees and shrubs in our urban setting.</p>
	Response	<p>USACE partners with several groups, organizations, and researchers to maintain the Garden. All considered changes to the Garden must be in accordance to Section 106 of the National Historic Preservation Act. This means that expansions of ornamental plantings might not be possible as it may change the historic nature of the Garden.</p>