CITY OF
BAINBRIDGE ISLAND

Island Center Subarea Planning Steering Committee Meeting Minutes Wednesday, February 21, 2018

REVIEW AND APPROVAL OF MEETING AGENDA
REVIEW AND APPROVE NOTES FROM JANUARY 17 AND FEBRUARY 7, 2018 MEETINGS
PUBLIC COMMENT
OVERVIEW AND DISCUSSION OF ISLAND CENTER AREA SURFACE WATERS
DISCUSS 2001 DRAFT ISLAND CENTER SPECIAL PLANNING AREA REPORT
PUBLIC COMMENT
NEXT STEPS, DISCUSS AGENDA FOR March 7, 2018 MEETING
ADJOURN

REVIEW AND APPROVAL OF MEETING AGENDA
The meeting was called to order at 6:35 PM. Steering Committee Members in attendance were Michael Loverich, Maradel Gale, Donna Harui, Micah Strom, Adam Matschek, Scott Anderson, Sarah Blossom (City Council) and Michael Killion (Planning Commission). Lisa Neal, Tracy Collier, Sherri Eckert and Joe Dunstan (Design Review Board) were absent. City Staff in attendance were Planning Director Gary Christensen, Engineering Manager Mike Michael, Senior City Planner Jennifer Sutton and Administrative Specialist Carla Lundgren who monitored recording and prepared minutes. There were five citizens present (see attached sign-in sheet).

The agenda was reviewed and approved.

Lisa Neal submitted (via Jennifer Sutton) updates to the December 5, 2017 meeting notes. It was recognized by the committee that Lisa Neal's notes/updates for the minutes of the January 17, 2018 and February 7, 2018 meetings were helpful to the committee members but not to be included in the official minutes as the audio recordings of the meetings are the official minutes and can be accessed via the City's website. The January 17, 2018 and February 7, 2018 minutes were approved as distributed.

PUBLIC COMMENT
None.

OVERVIEW AND DISCUSSION OF ISLAND CENTER AREA SURFACE WATERS
Cami Apfelbeck, Water Resources Specialist *(Presentation Only)*

DISCUSS 2001 DRAFT ISLAND CENTER SPECIAL PLANNING AREA REPORT
(Discussion Only)

PUBLIC COMMENT
Gary Loverich, Citizen – Liked the statement Michael Loverich read regarding his opposition to the 2001 Draft Island Center Special Planning Area Report.

NEXT STEPS, DISCUSS AGENDA FOR March 7, 2018 MEETING
Gary Christensen, Planning Director – Requested the committee develop a Vision Statement and prioritize each idea. Gary suggested each member bring 1-3 sentences of their vision to the next meeting. These would be compiled into a large list for each member to mark with a colored dot the sentences they felt would represent the Committee's Vision properly. It was decided that each Committee member would forward their vision sentences to Jennifer Sutton by March 6, 2018 for the meeting on March 7, 2018. It was suggested each member review the Guiding Principles from the 2016 Comprehensive Plan as an example of prioritizing their vision.

ADJOURN
The meeting adjourned at 9:00 PM.

CITY OF
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Island Center Subarea Planning Process Steering Committee Meeting

February 21, 2018 6:30 – 8:30 PM

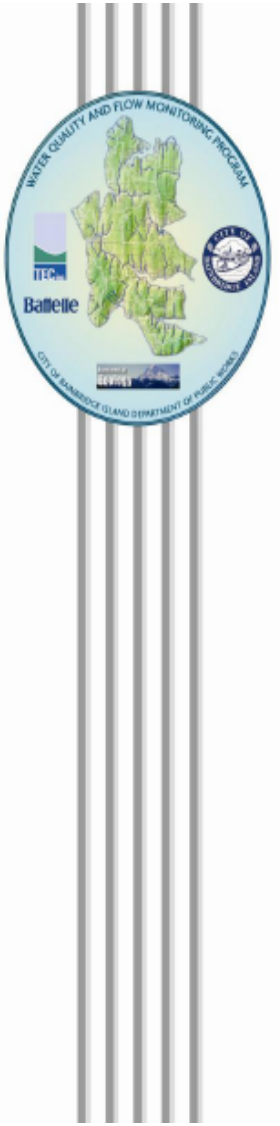
PLEASE PRINT

Name	Phone/E-Mail	Join ListServ Yes/No	Would like to speak	Subject
Jackie Wood	206-842-0803			
RICK HATTEN	RICKERBOCK@AOL.com		NO.	
GARY LOVERICH	nwocean@live.com		No	
Barry Spinak	punim@jhu.edu			
JIM CUTLER	JIMC@CUTCLER-ANDERSON.COM		?	

Fletcher Bay Watershed Surface Water Status and Trends Monitoring

February 21, 2018

Cami Apfelbeck, Program Manager
Water Quality and Flow Monitoring Program



Continuous flow and weather

Monthly grab & in-situ physiochem

Annual stream benthos (bugs)

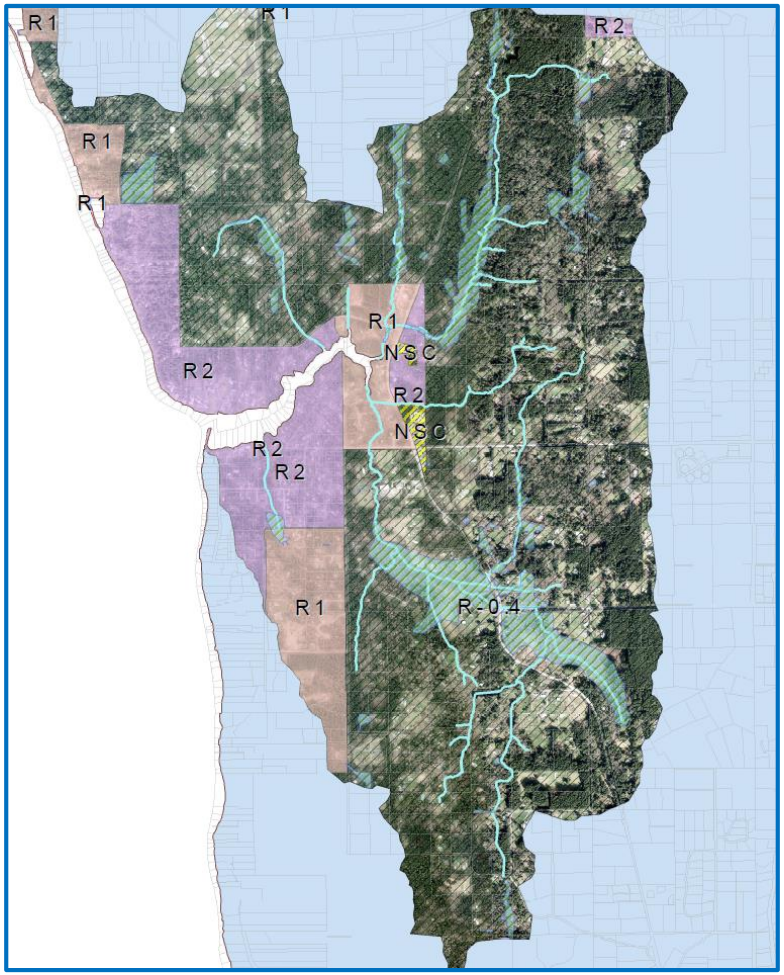
Targeted storm event (every 5 years)

Sediment (every 5 years)

Other Sources of Data

- Department of Health Shellfish Program
  - Fecal Coliform Bacteria
- Stormwater Action Monitoring – Washington Department of Fish and Wildlife Mussel Monitoring
  - Organic Contaminants (PAHs, PCBs, PBDEs, and DDTs)
  - Metals (Lead, Copper, Zinc, Arsenic, Cadmium, and Mercury)

Fletcher Bay Watershed



- 2102 total acres
- 147.1 acres of wetland
- 10.6 miles of stream
  - 7.2 miles fish-bearing
- 4.5 miles shoreline
- ~7% impervious
- 2 of 8 combined streams
  - Issei Creek
  - Springbrook Creek

State Listings

- Fletcher Bay
  - Water of Concern – Fecal Coliform Bacteria
- Springbrook Creek
  - Impaired – Fecal Coliform Bacteria
- Springbrook Creek/Fletcher Bay
  - Sinclair and Dyes Inlets Fecal Coliform Bacteria TMDL

Department of Ecology Water Quality Assessment (2014)

Springbrook Creek Water Quality

- Physiochemistry
  - Dissolved oxygen (summer lows)
  - pH (good)
  - Temperature (summer highs)
  - Turbidity (rain event slight elevations)
- Fecal Coliform Bacteria
  - Does not meet standard
- Metals
  - Routine sampling – no exceedances
  - Targeted storm sampling
    - Aluminum – Exceeds acute criteria
    - Copper – Exceeds chronic criteria
    - Lead – Exceeds chronic criteria

Springbrook Creek Water Quality

- Nitrogen and Phosphorous
  - Low to moderate concern
- Ammonia
  - Exceeds chronic criteria in wet season and storms
- Stream Bug Health
  - B-IBI (fair)
  - Fine Sediment Sensitivity Index (low)
  - No statistically significant trends

Springbrook Creek Sediment Chemistry

- Sediment Chemistry – No exceedances
  - Metals (Aluminum, Copper, Lead, Zinc)
  - Hydrocarbons
    - Diesel range organics (2013)
  - Semi-volatile organic compounds
    - Butyl Benzylphthalate (2013)

Springbrook Creek Sediment Grain Size

Size	2008 (%)	2013 (%)
Gravel	30	41
Sand	66	57
Silt	2	1
Clay	2	1

Issei Creek Water Quality

- Physiochemistry
  - Dissolved oxygen (summer lows)
  - pH (good)
  - Temperature (good)
  - Turbidity (rain event slight elevations)
- Fecal Coliform Bacteria
  - Does not meet standard
- Metals
  - Routine sampling – no exceedances
  - Targeted storm sampling
    - Aluminum – Exceeds acute criteria
    - Copper – Exceeds chronic criteria

Issei Creek Water Quality

- Nitrogen and Phosphorous
  - Low to moderate concern
  - High concern (summer)
- Ammonia
  - Exceeds chronic criteria in wet season and storms
- Stream Bug Health
  - B-IBI (poor)
  - Fine Sediment Sensitivity Index (low)
  - Statistically significant trends
    - Percent tolerant species (declining)
    - Metals Tolerance Index (declining)

Issei Creek Sediment Chemistry

- Sediment Chemistry – No Exceedances
  - Metals (Aluminum, Copper, Lead, Zinc)
  - Hydrocarbons
    - Diesel range organics (2013)
    - Heavy Oil (2013)
  - Semi-volatile organic compounds
    - Butyl Benzylphthalate (2013)

Issei Creek Sediment Grain Size

Size	2008 (%)	2013 (%)
Gravel	No Sample	42
Sand		56
Silt		1
Clay		1

Fletcher Bay Water Quality

- Physiochemistry
  - Dissolved oxygen (good)
  - pH (good)
  - Temperature (good)
  - Turbidity (slight elevations)

- Fecal Coliform Bacteria
  - Does not meet standard

- Metals
  - Meets criteria

Fletcher Bay Water Quality

- Nitrogen and Phosphorous
  - Ratio of Total Inorganic Nitrogen to Total Phosphorus
    - Good – control algal blooms
    - But, near high end of acceptable ranges – could be limiting aquatic diversity
- Ammonia
  - Exceeded chronic criteria one out of two storms

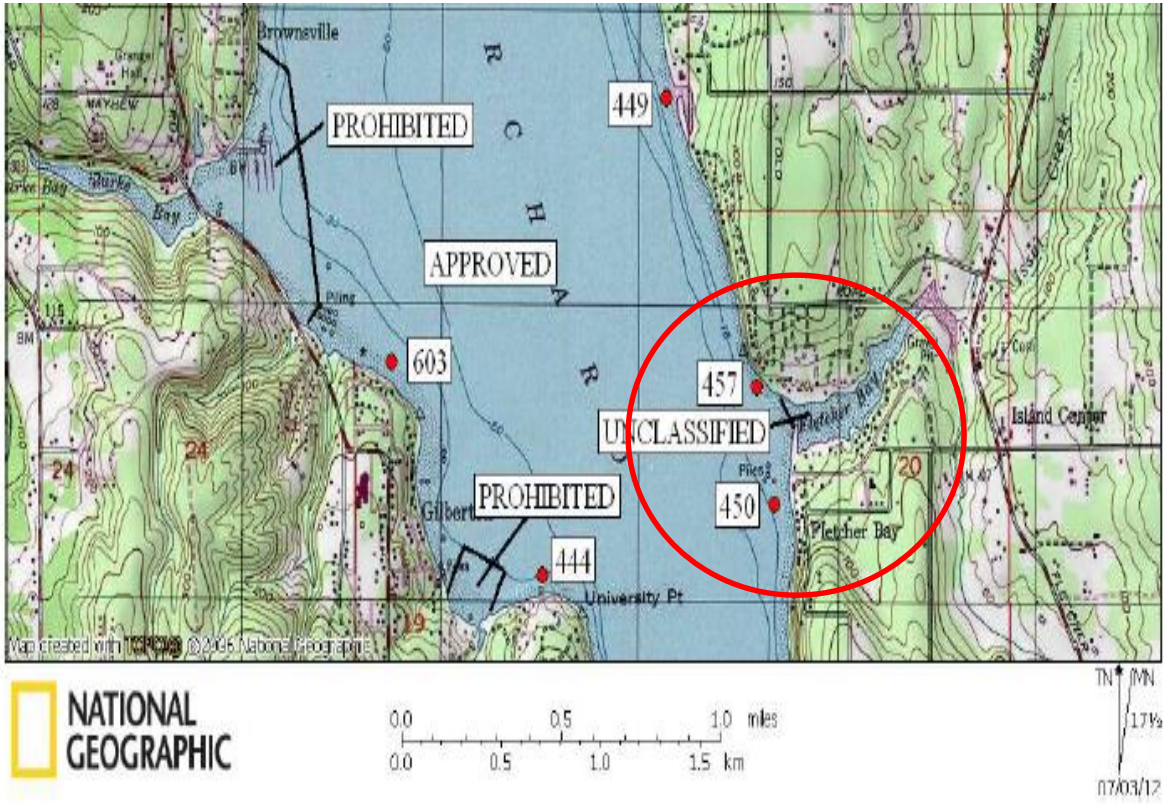
Fletcher Bay Sediment Chemistry

- Sediment Chemistry – No Exceedances
  - Metals (Aluminum, Copper, Lead, Zinc)
  - Hydrocarbons
    - Diesel range organics (2013)
    - Heavy Oil (2013)
  - Semi-volatile organic compounds
    - Butyl Benzylphthalate (2013)
    - Bis(2-Ethylhexyl)phthalate (2013)

Fletcher Bay Sediment Grain Size

Size	2008 (%)	2013 (%)
Gravel	59	28
Sand	34	70
Silt	5	1
Clay	3	1

Port Orchard Passage Shellfish Growing Area



Shellfish Growing Area Monitoring *(DOH Shellfish Program 2016)*

Port Orchard Passage Shellfish Growing Area

TABLE 1
Summary of Marine Water Data (SRS)
Growing Area: Port Orchard Passage

Sampling Event Type: Regulatory
Tides Included: ALL
Maximum Number of Samples: 30

Station Number	Classification	Date Range	Range (FC/100 mL)	GeoMean (FC/100 mL)	E90th (FC/100 mL)	Meets Standard
436	Approved	12/28/2011 - 12/19/2016	1.7 - 11.0	1.9	2.9	Y
438	Approved	1/30/2012 - 12/19/2016	1.7 - 7.8	1.9	2.8	Y
439	Approved	1/30/2012 - 12/19/2016	1.7 - 13.0	1.9	3.0	Y
440	Approved	1/30/2012 - 12/19/2016	1.7 - 4.5	1.8	2.2	Y
441	Approved	1/30/2012 - 12/19/2016	1.7 - 14.0	1.9	3.1	Y
443	Approved	1/30/2012 - 12/19/2016	1.7 - 7.8	1.9	2.9	Y
444	Approved	1/30/2012 - 12/19/2016	1.7 - 7.8	2.0	3.4	Y
445	Approved	1/30/2012 - 12/19/2016	1.7 - 33.0	2.3	6.3	Y
446	Approved	1/30/2012 - 12/19/2016	1.7 - 4.5	1.8	2.3	Y
448	Approved	1/30/2012 - 12/19/2016	1.7 - 11.0	2.2	4.0	Y
449	Approved	1/30/2012 - 12/19/2016	1.7 - 17.0	2.4	6.1	Y
450	Approved	1/30/2012 - 12/19/2016	1.7 - 79.0	2.6	8.5	Y
452	Approved	1/30/2012 - 12/19/2016	1.7 - 17.0	2.2	4.6	Y
453	Approved	1/30/2012 - 12/19/2016	1.7 - 49.0	2.2	5.2	Y
454	Approved	1/30/2012 - 12/19/2016	1.7 - 23.0	2.4	6.1	Y
455	Approved	12/28/2011 - 12/19/2016	1.7 - 46.0	2.0	4.4	Y
456	Approved	1/30/2012 - 12/19/2016	1.7 - 33.0	1.9	3.9	Y
457	Approved	1/30/2012 - 12/19/2016	1.7 - 49.0	3.7	13.7	Y
504	Approved	1/30/2012 - 12/19/2016	1.7 - 14.0	2.4	5.4	Y

Shellfish Growing Area Monitoring *(DOH Shellfish Program 2016)*

Organic Contaminants in Mussels

Appendix 2: Concentration of Organic Contaminants in Mussels by Site

Dry Weight Concentrations of Organic Contaminants

* Mean of six replicate samples from Penn Cove, Whidbey Island aquaculture source of mussels (i.e., starting condition)

< Indicates the concentration was not measured above the limit of quantitation (LOQ), which is the value reported in this case

Site ID	Site Name	Concentrations in ng/g, dry weight (ppb)						
		$\sum_{38}$PAHs	TPCBs	$\sum_{11}$PBDEs	$\sum_{6}$ DDTs	$\sum_{8}$ Chlordanes	$\sum_{3}$ HCHs	Dieldrin
WB_PC	Baseline Site (n = 6)*	35.5	5.4	<1.27	<1.27	<1.27	<1.27	<1.25
Site #2	Arroyo Beach	290.2	41.7	12.4	3.4	<2.03	<0.801	<0.801
Site #3	Brackenwood Ln	435.2	31.8	7.1	2.3	<1.09	<1.02	<1.02
Site #4	Cherry Point North	123.9	6.2	<2.08	<1.70	<1.01	<1.01	<1.01
Site #5	Salmon Beach	223.1	30.9	6.9	2.1	<0.857	<0.857	<0.857
Site #6	Eagle Harbor Dr.	1821.8	116.7	3.0	3.2	<0.828	<0.828	<0.828
Site #8	Chimacum Creek delta	94.9	12.5	<2.09	<1.20	<1.20	<1.20	<1.20
Site #10	Fletcher Bay, Fox Cove	256.0	55.2	5.9	3.3	<0.920	<0.920	<0.858
Site #11	South Bay Trail	382.1	22.4	8.0	3.1	<1.12	<1.12	<1.12

Stormwater Action Monitoring - WDFW Mussel Monitoring *(Lanksbury, J. et al. 2017)*

Metals in Mussels

Appendix 3: Concentrations of Metals in Mussels by Site

Dry Weight Concentrations of Metals

* Mean of six replicate samples from Penn Cove, Whidbey Island aquaculture source of mussels (i.e., starting condition)

< Indicates the concentration was not measured above the reporting detection limit (RDL), which is the value reported in this case

Site ID	Site Name	Concentrations in mg/kg, dry weight (ppm)					
		Mercury	Arsenic	Cadmium	Copper	Lead	Zinc
WB_PC	Baseline Site (n = 6)*	0.0440	6.14	1.71	7.60	0.34	84.3
Site #2	Arroyo Beach	0.0533	7.89	1.95	7.95	0.30	97.0
Site #3	Brackenwood Ln	0.0559	7.35	1.96	6.71	0.29	85.7
Site #4	Salmon Beach	0.0404	6.87	1.56	6.56	0.32	85.3
Site #5	Eagle Harbor Dr.	0.0578	6.78	1.66	8.77	0.98	97.1
Site #6	Fletcher Bay, Fox Cove	– 0.0424	– 6.63	– 1.70	↑ 8.31	↑ 0.51	↑ 91.0
Site #8	South Bay Trail	0.0501	6.88	2.14	8.79	0.92	97.1

Stormwater Action Monitoring - WDFW Mussel Monitoring *(Lanksbury, J. et al. 2017)*

Land Use Impact

Table 3. Impact of a land-use and point source factors on the concentration of contaminants in nearshore mussels.

Type	Test	Significant Results (α <0.05)	
		Organic Contaminants	Metals
Municipal land-use planning designations	UGA vs. Baseline Site	PAHs, PCBs, PBDEs, DDTs	NS
	UGA class (city vs. unincorporated-UGA)	PAHs, PCBs, PBDEs, DDTs	Zinc
Watershed land use* measured in adjacent watersheds with an average area 8.8 km^2 (3.4 $miles^2$)	mean % Impervious Surface	PAHs, PCBs, PBDEs, DDTs	NS
	% Urban area	PBDEs, DDTs	NS
	% Forested area	NS	NS
	% Agricultural area	PCBs, PBDEs, DDTs	Lead
	% Wetland area	NT	NT
Shoreline land use† measured up to 200 meters (656 ft.) inland from shoreline	% Urban area	NS	NS
	% Forested area	NS	NS
	% Agricultural area	NS	NS
In-water point sources	Marina/ferry terminal presence	PAHs, PCBs, DDTs	Lead
	Creosote observed	NS	NS
Natural geographical/geological features	Shoreline form (bay vs. open)	NS	Lead
	Substrate (depositional vs. coarse)	NS	Lead

UGA = urban growth area, NS = not significant, NT = not tested due to lack of replicates

* Data from National Land Cover Dataset 2011

† Data from NOAA's C-CAP Land Cover Atlas shoreline characterization

Stormwater Action Monitoring – WDFW Mussel Monitoring *(Lanksbury, J. et al. 2017)*

Springbrook Creek Evaluation and Feasibility Study – June 2018

- BI Land Trust
  - City
  - Wild Fish Conservancy
  - West Sound Watersheds Council
  - BI Watershed Council
- Activities/Outcomes
  - Baseline Monitoring
  - Habitat Assessment
  - Watershed Characterization
  - Project ID and Prioritization
  - Conceptual Design of 5 Projects

Thank you