



DECISIONS AND ACTIONS

Steering Committee
Tuesday, January 22, 2019
Colwood Municipal Hall

Present: Terry Phipps, Vicki Metcalfe, Jason Nault, Judy Nault, Judith Cullington, Gayle Johnston, Beth Mitchell, Thelma Wright, Iain Bourhill, Jill Collinson (Colwood Planning), Rodney Huszar, Natalie Bandringa, Kitty Lloyd, Ken Morgan (by phone), ,

Guest: Patty Menning (DFO), Ian Bruce (Peninsula Streams), Cornelia Lange (Colwood resident)

DECISIONS			
1	Based on consultation with ELSI, DFO will recommend using hard sided prawn traps for green crab surveys in the lagoon, to minimize possibility of capturing birds		
2	ELSI will write a letter in support of extending the dog on leash area at the lagoon		
Next Meeting: April 23, 2019			
ACTIONS		ACTION BY	DUE
1	Provide contacts to Cornelia to get Brookes students involved in creek project	All	ASAP
2	Colwood to follow up with Brookes School on fulfilling their development permit obligation	Iain	ASAP
3	Colwood provide a contact for Parks so Patty can let them know when they are sampling	Iain/Colwood	ASAP
4	Send Ian Bruce the Coastal Erosion Report by Northwest Hydraulics	Kitty	(done)
5	Write a letter of support for expansion of on leash area at the lagoon, including a request for enforcement	Kitty	ASAP
6	See if there's a possibility for getting the lagoon designated as a no boating zone	Vicki Metcalfe	ASAP
7	Ask development planning staff to follow up about Brookes School riparian works	Iain	ASAP
8	Contact Patrick Lucey about a tour of the Selleck Cr riparian restoration	Kitty	February

INFORMATION

Natalie: Acknowledgement that we are meeting on the traditional territory of the Lkwungen people. We are here to work together to look after the land and waters of Esquimalt Lagoon.

Review of Action Items from October 9, 2018 meeting:

- **RE presentation to Colwood council** – Kitty and Natalie are not able to present to council (CRD policy) but we have been discussing this with Iain Bourhill, he can forward information to new council members
- **Goose management** issue was brought to recent CRISP (Capital Regional Invasive Species Partnership) meeting, mostly parks and land managers attend, Canadian Wildlife Service was there
 - The south island invasive species group gets together regularly to discuss goose management, lots going on although we don't hear much from them
 - Not sure if Colwood is part of that group
- **Signage** – Owain (CWS) reported that they are behind schedule on this but will be working on signage for the lagoon this spring
- Public info session RE **coastal erosion study** – Colwood engineering has no plans to do any public outreach, input can be provided during budget discussions. Have to keep an eye on council agendas to see when this is going to be considered
- **Kayak rentals at Pacific Landing**: Randy Royer (developer) has scheduled a call with Kitty tomorrow, will bring this up then

Brookes School – Cornelia Lange (was working with students in the fall)

- Students are always asking how to do some volunteer work in the community
- Colwood Creek seems like a good fit for students to undertake environmental stewardship there
- Need to have a teacher mentor to lead this, and community support will help too
- Students are getting settled in this year, want to get something going that will last for years
- Hoping that people from ELSI will help
- Cornelia is no longer employed by the school, but wants to reach out on behalf of the students
- Since students are minors, they need an adult to be with them; there's lots of invasive species on the site that could be dealt with by the students; This has not been discussed with the students, Cornelia wanted to run this by ELSI first to see if there is community support
- Comment: when Brookes school was given the rezoning for building the school, they were required to do riparian work, nothing has happened, hoping that the City will hold them to their agreement
- Colwood: when school was built, there was a development plan; when hard structures are completed, then the landscaping component will be required; it is part of the plan for the site;
- **ACTION**: Colwood to follow up with Brookes School on fulfilling their development permit obligation
- Comment: Greater Victoria Green Team just received funding from Colwood to do works in the community; will forward Amanda Evans' contact to Cornelia
- Judy offers to help and provide Cornelia with many community contacts.
- **ACTION**: ELSI members provide contacts to Cornelia to get Brookes students involved in creek project

Presentation: European Green Crab monitoring – Patty Menning, DFO Aquatic Invasive Species Biologist.

- Called Environment Canada to get permission to trap crabs in the lagoon, got in touch with ELSI that way (through Ian Parnell at CWS)
- New legislation 2015 to take on this role to manage aquatic invasive species (AIS)
- 13 in this unit across Canada
- Draft vision for the national core program:
 1. Protect Canadian freshwater and marine ecosystems from introduction and spread of AIS
 2. Mitigate negative impacts of established AIS populations
 3. Benefit Canada's biodiversity, economy and society
- 4 main pillars in their mission: prevention, early detection, response, control and management
- European Green Crab is not a new species here, there are many established populations along the outer coast
- Females can carry 250,000 eggs
- Live 4 – 7 years, reproductive after 1 yr; can reach 9-10 cm width
- Predators include raccoons, Dungeness and Red Rock crabs
- Had hoped that currents would keep them out of Salish Sea, but there's now a big population in Sooke Basin
- Crabs dig up eelgrass in search of worms etc, really change an ecosystem
- Working with Washington Sea Grant, transboundary project
- Looked at Esquimalt Lagoon last summer – but not found there so far
- Look for pocket estuaries, tidal lagoons, low wave exposure, presence of prey organisms (e.g. small crabs, clams, fish) and absence of predators,
- More like a shore crab, make shelter in overhanging vegetation
- Have found 3 green crabs in Witty's Lagoon, 2 were adults, which is of concern
- Esquimalt Lagoon – set 3 strings of traps, at 2 ends of the lagoon
- Lagoon seems like a perfect place for green crabs, very tolerant to brackish water, more than native ones
- Characteristic identification is 5 bumps on either side of carapace (back shell)
- Not always green, juveniles are very variable in colour
- Very orange underneath – means it's an adult nearing last moult
- Easy to confuse with Dungeness or Graceful crabs
- Found in a range of habitats, ranked as one of the 100 world's worst alien AIS
- 2 types of traps wanting to try in lagoon: collapsible prawn trap; or Fukui trap
- Bait jar with herring is dangled from inside the trap
- Gee (minnow) traps is other type used, to target juveniles, as well as the other crab types to check for prey species in area
- Will set up series of Fukui and Gee traps, don't want the traps to dry out, also don't want to entice land animals that might drown in the trap, or fish that would die when trap dries out
- Measure each crab in the trap (green or otherwise);
- Leave traps in 24hr
- Monthly sampling April to September
- Esquimalt Lagoon is a high priority, very good habitat for green crabs; one of 4 locations in Salish Sea they will be trapping.
- Would love to have volunteers come and help, could take over the trapping eventually

- Have not found any yet; take DNA and RNA samples to see where population is coming from (west coast, Washington, etc)
- Management and control – may not be a way to eradicate a population such as in Sooke, but could concentrate on other areas where eradication is more possible
- Will let Kitty and Environment Canada know when they are planning to come
- **ACTION** – Colwood provide a contact for Parks so Patty can let them know when they are sampling
- Q: Is there a media campaign for identifying?
 - No not yet; going to a CRISP meeting in April
- Q: Have you looked in Albert Head Lagoon?
 - Went there in August, water quality seemed very suspect; bad smell; put in traps, got some shore crabs, but not as productive an area as Esquimalt Lagoon
- Q: Were there concerns from Env CA about the trapping?
 - Sent Ian Parnell and Courtney Albert (CWS) picture of the traps, and they said go ahead
- Ken – At different times of the year there are many diving birds that could be attracted to the bait. Some are there year-round (e.g. cormorants). Could birds be trapped in these? Is there evidence of incidental bycatch?
 - Haven't heard of that from colleagues in WA
- Please let Patty know if you have other concerns; we could stick with the minnow traps
- Hard-sided prawn traps might be a good alternative for the lagoon as it is in the bird sanctuary
- **ACTION** – Patty will recommend using the prawn traps
- Q: Trapping other areas in our harbours?
 - They trapped 28 sites last year, found crabs in 3 areas (Sooke, Port Renfrew, Witty's Lagoon)
 - Sites for trapping in 2019: Booth Canal on Saltspring Is, 2 sites in Port Renfrew, Witty's Lagoon, Esquimalt Lagoon

Update from Patty received 23 Jan 2019:

“As a result of our discussions concerning the importance of avoiding any conflicts with the Migratory Bird Sanctuary, I have purchased alternative traps for the Esquimalt Lagoon. Instead of the flexible, folding Fukui traps, I will be using small prawn traps for use in Esquimalt Lagoon. Although, we have never heard of the Fukui traps adversely impacting birds, using alternative trapping methods to further reduce any interactions certainly makes sense!”

Contact information:

Patty Menning - DFO AIS Biologist: Patty.menning@dfo-mpo-gc.ca

Report Marine Aquatic Invasive Species: AISPACIFIC@dfo-mpo-gc.ca

Forage Fish Surveys - Ian Bruce, Peninsula Streams Society (see presentation in appendix)

- Beach Education and Conservation of Habitat (BEACH) initiative
- Beach nourishment (as is planned for Esquimalt Lagoon) is a technique that PSS has used in other locations, e.g. Saanich Peninsula
- Sea level rise (SLR) is going to happen, beach nourishment is a technique that will help counter SLR
- Beach clean-ups, and now forage fish surveys as 3rd “pillar” of the BEACH program
- Have already surveyed for forage fish all around the region including Brentwood Bay, Pat Bay, Tsehum Harbour, Cordova Bay and others

- Will survey Esquimalt Lagoon Feb 2; 2pm at washroom end of the lagoon
- Funding from World Wildlife Fund, until 2020
- Use the vortex method, newest protocol developed in WA state
- Separates the eggs from the sand
- Found sand lance eggs throughout Tsehum Hbr
- Eggs at various stages of development
- Also found microplastics
- Going to try using leaf blowers backwards to suck up the plastics
- **ACTION** – send Ian the Northwest Hydraulics report on coastal erosion
- Pat Bay beach nourishment project with DFO, Ministry of Transportation and Infrastructure (MoTI) and Tseycum Band
- Backshore was eroding, road was being undermined, MoTI wanted to work on the backshore, Ian recommended that the beach nourishment happen at same time
- Recreational Fisheries Conservation Partnerships Program funded some of the work, MoTI the rest
- Poles put in and purple martin nest boxes installed, now being used
- Project included backshore planting of willow, red osier dogwood
- Work done in 2012, 2015, 2018
- Q: what's left from the work you did in 2012? Has the sediment moved?
 - Put in some groynes to slow down the transport of sediment; some of the material is definitely moving,
 - May continue with this depending on funding
- Iain Bourhill: Regarding beach nourishment proposed for the Coburg Peninsula, the plan is to move the pump station, but the beach nourishment would also help protect the recreational asset (i.e. the beach)
- Ian Bruce: suggests adding marker material to the beach nourishment material to follow where it moves
- Q: Would adding a groyne near the bridge end slow down the movement of sediment?
 - Could do this, and move the sediment back to the other end

Colwood updates:

- Item before council is the proposal to increase the dog on leash area at the lagoon; currently at the high water mark on outer beach, proposal would move boundary to past low tide mark
- There are reports of dog/bird attacks at the lagoon (e.g. brown pelican)
- Proposal was to extend the on leash area to the municipal boundary (offshore), went to committee of the whole, council asked for more clarification relative to CWS boundaries of MBS
- In meantime, ELSI can provide comments that Iain would take it to council
- No definite time frame; about 3 weeks lead time
- Letter from VNHS as well? Yes
- Q: where is boundary of MBS?
 - Wording in the regulations speaks to 300ft landward, and Coburg Peninsula. Not well defined, open to interpretation
- What about enforcement? Hard to enforce currently due to ambiguity of boundary
- Q: whose responsibility? CRD or Colwood?
 - Joint responsibility, Colwood hires CRD animal control to enforce bylaw

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- Need good signage, work with CWS to improve signage
- **ACTION:** ELSI write a letter of support for extended on leash area proposal by Colwood staff, include request for enforcement
- Q for Iain: Any progress on Brookes School riparian area works?
 - **ACTION:** Iain will ask development planning staff to follow up

Watercraft in Lagoon:

- Big discussion on Colwood Community Association Facebook site; lots of confusion, and no signs there to let people know
- What is the official stand?
 - Not aware of any restriction other than voluntary Wildlife Refuge Areas
 - Ken – nothing in MBS regulations that speak to that issue
- Could Colwood make a bylaw about this?
 - Probably not, could not be enforced
- If ELSI felt there was a need to address this, could make a formal request to Colwood to address this
- Drones are another issue there
- Pacific Landing – starting to talk again about kayak rentals, so this issue will continue to come up
- Monitor situation and address if this is a problem
- Vicki – there's a schedule under the federal shipping act that lists specific bodies of water with restrictions
- **ACTION:** see if there's a possibility for getting the lagoon designated as a no boating zone
- Vicki will look into the Shipping Act

CRD Harbours update:

- CRISP considered the goose management issues at recent meeting
- Hired a shared contractor to do invasive species removal for municipalities that opt to use the service; but contributed a bin for knotweed for other municipalities to use too
- CRISP organizing a workshop on invasive species: municipal staff focus, but there will be one section open to the public
- New technologies available for habitat inventory, we are exploring several options

CRD Stormwater Monitoring Update: Barri Rudolph, CRD Stormwater Monitoring Supervisor

- In 2018 staff completed sampling 10 times in Esquimalt Lagoon (5 in 30 sampling: 5 weekly samples in summer and 5 in winter). We sampled bacteria, metals, nitrate and physical parameters like pH, temp, oxygen and salinity. Some caffeine and PPCP sampling was also done.
- In 2018 we also sampled 8 of the stormwater discharges and creeks flowing into the lagoon for water quality twice
- We did 5 in 30 sampling in Colwood Creek in 2017. In addition to the water quality parameters above and a few others, we also collected benthic invertebrates.
- We will complete 5 in 30 sampling in Bee and Selleck creeks in 2019. In addition to the water quality parameters above and a few others, we will also collect benthic invertebrates in Bee.
- Water quality in Colwood Creek was good at the mouth of the creek, but poorer upstream in 2017. With the exception of phosphorus and E.coli, no water quality

parameters exceeded water quality guidelines for protection of aquatic life at the mouth. A number of water quality parameters were outside guidelines just downstream of Sooke Road, at Hagel Road and just downstream of Glen Lake, including metals (copper, chromium, iron and zinc), dissolved oxygen, turbidity and suspended solids, phosphorus, pH and E.coli. Exceedances of guidelines coincided with heavy rainfall. In addition, poor site water management on a construction site just downstream of Glen Lake impacted water quality for approximately 3 weeks in the fall.

Coordinator Update

- 2019 Work plan was discussed and accepted

Partner updates:

Two Waters/Ocean Grove: Nov 22, two council stratas sent letter to developer, Colwood and landscape architect, to discuss Selleck Cr riparian area, and what their plans are; asked them to keep it natural, low maintenance, no grass, minimal number of wood structures; don't want a manicured environment; meeting Jan 28 with landscape architect, Brent Molnar and developer; owners will be required to maintain riparian area

ACTION – Contact Patrick Lucey about a tour of the Selleck Cr, now finished Phase 1 of the creek riparian restoration

VNHS – sent a letter to Times Colonist and all 13 municipalities regarding the cats on leash initiative

All comes down to enforcement

Jason: following the Pit House Park designation, staff have filed park plan with land title office, now officially a park

Beth: No fish monitoring, creeks running too fast; there has been some damage to a wetland in RRU, total blockage so resident cutthroat can't move through to the creek; RRU knows about this, but no action taken that Beth knows about

Bee Creek: Second phase of the spawning channel beside Bee Creek has been started – had a walk through with Patrick Lucey. This is an extension of the spawning channel that was put in a couple of years ago, receiving water flowing under the new buildings

Meeting adjourned: 4:15pm



Island View Beach Clean-up: Dec 15



Peninsula Streams Society Presentation to ELSI – Jan 22

Beach Education And Conservation of Habitat (BEACH) Initiative

Beaches provide:

- Places for families, friends and for solitude
- Places for recreation and rest
- Habitat for a great variety of terrestrial and marine life, including otters, raccoons, birds, fish, invertebrates, algae and plants.

Beaches are under threat from:

- Pollution
- Overland flow erosion
- Outfalls and storm drain outlets
- Garbage and derelict boats
- Dog feces and trampling/compaction/disturbance
- Sea-level rise and climate-related storm activity
- Backshore development

Beach Education And Conservation of Habitat (BEACH) Initiative

Goals:

- Empower local citizens through the support that stewardship leadership can provide: education, training and organization related to beach conservation and protection
- Restore, conserve and protect local beaches
- Clean-up local beaches and waterways

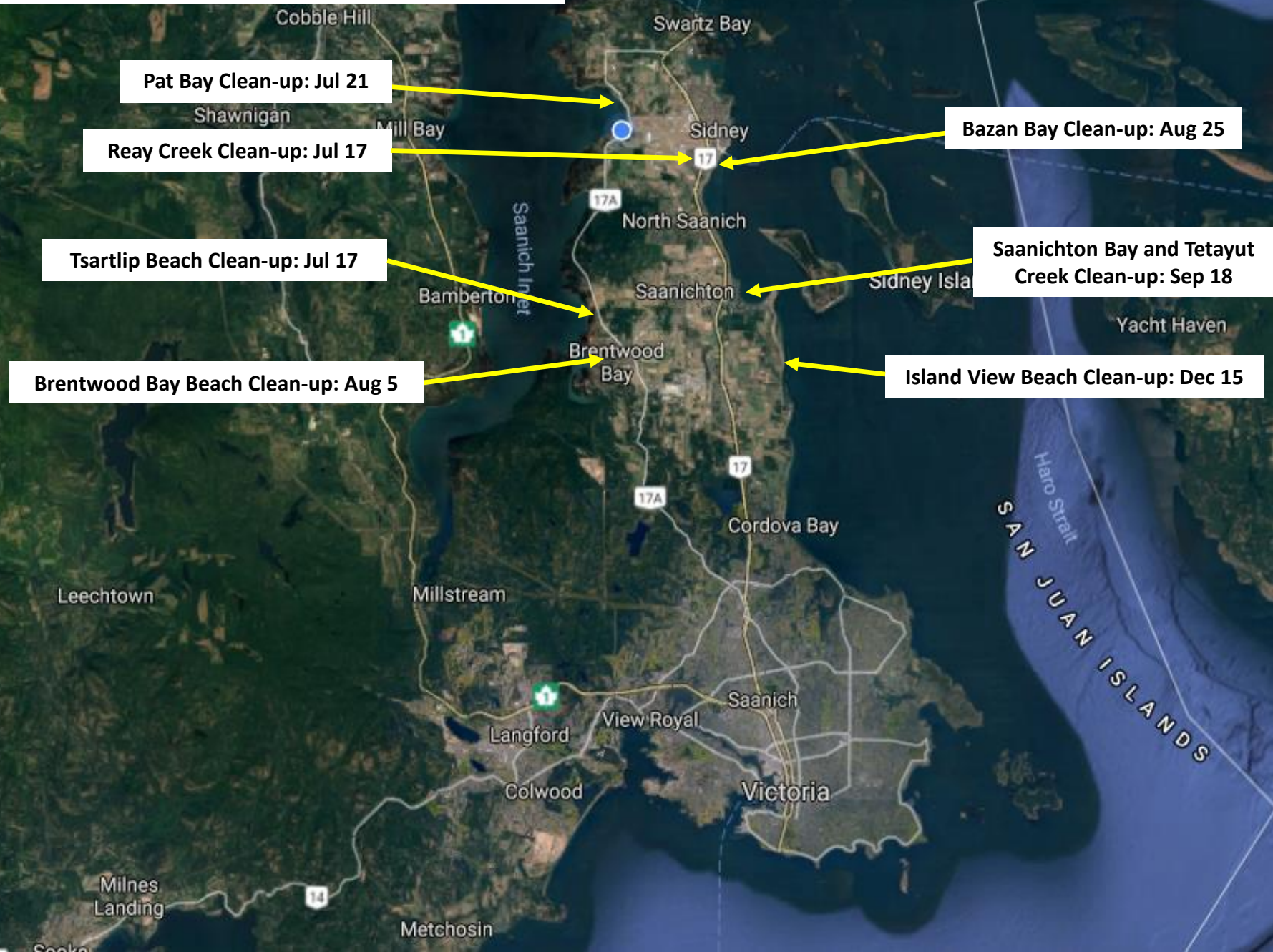
Started with:

- Beach Nourishment
- Clean-ups

Has evolved into so much more...



2018 Clean-up Location Map



B.E.A.C.H. Initiative: Clean-ups



B.E.A.C.H. Initiative: Clean-ups

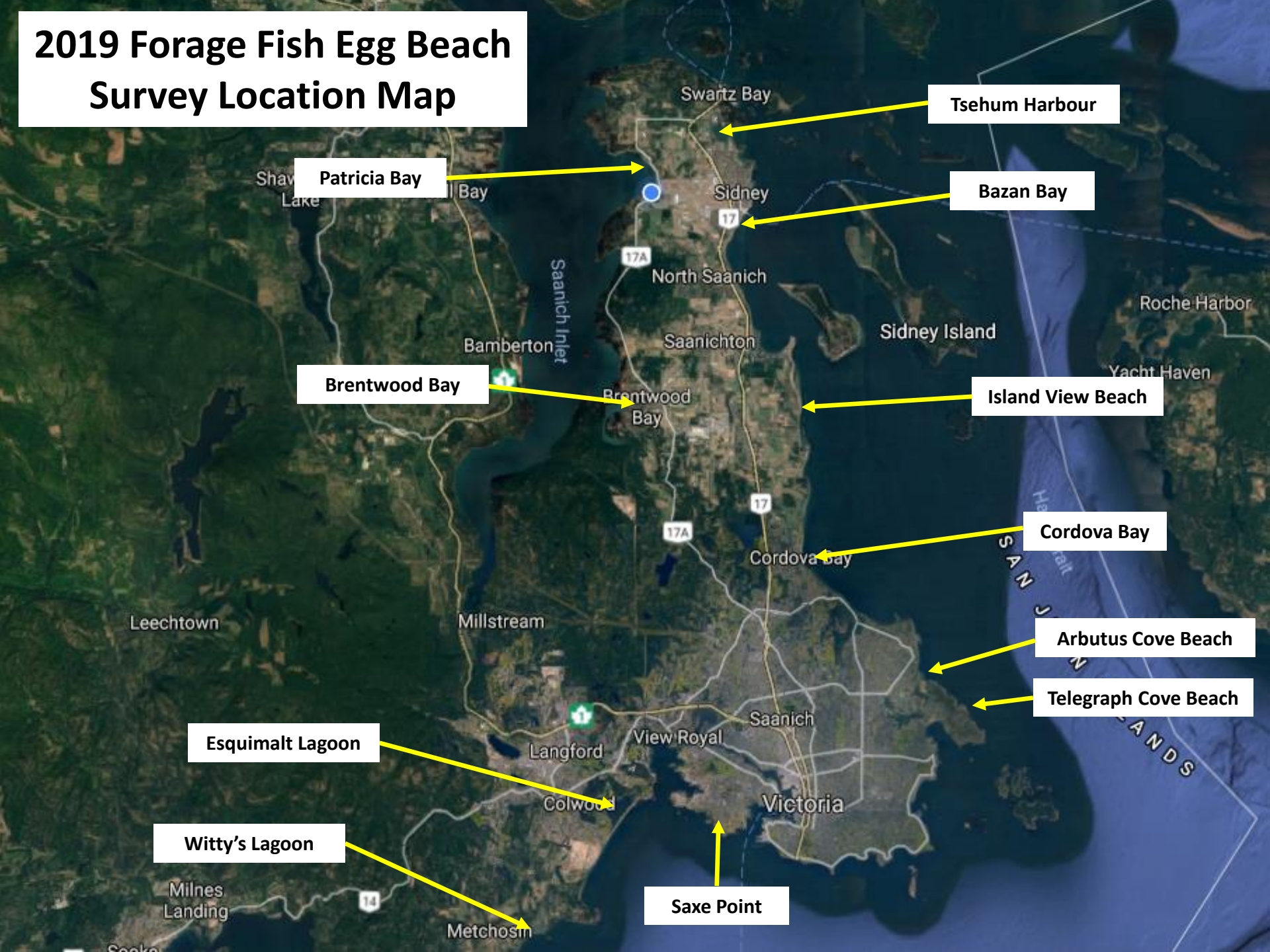
STATS

- Over 350 kg of material removed
- ~193 kg of material recycled
- 153 Volunteers (Over \$9,000 in Volunteer Hours)
- ~ 10 km of beach and creek cleaned



Tetayut Creek and Saanichton Bay Clean-up – September 18

2019 Forage Fish Egg Beach Survey Location Map

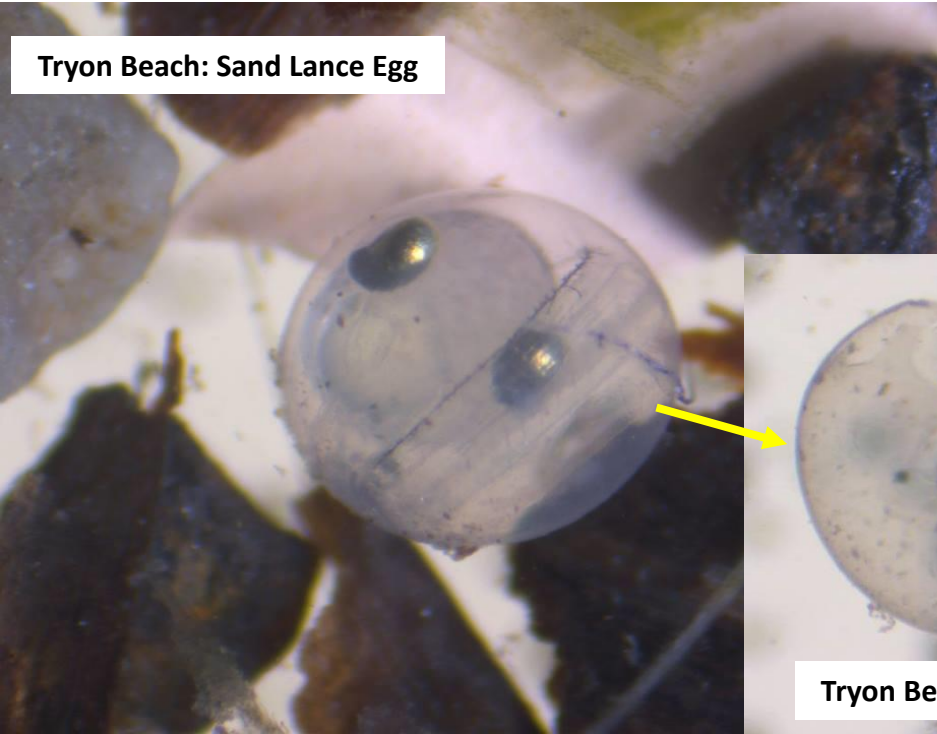


Forage Fish Egg Beach Survey

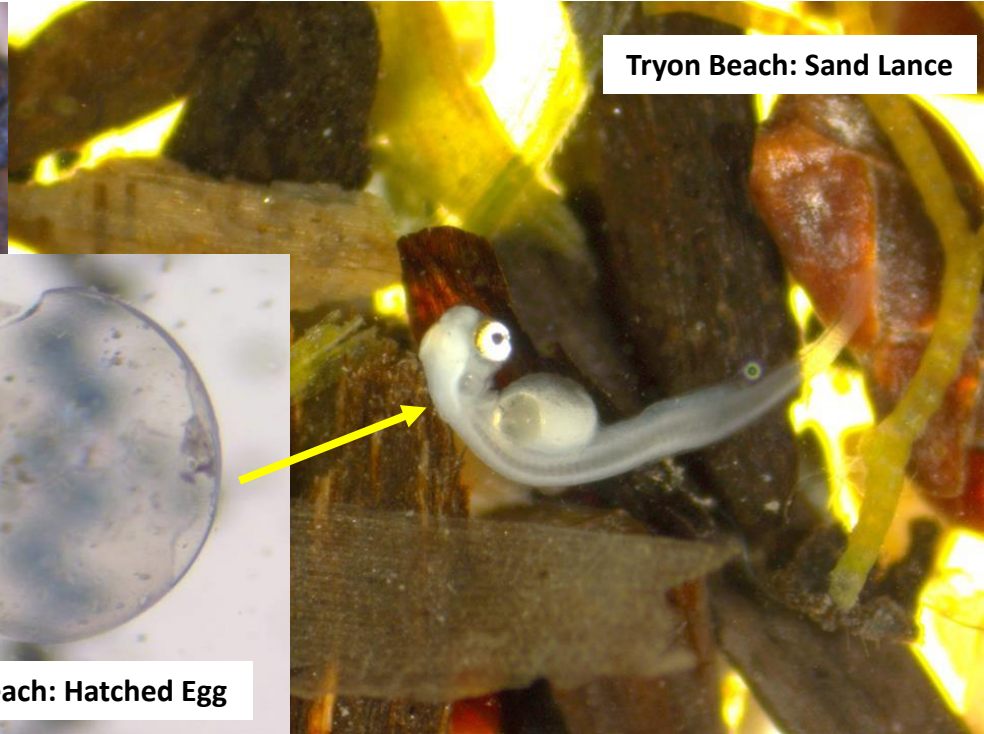


Forage Fish Egg Beach Survey: Results

Tryon Beach: Sand Lance Egg



Tryon Beach: Sand Lance



Tryon Beach: Hatched Egg



McMicken Beach: Sand Lance Eggs



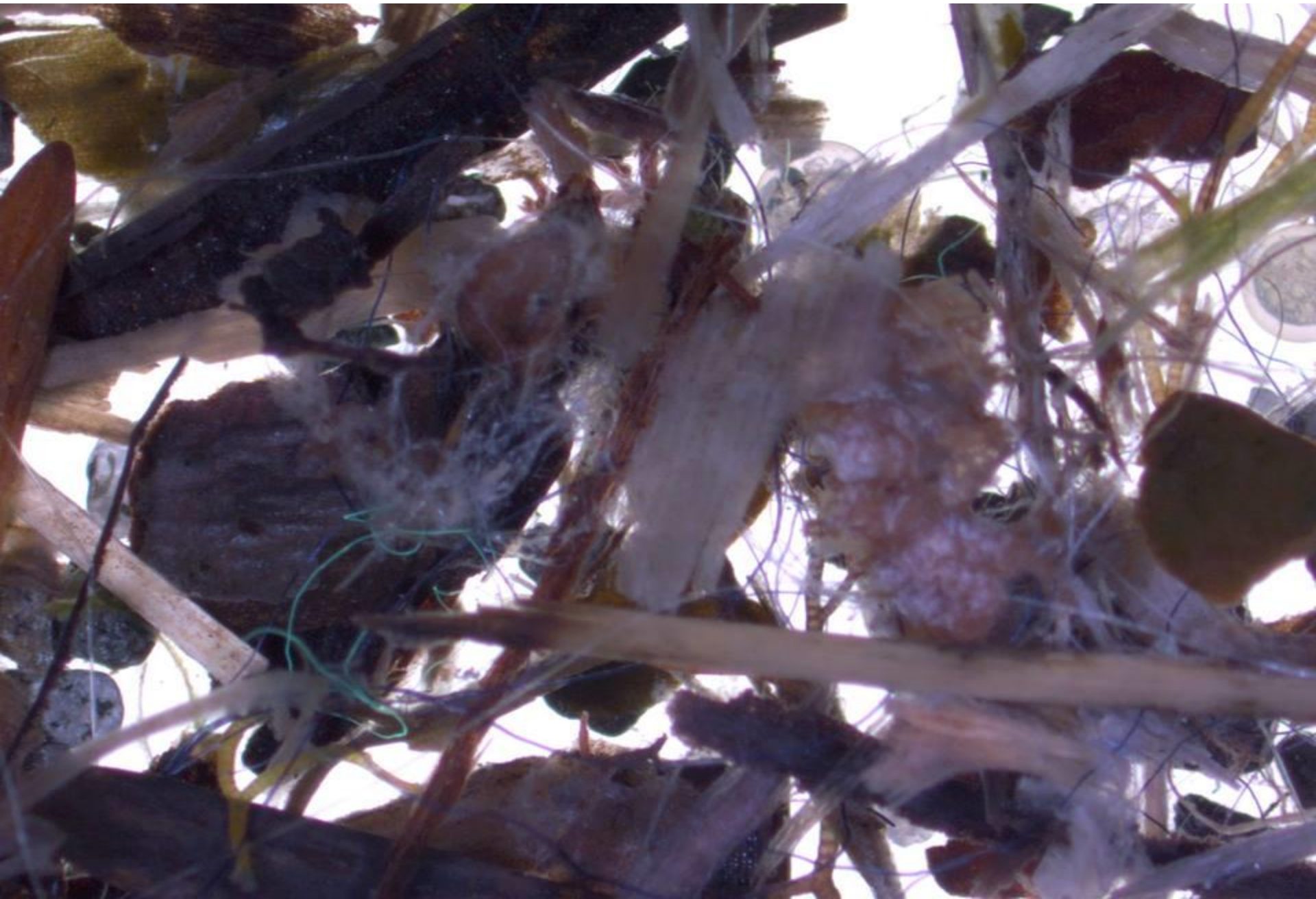
Lillian Hoffar Beach: Sand Lance Egg



NS Yacht Club Beach: Sand Lance Eggs



Forage Fish Egg Beach Survey: Microplastics...



Pat Bay Beach Nourishment

Pat Bay Beach Nourishment

Phase 3 – March 2018

Phase 2 - 2015

Phase 1 - 2012

Victoria
Airport



Photo comparison A – South end of Reach 2, looking north

September 16, 2011



June 25, 2014



May 28, 2015



Pat Bay Beach Nourishment March 2018



Pat Bay Beach Backshore Planting - March 2018



Pat Bay Beach – April 2018



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Thank you~!

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