

DATE: April 6, 2021

FILE: 5380-02/CVWMC

TO: Chair and Directors
Comox Strathcona Waste Management Board

Supported by Russell Dyson
Chief Administrative Officer

FROM: Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Ocean Legacy Foundation – Ocean Plastics Depot Establishment Report

Purpose

To update the Comox Strathcona Waste Management (CSWM) Board (Board) on a request to establish an Ocean Legacy Foundation (OLF) ocean plastics depot at the Comox Valley Waste Management Center (CVWMC).

Recommendation from the Chief Administrative Officer:

THAT the Comox Strathcona Waste Management Board support the establishment of an Ocean Legacy Foundation ocean plastics recycling depot at the Comox Valley Waste Management Center to ensure ocean debris collected within the Comox Strathcona Waste Management service area can be properly managed and recycled.

Executive Summary

The OLF, a Canadian internationally recognized non-profit organization based out of The City of Delta (Delta), British Columbia, was founded with a goal to end ocean plastic waste by creating an accessible platform to assist with the restoration of critical natural ecosystems and to assess and develop long-term plastic collection, processing infrastructure and policy, to mitigate oceanic plastic pollution sources. The OLF is applying for grant funding from the Province of BC to establish an ocean plastics depot within the CSWM service area to ensure ocean plastics are properly managed and recycled (appendix A for list of acceptable items). The OLF currently has two depots operating in the Alberni-Clayoquot Regional District and qathet Regional District.

- Marine and aquaculture debris generated within the CSWM service area is currently landfilled, fees are waived for community groups who collect this material and bring it to landfill for disposal;
- The volume of marine debris is increasing every year and is an ongoing problem;
- OLF uses Provincial grant funding to cover all capital infrastructure costs;
- The depot provides a location for OLF volunteers to sort and stage all marine debris collected within the CSWM service area;
- Tipping fees costs are covered under the grant funding, until funding runs out;
- The CSWM service will need to cover staff and equipment costs to load trailers for transport and may need to cover transportation costs;
- It is estimated 160 tonnes of marine debris will be recovered annually within the CSWM service area;
- The estimated annual operating cost to the CSWM service for the loading of this material is \$2,800 and the transport is expected to range between \$9,000 and \$24,000; and

- The establishment of an OLF ocean plastics depot at the CVWMC will ensure that ocean debris collected within the CSWM service area can be properly managed and recycled, and kept out of the regional landfills.

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Ocean Legacy Foundation	✓
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Background/Current Situation

Ocean plastics and marine debris from the aquaculture industry, including derelict vessels, are creating a global environmental issue within coastal communities. In recognition of this, the Provincial government has established a grant funding opportunity, Clean Coast Clean Waters Initiative Fund (CCCW). The fund is providing \$9.5 million to assist coastal Indigenous Nations, non-profits and local governments with cleaning coastal regions within British Columbia. There are several applicants within the CSWM service area who have applied for funding and hence, the service needs to be prepared to accept and manage this material at its facilities. The intent of the funding is not only to clean coastal waters, but to support coastal communities through COVID-19 recovery by creating jobs. To date, the service has provided one letter of support for Spirit of the West Adventures, based out of Quadra Island. Successful applicants is expected to be notified by the end of March and have until December 2021 to utilize their grant funding. More grant opportunities will be made available in the future, as marine and aquaculture debris is an ongoing issue.

Since 2016, the CSWM service has waived over \$21,000 in tipping fees for approximately 180 tonnes of derelict vessels and ocean plastics. Residents and community groups have removed between five to 10 tonnes of aquaculture debris from the south east shores of Quadra Island each year. It is estimated this equates to 100 cubic meters of debris which includes large foam floats, oyster baskets and rope. In addition, the Denman Island and Baynes Sound marine clean up event collects between seven to nine tonnes annually. Fisheries and Oceans Canada (DFO) has begun conducting clean-up of abandoned aquaculture leases on the west coast in the Nootka/Little Espinosa area. Although staff worked with DFO to keep as much of this material out of landfill, 240 cubic meters of material was landfilled at the CVWMC in February 2021. In order to divert material from landfill, the OLF has approached the CSWM service requesting partnership to establish an ocean plastic depot at the CVWMC. If established, the depot will ensure that marine debris collected within the CSWM service area is properly managed and recycled.

The OLF currently has two depots operating in the Alberni-Clayoquot Regional District and qathet Regional District. At the proposed depot, the material brought in by volunteers will be sorted into mega bags and placed inside three shipping containers that make up the foundation of the structure (see appendix B). Once the shipping containers are full, CSWM staff will load the trailers utilizing landfill equipment. The OLF will arrange for transport to their recycling facility in Delta where the material is utilized in various recycling processes. It is estimated the loading process will take approximately three hours of staff and equipment time to load 20 tonnes into each trailer. The tipping fee for this material is approximately \$150 per tonne, which does not include transportation.

The OLF is working out transport costs, which are currently being covered by the Alberni-Clayoquot and qathet regional districts for the depots in their area.

Building a relationship with OLF provides the CSWM service with a means of supporting the aquaculture industry and the residents who live in the coastal communities within our service area. OLF works with industry and plastic producers to establish a reverse supply chain, limiting plastic over consumption and capturing materials before they reach aquatic environments. Their technologies department strives to establish markets for contaminated plastics, new technologies and partnerships for resource recovery. Some of OLF's current partners are; Lush Cosmetics North America, Resynergi Inc. and the City of Knowledge, Panama.

Policy Analysis

The CSWM tipping fee waiver policy allows the service to waive fees for materials collected from the environment, including any ocean plastics and ghost gear that washes up on the shores of our service area. Since 2016, the service has waived over \$21,000 in tipping for marine debris collected through community events, which includes items like; large foam floats, rope, oyster baskets, nets, blue barrels and derelict vessels.

Options

The Board can choose one of the following options:

- 1) Issue a letter of support to establish an OLF depot at the CVWMC for the proper management of marine debris collected within the CSWM service area; or
- 2) Continue to waive fees and landfill ocean plastics and aquaculture debris collected in the service area.

Financial Factors

There is no capital cost to the CSWM service for establishing an OLF marine debris recycling depot at the CVWMC. Separate from the Provincial CCCW grant funding opportunity, the OLF is also working with the DFO to secure funding for this project. The funding will allow for the establishment of the depot and will provide an interim budget for tipping fees to cover the costs at the OLF Delta recycling facility, but will not cover loading or equipment costs. Each transport trailer holds 20 tonnes of marine debris and takes three hours to load. Based on historical data, it is estimated that, worst case scenario, the service can anticipate approximately 100-160 tonnes of ocean and aquaculture debris to be collected annually over the next three years. The staff and equipment costs associated with managing this volume of material has an estimated budget impact of \$1,400-\$2,800 annually; this figure is calculated based on 20 tonnes per trailer requiring five to eight trips to Delta per year.

The 2021 budget allocation for waiving tip fees for community clean ups is \$25,000. Once the funding runs out, the service can use the tipping fee waiver budget to cover tipping fee costs, rather than cover the cost of landfilling this material. It is unknown at this time how much DFO funding is available; therefore, the CSWM service may be required to fund the transportation costs in addition to the loading costs. The transportation costs would have a budget impact of between \$9,000 and \$24,000 annually depending on the weight of the materials. The total operating budget required per year is estimated at \$27,000 per year to manage 160 tonnes of aquaculture debris, starting in 2022 at the earliest based on preliminary timelines.

Please note, some revenue in the form of regular tip fee will be collected through private cleanup efforts but the amount is unknown at this time. Furthermore, if the Board support an aquaculture diversion program, the intention is to open this industry and set a tip fee for full cost recovery.

The service can continue to encourage residents to collect and dispose of this material for free at the landfill without the OLF depot, with the cost covered via the allotted tipping fee waiver budget. This continued practice will impact the landfill life span as this material often contains blocks of high density foam that has little weight but takes up a considerable amount of air space.

Intergovernmental Factors

Using an education, policy, innovation and collaborative (EPIC) approach; education & research, policy & advocacy, infrastructure development and clean-up & restoration, OLF works with governments and industry on a global level to promote best practice management and strategies for dealing with ocean plastics. Working with all levels of government, OLF addresses mismanagement of plastic waste and assists local governments by establishing the necessary infrastructure to ensure and establish proper resource recovery. The OLF also works with government agencies like DFO on policy to prevent this material from ending up in the environment. The service will continue to work with DFO and other local agencies to ensure as much of this material gets kept from landfill. The February 2021 DFO clean up saw 200 blue barrels and eight super sacks of rope diverted, as staff were able to provide a staging area at the landfill in Village of Gold River, which allowed time for the material to be diverted.

Interdepartmental Involvement

CSWM staff will work with our public relations staff to notify the residents of our service area about the OLF depot and promote clean up events through our tipping fee waiver policy.

If required, CSWM staff will work with Legislative Services to prepare a bylaw amendment to bring back to the Board with a firm tipping fee figure for consideration. This will provide residents and commercial aquaculture businesses an opportunity to recycle this material and keep it out of landfill increasing our overall diversion and helping businesses and residents work towards zero waste. Tipping fees collected for an aquaculture diversion program may assist with offsetting costs for the service to assist with operating the OLF depot.

Citizen/Public Relations

Each year the CSWM service receives request from community groups and non-profits wishing to conduct clean up events. Groups involving children often participate in beach clean-up events. The ability of the service to work with these groups, to collect and then properly recycle this material, provides an environmental benefit but also an educational opportunity to discuss resource recovery and diversion with our younger residents, furthering the work of CSWM staff and the Board. The clean-up component of OLF's EPIC solution, provides action based engagement with citizens, which aligns with the current goals and interests of our Board.

Attachments: Appendix A – Material list of acceptable OLF items
Appendix B – Example of Ocean Legacy Foundation Plastics Depot



SORTING GUIDE

WELCOME TO THE OCEAN PLASTIC DEPOT

This depot is one of the first of its kind in Canada created to collect and recycle select ocean plastics and marine debris materials from cleanup efforts as well as legacy equipment from the marine sector.

Thank you to all the volunteer cleaning efforts that are an integral part in solving this plastic pollution crisis.



WE DO ACCEPT

*FOAM FLOATS



*OYSTER BASKETS & CRAB POTS

- Perfect condition, reusable oyster baskets



*OYSTER BASKETS & CRAB POTS

- Damaged/broken oyster baskets



*HARD PLASTIC BUOYS



*HARD PLASTIC & FRAGMENTS



*BEVERAGE BOTTLES



*NETTING



*ROPE



*BARRELS



*TIRES WITH STYROFOAM



*STYROFOAM

 White Styrofoam

 No coloured or dirty foam



WE DO NOT ACCEPT

- X Coloured Styrofoam**
- X Dirty Styrofoam**
- X PVC /ABS Tubing**
- X Lighters, Tennis Balls**
- X Containers or Bottles with liquid**
- X Metal, Glass or Fiberglass**
- X Candy/Snack Wrappers**



**DO NOT LEAVE
LOOSE ITEMS!**

All items must be placed in a provided storage bag unless it is too big to fit into a bag.



No standing water.
Please empty all water from all items if possible before placing them in a storage bag.



Do not leave your item in the wrong category or on the ground. Help us keep things organized!

If you do not see your item included in a category then we unfortunately are not yet able to recycle your item or your regional district has a local recycling option in place.

WHY IS THIS IMPORTANT?

**400 MILLION
TONS OF PLASTIC**

... IS PRODUCED EVERY
YEAR AROUND THE WORLD

**SINGLE USE
PLASTICS ACCOUNT FOR**

... A LARGE PERCENTAGE OF
MISMANAGED PLASTICS.

**8-12 MILLION
TONS ENTERS THE OCEAN**

... EVERY YEAR KILLING MARINE WILDLIFE,
COMPROMISING HUMAN AND OCEAN
HEALTH, THREATENING FOOD QUALITY AND
SAFETY AS WELL AS COASTAL TOURISM;
CONTRIBUTING TO GLOBAL CLIMATE
CHANGE..

**ONLY 9%
IS RECYCLED**

... MUCH OF IT ENDING UP IN
LANDFILLS OR WATERWAYS.

MICROPLASTICS

... THREATEN OUR ENTIRE ECOSYSTEM. THE PARTICLES
ARE IN OUR FOOD, WATER AND ARE NOW A PART OF OUR
WEATHER SYSTEMS. PREVENTING PLASTIC FROM
ENTERING THE OCEAN HELPS PREVENT ITS EVENTUAL
BREAKDOWN INTO MICROPLASTICS.

DEPOT BENEFITS

- * Diverting landfill waste
- * Reducing oceanic plastic pollution
- * Reducing our carbon footprint by making recycled sources of plastic available
- * Stimulating the Canadian plastic circular economy
- * Creating safer and cleaner marine environments for all to enjoy



Please carefully read the category and picture signs that are provided next to each storage bag located either in or beside the depot containers.

To use the Ocean Plastic Depot, please contact Let's Talk Trash to sign up. Call 604.485.2260 or email info@letstalktrash.ca.



Ocean Legacy Tipping Fees / Charges

Ocean Legacy operates a marine plastic processing centre in Richmond BC to support the removal of waste from the marine environment and to support the reuse of resources wherever possible.

Shipments will be accepted only with prior arrangement for scheduling and approval.

Rates effective February 5, 2021 and subject to change.

For shipments from Ocean Legacy affiliated depots, and shoreline and industrial cleanup activities to be sorted according to Ocean Legacy guidelines

All shipments must have a scale ticket indicating weight of shipment

Material Type

Standard Expanded Polystyrene	\$1,600	per truckload up to 53' long
	\$ 900	per truckload up to 24' long
Densified Expanded Polystyrene	\$ 200	per Tonne
Ropes and Netting	\$ 150	per Tonne
Hard Plastics	\$ 150	per Tonne
Large Plastic Items	\$ 150	per Tonne
Foam filled tires	\$ 10	each

Loads with contamination or unsorted material (greater than 5% of load) subject to a fee double the above rate, or may be rejected.