

Appendix J

Waste Management Plan

October 18

2016

The following document is the WMP for Oak Bay Hatchery. It includes waste definitions, handling/storage and removal as well as service provider contacts. This document should be updated on an as needed basis.

Oak Bay
Hatchery

Waste Management Plan Oak Bay Hatchery

Waste is generally defined as ***damaged, defective, or excess material produced through normal operations of the facility***. A waste is considered uncontrolled should it leave the facility in a manner not covered in this WMP.

Types of waste that may be generated from a facility and potential sources are described as follows:

- **Operational Debris** including feed bags, pallets, rope, tanks, and litter and other inorganic materials that may come from daily operation of the facility.
- **Hazardous Wastes** could potentially include petroleum products, paints, or other materials used at the facility.
- **Human Waste** includes metabolic waste products from staff and visitors to the facility.
- **Routine Mortalities** include dead and moribund stock removed from the tanks.
- **Major Stock Loss** includes mortalities greater than that expected through normal operations.
- **Feed and Feces** includes fish feed that was not consumed by the stock and spills from automatic or manual feeding systems, as well as feces produced by the stock.
- **Egg Take Wastes** include materials produced by on-site egg-take practices such as stripping and bleeding.

1.1 Operational Debris

Generation will be limited by daily inspection for materials that may be discharged from the facility, and by containing these materials for disposal at a suitable facility.

- Debris will be stored in marked, securely covered containers that are readily accessible by site staff and visitors.
- Items such as pop cans and other recyclable materials are sent for recycling where such a facility is available.
- Large materials (pallets, for example) will be sent to Lake Utopia for reuse/recycling.
- Feed bags will be collected and stored as they are emptied and taken to Fundy Plastics for recycling.
- All contained operational debris described above will be transported as needed to an approved solid waste landfill or recycling facility.
- Staff will be encouraged to participate in regional inspections and clean-ups.
- Any construction related materials or waste created during regular facility maintenance or construction is collected and stored until proper disposal/recycling can be arranged.
- Only facility property will be used for short or long-term storage of operation equipment and/or debris. Shorelines and other off-facility lands, either public or private, must not be used for short or long-term storage of equipment, gear, and/or other operational debris unless they have been approved by the land owner and/or the regulators for this purpose.

1.2 Hazardous Waste

Hazardous materials such as cleaning agents, fuels, paints and oils will only be brought to the facility if they are required for use.

- Any items that may be considered hazardous waste will be transported in appropriate leak proof containers to an approved facility for recycling or disposal.
- Where applicable, chemical and hazardous materials are disposed of as per the manufacturer's instructions on the product labels.
- Used petroleum products associated with normal equipment maintenance will be stored and transported in sealed containers to the nearest waste oil recycling facility.
- Waste oil obtained from the forklift is managed by Liftow.
- Any accidental release of a hazardous substance or contaminant in an amount to be of concern to human health or safety or environmental harm will be reported immediately to the Saint John Regional Office of DENV and to the Canada Coast Guard (506-658-2558, 800-565-1633).

1.3 Human Waste

The intended policy is that no human waste will be discharged directly from the facility. The facility owns and maintains a septic system serviced by A One Pumping Service with an accompanying weeping field.

1.4 Routine Mortalities

Generation of this waste type will be minimized by maintaining optimal husbandry and health conditions for the stock.

- Dead and moribund fish will be removed from the tanks once per day. The intention will be to remove mortalities as frequently as possible such that the quantity of the waste per week is minimized.
- All mortalities will be incinerated daily.
- At no time will dead or moribund fish be released into a watershed.

1.5 Major Stock Loss

Major stock loss includes mortalities greater than that expected through normal operations, and could occur through equipment failure, adverse environmental conditions (low oxygen, low temperature), or fish health causes. Major stock loss is not a normal operating condition. However, it is an operational possibility that warrants some pre-planning and preparation.

- Major stock loss mortalities will be removed from tanks.
- Containers not designated for normal mortalities may be used for collection of major stock loss mortalities, provided they are leak proof.
- Mortalities will be disposed of at Cardwell Composting Facility in Penobsquis, New Brunswick. Other avenues may be used in the event that Cardwell is unable to handle the excess fish, this includes other compost facilities, rendering plants, and mink farms in the province of NB.

1.6 Feed and Feces

Feces waste generation will be limited by maintaining optimal stock husbandry and health conditions at the facility, and by feeding the fish according to best available techniques. Waste feed generation will be limited by following clear delivery, storage, and feeding practices.

- Feed will be stored at the facility in covered secure areas including hoppers, bins or buildings. Bags of feed will not be left outside and unattended at the facility.
- Feed will only be brought to the facility on an as-needed basis. Maximum storage capacity is 10 tonnes.
- Facility staff and feed delivery personnel will take all reasonable and safe precautions to reduce spills during feeding, feed spills will be cleaned up as they occur.
- Amounts of feed given to stock will be based on biomass and environmental conditions present. Feeding will be reduced or stopped if conditions such as low temperature, low oxygen, or fish health events suggest that utilization of feed by the stock will be affected.
- Feeding of stock will be monitored by trained facility staff. Feeding rates will be reduced or stopped as staff observe changes in fish activity indicating a reduction in appetite and/or if uneaten feed is sitting on the bottom of the tank.
- Water quality requirements will be adhered to as per the Approval to Operate.
- Solids (Feces and Excess Feed) will be filtered out of the final effluent water and retained in septic tanks. Septic tanks will be emptied either a minimum of once per year, as required by licences and/or permits, or as necessary to meet regulatory effluent discharge requirements.

1.7 Egg Take Wastes

Egg takes will be conducted to ensure the highest fish quality and fish welfare standards.

- Fish carcasses as a result of spawning activities are sent to True North for disposal at Cardwell Farms.
- Scalpel blades will be placed into a sharps container and removed once full via Zee Medical.

1.8 Waste Management Services Contact

A One Pumping Service Ltd. (Human Waste & Fish Waste)
30 Old Bay Road
St Stephen, New Brunswick
E3L 3X1
506-466-4407

Cardwell Farms Composting Products Inc (Composting)
12315 Route 114
Penobsquis, New Brunswick
E4G 2X9
506-433-4078

Fundy Plastics (Plastic Recycling)
5284 Route 1
Pennfield, NB
E5H 2C4
506-755-2135

Fero Waste & Recycling Inc (Operational Debris and Recycling)
1300 Berry Mills Road
Moncton, New Brunswick
E1E 4R8
506-855-FERO(3376)

Liftow Limited (Waste Oil)
275 Baig Blvd.
Moncton, New Brunswick
E1E 1E1
506-853-5083

Zee Medical Canada (Sharps)
Contact: Albert Bodechon
Accident Management & Safety Advisor
Fredericton, New Brunswick
800-661-1491, Ext. 6703
Cell: 506-471-9056
Canada@zeemedicalinc.com