# **Exhibit A-2**

# **Department of Natural Resources**

# **Lab Requirements**

1. **FAW Labs**

### **General Lab Requirements:**

1. All labs shall have R22 insulated walls to deck.
2. Provide badge/card access and video monitoring at all lab entry points.
3. Provide water-resistant gypsum board at all wet wall locations.
4. Provide nine-foot minimum height ceiling that is moisture- and fire-resistant.
5. All lab and lab storage areas must be climate controlled with a means to control humidity.
6. Provide Wi-Fi in lab areas.

### **Primary Lab**

The function of the Primary FAW Lab is for DNR scientists to study the health of fish through tissue sampling and studies as well as to analyze fish for contaminants such as mercury. Chemicals used include acetone, hexane, and acids and bases including nitric and hydrochloric acid. Primary lab space to be low air pressure with two positive pressure sub-labs.

1. Provide 5-10 air exchanges per hour. Final ventilation requirements determined at design.
2. Labs must be located on a route where large containers, up to 150-quart capacity, can be transported from loading dock or shipping room to labs.
3. Primary lab must be divided into several smaller rooms /work areas with additional doors as determined in design, including the following two rooms:
   * + - 1. Adjacent Sub-lab 1: 100 square feet (SF) required, 200 SF preferred ISO 8\* clean room, positive pressure, off of main lab.
         2. Adjacent Sub-lab 2: 100 SF required, 150 SF preferred, ISO 8\* clean room, positive pressure, off of main lab.
4. 25 lineal feet (LF) lab counter with epoxy resin countertop, 42 inch wide double-sided access with two (2) one-foot-deep shelves stacked and centered above length of counter.
5. 40 LF lab counter with epoxy resin countertop, 30-32 inch wide with cabinet above.
6. 15 LF lab counter with epoxy resin countertop.
7. Five (5) vacuum ports.
8. Five (5) natural gas ports.
9. Two (2) pressurized air ports.
10. Two (2) eyewash stations.
11. Six (6) integral sinks in countertops with hot/cold water.
12. One (1) 66 inch long x 27 inch wide x 3 inch deep stainless steel table with integral sink with 2 inch drain line and high-pressure spray hose.
13. 90 duplex electric outlets, some built onto countertop, GFI where required.
14. Two (2) 240-volt outlets.
15. 40-inch-wide fire door/primary access to lab. 40-inch minimum-width route to lab from loading dock.
16. Five (5) floor drains.
17. Water connections to DNR-provided autoclave and water deionization equipment.
18. 5-foot minimum width exhaust hood above autoclave with condenser to cool steam and drain line for condensed steam; exhaust hood vented to the outside, with the capability to exhaust at rates reaching 200 CFM. Final ventilation requirements determined at design.
19. One (1) chemical fume hood exhausted to the outside, with the capability to exhaust at rates reaching 200 CFM. Final ventilation requirements determined at design. Some of the above components may be located within the adjacent sub-labs; the locations will be determined at design.

\*ISO 8 clean rooms must include, but are not limited to, the following:

* + 1. HEPA filtration; minimum of 20 air changes per hour
    2. Low air returns and use of non-unidirectional or mixed airflow patterns
    3. Limit of no more than 3,520,000 particles (0.5 micrometers or larger) per cubic meter
    4. Air pressure management
    5. Temperature to be maintained at 70 degrees F with a 2-degree variance.
    6. Humidity control sufficient to maintain relative humidity (RH) of 30-40% RH year-round.
    7. Static control

### **Secondary Wet Lab** (constructed such that walls, tables and floors may be sprayed down to clean them)

The function of the FAW wet lab is for DNR scientists to study the health of fish through tissue sampling and studies, as well as to analyze fish for contaminants such as mercury.

Floors sloped to drain to two floor drains.

40-inch-wide metal fire doors.

12-foot-long stainless steel table with 4-foot-wide x 12 inch deep integral sink in center with three-inch drain, two mobile high pressure spray nozzles – cold water.

12-foot-long hot/cold tapped high-pressure hose with wall mount & heavy-duty sprayer to wash down floors and walls.

5-foot-wide chemical fume hood with space for chemical storage; vented to the outside. Ventilation requirements determined at design.

One eyewash station.

11 duplex electric outlets, GFI where required by code.

Two 240-volt GFI outlets.

10-foot-long counter, 24-inch deep, with built-in cabinets above and below.

75 SF walk-in freezer and 25 SF walk-in refrigerator accessed from wet lab.

Floor must be a slip-resistant epoxy with integral base.

Provide 5-10 air exchanges per hour. Final ventilation requirements determined at design.

## **EWR Labs**

### **General Lab Requirements:**

1. All labs must have R22 insulated walls to deck.
2. Provide badge/card access and video monitoring at primary lab entry points.
3. All lab areas to be climate controlled.
4. Provide Wi-Fi in lab areas.

### **Primary Lab**

The function of the Primary EWR Lab is for DNR scientists to process invertebrate samples and preserve them in ethanol. Sometimes DNR scientists handle samples that are preserved in formalin.

1. 10 LF, 4-foot-wide lab seated counter /island with drawers below, knee space for four (4) workstations, and an epoxy resin top. Eight (8) electric outlets must be provided down the center of the countertop.
2. 12 LF x 30-inch lab counter with epoxy resin countertop and metal drawers below.
3. 28 LF x 24-inch depth lab counter with epoxy resin countertop and integral sink (minimum of 24”W x 14”L x 12”D) ; metal drawers below.
4. 14 LF enclosed storage shelves.
5. Two (2) vacuum ports.
6. Two (2) pressurized air ports.
7. One (1) eye wash station.
8. Four-foot-wide fume hood vented to the outside with the capability to exhaust at rates reaching 150 CFM. Final ventilation requirements determined at design
9. Utility sink.
10. Eight (8) standard outlets, four (4) at countertop height.
11. Provide 5-10 air exchanges per hour. Final ventilation requirements determined at design.

### **Secondary lab/work room**

The function of the secondary lab/workroom is to calibrate and clean field equipment such as dataloggers, data cables and well measurement tapes (approx. one cubic foot in size), as well as to charge equipment (lithium ion and lithium phosphate batteries as well as lead acid and AGM batteries).

1. Prefer lab/workroom to have an elongated shape, roughly twice as long as it is wide.
2. 20 LF lab counter with epoxy resin countertop required, 40 LF preferred. 1/3 open below, 2/3 metal drawers below.
3. Ten (10) outlets at counter height.
4. Six (6) LF battery charging counter.
5. One (1) utility sink. Minimum: 20-inch long x 20-inch wide x 14-inch deep with hot/cold water and spray hose.
6. Floor drain.
7. Provide five (5) air exchanges per hour to assist in drying out equipment. Final ventilation requirements determined at design.

### **Specimen Archival Room**

The function of the archival room is to store specimens in ethanol and, in some instances, formalin.

1. Provide badge/card access.
2. Provide space for two (2) flammable cabinets.
3. Provide space for six (6) archival cabinets with sliding trays.
4. Ceiling, walls and floor must be constructed with 2-hour fire rating.
5. Provide Class B self-closing fire door.
6. Design and build containment for spills.
7. No electrical or data outlets within the space.