Attachments for IDFG Pack River Delta Phase 3 Restoration Project

BLOCK 14. DIRECTIONS TO PROJECT SITE:

The project site is accessed by traveling approximately 8 miles east of Sandpoint, Idaho on State Highway 200, then traveling 2.5 miles south on Sunnyside Road, in the northwest corner of the Pack River delta, south of the Burlington Northern Railroad grade.

BLOCK 15. PURPOSE AND NEED:

Lake Pend Oreille, including the lower Pack River delta is inundated during summer because the lake is held unnaturally high under post-dam water level management operations at Albeni Falls dam. The inundation killed most of the original floodplain wetland plant communities and the lack of vegetation results in barren banks and shorelines that are extremely vulnerable to wind and wave driven erosion. Under these current water level management regimes, erosion has occurred resulting in loss of soil and native riparian wetland vegetation, which ultimately reduces the quality and quantity of fish and wildlife habitat. These altered water level management scenarios have also reduced the Pack River delta natural wetland functions to store incoming sediments and create new landforms and new wildlife habitat. This is the sixth restoration project on Lake Pend Oreilles deltas, and the goals of this project are the same as for the other successful projects:

1. To protect remnant habitats within the Pack River delta from further erosion
2. To raise and restore areas within the delta that are submerged during summer lake elevations
3. To increase wetland habitat complexity and diversity – including adding deep water habitats
4. To improve recreational opportunities for sportsman

BLOCK 16. DETAILED DESCRIPTION OF EACH ACTIVITY WITHIN OVERALL PROJECT:

Staging Areas – We will clear trees and vegetation along Sunnyside Road (2.5 miles South of State Highway 200) and build access and a temporary staging area down on the Pack River delta floor. This temporary staging area will serve as storage for equipment, construction material, office and equipment trailers, contractor parking, portable toilets, refuse and recycling, and equipment fueling and maintenance. Stored materials may include imported rock, erosion and sediment control materials, culvert pipe, piles, and plant stock. Fueling and hazardous materials storage would occur within applicable spill containment measures and at an appropriate distance from any watercourse, lake, or area of open water. Suitable fill material will be offloaded from the

Sunnyside Road pull off access point, to build a workable and safe entrance ramp, sloped down to the delta floor where the staging area will be built. Sunnyside Road is owned by Bonner County.

Access Roads – Due to the soft and unstable soil conditions on the Pack River delta floor, access roads will be built to the various construction zones. Access from Sunnyside Road to the staging area/platform on the delta floor will be established first. Offsite fill will be used to build a primary access road out to the first fill area. Material from the first fill area will be used to build subsequent roads to the other construction zones. Daily access from staging areas will be necessary to haul materials, heavy equipment, and other vehicles to each project construction zone. Access roads will be generally 14 to 16 ft wide and will include the following:

- Primary Access Road – Approximately 1.0 miles would be constructed by grading and gravelling. The roadway would be approximately three feet deep of pit run or suitable rock and geotextile may be used. When adding rock is insufficient for maintaining level, safe and efficient travel on primary roads or in wet areas, small culverts with rock reinforcement may be temporarily added along roadways. After construction, primary access roads and materials would be removed and roadbed would be returned to grade, when feasible. See Plan Set for details.

- Temporary Access Roads – Temporary roads would be gravel or hard packed sand and may include geotextile fabric with pit run or appropriate rock four or more inches deep. These roads would be removed after construction and would be restored or revegetated/reseeded as needed. Materials will be incorporated as bank protections where appropriate. See Plan Set for details.

- Interlocking Construction Matting - This may be used in conjunction with the typical geotextile fabric/rock construction methods when appropriate or cost effective.

Project Elements and Actions by Area

The following sections describe the elements and actions that would occur by project area. Referenced sheets from project stamped engineering bid set show the proposed elements for each of the areas. Detailed calculations of cut-and-fill volumes are shown in Bid Schedule (attached).

Island 1 – New Island Landform. Place approximately 30,335 cubic yards of fill for Island and 3408 tons (2434 CY) of minor bank protection. Includes willow planting into bank by contractor (see Sheet 3.1 for reference).

Island 2 – New Island Landform. Place approximately 7,310 cubic yards of fill for Island and 2776 tons (1983 CY) of minor bank protection. Includes willow planting into bank by contractor (see Sheet 3.2 for reference).

Island 3 – New Island Landform. Place approximately 30,428 cubic yards of fill for Island and 3458 tons (2470 CY) of minor bank protection. Includes willow planting into bank by contractor (see Sheet 3.2 for reference).

Borrow Area 1 – Near Island 1, provides material for landform building and adds deep water habitat (see Sheet 3.0 for reference).

Borrow Areas 2 – Near Island 2, provides material for landform building and adds deep water habitat (see Sheet 3.0 for reference).

Borrow Areas 3 – Near Island 3, provides material for landform building and adds deep water habitat (see Sheet 3.0 for reference).

Note: All borrow areas may not be excavated as part of the project. The borrow areas are intended to provide enough material for island building.

Block 17. DESCRIBE ALTERNATIVES CONSIDERED TO AVOID OR MEASURES TAKEN TO MINIMIZE AND/ OR COMPENSATE FOR IMPACTS TO WATERS OF THE UNITED STATES, INCLUDING WETLANDS:

Conservation measures presented below are components of the proposed action and requirements for the contractors implementing the Pack River delta phase 3 restoration project.

Impact Avoidance and Minimization Measures

The project design is intended to limit potential disturbance to the environment to the extent feasible. Prior to construction, the following minimization measures would be completed:

- Grading and offset stakes will be placed according to construction documents to identify the limits of construction areas.
- Staging areas and clearing/disturbance limits will be visibly marked in the field.
- The Contractor will be required to submit a BMP plan prior to construction.
- The Contractor will be required to submit a Spill containment plan prior to construction.
- The Contractor will be required to provide an Access Route plan for movement around the project site.

- The Contractor will ensure that the following materials for emergency erosion control are on site: (1) a supply of sediment control materials (e.g., silt fence, straw bales), and (2) oil absorbing floating booms and spill containment kits at each of the work sites.
- Temporary erosion controls identified on project drawings must be in place until completion of construction activities and site restoration.

Erosion Control and BMPs

A BMP plan will be prepared for the work site. This plan would identify BMPs to minimize erosion and sedimentation associated with access roads, water crossings, construction sites, equipment and material storage sites, and staging areas.

- To prevent sediment from entering the lake, stream and wetland habitats, erosion control measures would be implemented such as filter bags, sediment traps or catch basins, vegetative strips, berms, jersey barriers, fiber blankets, bonded fiber matrices, geotextiles, mulches or compost, wattles and silt fences, and covering exposed soils with plastic sheeting.
- Disturbance to riparian vegetation would be the minimum necessary to achieve construction objectives and minimize unwanted habitat alteration and the effects of erosion and sedimentation. Project Specifications in the bid package detail riparian tree/shrub size classes, method and expected procedures to address disturbed riparian vegetation.
- During construction, all erosion controls would be examined by the project inspector to ensure they are working adequately.
- If inspection shows that the erosion controls are ineffective, work crews would be mobilized immediately to make repairs, install replacements, or install additional controls as necessary.
- Sediment would be removed from control devices once it has reached one third (1/3) of the exposed height of the control.
- Measures would be implemented to prevent stockpile erosion during rain events or when the stockpile site is not moved or reshaped for more than 48 hours. These may include surrounding piles with compost berms, covering piles with impervious materials or other equally effective methods.
- Measures would be implemented to prevent construction vehicles from tracking sediment offsite or onto roadways where it may wash into storm drains, waterways, or wetlands; including gravel access pads, wheel wash stations, or other equally effective methods.

- The majority of construction work will be done below high-water mark, but at low-water pool on stable, progressively less saturated ground.

In-water Work, Dewatering and Water Treatment

The completed work areas may be isolated using floating silt curtains for each area as needed after completion. Turbidity curtains would be installed on the outer perimeter of the staging area and downstream of temporary crossings or other in-water work as determined by regular on-site turbidity monitoring.

Restoration of Temporary Construction Impacts

Streambanks, soils and vegetation would be restored at each project site as previously described for the overall habitat restoration plan. Temporary construction impacts outside the treatment areas would be restored as follows.

• All temporary access roads would be obliterated, the soil stabilized, and if above the summer full pool of 2,062.4 feet, the site would be revegetated.

• Temporary erosion control measures would remain on site and operational until the site is stabilized, at which time the devices would be removed.

• Implement any mitigation measures for impacts to waters of the United States that are specified in permit(s) issued by the USACE and Idaho Department of Environmental Quality (IDEQ) through Section 404 and 401 of the Clean Water Act, respectively.

Block 24. SIZE AND FLOW CAPACITY OF BRIDGE/CULVERT and DRAINAGE AREA SERVED

No permanent channel crossing will be installed as part of the project. The Contractor shall submit to Owner the proposed crossing type (as allowed by permits) and stamped design. The size and design capacity will be based streamflow characteristics during the project window and would most likely use USGS peak flow statistics, USGS Streamstats and actual gage readings for the Pack River with an applied safety factor. The drainage area above the Hwy 200 bridge is 286 SM. (see attached hydrology writeup and Streamstat report for flow-duration curves for project months)

Secondary channels

No permanent flow conveyance structures would be installed. Temporary culverts to facilitate travel across wet, low areas near secondary river channels along access routes may be installed when necessary. Under normal conditions, secondary channels will not have flowing water during the construction window but may still be wetted and require improvements for crossing. Culverts would be overlain with rock to facilitate crossing. All temporary coffers, other crossings, and materials used for their

construction will be removed at project end and channels will be restored to their original condition.

Block 26b. BEST MANAGEMENT PRACTICES (BMP's):

During construction, site-specific best management practices (BMPs) will be implemented to minimize construction-related erosion and the potential for introducing construction-related materials (e.g. oil, hazardous materials) into waterways and other sensitive habitats. The project would follow all applicable local and state regulations governing construction, including the Idaho Department of 14 Environmental Quality's Catalog of Stormwater Best Management Practices for Idaho Cities and Counties. Construction specifications would include these BMPs as guidance for contractors, and the project would comply with all permit conditions, such as listed in the Section 401 of the Clean Water Act (Water Quality Certification) issued by Idaho Department of Environmental Quality. In addition, the project would incorporate the following avoidance and minimization measures:

Staging Areas

- Staging area limits would be clearly marked on the ground with orange plastic fencing or similar methods prior to construction.
- Staging areas would be chosen to minimize disturbance to perennial vegetation (based on logistical constraints).

Pollution Control

A Pollution Control Plan for construction activities would be prepared and implemented to prevent construction-related pollution from reaching flowing waters or contaminating upland areas. This plan would include the following:

- Practices would be identified to prevent pollution from equipment and material storage sites, fueling operations and staging areas.
- Staging areas would use appropriate BMPs to prevent stormwater runoff from contaminating surface waters.
- Sanitary facilities such as chemical toilets would be located at least 150 feet from water bodies to prevent contamination of surface or subsurface water.
- A spill containment and control plan would be prepared that includes notification procedures, specific clean-up and disposal instructions, quick response containment and clean up materials that would be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

- Spill containment kits would be stored at each work site and construction crews trained in proper use.
- A spill response plan would describe the chain of command, incident response procedures, agency notification protocols, and disposal protocols following all applicable local, state, and federal regulations.
- If a spill of chemical pollutants such as fuel or hydraulic fluid should occur, the plan would require that the contractor attempt to contain the spilled material. The following procedures would be followed:
    1. Notify the project inspector immediately.
    2. For spillage on land, construct earthen berms or use other suitable barricade material of sufficient size to contain the spill and keep it from spreading.
    3. For spillage on water, attempt to isolate and contain the spilled material. Commercial booms or other suitable materials shall be kept on site during construction to contain fuel and oil spills on water.

Equipment Maintenance and Refueling

- Prior to mobilizing to the project site, all equipment would be washed to minimize the introduction of foreign materials and fluids. All equipment would be free of oil, hydraulic fluid, and diesel fuel leaks.
- Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a designated area at least 150 feet from any stream or wetland.
- All vehicles operated within 150 feet of any stream or wetland must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected must be repaired in the vehicle staging area before the vehicle resumes operation. Inspections must be documented in a record that is available for review on request.
- All equipment operated working within lake must be cleaned before beginning operations below the bankfull elevation to remove all external oil, grease, and dirt.
- All other power equipment within 150 feet of the water would be inspected daily for fluid leaks and repaired. The contractor must prepare daily inspection reports.
- If a fluid leak does occur, the project inspector shall be notified immediately, and all work ceased at that specific location until the leak has been rectified. At all times during construction, fluid spill containment equipment would be present on-

site and ready for deployment should an accidental spill occur. The project inspector reserves the right to refuse equipment that does not meet criteria.

- Stationary power equipment (e.g., generators) operated within 150 feet of any stream, water body or wetland must be diapered to prevent leaks.
- All fuel and lubricants would be stored in containers and areas that conform to applicable local, state and federal regulations.
- If a spill of fuel or hydraulic fluid occurs, the contractor would immediately attempt to contain the spilled material and notify the appropriate regulatory agency following the spill response plan and all applicable local, state, federal regulations.
- Petroleum contaminated soils resulting from contractor fueling, greasing, and cleaning, or due to fluid leaks would be removed and disposed of following all applicable local, state, and federal regulations.