

**IRRIGATION CONTRACTOR**  
**DRAFT SCOPE OF WORK**  
**Island Complex Recreational Area Remedial Actions**

## **1.1 PROJECT BACKGROUND**

The Washington State Department of Ecology (Ecology) is conducting remedial actions at the Island Complex Recreational Area in Spokane County, Washington. Historical mining practices in the Coeur d'Alene basin in Idaho resulted in sediment and soil contamination along the shoreline of the Island Complex and at other shoreline sites in the Spokane River in Washington, between the Washington – Idaho state line and Upriver Dam. The primary contaminants of concern include lead, arsenic, cadmium, zinc which occur in concentrations that exceed human health- and ecological-based criteria.

The remedial design for the Island Complex site will include stabilization of portions of the downstream bank to minimize the re-distribution of contaminants in the river; enhancement and capping of trail sections and stable banks to prevent contact with contaminated soil; installation of signage, vegetation or physical barriers, such as boulders or fencing, to better define the trails; and enhancement (or avoidance of disturbance) to the uplands, riparian, and aquatic habitat.

Ecology is seeking a qualified licensed irrigation contractor to provide irrigation system design, installation and testing. The irrigation system will serve the Back Channel at the Island Complex Recreational Area.

## **1.2 PROJECT LOCATION**

The Island Complex recreational area is located at approximate river mile 95.0 about 1.0 mile west of the Idaho State line in Spokane County, Washington (Figure 1). The site is located on land owned by the State of Washington and managed by the Washington Department of Natural Resources (DNR), and can be accessed via a 0.5-mile trail through parkland owned by Spokane County. The trailhead is located at a parking lot adjacent to the river near Exit 299 on I-90.

Access to the work site will likely require off-road capabilities. Prospective bidders are encouraged to attend the pre-bid conference and/or visit the site to become familiar with existing conditions.

Project Drawings can be viewed at [www.ridolfi.com/spokaneriver](http://www.ridolfi.com/spokaneriver).

### 1.3 SCOPE OF WORK

- A. The Irrigation Contractor (IC) will be responsible for the design, installation, and testing of the Back Channel, Zone 1 irrigation system at the Island Complex Remediation Area. A schematic design of the system is attached to this Scope of Work.
1. Construction of the Back Channel, Zone 1 irrigation system will be in two phases:
    - a. The initial phase will consist of the construction and testing of the main system manifold from the source water tie-in extending the length of the Back Channel planting area. All fittings and valves for “zone” manifolds must be installed, tested and working prior to the second phase.
    - b. Phase II will consist of providing water from the main manifold to each of the Zone 1 planting pits during installation of the rooted stock. This work will require coordination with the Drilling Contractor and Planting Contractor and must be completed concurrently with drilling and planting work.

### 1.4 REFERENCES

- A. ASTM International:
1. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
  2. ASTM D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.

### 1.5 SYSTEM DESCRIPTION

- A. Manually controlled above-ground irrigation system, with low-point self-drain or pressure blow-out drain.

### 1.6 SUBMITTALS

- A. Section 01300 - Submittals: Requirements for submittals.
- B. Shop Drawings: Indicate piping layout to water source, location of sleeves under pavement, location and coverage of zone tees, components, plant and landscaping features, site structures, schedule of outlets and fittings to be used.

## 1.7 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of concealed components including, but not limited to control valves and piping.
- B. Operation and Maintenance Data:
  - 1. Submit instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.
  - 2. Submit schedule indicating length of time each valve is required to be open to deliver specified amount of water.

## 1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience and/or approved by manufacturer.

## 1.9 PRE-INSTALLATION MEETINGS

- A. Convene one week prior to commencing Phase I and Phase II of the Work described in this section.

## 1.10 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on Shop Drawings.

## 1.11 COORDINATION

- A. Coordinate the Work with installation of Back Channel Zone 1 planting with Drilling and Planting Contractors.

## 1.12 PIPE MATERIALS

- A. PVC Pipe: ASTM D2241; 200 psi pressure rated upstream from controls, 160 psi downstream; solvent welded sockets.
- B. Solvent Cement: ASTM D2564 for PVC pipe and fittings.

## 1.13 MANUAL VALVES

- A. Ball Valves: PVC construction.

**1.14 EXAMINATION**

- A. Verify location of existing utilities.
- B. Verify required utilities are available, in proper location, and ready for use.
- C. Verify that source water connections are available, in proper location, and ready for use.

**1.15 PREPARATION**

- A. Piping layout indicated on Drawings is schematic only. Route piping to avoid plants, ground cover, and structures and to provide adequate irrigation where needed.
- B. Layout and stake locations of system components. Verify locations with Ecology or its designated representative before installation of system.

**1.16 INSTALLATION**

- A. Connect to water supply tie-in provided by Ecology.
- B. Slope piping for self drainage.
- C. Use threaded nipples for risers to each outlet.
- D. After piping is installed, but before outlets are installed and backfilling commences, open valves and flush system with full head of water.

**1.17 FIELD QUALITY CONTROL**

- A. Test system for leakage at main piping to maintain 100 psi pressure for one hour.
- B. System is acceptable when no leakage or loss of pressure occurs during test period.
- C. Provide one complete Spring season start-up and Fall season shutdown.

**1.18 DEMONSTRATION AND TRAINING**

- A. Instruct Ecology personnel in operation and maintenance of system, including adjusting of sprinkler heads. Use operation and maintenance manual as basis for demonstration.

END OF SECTION