Curly Leaf Pondweed Early Detection and Rapid Response

Introduction/Background

Midewin National Tallgrass Prairie (MNTP), located in Will County approximately 40 miles southwest of Chicago, includes key aquatic and wetland resources such as Prairie Creek, Grant Creek, Jackson Creek, and associated wetlands and riparian corridors. Prior to Forest Service ownership, the land was part of the former Joliet Army Ammunition Plant. Decades of agricultural use, drainage modifications, and idling of wet areas facilitated the spread of invasive aquatic and riparian species and altered natural hydrology. After the facility's closure in the 1990s, management ended and invasive species expanded rapidly. The Forest Service is actively working to restore aquatic systems, reduce invasive species, and protect restored wetlands, streams, and floodplain habitats across MNTP.

Potamogeton crispus, also known as curly leaf pondweed (CLP), was recently discovered in isolated areas within Grant Creek. As part of USFS early detection and rapid response efforts, the goal is to identify the extent of this population and eradicate it. Work under this contract would involve mapping infestations and eradication through application of benthic barriers, or similar.

General Treatment Specifications

The Contractor shall provide all expertise, labor, supervision, services, materials, equipment, tools, supplies, transportation, licenses, permits, worker personal protective equipment (PPE), and incidentals necessary to perform the required work, for which the desired outcome is in strict accordance with the standards in the contract. The Contractor shall perform and accomplish the work in accordance with all applicable federal, state, and local laws, regulations, and ordinances. Equipment may be stored on site with COR approval.

Contractor will conduct treatments to 100% of the specified project area(s) of the target CLP infestation(s) as identified in the Performance Work Statement and Quality Assurance Surveillance Plan. Contractor will conduct treatments at a sufficient interval to meet or exceed the kill rate of 95% for target CLP infestations (refer to Quality Assurance Surveillance Plan and attached maps).

The Contractor shall progressively accomplish the work at a rate that will result in completion of the work within the time specified as determined by the final accepted work schedule for the awarded contract.

Forest Service COR or Contract Inspectors may conduct visual inspection of CLP treatments on site to check on their progression to ensure the Contractor is following the specified requirements of the contract. The COR may conduct random inspections and sampling to verify acceptable kill rates to target vegetation. At the discretion of the COR, Forest Service will accept work based on visual inspection.

Recordkeeping and Daily Logs/Diary

The Contractor shall submit the following written documentation to the COR:

- Pre-installation monitoring report.
- Weekly barrier inspection logs.
- Incident reports within 24 hours of any safety or environmental event.
- Final summary report within 15 days of project completion, including data, observations, and recommendations.

Failure to submit required documentation may result in work suspension or non-payment.

Equipment Cleanliness

Prior to starting work, the Contractor must clean all equipment (including vehicles, Personal Protective Equipment, etc) used in CLP control activities before entering Midewin National Tallgrass Prairie. Project COR will inspect equipment on-site and will require cleaning if equipment leaves the site. Equipment will be inspected at the Welcome Center by the COR before work can begin.

ATV/UTV Use

Wet weather conditions may preclude the use of vehicles and all-terrain vehicles (ATVs), utility terrain vehicles (UTVs) or off-highway vehicles (OHVs) in off-road areas, along trails or fields for indefinite periods or possibly the entire area at certain times of the year. The COR will determine those conditions or locations that warrant cession of vehicle or ATV/UTV/OHV use. In the event that vehicular access is precluded, work must be completed on foot. Amphibious equipment may be approved by COR.

Inspections

The Contractor may set up the Work Plan and Schedule to include interim inspections; however, interim inspections will only be done upon completion of at least one line item (CLIN). The Contractor shall complete the CLIN work according to the approved Work Schedule then request an inspection by the COR. Contractors are reminded that some work cannot be immediately inspected, because an appropriate time interval must pass before determining whether the AQL has been met. Notify the COR when work is completed and when it is anticipated that enough visible plant mortality will have occurred for the work to be inspected.

Invoicing

Invoicing is tied to successful inspection of work. The Contractor may only invoice after the COR has inspected the completed line item(s) and the work is determined to have met the AQL. This applies to both interim and final payments. Invoicing will be through the U.S. Treasury's Invoice Processing Platform (IPP).

Quality Control Plan

The Contractor will provide a written Quality Control Plan that demonstrates how the contractor will meet the Task(s) / Sub-tasks, Inspection Requirements, Monitoring Method and achieve an Acceptable Quality Level (AQL) for these requirements.

See Quality Control Plan Matrix below.

Safety Plan

The Contractor will provide a written safety plan that demonstrates how the contractor will ensure a safe work environment for themselves, their employees. The safety plan should include: 1) emphasis in aquatic field safety, safe handling of benthic barriers and anchors, emergency water procedures, and site-specific hazards identified by the COR. 2) documentation to substantiate that the Contractor has an ongoing safety training program, 3) documentation regarding any Occupation Safety and Health Administration (OSHA) actions/citations issued against the contractor. The same safety plan information is required of subcontractors.

Archaeological and/or Historic Sites

If a previously unidentified archaeological or historic site(s) is encountered, the Contractor shall discontinue work in the general area of the site(s) and notify the Contracting Officer immediately.

If you come across human remains, immediately stop working and notify local law enforcement and COR.

Contract Line Items and Specifications

Line Item 1- Survey:

The Contractor shall survey the full wetted channel of the creek from (41.3869, -88.0891) to (41.3705, -88.1850) approximately 6 river miles.

Survey extent must include the main channel and any connected backwaters, pools, or side channels accessible during the field window.

Field Survey Window

Data shall be collected mid-summer and be completed by September 30th, 2026. Surveys must occur during daylight hours and in conditions allowing safe visual/wading assessment.

Required Data Collection Methods

The Contractor shall:

- Conduct surveys by wading or canoe/kayak appropriate for shallow, narrow channels.
- Record all Curly-leaf pondweed occurrences with submeter GPS accuracy using a field grade technology (e.g., Trimble, Hemisphere, EOS, or equivalent).
- Map occurrences as polygons where stands exceed 1 m^2; otherwise as points.
- Estimate percent cover within each polygon using standardized bins (e.g., 1–10%, 11–25%, 26–50%, 51–75%, 76–100%).
- Record water depth at each observation location.
- Take georeferenced photos at representative locations, including at least one per polygon.
- Note coexisting aquatic vegetation, if present.

Attribute Data Requirements

Each feature (point or polygon) shall include:

- Species: Potamogeton crispus and coexisting vegetation
- Percent cover (categorical bin)
- Water depth (m)
- Survey method (wading, kayak, boat)
- Photo ID (if applicable)
- Observer initials
- Date/time
- Notes (optional)

Spatial Data Requirements

- All spatial data must be collected in NAD83 UTM Zone 16 meters, unless otherwise specified by the COR.
- Minimum horizontal accuracy required: ≤ 1 meter (RMS).
- All GNSS tracks/routes used must be recorded and included with deliverables.
- Data must not contain duplicate features or topology errors (self-intersections, gaps, or slivers in polygons).

Quality Assurance / Quality Control

The Contractor shall:

- Perform daily GNSS calibration checks before data collection.
- Document estimated accuracy at each observation point.
- Submit metadata describing equipment, methods, environmental conditions, and any deviations.
- Correct any identified errors within 10 business days of notification.

Deliverables

The Contractor must provide data (by October 15, 2026)

• A GIS dataset (shapefile or file geodatabase) of Curly-leaf pondweed locations including all required attributes.

• GNSS track logs.

• Georeferenced photographs.

• Metadata following FGDC or ISO standard.

• A brief summary report describing methods, field conditions, findings, limitations, and recommendations for future monitoring.

Line Item 2- Treatment:

- Treatment may start in April if criteria (low turbidity, and low flow) is met and must be completed by June 30th
- Regularly monitor barrier effectiveness biweekly or when rain events of 1" or more occur
- Any plant fragments or debris resulting from barrier operations shall be collected, dewatered, and stored in covered containers. Disposal shall occur only at locations approved by the COR. No plant material shall be returned to any waterbody.
- Treatments will occur in Calendar Year(s) 2027 and 2028. Coordinate with Contracting Officer Representative (COR).
- Benthic barriers shall:
    - Be installed flush against the substrate with full bottom contact.
    - Be anchored at a frequency and method adequate to prevent shifting, uplift, or light penetration along edges.
    - Remain in place until October 1st of each treatment year.
    - Infestations that were not previously recorded must also receive treatment

Quality Control Requirements:

Contract Line Item No. – Work Requirement	Task / Critical Sub-tasks	Inspection requirements	*Acceptable Quality Level (AQL)	Monitoring Method
Mapping Grant Creek Vegetation	Contractor will map infestations of Potamogeton crispus in the areas delineated in the attached map Data points will include photo of infestations Contractor will create list of coexisting vegetation when mapping CLP infestations	100% of target vegetation of all areas mapped AQL determinations are made by the COR/Technical lead upon inspection of the work These determinations are unilateral and not protest-able	Spatial data report must be provided to COR by **October 15, 2026**, for review and approval	Visual
Application of benthic barriers	Contractor will apply benthic barrier, or similar, to CLP infestations Missed or new infestations will be recorded and treated Contractor will monitor barriers on a bi-weekly basis (once every 14 days) to ensure they are intact and secure	100% of CLP infestations will be covered with benthic barrier	All CLP infestations within project area are covered with benthic barrier, or similar	Visual
Schedule (non-Line Item)	Timely Completion of the contract work	Per the Work Schedule, the Contractor will complete all work prior to the contract end date. AQL determinations are made by the COR upon inspection of the work. These determinations are unilateral and not protestable	All work must be complete by the end date of the contract and meet the AQL.	Visual

***Meeting the AQL for Line Items**: Contractor(s) must complete tasks at their expense upon failure to meet AQL values at the final inspection for each contract line item where: 1) the work performed failed to reach the minimum acceptable target kill ratio of the NNIS infestation(s) and 2) data report has insufficient information.

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