

# **Attachment A - Workscope and Specifications**

## **Herbicide application to manage nuisance aquatic plants in Lake Guntersville.**

### **1. General description of Workscope & Responsibilities**

a. **Application Services** - The contractor will apply herbicides to select sites within Lake Guntersville to control: (1) submersed or floating leaved aquatic vegetation in shallow water areas (generally within 100-200 ft off the shoreline), (2) emergent vegetation along shorelines areas. Treatments required of the contractor usually will be in the vicinity of structures or facilities (e.g., ramps, docks, piers, marinas, swimming beaches, etc.) or along shoreline areas bordering parks, campgrounds, and other types of recreational facilities and (3) newly identified invasive species which pose significant environmental and economic threat should they become established and/ or widespread.

b. **Materials, Manpower, Regulatory Compliance** - The contractor will furnish all the herbicides, surfactants, materials, tools, equipment and manpower (labor & supervision) necessary to complete assigned tasks. The contractor shall have all appropriate licenses, permits, environmental compliance training, and required insurance as needed to comply with federal, state, and local regulations.

### **2. Geographical Area of Work**

Herbicide treatments will be entirely on Lake Guntersville

### **3. Annual Treatment Acreages**

Current treatment areas are anticipated to total 1,000 to 1,200 acres with annual increases in coverage. New introductions of Eelgrass and Hydrilla, and overall increases in macrophyte growth in Lake Guntersville will likely continue to increase the number of acres treated annually.

### **4. Site Characteristics and Treatment Patterns**

a. **Nuisance Aquatic Plants** - The primary nuisance aquatic plants in the Lake Guntersville that are managed with herbicides are Eelgrass (*Vallisneria sp.*) and Hydrilla (*Hydrilla Verticillata*). Other submersed and floating-leaved plants include Southern Naiad (*Najas Guadalupensis*), Spiny Leaf Naiad (*Najas Minor*), Small Pondweed (*Potamogeton Pusillus*), American Pondweed (*Potamogeton Nodosus*), Muskgrass (*Chara Sp.*), Eurasian Watermilfoil (*Myriophyllum Spicatum*) and Coontail (*Ceratophyllum Demersum*). Herbicides may be needed to manage about 10- 15 acres of emergent species per year.

Most of the treatments applied are to Giant Cutgrass (*Zizaniopsis Miliacea*), Water Primrose (*Ludwigia Uruguayensis*), or Alligator Weed (*Alternanthera Philoxeroides*)

b. **Selection of Weekly Treatment Sites** - W.E.T. Foundation personnel will provide treatment packets for the following week and submit this to the contractor no later than Friday 5:00PM. W.E.T. will provide the area (in acres) for each treatment site, dominant species present, herbicide active ingredient to be used, and the needed application rate. W.E.T. will also provide the contractor with digital form of each treatment area to be used in GPS format to ensure management is taking place at the correct location(s). In some instances, the contractor may be asked to provide recommendations on herbicide type and application rate, however all final management protocol is at the discretion of W.E.T. staff. Contractor will also be asked to coordinate site treatments for specific days or time to avoid conflicts with lake users (e.g., swimmers at beaches). Information and maps for the treatments will be electronic, thus the contractor must have an email account and software to read documents in MS Word and Excel and open maps in pdf or jpeg format. The contractor should have GPS hardware (preferably Lowrance) mounted to all application boats for use with digital mapping.

c. **Size of Treatment Sites** - The size of treatment sites for submersed and floating-leaved species is Lake Guntersville range from about 0.5 acres to about 35 acres. Treatment sites for emergent species are general 0.1 acres to as large as 3.0 acres.

d. **Dates & Frequency of Treatment** – Contractors should be prepared to begin treatments on or about July 17th and extend through late October. Applications are normally Monday through Friday. Treatments are applied on an as needed basis as determined by W.E.T. staff, and each site is generally treated one to four times during the July to October treatment season. Because of the large number of treatment sites and aquatic plant growth patterns, herbicide applications on Lake Guntersville are weekly.

e. **Weekly Treatment Acreages** – The amount of weekly treatment acres on Lake Guntersville is likely to range from as little as 25 to as many as 380 acres in a single week.

## 5. Application Equipment & Regulation Compliance

a. **Application Equipment** - The contractor will provide all equipment, tools, sprayers, boats and vehicles necessary for application of herbicide. Treatments of submersed and floating-leaved aquatic plants in reservoirs will be from an airboat. Airboat(s) should be 16 feet or longer in length, in good working condition, and be clearly marked with a company name and an identifying number. Treatment of emergent vegetation along the shoreline can be from an airboat or from sprayer mounted on four wheelers or similar equipment with the choice of equipment being dependent on site access, other logistical considerations, or as directed by W.E.T.. Furthermore, a flashing light must be affixed to such vessels and be turned “on” while application is taking place and subsequently, be turned “off” when no application is taking place. Airboat(s) should have an onboard tank for herbicide(s), pumps, flow meter, and other equipment necessary for the application of liquid

herbicides at a specified rate per acre. Liquid herbicides will be applied through the rear boom system with trailing hoses. Spray system must be capable of applying herbicide with a hand-held spray gun for the treatment of emergent vegetation. For application of granular herbicides, contractor must be able to equip one airboat with a Thompson type spreader or equivalent. Contractor must also have a backpack sprayer (Stihl Model SR 450) or equivalent that is capable of applying liquid or granular herbicide to small areas that may be inaccessible by boat or wheeled vehicles. All application equipment will be rinsed at the last treatment site of the day prior to equipment being removed from the reservoir or upon completion of treatments of emergent vegetation from the shoreline. Similarly, all disposable herbicide containers carried to a treatment site will be triple rinsed, and the rinse applied prior to leaving the treatment site.

**b. Compliance with Label Regulations during Application & Mixing** - While applying herbicide treatments requested by W.E.T., the contract applicator and all employees assisting with the application and reservoir on site mixing must follow all safety regulations and wear Personal Protection Equipment (PPE) as specified on the herbicide label for handling, mixing, and application of herbicides. When on the water, applicators and employees of the contractor will wear personal floatation device that meets specifications required by law and observe all safe boating regulations. Applicators and employees of contractor must wear hearing protections when driving or riding on airboats.

## **6. Additional Contractor Requirements & Responsibilities**

**a. Licenses/Certification** - The contractor must be licensed in Alabama. Contractor will be required to show proof of licenses to W.E.T.. All persons employed by the contractor that apply herbicides at the request of W.E.T. on Lake Guntersville must be certified as an applicator in Alabama. Contractor will be required to show proof of certification for each applicator.

**b. Posting of Signs** - Contractor will be responsible for posting signs (8.5 by 11 inches) just prior or during the application of herbicides. Signs will be posted at the ends of docks or similar structures at locations clearly visible from the water and along the shoreline at lot locations visible to users that access the water from land. The signs will be the expense of the contractor and be made of biodegradable paper that will be readable for at least 30 days. Wording on the signs will be provided by W.E.T. and include the NPDES general permit number, date of treatment, herbicide(s) applied, water use restrictions, telephone numbers from the contractor, and other information specified by W.E.T.. All posting must be done to correctly match treatment protocol. In some cases, W.E.T. may ask that confirmation pictures be taken at select sites.

**c. Records** - The contractor must have an NPDES Pesticide General Permit (PGP) issued to the applicator by the state of Alabama. The PGPs require the applicator to maintain certain records. As applicator, the contractor will maintain the following records as required by the PGP: dates of weekly inspections for leaks of herbicide containers and transfer pumps, documentation of weekly calibration of application equipment, and daily inspections for leaks and cleaning of application equipment.

During treatments with herbicide, the contractor will monitor the treatment site for adverse effects to persons or non-target organisms. The contractor will also be required to provide W.E.T. a treatment record for each site that will include information such as treatment date, type and quantity of herbicide applied, applicator, type of application equipment and any observations related to adverse impacts to non-target organisms. All records will be maintained in electronic format and upon request will be provided to W.E.T. and state regulatory agencies.

**d. Calls & Inquires from Lake Users** - The contractor will be available or have a person on staff during normal business hours of the work week to receive and respond to calls from lake users pertaining to the name of the herbicide applied at a specific site, date of application, water use restrictions and to direct calls to appropriate W.E.T. staff or state regulatory agencies in the event of an emergency situation. Applicator will have a cell phone available during treatments. During non-business hours, contractor will be available to W.E.T. staff via cell phone to provide information needed to address calls or reported events that are urgent or of an emergency nature. Contractor and/or staff keep a log of all calls and the response or action taken.

**e. Invoices for Services & Materials** - The contractor will submit invoices for work and materials along with supporting documentation to W.E.T.'s Accounts Payable. Invoices will be submitted every two weeks and more frequently if requested by W.E.T. and payments to the contractor will be made monthly. W.E.T. will provide contractor guidelines and procedures for submission of invoices upon acceptance of the RFP.

## 7. Herbicides

**a. Herbicides used by Contractor** - Referenced in the attached spreadsheet (Attachment B) is a list of herbicides labeled for aquatic use and a surfactant that potentially could be used by the contractor. The primary herbicides and surfactant that will be used to manage aquatic plants in the near future are highlighted in **YELLOW**. Herbicides with the active ingredient Diquat Dibromide or Chelated Copper are the primary herbicides used to manage submersed plants. These two herbicides are generally applied in combination at rates from two gallons of Diquat Dibromide (Reward or Tribune) and three to six gallons of Chelated Copper (Current or Komeen) per surface acre, or Chelated Copper (Nautique) alone at rates from four to sixteen gallons per surface acre. These treatments will likely account for approximately 90 percent of cumulative annual treatments. W.E.T. maintains the responsibility in determining the appropriate ratio and will be the final approver of which brands will be purchased.

**b. Herbicide Storage Facility & Staging Area** - Herbicide storage facilities owned and/or leased by the contractor and all handling of herbicides during storage, mixing, and application must meet all local, state, and federal regulations. Removal and disposal of all herbicide totes and containers are the contractor's responsibility.

## 8. Evaluation of Performance

The performance of the contractor will be evaluated at the end of each treatment season. The evaluation will include but not limited to timely submission of invoices and treatment records to W.E.T., compilation and maintenance of records (e.g., equipment calibration) required by the NPDES PGP, posting of signs in accordance with instructions specified by W.E.T., timely and courteous response to inquiries and “call ins” from lake users, and a demonstration of behaviors that are conducive to a positive image of W.E.T. and the contractor. A failure to correct any deficiencies in performance as identified by W.E.T. will result in possible termination of contract agreement.

## 9. Supplier Summary of Experience

- a. **Minimum Experience** - Contractors responding to this RFP must have a minimum of 10 years of experience (including any subcontractors working for the contractor) in controlling aquatic plants with herbicides in large reservoirs or similar environments.
- b. **Verification** - Contractor must provide a summary of past work activities that demonstrate experience in controlling aquatic plants in large water systems and provide a list of contacts in order for W.E.T. to verify the role and performance of any potential contractor.

## 10. Aquatic Contractors & Subcontractors Details

Contractors responding to this RFP will provide the following information for themselves and any subcontracts that will or may be used during the application of herbicides:

- i. Proof of company business licenses and applicator certification for all staff that will apply aquatic herbicides, licenses and certifications must be current for all states where herbicides may be applied.
- ii. Provide DUNS number
- iii. Provide 2020, 2021 & 2022 financial reports

## 11. Application Services for Aquatic Management – provide in *Attachment-B*

- a. **Cost of Application Services** - Contractor will provide a per acre cost for the listed types of applications. The per acre cost will include all costs associated with application of herbicides and incorporate the cost of all support activities (e.g., posting of signs, record keeping, licenses and certifications, call response, etc.).

**Contractor will be provided a list of sites that will require application services the following week (Monday - Friday) by no later than 5:00 pm on Friday**

b. **Granular Herbicides** - Spreader - Granular applications are rarely used to manage aquatic plants in Lake Guntersville but could be needed under special circumstances. Any applications would likely be to small areas.

c. **Handgun Applications** - Used to treat emergent species such as cutgrass, primrose, etc., along shoreline areas. Annual treatment is estimated to be 10 to 15 acres for these species.

d. **Liquid Herbicides** - Trailing Hoses from Airboat - Approximately 95 percent of treatments are by application of liquid herbicides from trailing hoses from an airboat. Under the scope of this RFP, treatments are estimated to be 950 to 1,150 acres during years with good growing conditions for aquatic plants.

e. **Backpack Sprayer Application** - Occasional use and for treatment (liquid or granules) of very small areas that may be inaccessible by boat or wheeled vehicles.

f. **Liquid or Granular Herbicides - Specialized Equipment** - Contractor may have (not required) specialized equipment that might be used to manage to aquatic plants in Lake Guntersville. Contractor is asked to provide a description of such equipment for evaluation by W.E.T. and a per acre cost if used in application.

## **12. Herbicides & Other Chemicals for Aquatic Plant Management – provide in *Attachment-C***

a. **Herbicides and Pricing** - The per gallon (if liquid) or pound (if granular) cost to W.E.T. for the brand name herbicides listed by active ingredient is the attached table (Attachment B). Only herbicides labeled for aquatic use will be applied. W.E.T. will only provide reimbursement for herbicide cost after it is applied to Lake Guntersville. Ownership of herbicide is that of the contractor until the time of application. W.E.T. reserves the right to view all invoices for herbicides applied for aquatic plant management.

### **b. Classification:**

i. Contact - A herbicide that is not translocated by vascular tissues or a plant.

ii. Systemic - A herbicide that is translocated or moved to other parts of the plant by its vascular tissues.

### **c. Plant Type:**

i. Submersed - An aquatic plant whose vegetative parts are primarily below the surface of the water, used here to also include with floating leaves.

ii. Emergent - An aquatic plant that has most of its vegetative parts (i.e. stems, and leaves) above the surface of the water.

d. **Highlighted Brand Names** - Herbicides or surfactants most likely to be used at this time to control aquatic plants in Lake Guntersville in "Attachment B".

e. **Estimated Volumes** - Annual volume in gallons/pounds of herbicide based on estimated acreages and RFP scope. See below for additional notes for herbicides:

i. Occasional - Used during some years and in small volumes

ii. Special Need - Herbicide not anticipated to be used but could be needed to manage aquatic plants under special circumstances.

iii. Copper (Chelated) - 3,000 gallon estimated total combined volume of all Chelated Coppers (Komeen, Harpoon, Current). Chelated Coppers have been used to control Hydrilla and other vascular plants. **The response to the RFP must include pricing for Current and Komeen.**

iv. Diquat Dibromide – 1,200 gallon estimated total combined volume of all Diquat Dibromides (Littoria, Reward, Tribune). Diquat Dibromide has been used to control Hydrilla and other vascular plants. **The response to the RFP must include pricing for all listed Diquat Dibromide (i.e., Littoria, Reward, Tribune).**

v. Nautique (Chelated Copper) - 4,000 gallon estimated total volume of Nautique. Nautique has been used to control primarily Eelgrass. **The response to the RFP must include pricing for Nautique.**

vi. Surfactants - Chemical compounds that increases spread ability and even distribution of herbicides.

### **13. Equipment and Herbicide Storage** - provide in Attachment-D

a. **Available Equipment** - Contractor provide a list of equipment available to be used on this project. At a minimum contractor will provide a spreadsheet that gives equipment type (i.e., Backpack, Airboat, Truck), age of equipment, quantity, and delivery system (i.e., spray, pellets).

b. **Location** - It is preferred that equipment be stationed and herbicide stored within 50 miles of Guntersville Reservoir. This is to minimize any travel or safety issues from extended road travel of equipment and herbicides.