

## Aquatic Plant & Algae Management

**TOP TEN QUESTIONS** to ask and answer prior to designing and implementing an aquatic weed and algae management program.

*The*  
**Stewards**  
*of* **Water**

**1. What weed(s) is causing the problem?**

- If unknown, send to expert or SRTC lab for positive identification

**2. Is the problem re-occurring or recent?**

- When was it discovered, location in lake/pond

**3. What other plants (native) are present?**

- Submerged, emergent, or floating species

**4. What is the potential cause or source of this problem?**

- Boat launch, birds, inlet stream, reclaimed water source, phosphorus pollution, etc.

**5. What are you managing this system(s) for?**

- Irrigation supply water, municipalities, aesthetics, wildlife and fisheries, multiple use site, eradication or control of noxious weeds

**6. What is the water use from or downstream of waterbody?**

- Irrigation (crops, frequency, time of year), drinking, domestic, swimming, fishing, etc.

**7. What is water volume, flow, etc? (Characterize the waterbody)**

- Maps, surface acres, maximum depth, average depth, inlets, discharge (CFS), sediment type, WQ

**8. What are my current weed and algae control options?**

- Biological, chemical, mechanical, physical
- Short-term needs, long-term objective(s)

**9. What is the management budget?**

- Annual/fixed, reoccurring, new funding options

**10. What local, state and federal approvals/permits are needed to proceed with management program?**

- Understand and secure permits, if needed; cooperate with other property owners, regulators, resource managers as necessary

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# Design and Implement a Management Program Specific to Your Waterbody

## Frequently Used Calculations:

### Flowing Water

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**Cubic Feet Per Second (CFS)** = Average Width (ft.) x Average Depth (ft.) x Speed (ft./sec.)

**Acre Feet/Day** = CFS x 1.98

### Area

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**Rectangle Pond Acreage** = Length (ft.) x Width (ft.) / 43,560 (square feet per acre)

**Triangle Pond Acreage** =  $1/2$  base (ft.) x Height (ft.) / 43,560 (sq. ft.)

**Circular Pond Acreage** =  $3.14 \times \text{Radius Squared (ft.)} / 43,560$  (sq. ft.)

### Volume

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**Acre Feet** = Surface Acre x Average Depth (ft.)

**1 Acre Foot  $\text{H}_2\text{O}$**  = 325,851 gallons

### Application Rates

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**Herbicide (lbs/a.i.)** = Concentration (ppm) x Volume (acre ft.) x 2.7

**Formulated Herbicide** = Concentration (ppm) x Volume (acre ft.) x 2.7 / a.i. (%)



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