



Fox Trail POA

Lake Management Field Report

Date: December 15, 2025

Current Lake Conditions

The Fox Trail POA canal and lake system remains in stable condition as the system progresses through the winter seasonal phase. Reduced ambient temperatures and shortened photoperiods have resulted in decreased metabolic and vegetative growth rates, contributing to improved system stability and enhanced water clarity throughout the interconnected waterways.

Water elevations are within expected winter operating ranges and continue to support adequate hydraulic connectivity through culverts and canal junctions. Areas previously addressed through mechanical removal and targeted herbicide applications continue to exhibit improved conveyance and reduced organic accumulation, minimizing the potential for localized stagnation.

Fish populations are present and evenly distributed across the system. While overall activity levels are seasonally reduced, observations remain consistent with acceptable dissolved oxygen availability and suitable habitat conditions. No indicators of stress, fish kills, or oxygen depletion were observed during this reporting period.

Aquatic vegetation conditions reflect the cumulative effectiveness of earlier management activities:

Floating aquatic vegetation, including water lettuce, remains at trace levels with no measurable surface coverage requiring active treatment.

Emergent vegetation, primarily cattails, remains suppressed along canal margins, with only limited, isolated regrowth observed.

Shoreline invasive species such as torpedo grass and mixed emergent grasses persist at low densities and are currently non-obstructive to flow or access.

Submersed and emergent vegetation growth rates have slowed substantially, reducing the need for aggressive mechanical or chemical control during this period.

No mechanical harvesting or debris removal is warranted at this time. Biomass levels remain well below thresholds that would impact circulation, water quality, or aesthetic function.

Water Quality Observations

Parameter	Current Reading	Notes
Water Clarity (Secchi)	Excellent (5–6 ft)	Seasonal improvement due to reduced turbidity and biological activity
Dissolved Oxygen	7.2 mg/L	Optimal winter concentrations; supports fish and aerobic processes
pH	7.5	Stable and well-buffered
Total Alkalinity	125 mg/L	Adequate buffering capacity for system stability and treatment efficacy
Hardness	155 mg/L	Within acceptable range for Florida freshwater systems
Nitrate/Nitrite	<0.5 mg/L	Indicates low nutrient loading and minimal eutrophication risk
Temperature	70°F	Typical winter condition; reduced biological demand

Planned Management Actions

Routine Surveillance: Continued monitoring of canal banks, culverts, and transition zones to identify early-stage vegetative regrowth prior to spring acceleration.

Selective Herbicide Applications: Spot treatments as warranted to address isolated shoreline and emergent invasive species before expansion occurs.

Flow Assurance Inspections: Periodic evaluation of culverts and mechanically cleared areas to ensure sustained hydraulic performance through the dry season.

Seasonal Water Quality Monitoring: Ongoing data collection to track oxygen, clarity, and nutrient indicators and establish baseline conditions ahead of spring growth.

Summary

The Fox Trail POA lake and canal system is performing well under current winter conditions. Vegetation control measures implemented earlier in the year continue to provide effective suppression, water quality metrics remain within optimal ranges, and hydraulic function throughout the system is intact. Proactive monitoring and limited preventative maintenance during the winter months will support continued system stability and reduce the likelihood of elevated management demands during the upcoming spring and summer growth cycles.