Connecticut Federation of Lakes Wake Boats and Enhanced Wake Policy Framework

October 22, 2025

Purpose

Define protective, evidence-based parameters for any **Enhanced-Wake Activity** (wake surfing/wake-shaping) on **Connecticut inland lakes**, consistent with DEEP's study scope and existing CT practices for marked zones and Connecticut Environmental Policy Act/Environmental Impact Evaluation.

1) Designation & Eligibility

- **Parameter / Rule.** Enhanced-wake operation allowed **only** inside **DEEP-designated Enhanced-Wake Zones (EWZs)**; wake-enhancing devices must be disabled elsewhere.
- **Minimum Metric. No statewide default access.**
- **Rationale.** Mirrors DEEP's process for authorizing marked/regulatory zones that explicitly weigh erosion, vegetation/sediment disturbance, public safety, traffic flow, and conflicts among user groups; aligns with Vermont's statewide "wake-sport zone" approach. CT DEEP Navigation Marker Permit

2) Minimum Water Depth (to limit lakebed interaction)

- **Parameter / Rule.** When ballast/wake-enhancement is engaged, the **depth under the propeller** must be **≥30 ft** throughout the pass.
- **Minimum Metric. ≥30 ft**.
- **Rationale.** Research indicates **that a minimum of 20 ft is required to reduce lakebed impacts during surfing.** CT's Lake Waramaug study documented **propeller downwash to ~26 ft**, justifying a **30-ft** protective buffer on CT lakes. University of Minnesota Twin Cities, Terra Vigilis (2024),

3) Shoreline / Habitat Setback (to reduce erosion and near-shore disturbance)

- **Parameter / Rule.** EWZs must be centered mid-lake; while wake-enhancing, vessels must stay **at least 1,000 ft** from **shorelines, docks, wetlands, aquatic-vegetation beds, marinas, and designated swim areas**.
- **Minimum Metric. ≥1,000 ft**.

- **Rationale.** Wake surf waves require **hundreds of feet** to attenuate; SAFL's synthesis supports operational distances **>500 ft** to match conventional-boat wake levels at 200 ft. **A 1,000-ft CT standard adds a protective factor** for smaller/shallower lakes and sensitive littoral zones inhabited with native aquatic plant beds. These sites serve as important habitats for fishery recruitment and species of greatest conservation concern. DEEP's navigation-marker criteria already emphasize erosion/vegetation and conflicts, supporting large buffers. St. Anthony Falls Laboratory (2024), CT DEEP Navigation Marker Permit

4) Width & Length of Zone (to avoid repeated shoreline strikes)

- **Parameter / Rule.** EWZ geometry must provide a continuous width of **at least 2,500 ft** and a length of **at least 3,000 ft**, while also meeting **Depth** and **Setback** standards.
- **Minimum metric. Width ≥2,500 ft; length ≥3,000 ft.**
- **Rationale.** Ensures mid-lake parallel passes with room to maneuver without tight turns; complements Vermont's requirement that qualifying wake sport areas maintain **500 ft shore buffers** and **20-ft depths** over a contiguous area. Vermont Legislature

5) Separation from Non-Motorized Users & Anchored Anglers

- **Parameter / Rule.** Maintain **≥500 ft** lateral separation while wake-enhancing from **canoes, kayaks, SUPs, rowing shells, sailing classes, swim areas, and anchored anglers**.
- **Minimum metric. ≥500 ft**.
- **Rationale.** Reduces swamping/capsize risk and user conflicts—core DEEP criteria for zone authorization. CT.gov

6) Operating Patterns

- **Parameter / Rule. Parallel, mid-lake passes** within the EWZ; **no figure-8s or tight circling** that repeatedly focus wave energy on one shore.
- **Conservative metric. Straight, mid-lake tracks only** when wake-enhancing.
- **Rationale.** Minimizes cumulative wave loading on specific banks and aligns with DEEP's emphasis on safe traffic flow and conflict reduction in marked zones.

7) Trigger-Based Suspensions

- **Parameter / Rule. Automatic suspension** of enhanced-wake operation during: (a) **High-water/flood advisories**, and (b) **active Harmful Algal Blooms advisories**.
- **Minimum metric. Suspend until advisories are lifted.**

- **Rationale.** High water and HAB conditions heighten shoreline vulnerability and resuspension risks; conservative pauses protect resources and public health. (Advisories administered by state/local health departments, DEEP partners, and town leadership.)

8) Aquatic Invasive Species (AIS) & Ballast

- **Parameter / Rule. Inspection/Drain/Dry or decontamination** required for any ballast-equipped craft before moving between waterbodies; integrate AIS Stamp education/compliance in outreach. "Home-lake Rule" for wake boats (no leaving the home lake during the season unless ballast systems are professionally decontaminated and documented; random inspections at launches). Vermont implemented this to address invasive-species transfer via ballast tanks. VTDigger
- **Minimum metric. Proof of compliance on request.**
- **Rationale.** Ballast tanks elevate AIS transfer risk; CT's AIS Stamp framework provides funding and education mechanisms to support prevention. CT Insider

9) Boat Density & Spacing (to limit wave stacking)

- **Parameter / Rule. Max 1 wake surf boat per 50 EWZ acres** and **≥1,000 ft** spacing between wake sport boats while surfing.
- **Minimum metric. 1 wake surf boat/50 acres; 1,000-ft spacing.**
- **Rationale.** Avoids cumulative wave trains and localized stress in small basins; complements width/length standards. (Adopted as a precautionary enforcement guideline.)

10) Time-of-Day Quiet Hours

- **Parameter / Rule.** No wake-enhanced operation **is permitted before 10:00 a.m. or after 6:00 p.m.; local authorities may extend these** quiet periods.
- **Minimum metric. 10 a.m.–6 p.m. window.**
- **Rationale.** Reduces conflict with morning paddling/angling and evening family swimming—consistent with user-compatibility objectives in DEEP's permit criteria. CT.gov

11) Noise Compliance (existing CT law)

- **Parameter / Rule.** Enforce CT noise limits: **≤75 dB(A) at 50 ft** (SAE J1970), and **≤88–90 dB(A)** at idle by engine year (SAE J2005).
- **Minimum metric. Strict compliance with CGS §15-129.**
- **Rationale.** Connecticut statute already sets these limits; targeted checks at EWZs support coexistence. Justia Law, Boat-ed.com

12) Monitoring & Adaptive Management

- **Parameter / Rule.** For any **new EWZ**, require **1–2 seasons of monitoring** (shoreline photo-points; turbidity during peak use; user-conflict logs), with the ability to adjust zone geometry or suspend operations.
- **Minimum metric. Mandatory monitoring plan** with public reporting.
- **Rationale.** Connecticut's CEPA/EIE practice (e.g., UConn Mirror Lake) uses alternatives, mitigation, and public input to refine outcomes—apply the same adaptive approach here. UCONN Record of Decision Mirror Lake Improvements by Fuss & O'Neill (2022), UCONN EIE Mirror Lake Improvements by Fuss & O'Neill (2022).

Connecticut context supporting this framework

- **CEPA/EIE precedent:** Inland-water recreation projects undergo impact evaluation with public comment and mitigation planning (e.g., UConn Mirror Lake EIE/ROD).
- **DEEP criteria for marked zones:** Explicitly require analysis of erosion, vegetation/sediment disturbance, public safety, traffic flow, and **conflicts among water-use groups**.
- **Scientific basis for distance/depth:** SAFL research indicates wakesurf boats should operate **farther from shore** than typical boats and in **deeper water**; Vermont's rule operationalizes **≥500 ft** and **≥20 ft**; CT's Lake Waramaug field study shows **downwash to ~26 ft**, supporting **≥30 ft** in Connecticut.
- **Local authority example: Lake Waramaug** ordinance—reviewed/approved by DEEP—demonstrates that lake-specific conditions may warrant stricter limits up to prohibition.