



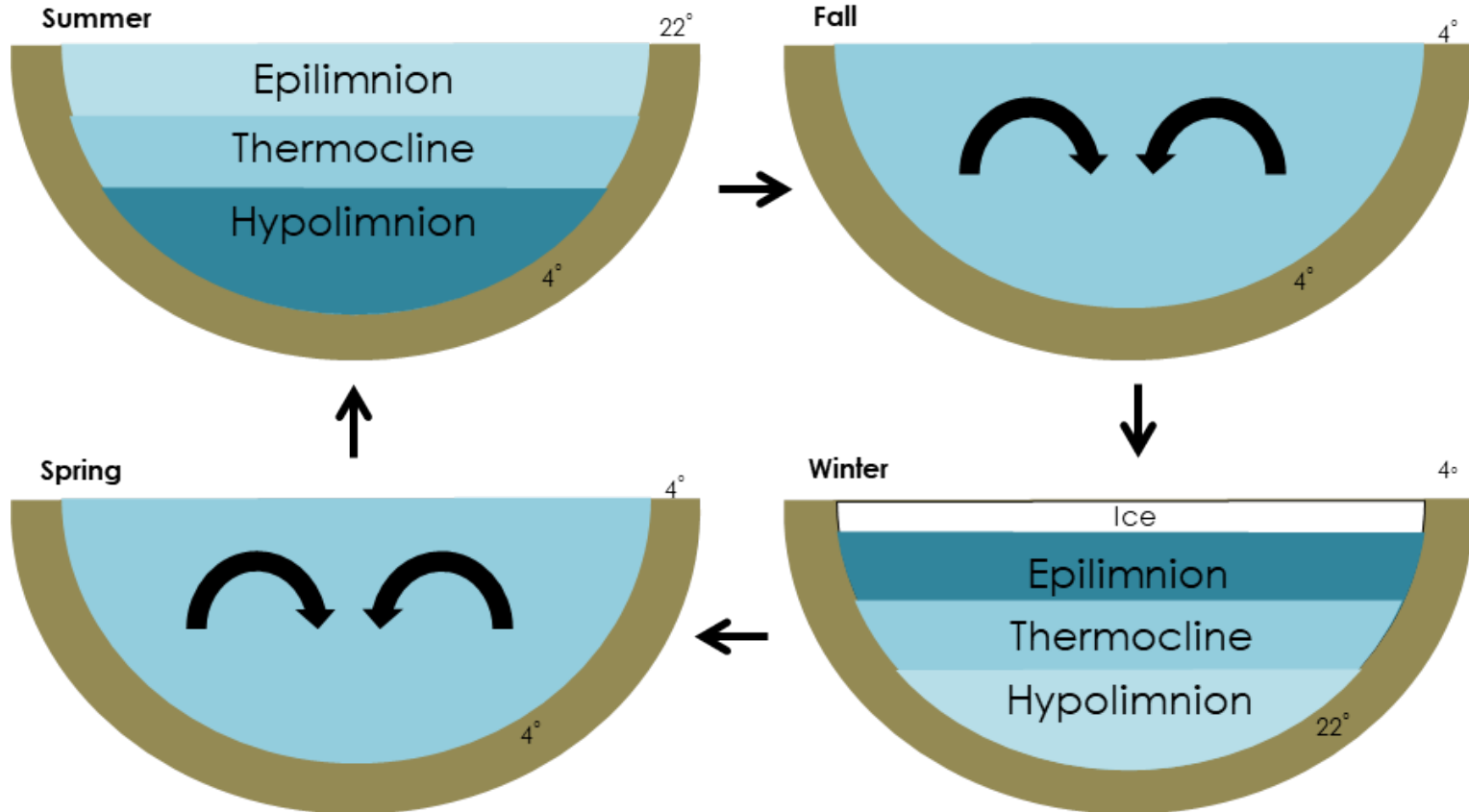
Lake Turnover & Water Quality

City Council Meeting
September 21, 2021

Is the water safe to drink?

- * Yes
- * Although the water may have an off taste to some, it is safe to drink.
- * Chilling tap water before drinking can reduce taste issue.
- * All laboratory tests show the water meets all water quality guidelines for health standards.

Lake Turnover



Taste & Odor Problems by Source

What is making my water taste bad?

- * With lake turnover, algal compounds from naturally occurring blue green algae result in a change in the the taste and odor.
 - * Geosmin
 - * Methyl iso-borneol (MIB)

Surface Water Algae Induced Taste & Odor

- * Musty, Dirty, Earthy
- * Qualitatively Identified by Taste & Odor Tests at Plant
(Human Threshold – 10 to 30 ng/l)
- * Quantified by Geosmin and MIB (Methylisoborneol)

Why hasn't this happened before?

- * It has happened before and is normal occurrence for surface water supplies
- * Normally Lake Springfield hasn't seen taste and odor issues to this degree with this high of algal compound levels
- * The water treatment plant normally has the capability to remove most taste and odor causing compounds from the water.
- * Lack of water movement including with nonoperation of Units 31, 32 and 33 in recent months appears to correlate

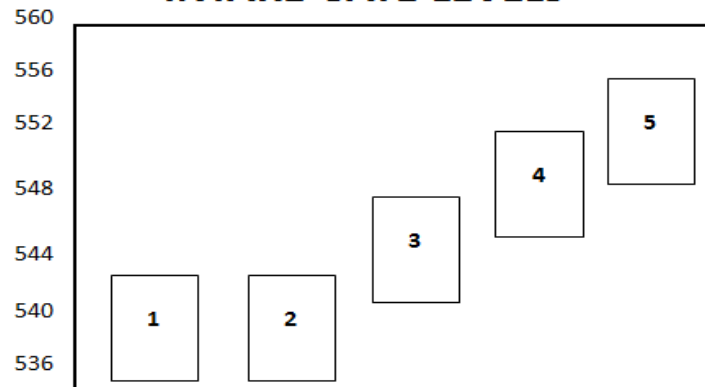
Mitigations

- * Intake Level Adjustment
- * Powder Activated Carbon Feed
- * Plant Washouts
- * Distribution System Flushing
- * Lake Springfield BMPs
- * Lake Aeration & Mixing -Future

Intake

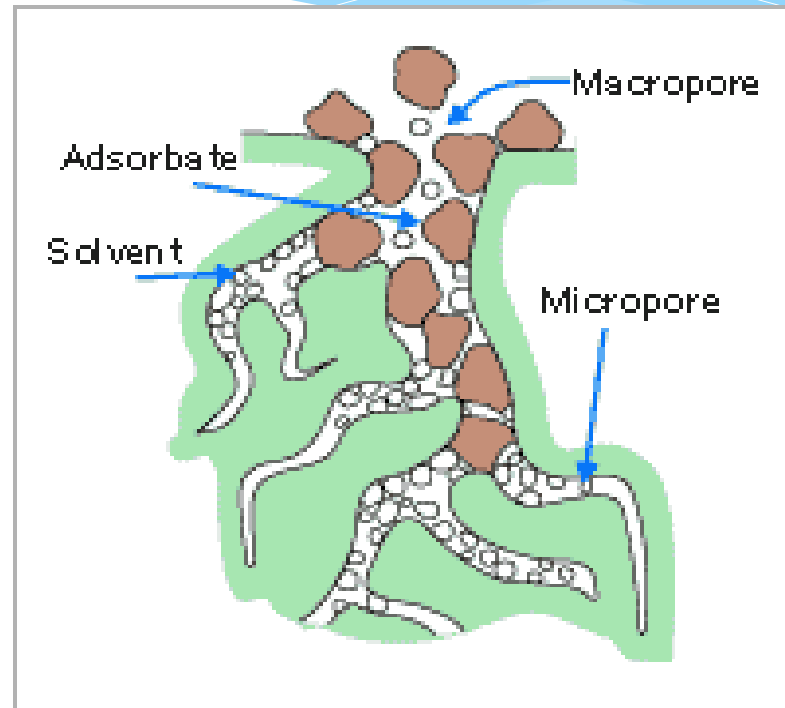


INTAKE GATE LEVELS



Powdered Activated Carbon

- * Macroporosity
- * Microporosity

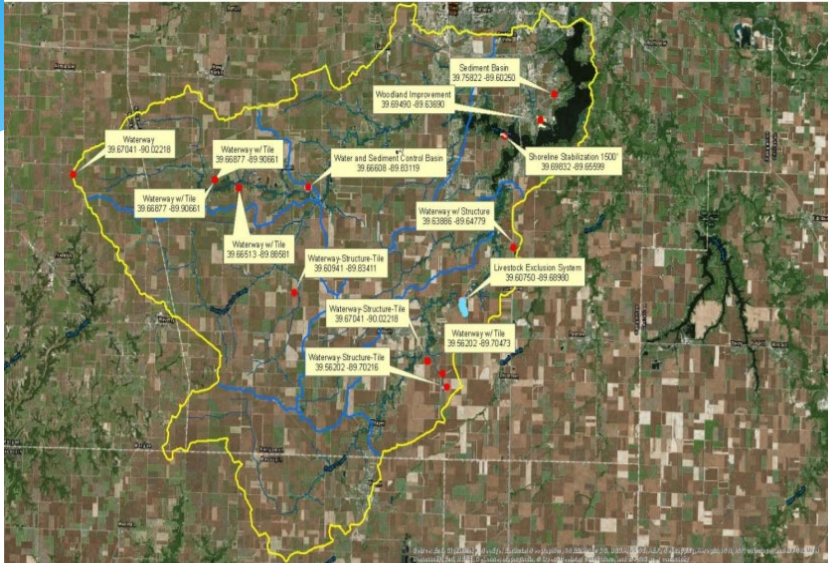


Plant Washouts and Distribution System Flushing



Lake Springfield BMPs

Lake Springfield Watershed-based Management Plan—2017



LAKE SPRINGFIELD SHORELINE STABILIZATION USING ROCK RIP RAP



GRASSED WATERWAY IN LAKE SPRINGFIELD WATERSHED



FILTER STRIP IN LAKE SPRINGFIELD WATERSHED

Lake Aeration and Mixing

The header consists of a solid blue rectangular area at the top. Below this, there are several overlapping, wavy, semi-transparent blue shapes that create a sense of movement and depth, resembling water waves or a stylized landscape.

For Assistance

- * Customers can inquire or make reports
- * 217.789.2323 ext. 2
- * PublicInformation@cwlp.com