

Mason Lake Drawdown FAQ's.

Frequently Asked Questions Asked about the Mason Lake Drawdown

Why?

Many native aquatic plants need fluctuating water levels to grow. Even during the winter, seed preparation begins. Many beneficial aquatic plant seeds rely on freezing (i.e. cold stratification) so they can germinate the following year. The drawdown is designed to take advantage of this to increase plant density and diversity. Mason Lake has two major sources of excess nutrients (a/k/a fertilizers) that create algae blooms: Internal and External Loading. Internal Loading is basically comprised of nutrients coming from the lake sediments, and External Loading are nutrients coming from outside the lake such as lawns, septic systems, stormwater and land uses upstream of the lake. Increasing plant density and diversity will attenuate (i.e. absorb) more nutrients that would otherwise produce algae. More plants will result in clearer water and benefit game fish that feed primarily by sight. Algae dominated lakes are ideal for rough fish that don't need to rely on sight for finding food – they sniff it out! The goal is to increase plant diversity and density to increase water clarity and increase gamefish habitat for a more desirable fishery.

What if there are too many aquatic plants?

Up until 2010, Mason Lake would apply to treat aquatic plants with herbicides. What we've learned over time is that: 1) herbicide treatments eliminated way more plants than what were targeted, and 2) The plants that were killed, sank to the bottom and decayed, releasing the nutrients back into the lake, that created more algae (internal loading). Mason Lake ceased treating aquatic plants in 2010, it has taken this long to see a change. Last year Mason Lake Management District sub-contracted a weed harvester to cut and remove abundant plants. The lake district sampled some of these plants, sent them to a nutrient analysis lab, to determine the concentration of the two major nutrients: nitrogen and phosphorus. Because the excess plants were removed, so were the nutrients (unlike herbicide treatments). The short period harvesting (less than a week) yielded about 33 pounds of nitrogen and 9 pounds of phosphorus. It may not seem like a lot, but the phosphorus removal alone can equate to 2.25 tons of algae growth prevented. Harvesting is the best method to keep plants at a level where navigation can be possible AND remove nutrients that would otherwise cause algae growth. As stated before, this would increase better water clarity and a better fishery.

How is this drawdown different from previous drawdowns?

Not much. The difference here is that there will not be herbicide treatments like in the past. The previous herbicide treatments killed off the plant gains from the drawdown the winter before. Drawdowns are not needed every year and should only be conducted to improve fish habitat and maintain a balance between aquatic plants and algae. The lake will tell you when a drawdown is needed.

Is the fishery going to close with the 2020/2021 fall drawdown?

No, the drawdown is three foot and should not concentrate fish to warrant a fishing closure. Fishing closures can occur in conjunction with a drawdown if the fish become concentrated and are vulnerable to harvest. Fishing closures don't necessarily happen with significant drawdowns either, each situation is unique.

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What is the bass regulation?

The bass regulation is a no minimum length limit, but bass from 14" to 18" may not be kept, and only 1 fish over 18". The daily bag limit is 5 fish. The regulation was based on fisheries surveys conducted in 2002, 2012, and 2015. Relative abundance of bass increased from 10 fish/mile to 28 fish/mile and growth significantly declined to a growth rate below the average bass in Wisconsin. Size structure shifted to smaller fish with only 3% of the population being of preferred size (15") and no memorable size (20") fish were caught. Bass were stockpiling at 12". The management goal with the special regulation is to improve bass growth and size structure, providing a bass population with a mix of ages and sizes in Mason Lake. The objective is to increase the proportion of bass over 14" from 4% to over 20% within 10 years after implementation (2018 fishing season). This regulation is one tool to help meet the management goal because increased harvest of small bass is expected to improve growth rates by reducing competition, preserve a range of sizes by protecting 14" to 18" bass, and provide additional harvest opportunity. The regulation will be evaluated with future surveys and can change if the regulation isn't meeting the management objective or objectives change.

What happened to the bluegill?

Historically the bluegill population was very abundant in Mason Lake. Partial drawdowns in the past were designed to reduce aquatic vegetation with an objective of reducing bluegill densities and hopefully improve their growth and size structure. Those efforts had some success. As mentioned above, overtime additional aquatic plants were removed by herbicide applications to improve recreational use of the lake. With reduced aquatic vegetation bluegill abundance declines. Bluegills are the number one predator for carp eggs and fry and play a critical role in keeping carp recruitment in-check. The loss of aquatic plants and bluegills created a condition where carp recruitment is no longer controlled by bluegill, which led to increases in carp abundance. Carp worsen the problem by stirring up the lake bottom, uprooting plants, and releasing nutrients, similar to herbicide treatments. The vegetation observed in 2020 was very good for bluegill. Bluegill are still in Mason Lake, the 2019 panfish netting found relative abundance to be low and fish ranged in size from 3.5" to 9.0" with an average size of 6.1". We will continue to monitor the status of the bluegill fishery.

What about black crappie sarcoma?

Please see the information sheet provided by our DNR Senior Veterinarian, Dr. Danielle R. Godard. During the 2019 spring netting survey, 7.5% of the black crappies caught had Black Crappie Sarcoma. Black Crappie Sarcoma was only found on crappies 9.0" and greater, approximately 10% of crappies caught between 9.0" and 12.9" had Black Crappie Sarcoma.

What about the carp?

A rough fish contract was issued for Mason Lake over a 5-year period. During this time, they've removed about 60,000 pounds of carp. Based on some fish survey work the carp relative abundance decreased, yet continued monitoring is needed for the status of the carp population.

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Plant and algae balance is always a struggle with shallow lakes. Sound management takes into account both internal loading and external loading. The drawdown is a tool to manage the internal load. However, this is only part of the management needed. For long-term nutrient management, external loading also needs to be controlled. This will take more time to complete and will need your help no matter where you live in the watershed. Stay tuned!

A good video with an introduction to Shallow Lakes was filmed by the Ramsey-Washington Metro Watershed District in MN: <https://www.youtube.com/watch?v=dogG0mQ7G1I>

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