



Updating Black Bass Management in Connecticut – Supplemental Document

July 22, 2026

Introduction:

The Connecticut Department of Energy and Environmental Protection (DEEP) Fisheries Division is considering repealing [Bass Management Lake](#) (BML) regulations from the 29 waterbodies currently managed under that designation and replacing them with alternative bass regulations. DEEP is considering removing special BML length and creel limits based on evidence that those regulations are no longer effective at improving black bass (Largemouth and Smallmouth bass) fisheries through selective harvest given current low angler harvest rates. However, these regulations do currently reduce mortality from black bass fishing tournaments by making weigh-in format tournaments impractical during July and August when catch and release mortality is highest and exemptions from the length and creel limits are not approved (except for Gardner Lake and Mansfield Hollow Reservoir). The Fisheries Division is seeking public input in advance of possible regulation changes to develop more targeted strategies to minimize catch and release mortality from tournament fishing for black bass. If advanced and approved, the regulation changes would not take effect until January 1, 2028, at the earliest.

Important Terms and Definitions:

- Bass Management Lake (BML): One of 29 waterbodies with specialized slot, creel, and minimum length regulations for black bass (Largemouth Bass and Smallmouth Bass, together). Two general types of BMLs exist: “Big Bass” lakes where the goal is to increase the number of quality size bass and “Trophy Bass” lakes where the goal is to develop a trophy size fishery.
- Catch and Release Mortality: The rate at which fish die from physical trauma or physiological stress after a catch and release event.
- Weigh-In Format Event: A fishing event where caught fish are retained alive in a storage compartment, generally an aerated or recirculating livewell, for a period before officially being weighed at a centralized location. Fish caught during these events are released upon final weighing.
- Immediate Release Format Event: A fishing event where caught fish are immediately measured (either weight, length, or count), the information recorded, and fish are returned immediately to the water. Fish caught during these events are not retained for any period.

Background:

Black bass (both Largemouth and Smallmouth bass) are the most targeted freshwater sportfish in Connecticut and play a vital ecological role as primary predators. To help manage these important fisheries, [Bass Management Lake](#) (BML) regulations were implemented in 2002. Developed using nearly two decades of angler and fish community surveys, these regulations were designed to improve angling quality for both black bass and panfish species. Protective slot limits, such as the 12-to-16-inch slot limit in some “Big Bass” management areas, were used in some lakes to increase the abundance of and protect large bass while increasing harvest of overabundant smaller bass. Minimum length limits and reduced creel limits, such as the minimum length of 18 inches and daily creel limit of one fish at Lake Saltonstall, were used in others to decrease mortality on larger bass and increase predation on overabundant panfish, which in turn improved growth rates for larger panfish.

However, anglers have gone from harvesting some of their black bass catch around the turn of the century to near universal catch and release fishing (recent angler surveys document ~99% release rates for black bass; Figure 1). As a result, BML regulations no longer improve the abundance or size structure of fisheries through harvest. Although anglers no longer regularly harvest black bass, catch and release mortality can still influence abundance, size structure, and catchability. Connecticut hosts upwards of 800 black bass fishing tournaments annually, with a slight downward trend in tournaments over the past 5 years (Figure 2). Although tournaments practice catch and release, fish caught during weigh-in format events are typically held in livewells for extended periods of time before being released. Therefore, the Fisheries Division mainly focuses on the impacts of weigh-in format events in this document. It is expected that the impacts on black bass populations from immediate release format events versus fishing by non-tournament anglers would be similar.

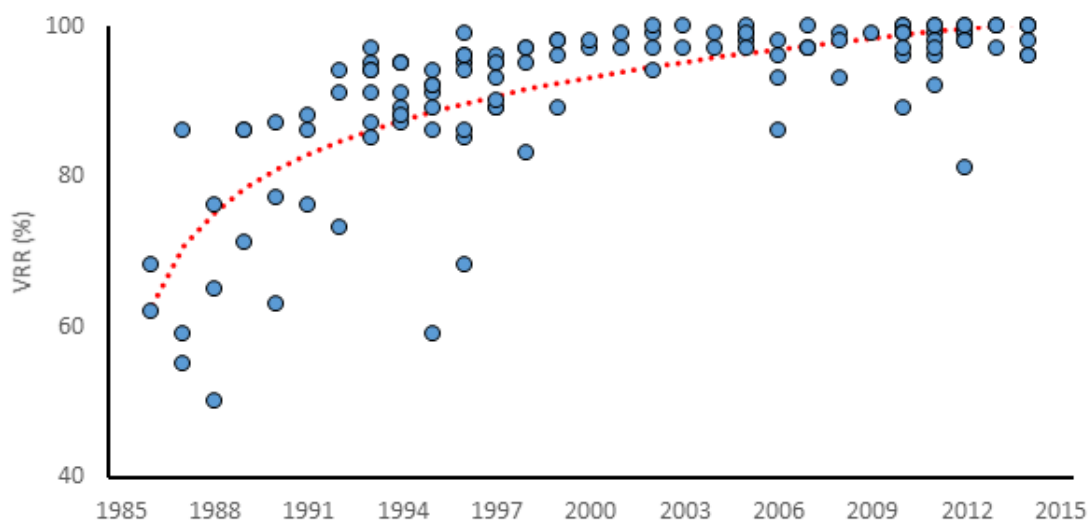


Figure 1: Voluntary release rate of bass (Largemouth and Smallmouth in aggregate) during open water at lakes surveyed during 1986-2014. (Davis & Leonard, 2016)

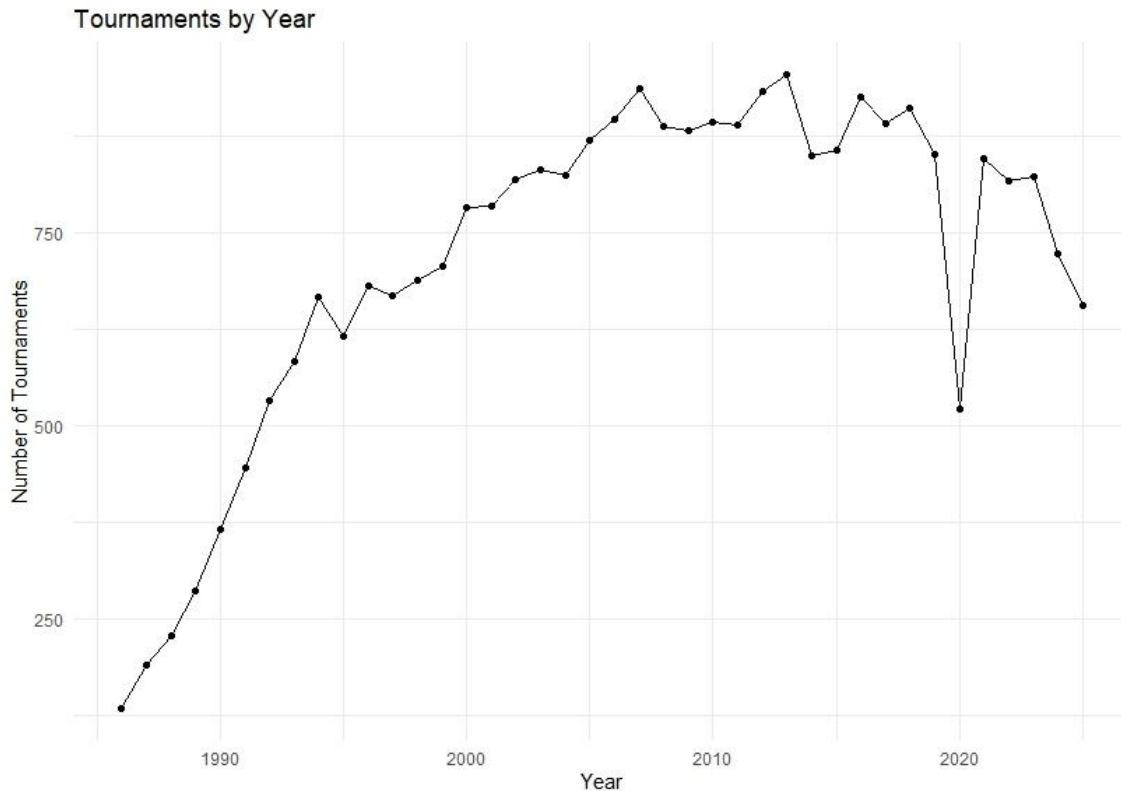


Figure 2: Annual number of all fishing tournaments in Connecticut since 1986.

Under current practice, groups using a weigh-in format event must request an exemption from the BML regulations to tournament fish using their preferred creel and length limits (generally 5 black bass, 12-inch minimum length). However, during July and August, tournament groups are not granted exemptions to the BML creel and size limits (except for Gardner Lake and Mansfield Hollow Reservoir) to reduce catch and release mortality during the hottest months. Weigh-in format events could be held if groups followed the waterbody-specific BML regulations, but many groups instead seek out alternative waterbodies for their events as BML regulations are highly restrictive for standard tournament fishing. Groups that conduct immediate release format events can host tournaments on any waterbody, including BMLs, regardless of time of year, as this method does not conflict with current regulations.

During July and August, when approximately 25% of all tournaments happen, surface water temperatures in Connecticut generally reach their peak. It is well documented that increasing water temperatures lead to an increase in both initial (prior and up to weigh-in) and delayed (after release) tournament mortality. In 2004, Edwards et al. looked at factors influencing mortality of tournament caught black bass in Connecticut. Their findings showed that, though low compared to nationwide and southern states' averages, initial and delayed mortality for both black bass species increased sharply at 25°C (77°F; Figure 3). According to data collected by the DEEP Water Planning and Management Division since 2012, 93% of all water temperatures above 25°C statewide occur during July-August, and water temperatures can reach as high as 29.5°C (85°F) during this period. If weigh-in format tournament fishing were to be allowed at all BMLs during July and August, tournament fishing effort and associated bass mortality during these months would likely increase significantly.

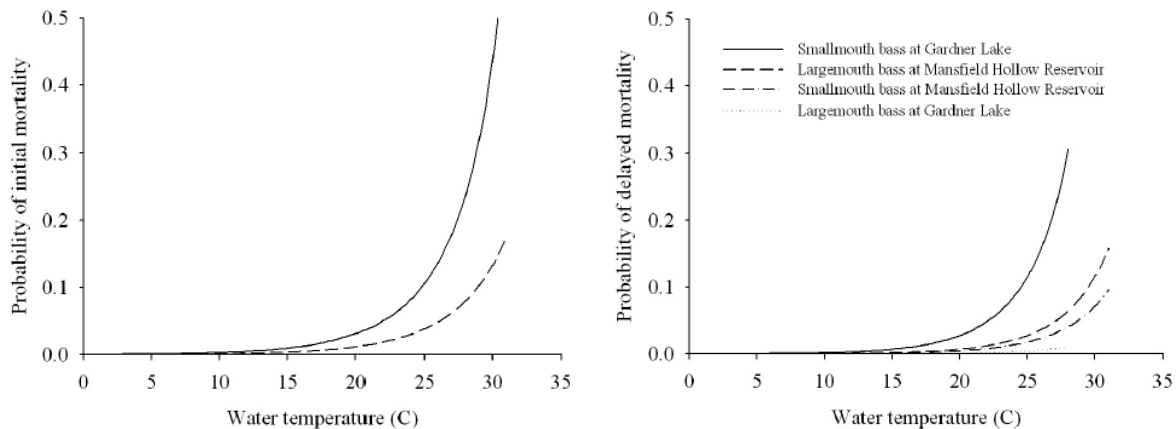


Figure 3: Modelled initial and delayed mortality rates of Largemouth and Smallmouth Bass in two waterbodies in Connecticut during 2001 and 2002. Total handling time (0.6h) and fishing day length (7.0h) were constant. From Edwards et al. (2004). **Left.** Initial mortality of tournament-caught Largemouth Bass (dashed line) and Smallmouth Bass (solid line) as a function of water temperature at Mansfield Hollow and Gardner Lake, Connecticut. **Right.** Delayed mortality of tournament-caught Largemouth and Smallmouth Bass as a function of water temperature at Mansfield Hollow and Gardner Lake, Connecticut.

Increasing the share of the bass population that is caught each year or increasing the proportion of those catches that result in mortality generally reduces the abundance of catchable size bass as well as the abundance of larger fish that anglers typically target and value. Hessenauer et al. (2018) modelled the effects of different harvest rates and catch and release mortality rates for Largemouth Bass in Connecticut. Based on that work, going from individual bass within a lake getting caught one time on average annually to up to three times on average annually leads to up to a 38% decrease in the number of catchable Largemouth Bass (9.8" or larger; Figure 4). As a point of reference, Hessenauer et al. (2018) estimated that Largemouth Bass in Gardner Lake and Mansfield Hollow were caught 2 to 2.8 times annually, with confidence intervals ranging from 1.2 to 5.5.

An increase in catch rate or mortality rate will also drive changes in the size structure of black bass. Proportional size distribution (PSD) is the percentage of stock size fish (>8") that are also quality size (>12"). For example, a PSD of 10% means that 1 out of every 10 bass over 8" in the lake are also over 12". Under the highest simulated catch and mortality rate scenarios (mortality rate of 33%, capture rate of 3.0 times annually), PSD could drop to as low as 2.5% of the >8" bass within the population also being greater than the standard 12 inches needed for weigh-in tournaments (Figure 5). In such a situation, CT black bass populations will be dominated by fish too small to legally record for tournaments, putting even more pressure on those fish that do meet tournament minimum length requirements. Furthermore, under the highest simulated mortality rates (0.2 and 0.33) and capture rates (greater than 1.5 times annually), preferred size black bass (those >15" in length) virtually disappear from CT waterbodies.

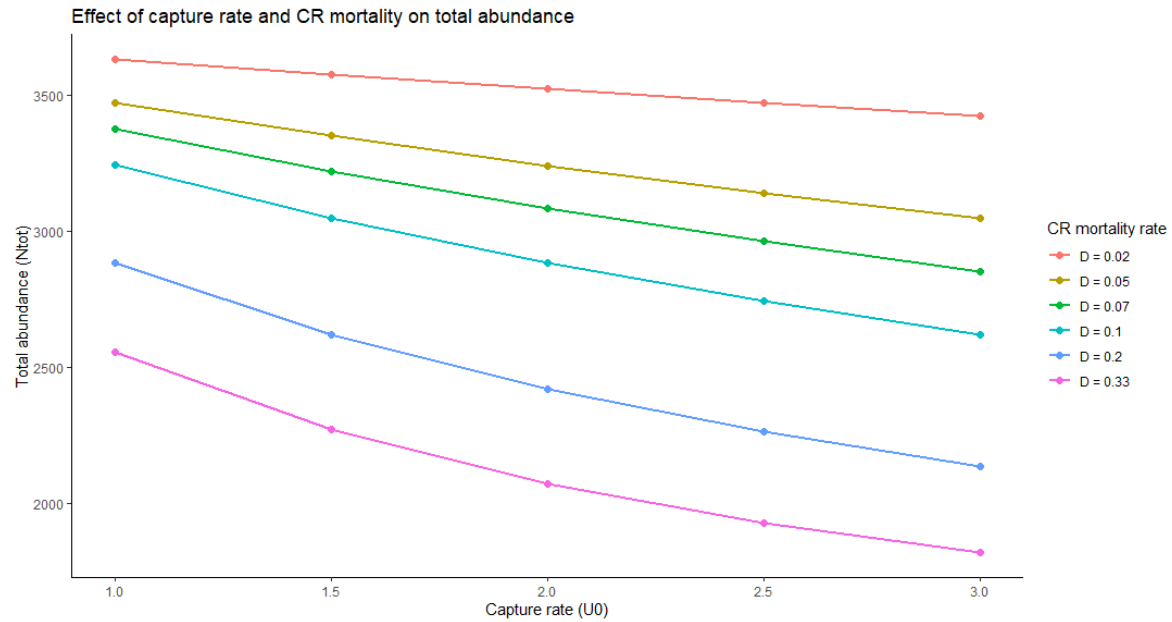


Figure 4: Total abundance of catchable size (>250mm; 9.8 inches) Largemouth Bass under different capture rates (U_0) and mortality rates (D). Capture rates are how frequently fish get caught on an annual basis. i.e., a capture rate of 2.0 means that each fish is caught an average of two times each year. Mortality rates are estimated based on weigh-in tournament formats and what the anticipated mortality is from those events. A mortality rate of 0.02 is equivalent to 2% of fish dying at a weigh-in tournament from either initial or delayed mortality. A mortality rate of 0.33 is equivalent to 33%, or one-third, of fish dying at a weigh-in tournament from either initial or delayed mortality.

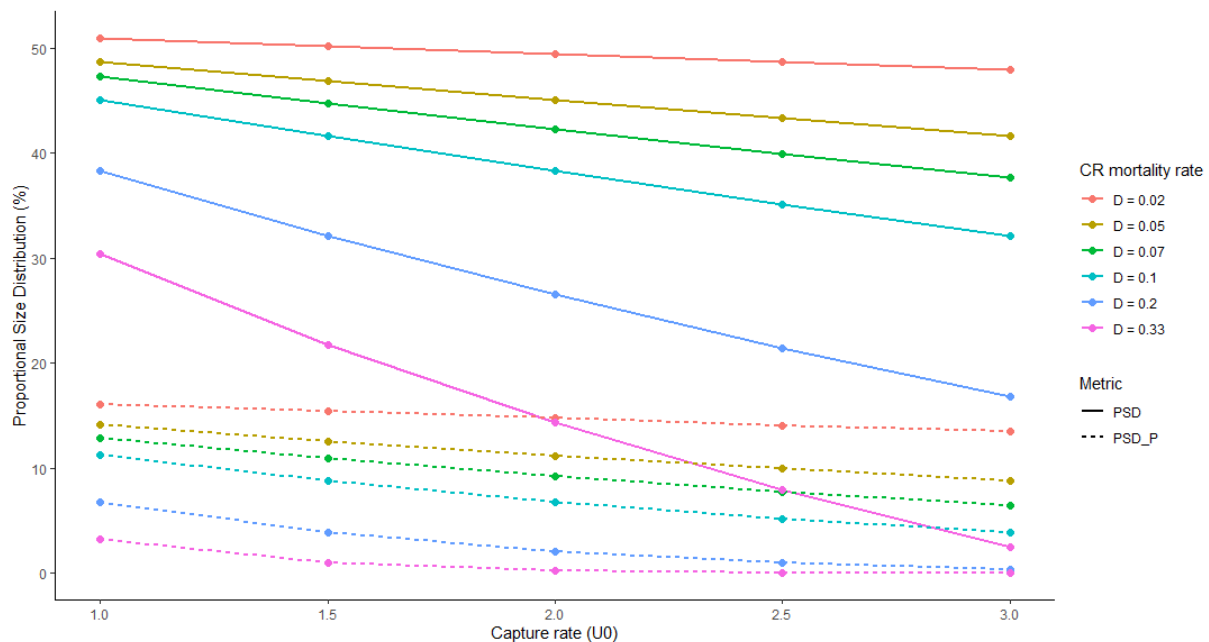


Figure 5: Proportional size distribution (PSD) of Largemouth Bass under different capture rates (U_0) and mortality rates (D). PSD (solid lines) is represented as the percentage of stock size (>8") fish that are also quality size (>12"). PSD-P (dashed lines) is similarly the number of stock size (>8") fish that are also of preferred size (15" or greater). PSD-P represents larger fish in this scenario and how commonly they would occur. Capture rates are how frequently fish get caught on an annual basis. I.e., a capture rate of 2.0 means the average bass is caught a total of two times in a given year. Mortality rates are estimated based on weigh-in tournament formats and what the

anticipated mortality is from those events. A mortality rate of 0.02 is equivalent to 2% of fish dying from a weigh-in tournament from either initial or delayed mortality. A mortality rate of 0.33 is equivalent to 33%, or one-third, of fish dying at a weigh-in tournament from either initial or delayed mortality. Under these scenarios, you can see that increases in capture rates and mortality rates interact to cause a decline in PSD of Largemouth Bass, leading to less fish of quality (12") and preferred (15") sizes.

Finally, the Fisheries Division also recognizes the impact higher water temperatures have on the prevalence of Largemouth Bass Virus (LMBv). LMBv is an Iridovirus that impacts not only Largemouth Bass but other species such as Smallmouth Bass and is carried by other fish species such as Bluegill or Chain Pickerel (Grizzle and Brunner, 2003). Recently, pathology testing of over 30 waterbodies in Connecticut has shown an unexpected prevalence of LMBv in many locations, including some popular tournament fishing locations. Recent studies (Boonthai et al., 2018; Zhao et al. 2023) have shown that the virus becomes more active in temperatures above 25°C, leading to higher viral loads and fish kills. Furthermore, LMBv was detected at nearly double the rate for fish held in livewells compared to the lake-wide detection rate of LMBv, showing that containment of fish in livewells can result in further spread of LMBv after weigh-in events (Schramm et al., 2006). Since July and August water temperatures in Connecticut frequently exceed 25°C, limiting the number of black bass held in livewells could be important to limit spread of and physiological stress caused by LMBv infection.

Regulatory Options under Consideration:

The Fisheries Division is seeking public input on targeted solutions that balance overall fishing quality with the desires and evolving behaviors of tournament anglers. The following options are for summertime black bass tournament fishing only (July 1 – August 31, inclusive). Any black bass fishing tournaments that conduct immediate release format events would not be subject to any of the following regulatory options that are being considered. Please note that the Fisheries Division expects the impact from immediate release format events on black bass populations to be similar to those from routine regular catch and release angling by non-tournament anglers, hence the focus on weigh-in format events in this document.

Potential Regulatory Options

- a) No weigh-in format events allowed.
- b) Weigh-in format events can be a maximum of 5 angling hours in duration.
- c) Weigh-in format events must have a daily creel limit no greater than 3 black bass (Largemouth and Smallmouth bass, in aggregate).
- d) Allow weigh-in format events from July 1 - August 31 with no additional restrictions.

Below you will find the rationale behind each of the options offered:

a) No weigh-in format events allowed.

This option is a more restrictive alternative to the current status-quo BML regulations. While weigh-in tournament groups can currently host tournaments on BML waterbodies, they need to follow the size and creel limits for that waterbody. This generally dissuades groups from holding weigh-in format events on BLM waterbodies during the July 1 – August 31 period, as the current BML regulations restrict their ability to follow standard tournament practices. Under this option, no weigh-in tournaments would be allowed, while immediate release tournaments would be allowed.

It is expected that both initial and delayed mortality resulting from July-August fishing events on current BMLs (which would necessarily be immediate release format) would decrease as fish are returned to the water immediately, without being held in a livewell. This option is also protective of larger fish, as mortality rates increase with size in weigh-in tournaments. Overall, this option is the most direct measure to reduce exposure to the stressors (livewell holding times, changes in water condition, thermal stress, pathogen spread, etc.) associated with weigh-in format tournaments.

b) Weigh-in format events can be a maximum of 5 angling hours in duration.

With this option, groups can still host weigh-in tournaments but would be limited to a maximum of 5 hours of angling. The current average length of angling time for tournaments is between 7-8 hours, so under this proposal, there would be a decrease in average tournament length of 28 – 37% from July 1 – August 31, inclusive. Groups that use immediate release formats would not be subjected to a maximum event duration.

This proposal would likely lead to fewer fish being caught and held in livewells, and improved survival of those bass brought to weigh-in due to shorter holding times.

c) Weigh-in format events must have a daily creel limit no greater than 3 black bass (Largemouth and Smallmouth bass, in aggregate).

This regulation would allow weigh-in tournaments during July 1 – August 31, inclusive, but the possession limit would be reduced to a maximum of three. Given that most anglers do not reach the standard 5 fish bag limit, the practical effect of this regulation may be limited.

Catch rates and total catch during the event would not change, as total angling effort would remain the same. Since, on average, most anglers do not fill the 5 fish bag limit, decreasing the bag limit to 3 may only result in more culling from the most successful anglers. However, reduced livewell density would be expected to reduce mortality and fewer fish would be subjected to extended livewell holding periods. The largest fish in the population, while still benefitting from reduced livewell density, would receive relatively little protection as they would be the least likely to get culled and thus most likely to experience extended livewell holding periods.

d) Allow weigh-in format events from July 1 - August 31 with no additional restrictions.

This is the most liberal option, allowing tournaments on all waterbodies with no restrictions outside of standard black bass fishing regulations (12" minimum length across all lakes, ponds, and the CT River).

Under this proposal, those BMLs that were previously protected from regulation exemptions for July-August weigh-in format events would be open to tournaments with no restrictions. This would be expected to increase tournament fishing effort on those waterbodies during the summer when tournament-related mortality is highest, which would likely lead to reduced abundance of large bass. A potential benefit would be that opening 27 BMLs to weigh-in tournament fishing during the summer could spread the summertime tournament effort to more lakes, thus minimizing the impact on any one waterbody.

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