

Shrimply Blue: Dog Treats to Restore Lake Tahoe's Clarity



Photo courtesy of Alison Toy

Who We Are:

We are Shrimply Blue, an environmental nonprofit on a mission to restore Lake Tahoe's clarity one dog treat at a time. Yes, our furry best friends are going to help us save the lake!

A Breakthrough Discovery:

Scientists at the UC Davis Tahoe Environmental Research Center (TERC) have demonstrated that Lake Tahoe's *internal ecosystem* is the secret to its pristine water clarity. *Daphnia* were filter-feeders that once swam freely in Tahoe, consuming tiny algal cells and removing fine-sediment in the process. The *Daphnia* were essentially Tahoe's natural water filters. But the introduction of *Mysis* in the 1960s decimated the native *Daphnia* population and significantly contributed to Tahoe's declining clarity. TERC's research on Emerald Bay (Fig1) demonstrates that when *Mysis* populations are reduced, *Daphnia* quickly return, and water clarity improves.

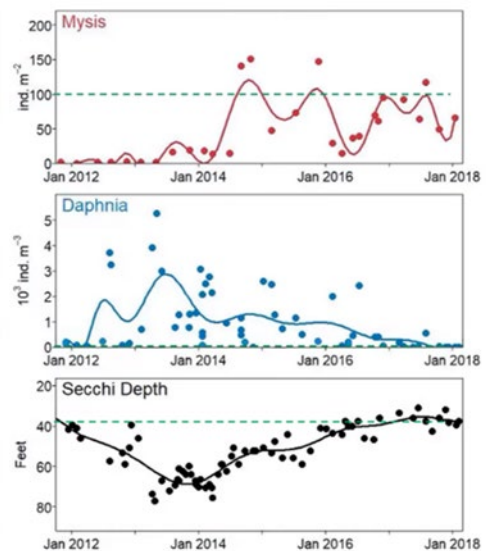


Figure 1 Observed relationship between *Mysis*, *Daphnia*, and water clarity in Emerald Bay. Data courtesy of TERC.

Over the last few years, TERC has been studying the *Mysis* to find the most efficient means of removal. Their research highlights two key components to managing the *Mysis* population:

- 1) **Efficient targeting:** Each night, during the summer and fall seasons, the *Mysis* congregate in a thin band just below the thermocline. This is the optimal time to remove the *Mysis* with a mid-water trawl.

- 2) **A nutritious superfood:**

Food scientists at UC Davis have analyzed the *Mysis* and were blown away by the results. Tahoe *Mysis* are high in protein and healthy fats (Fig2), and as a dry ingredient, are an even better natural source of Omega-3s than salmon!

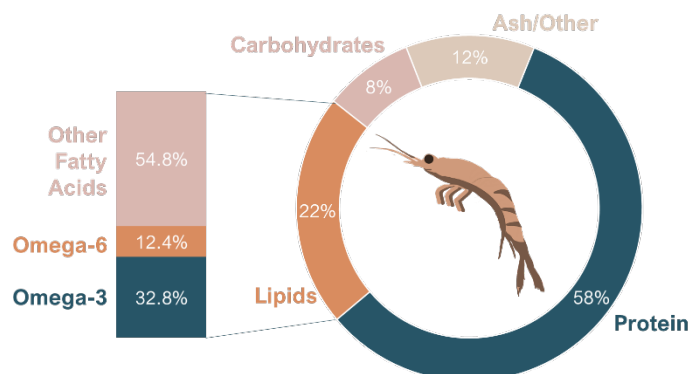


Figure 2 Nutrition and fatty acid analysis of Tahoe *Mysis* (dry). *Mysis* are high in protein and rich in healthy Omega-3s. Data courtesy of TERC.

Saving the Planet Hand-in-Paw:

Life's more fun when we share it with our dogs, and for the first time ever, super dogs and their human sidekicks get to save Lake Tahoe together. The *Mysis* are surprisingly tasty too, and when combined with other natural ingredients, makes for a healthy treat that's better for our dogs AND better for Tahoe.

Life's more fun when we share it with our dogs.

100% of our revenue from treat sales will support restoration efforts, and in the long run this project will pay for itself. We're targeting a 15-year horizon to reduce *Mysis* in Lake Tahoe, and in year 1 we're focusing on Emerald Bay where we'll be able to see clarity improvement within 24 months of trawling.

Funding Goals Over 15 Years:

Year 0 - 1:	1.5M
Years 2 - 4:	3.5M
Years 5 - 15:	None!

A unique environmental effort with the potential to pay for itself over time.

Our aim is to raise this initial 1.5M from a variety of sources: agencies, grants, local business, Tahoe-loving dog owners, etc., and these funds will allow us to accomplish the following:

- Design and scale custom net for *Mysis* removal.
- Trawl and reduce *Mysis* population in Emerald Bay below the 27 ind/m² target density.
- Monitor Emerald Bay ecosystem for expected impact of *Mysis* removal.
- Pilot trawl Lake Tahoe to assess how we further scale.
- Develop, quality assure, and produce and distribute our dog-treats.
- Create an engaged community and raise awareness of Tahoe *Mysis* and lake clarity.

How You Can Help:

This project is a much-needed, fresh approach to clarity restoration that offers so many firsts: a focus on the internal ecosystem, a consumer good to engage a broader community, a self-sustained long-term model, and the opportunity for our dogs to help save the day.

If you're excited about this project and what we're trying to do, there's a few ways you can help:

1. **Join our journey** and help us get started @
→ <https://shrimplyblue.org/donate>

2. **Follow Us** on Social Media @shrimplyblue



3. **Got Questions / Want to Collaborate?**
Contact us at info@shrimplyblue.org

