

**Maine Department of Marine Resources
Bureau of Public Health and Aquaculture
Water Quality & Biotoxin Labs**

2025 BY THE NUMBERS

Every year, our Water Quality and Biotoxin Programs work behind the scenes to protect public health and support Maine’s shellfish industry.

In 2025 alone, our two state laboratories — **Boothbay** and **Lamoine** — tested **over 12,000 samples** to monitor water quality, shellfish safety, and harmful algae.

💧 Water Quality Program: Monitoring Our Coastal Waters

The Water Quality Program conducts routine monitoring of seawater, streams and shellfish for fecal coliform bacteria — a key indicator of contamination. Listed below are the number samples that each lab tested for coliform levels in 2025.

These nearly **9,200 water and shellfish samples** directly support public health decisions.

| Laboratory | Seawater Samples | Seawater Stations | Dealer Process Water | Streams | Shellfish |
|------------|------------------|-------------------|----------------------|---------|-----------|
| Boothbay | 4688 | 709 | 107 | 240 | 45 |
| Lamoine | 3557 | 515 | 279 | 208 | 8 |

🌿 Biotoxin Program: Monitoring Harmful Algae & Shellfish Toxins

The Biotoxin Program tracks harmful algae (phytoplankton) and tests shellfish for toxins that can cause serious illness.

The table below shows the total number of phytoplankton (Phyto) samples collected and analyzed for harmful algae species; and the number of shellfish stations & samples collected & tested for Paralytic Shellfish Poisoning (PSP) and Amnesic Shellfish Poisoning (ASP).

| Laboratory | Phyto Samples | Phyto Stations | PSP Testing | ASP Testing | Shellfish Stations |
|------------|---------------|----------------|-------------|-------------|--------------------|
| Boothbay | 406 | 23 | 821 | 62 | 89 |
| Lamoine | 403 | 20 | 293 | 107 | 27 |

Why this matters:

Early detection of harmful algae allows the state to act quickly — preventing unsafe shellfish from reaching the market and protecting both consumers and harvesters.

📄 Additional Laboratory Highlights for 2025

- Collaborated with the **Maine Health and Environmental Testing Laboratory (HETL)** to advance *Vibrio* research by submitting **155 oyster-derived isolates** for whole genome sequencing.
- Tested shellfish for **oil residue** following spill-related closures
- Participated in **FDA Proficiency Testing**, ensuring testing accuracy and reliability
- **Secured MOHF funding** to conduct baseline surveillance of Maine oysters for *Vibrio parahaemolyticus*, testing **174 samples** to support public health monitoring.
- **Expanded molecular testing capacity** through PCR training for detection of the harmful algal species *Pseudo-nitzschia*.

