Federal Agency	Laboratory	Contact Information	URL	About the Laboratory	Specific Services	Specific Toxins	Human Biospecimens?	Animal Biospecimens?	Additional Information
CDC	Toxins and Drugs of Abuse Laboratory - Division of Laboratory Sciences/National Center for Environmental Health	4770 Buford Hwy, Atlanta, GA 30341; POC Elizabeth Hamelin	https://www.cdc.gov/nceh/dls/erb_capacity.html; https://www.cdc.gov/chemicalemergencies/index.html	The Toxins and Drugs of Abuse Laboratory develops, applies, and transfers analytical methods to identify and quantitate algal/cyanobacterial toxins and related biomarkers in clinical specimens, typically urine and blood. These efforts support emergency response events, health studies, and surveillance to improve diagnostic testing for human exposure to algal toxins.	Algal/cyanotoxin analysis in human clinical specimens	Brevetoxin, microcystins, PSP	Y	Sometimes	
EPA	Office of Research and Development, Center for Environmental Monitoring and Modeling	26 W. Martin Luther King Drive (MSL587), Cincinnati, OH 45268; POC Jingrang Lu	No website	Research laboratory performing analysis of samples associated with environmental measurements and monitoring of cyanotoxin water column, sediment, fish tissue, and periphyton. Also is developing a method to assess toxins in fish tissue.	ELISA for fish tissue		N	Y	
EPA	Office of Research and Development, Center for Environmental Solutions and Emergency Response	26 W. Martin Luther King Drive (MSL587), Cincinnati, OH 45268; POC Toby Sanan	No website	Research laboratory performing analysis of samples associated with environmental measurements and monitoring of cyanotoxin water column, sediment, fish tissue, and periphyton. Also is developing a method to assess toxins in fish tissue.	LC-MS/MS method development for fish tissue		N	Y	
EPA	EPA New England Regional Laboratory	11 Technology Drive; North Chelmsford, MA 01863	https://www.epa.gov/aboutepa/about-region-1s-new-england-regional-laboratory	Staff conduct field and laboratory studies to: monitor and analyze environmental conditions to determine human health risk and ecological health; determine compliance with environmental laws and regulations; measure environmental benefits and our programs' progress; and identify emerging threats to the environment or public health.	ELISA for fish tissue		N	Y	
FDA	FDA Center for Food Safety and Applied Nutrition, Office of Regulatory Science, Division of Analytical Chemistry, Methods Development Branch	5001 Campus Drive, College Park, MD 20740; POC: Jonathan Deeds	https://www.fda.gov/about-fda/fda-organization/center-food-safety-and-applied-nutrition-cfsan	Research laboratory developing and validating methods of analysis for marine and freshwater toxins in FDA regulated products including foods, primarialy seafood, and dietary supplements. Sample analysis in support of illness investigations and regulatory compliance, as needed.	ELISA, functional (in-vitro) bioassays, HPLC-UV and FLD, LC-MS/MS, LC-HRMS	ASP, AZP, DSP, PSP, microcystins, anatoxin, cylindropsermopsin, palytoxin, tetrodotoxin	N	Y	Collaborates with academic and Federal partners on research topics of common interest. Assist state and Federal agencies with regulatory analyses as needed.
FDA	FDA Center for Food Safety and Applied Nutrition, Gulf Coast Seafood Laboratory, Office of Food Safety, Division of Seafood Science and Technology, Chemical Hazards Science Branch	One Iberville Drive, Dauphin Island, AL 36528; POC: Ronald Benner	https://www.fda.gov/about-fda/fda-organization/center-food-safety-and-applied-nutrition-cfsan	Research laboratory developing and validating methods of analysis for marine and freshwater toxins in FDA regulated products including foods, primarialy seafood, and dietary supplements. Sample analysis in support of illness investigations and regulatory compliance, as needed.	ELISA, functional (in-vitro) bioassays, LC-MS/MS	NSP, CFP	N	Y	Collaborates with academic and Federal partners on research topics of common interest. Assist state and Federal agencies with regulatory analyses as needed.
FDA	FDA Office of Regulatory Affairs, Pacific Northwest Laboratory, Chemistry Branch	FDA Building 22201, 23rd Drive SE, Bothell, WA 98021; POC: Ghislain Gerard	https://www.fda.gov/science-research/field-science-and-laboratories	Regulatory laboratory performing analysis for various contaminants in FDA regulated human and animal foods for regulatory compliance.	Functional (in-vitro) bioassays, HPLC-UV and FLD	PSP (TBD), ASP	N	Y	PSP-RBA method is being set up and implementation is TBD. PSP-PCOX is pending ORS approval to set up at PNL.
NOAA	NOAA National Centers for Coastal Ocean Science, Charleston and Hollings Marine Laboratory	331 Fort Johnson Road, Charleston, SC 29412; POCs: Mike Denson, John Ramsdell	https://coastalscience.noaa.gov/about/facilities/charleston	The Hollings Marine Laboratory is built on an approximately 8-acre site within the Fort Johnson campus of the South Carolina Marine Resources Center in Charleston, South Carolina. Dedicated on December 21, 2000, the 103,000 square foot laboratory promotes collaborative and interdisciplinary scientific research to sustain, protect, and restore coastal ecosystems.	Analytical (LC-MS/MS) method development for specific congeners and sample types. Bioassay testing (receptor binding, cell based, ELISA, phosphatase inhibition); bioassay guided fractionation, targeted analysis and nontargeted screening.	domoic acid, brevetoxins (expertise on peptide conjugates), ciguatoxins (expertise on Pacfic ciguatoxins), diarrhetic shellfish toxins, (including esters), azaspiracids, yessotoxins, pectenotoxins, paralytic shellfish toxins (saxitoxins), microcystins and nodularins	Y	Y	Microcystins and nodularins have been measured using bioassay and/or LCMS but only for water samples. Many methods have been used to analyze mammalian fluids (marine mammals/laboratory animals), but only some methods have directly been used on human samples. Except MYC & NOD, fish and shellfish have been measured by many of the methods described. Each analysis request is evaluated to determine the best analysis approach based on the customer/project needs.

NOAA	NOAA National Centers for Coastal Ocean Science, Beaufort Laboratory	101 Pivers Island Road, Beaufort, NC 28516; POC: Greg Piniak	https://coastalscience.noaa.gov/about/facilities/beaufort/	The Beaufort Laboratory is operated by the National Centers for Coastal Ocean Science (NCCOS) under NOAA's National Ocean Service (NOS). NCCOS staff in Beaufort conduct research on harmful algal blooms, habitat mapping, aquaculture siting and impacts, ecology of marshes and coral reefs, and coastal resilience and restoration. Facility infrastructure includes seawater/culture facilities, analytical laboratories, scientific diving and small boats programs, and NCCOS business management functions.	Bioassay - cell based (ELISA, neuro-2a, hemolytic assay), analytical (HPLC, LC-MS/MS)	domoic acid, microcystins, brevetoxins, ciguatoxins, maitotoxins, anatoxins, saxitoxins	N	Y	Collaborates with academic and Federal partners on research topics of common interest. Assist state and Federal agencies with fish, water, and shellfish toxin analyses as needed.
NOAA	NOAA National Centers for Coastal Ocean Science, Kasitsna Bay Laboratory	95 Sterling Highway, Homer, AK 99603; POC: Kris Holderied	https://coastalscience.noaa.gov/about/facilities/alaska	The Kasitsna Bay Laboratory is a field station of the National Centers for Coastal Ocean Science (NCCOS) under NOAA's National Ocean Service. NCCOS partners with the University of Alaska Fairbanks on lab operations and research. The lab is a part of NCCOS's Marine Spatial Ecology Division and conducts research on coastal impacts of climate change, ocean acidification, harmful algal blooms, and oil spills and hosts federal, state, tribal, and university researchers.			N	Y	
NOAA	NOAA National Centers for Coastal Ocean Science, Cooperative Oxford Laboratory	904 South Morris Street, Oxford, MD 21654; POC: John Jacobs	https://coastalscience.noaa.gov/about/facilities/oxford/	The Cooperative Oxford Laboratory (COL) is a partnership between NOAA, the Maryland Department of Natural Resources and the USCG Station Oxford. COL partners combine science, response, and management capabilities to meet respective missions and collaborate to address science and management challenges. The lab is a branch of NCCOS' Marine Spatial Ecology Division. NOAA and MD DNR scientific capabilities are diverse and include expertise in field ecology, advanced underwater acoustic technologies, histopathology, fish health, marine mammal and sea turtle stranding response, ecological assessments, ecological forecasting, quantifying ecosystem services, research to enhance preparedness and recovery in the face of coastal change, and research of novel methods to improve restoration and resilience practices.			N	Y	
NOAA	NOAA Northwest Fisheries Science Center	2725 Montlake Blvd E, Seattle, WA 98112; POC Penny Swanson	https://www.fisheries.noaa.gov/region/west-coast#northwest-science https://www.fisheries.noaa.gov/west-coast/science-data/wildlife-algal-toxin-research-and-response-network-us-west-coast-warrn-west	The NWFSC uses science to improve people's lives, save species, and protect ecosystems. NWFSC scientists conduct cutting-edge biological, economic, and oceanographic research. They observe and monitor living marine resources and their environments in the Pacific Northwest and California Current ecosystem, and trace biotoxin trophic transfer through Alaska and Arctic marine food webs under rapidly changing climatic conditions. They also study the impacts of environmental variability and climate change on marine ecosystems and fishery socioeconomics. Together with decision-makers at NOAA, other federal agencies, states, and others, NWFSC scientists and staff apply this scientific knowledge to make our environment healthier and improve people's lives and livelihoods.	Enzyme-linked immunosorbent assays (ELISA), including those conducted remotely and autonomously using the Environmental Sample Processor (ESP); ELISA and HPLC-based detections of biotoxins (domoic acid, saxitoxin) in environmental samples (seawater) and complex biological matrices (plankton, finfish, shellfish, marine mammals, seabirds); PP2A inhibition-based detection of biotoxins (dinophysistoxin, okadaic acid) in environmental samples.	PSP, Domoic acid; ASP , Saxitoxin; diarrhetic toxins, dinophysistoxin and okadaic acid	N	Y	Contact the Wildlife Algal-toxin research and response center for the West coast (WARRN-West): https://www.fisheries.noaa.gov/west-coast/science-data/wildlife-algal-toxin-research-and-response-network-us-west-coast-warrn-west; Near real-time toxin monitoring information served by the RealTime HABs web application on NANOOS: http://www.nanoos.org/products/habs/real-time/home.php.

NOAA	NOAA Great Lakes Environmental Research Laboratory	4840 S. State Road, Ann Arbor, MI 48108; POC: Deborah Lee	https://www.glerl.noaa.gov; https://www.glerl.noaa.gov/res/HABs_and_Hypoxia/	NOAA GLERL and its partners conduct innovative research on the dynamic environments and ecosystems of the Great Lakes and coastal regions to provide information for resource use and management decisions that lead to safe and sustainable ecosystems, ecosystem services, and human communities.	ELISA cyanobacteria analysis (particulate and dissolved toxin), qPCR analaysis, competivitive assay (via ESP)	Microcystin, anatoxin, saxitoxin	N	N	Work with univeristy partners for LC MS/MS toxin determination (water column)
NOAA	National Seafood Inspection Laboratory (NSIL)	3209 Frederic Street, Pascagoula, MS, 39567; POC: Jon Bell	https://www.fisheries.noaa.gov/contact-directory/national-seafood-inspection-laboratory-chemical-analytical-services	NSIL is administered by NMFS' Office of Sustainable Fisheries, and is a ISO:IEC 17025:2017 accredited laboratory. NSIL provides analytical testing in support of NMFS' seafood export certification mission and other NOAA/NMFS seafood-related projects. NSIL provides food safety expertise to NMFS offices and represents NOAA on multiple food safety interagency organizations.	Conducts analytical testing for microbial pathogens and ruminant material in fishmeal and other samples for NOAA's Aqualtic Animal Bi-Products Program and providing additional support activities' for this program's export certification mission. Conducts analytical testing for heavy metals and algal biotoxins in lobster samples to support the Seafood Inspection Program's seafood export certification mission. Providing food safety expertise to the Seafood Inspection Program and other NMFS programs and offices.	domic acid, PSP/saxitoxins	N	Y	Seafood focus.
USGS	USGS Algal and Other Environmental Toxins Laboratory - OGRL, Kansas Water Science Center	1217 Biltmore Drive; Lawrence, KS 66049	Algal and Other Environmental Toxins — Lawrence, Kansas | U.S. Geological Survey (usgs.gov)	The Environmental Health Program collaborates with scientists at the Organic Geochemistry Research Laboratory (OGRL) in Lawrence, Kansas, to develop and employ targeted and non-targeted analytical methods for identification and quantitation of known and understudied algal/cyanobacterial toxins. The laboratory contructed in 2019 is a 2,500 square foot modern laboratory facility with enhanced capabilities for algal toxin detection and increased throughput. This research is used to meet the growing demand for reliable algal toxin data and better definition of potential human and wildlife health effect thresholds of toxin exposure.	ELISA, Protein Phosphatase assay, LC/HRMS (qualitative and quantitative), Cyanotoxin analysis, *in vitro* bioaccessibility assays, toxicology dosing solution verification	anatoxins, cylindrospermopsins, microcystins, nodularins, saxitoxins	N	Methods Development	Building out a BSL2 lab over next couple of years.

USGS	National Wildlife Health Center	6006 Schroeder Rd., Madison, WI 53711; NWHC-EPI@USGS.GOV; phone (608)270-2480	https://www.usgs.gov/centers/nwhc/connect	The NWHC provides information, technical assistance, and research on national and international wildlife health issues. We monitor and assess the impact of disease on wildlife populations; define ecological relationships leading to the occurrence of disease; transfer technology for disease prevention and control; and provide guidance, training and on-site assistance for reducing wildlife losses.	The USGS National Wildlife Health Center (NWHC) is the only national center dedicated to wildlife disease detection, control, and prevention in the United States. Each year, wildlife managers across the United States are confronted with sick and dead animals, frequently on a large scale. Minimizing such wildlife losses depends on effective technical support, knowledgeable guidance, and timely intervention. The National Wildlife Health Center provides information, technical assistance, and research on national and international wildlife health issues by monitoring disease and assesses the impact of disease on wildlife populations; defining ecological relationships leading to the occurrence of disease; transferring technology for disease prevention and control; and providing guidance, training and on-site assistance for reducing wildlife losses when outbreaks occur.		N	Y	Scientists at the NWHC possess a wide array of expertise and capabilities, including wildlife biology, ecology, statistics, quantitative modeling, epidemiology, veterinary medicine, microbiology, molecular biology, toxicology, and immunology.