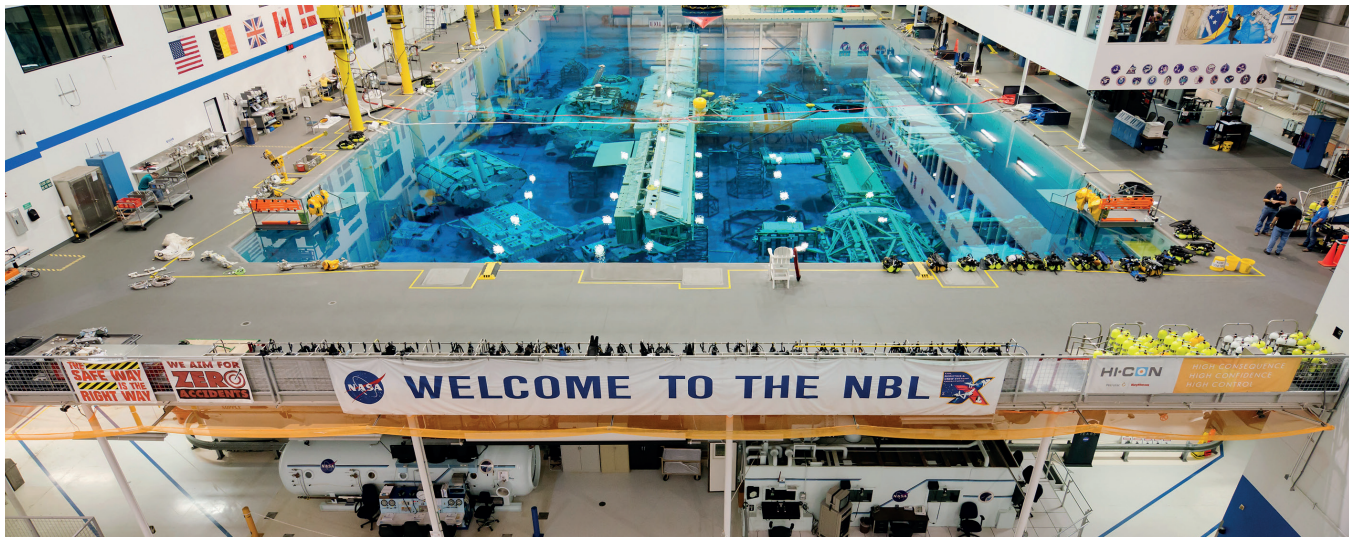


# Neutral Buoyancy Laboratory (NBL)

NASA facility available for industry use



## BENEFITS TO USERS

Reduce operational risks

Lower overall operational costs

Improve safety knowledge under tightly controlled conditions

# Neutral Buoyancy Laboratory (NBL)

## NASA facility available for industry use

The Neutral Buoyancy Lab (NBL), once a dedicated pool facility of the U.S. Space Program, supports the completion of underwater testing, training, systems integration tests, tool tests, or rehearsals of processes and procedures for industrial projects prior to offshore deployment.

### NBL Pool and Facilities

- » 6.2 million gallon pool
- » 40.5 ft depth
- » 202 ft long x 102 ft wide
- » Environmentally-controlled and secure high bay, 72,000 ft<sup>2</sup>. 80 ft in height
- » Permanently installed work class ROV



Skybox-style control rooms overlook the pool to provide direct and indirect monitoring, communications, data connectivity, and control capabilities throughout the facility. A complete closed circuit video system provides subsurface and surface HD video and still photography.

Nitrox diving systems and two-way surface and subsurface communications systems enable NBL divers to perform safe extended-duration and coordinated work in the pool. Additional services include onsite hyperbaric chambers, facility-level uninterruptable power supply, facility compressed air, and chilled water.

Material handling capabilities are supported by two 20.5-ton overhead cranes. The pool also has four 1.6 ton jib cranes and two davit cranes. Additional capabilities include a tow-tug, forklifts, lift-a-loft, and scissor jacks.

High-bay accessible outdoor secured storage and staging areas are also available. The facility features conference and meeting rooms with full connectivity to in-house and external networks. The site is fully secured 24/7/365 and benefits from guard-gate-controlled access to the grounds and badge controlled access within the facilities. Additional security options are available for proprietary projects.

### Oceaneering ROV Tooling Solutions

Oceaneering NBL capabilities include analyzing and preparing operational and test situations prior to open-ocean deployment. The MILLENNIUM® work class ROV installed at the NBL is operated by Oceaneering ROV personnel working with other Oceaneering entities to test operational concepts for existing, proven, and emerging ROV tools, and equipment.



### Component Testing

Individual components or systems can be fully tested, and in some cases, certified in the NBL for integration with an ROV for operational stand-alone testing or as part of a full system integration test (SIT).

### Subsurface Mock-Ups

Realistic and operationally functional models can simulate the anticipated conditions and near operational configuration to verify concepts, develop tools and procedures, and troubleshoot obstacles to success.

Oceaneering can design and/or fabricate mock-ups to customer specifications, or customers can bring their safety-certified designs. Engineers and technicians can assist with integrating non-Oceaneering, custom-designed mock-ups for use in the NBL. An onsite Light Manufacturing Facility (LMF) with access to skilled design engineers and craftsmen is also available.

### NBL Remotely Operated Vehicle (ROV)

The Millennium® ROV is a 220hp heavy work class model with an Atlas Hybrid SC manipulator and an Atlas Rate Control Arm manipulator. Fiber optics provide the primary transmission link for all video and data signals between the vehicle and the surface control console. This allows extremely high quality video transmission as well as plug-and-play installation of sensors and equipment.

**Oceaneering Space Systems has partnered with other Oceaneering divisions to open the NBL to industry as the finest underwater test facility in the world.**

- For more information visit us at [oceaneering.com/nbl](https://oceaneering.com/nbl)



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