



# Neutral Buoyancy Laboratory

The Neutral Buoyancy Laboratory (NBL) is one of the world's largest indoor pools and can support multiple large scale operations utilizing both underwater and topside assets simultaneously. The NBL is utilized for mission planning, procedure development, hardware verification, astronaut training, and refinement of time-critical operations necessary to ensure mission success during spacewalks.



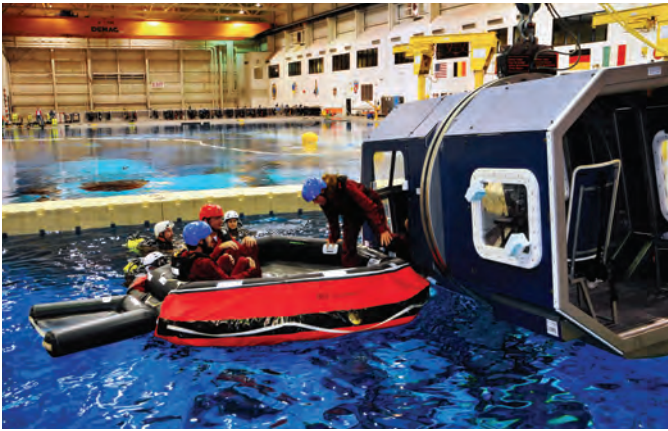
## The Pool

- Length: 202 ft (61.5 m)
- Width: 102 ft (31.1 m)
- Depth: 40 ft (12.2 m)
- Volume: 6.2 million gallons
- Water composition: Chlorinated fresh water
- Water temperature: 84°-86° F (28.9°-30° C)

## NBL Facility Capabilities

- Multiple integrated control rooms
- Clean climate controlled environment
- Extensive video, audio and instrumentation capabilities
- Multiple crane systems for equipment handling
- SCUBA and surface supplied dive systems
- On-site engineering and technical services
- Co-located logistics and manufacturing facility
- ISO level 8 clean room
- Classroom, meeting, and high-bay work areas
- Time-critical, mission success ready workforce
- World class safety culture

Johnson Space Center



### Diver Support

With an experienced and certified professional diving staff, the NBL offers operations support, reconfiguration, camera operations and safety diving functions. The NBL utilizes SCUBA and surface supplied dive systems, with nitrox and air and has an on-site hyperbaric chamber. There is an ISO Level 8 Clean Room supporting maintenance and repair capabilities.

### Buoyancy

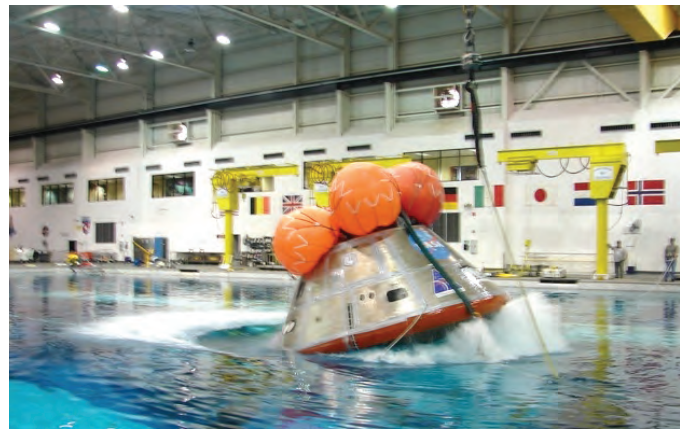
The NBL has extensive experience manipulating buoyancy to simulate full or partial gravity and to make mass handling in the water more manageable.

### Logistics and Mockup Facility (LMF)

The LMF consists of a large high bay, a series of workshops for building and maintaining equipment, and a cadre of highly skilled and certified personnel. LMF services include mockup fabrication and repair, machine shop, sheet metal shop, welding, sewing, assembly, woodworking, and multi-disciplinary engineering.

### Site Support

The NBL is conveniently located next to the Houston Ellington Airfield with access to a taxiway. The NBL has outdoor space to support training activities along with covered and uncovered areas to store hardware. Within the facility, the NBL has a hyperbaric chamber, a hypobaric altitude chamber, a medical treatment room and locker room facilities.



For the benefit of all

**For more information:**  
[www.nasa.gov/jscpartnerships](http://www.nasa.gov/jscpartnerships)

**Point of contact:**

Angela R. Prince  
 JSC Flight Operations Directorate  
 281.244.1086  
[angela.r.prince@nasa.gov](mailto:angela.r.prince@nasa.gov)