DARPA Selects Performer Teams for Liberty Lifter X-Plane Program

First phase will define the seaplane's design and capabilities

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Two teams – General Atomics working with Maritime Applied Physics Corporation and Aurora Flight Sciences working with Gibbs & Cox and ReconCraft – will develop designs for DARPA's Liberty Lifter Seaplane Wing-in-Ground Effect full-scale demonstrator. The Liberty Lifter program aims to demonstrate a leap-ahead in operational capability by designing, building, floating, and flying a long-range, low-cost X-Plane capable of seaborne strategic and tactical heavy lift.

The planned Liberty Lifter demonstrator will be a large flying

boat similar in size and capacity to the C-17 Globemaster III transport aircraft. Goals include takeoff and land in Sea State 4, sustained on-water operation up to Sea State 5, and extended flight close to the water in ground effect with the capability to fly out of ground effect at altitudes up to 10,000 feet above sea level.

“We are excited to kick off this program and looking forward to working closely with both performer teams as they mature their point-of-departure design concepts through Phase 1,” said DARPA Liberty Lifter Program Manager Christopher Kent. “The two teams have taken distinctly different design approaches that will enable us to explore a relatively large design space during Phase 1.”

The General Atomics team has selected a twin-hull, mid-wing design to optimize on-water stability and seakeeping. It employs distributed propulsion using twelve turboshaft engines.

Aurora Flight Sciences point-of-departure design more closely resembles a traditional flying boat, with a single hull, high wing and eight turboprops for primary propulsion.