The History of Logistics-Over-The-Shore (LOTS) Operations

Definition. Capability to provide logistical sustainment to early entry forces over an unimproved beach, discharge through ports inaccessible or denied to deep draft shipping, and support of normal fixed port operations.

Army History of bare beach operations.
Winfield Scott's landing at Vera Cruz, Mexico, 1847. QM Gen Jessup had special landing barge designed to land troops.
McClellan's 1862 Peninsula Campaign. In-stream discharge. Goose Creek, Cumberland Landing and White House Landing on the Pamunkey River. At White House Landing, Army of the Potomac beached barges at high tide then built wharves out to them.
William Shafter's landing at Daiquiri and Siboney, Cuba, 1898.

WWII.
Landing Craft.
LCP, LCV,
LCVP. Built by Andrew J. Higgins Boat Company in April 1943. 36 feet long. Capability of hauling 34 soldiers or one truck.
LCM 6. Landing Craft Mechanized. The hinged bow ramp idea originated in 1926. The LCM was a British design. The first prototype, Motor Landing Craft, came out in 1938. The first trials for the LCM Mk1 took place in February 1940. It was 45 feet long and was designed to transport a 16-ton tank. In the United States, Higgins experimented with modifications to the bow and built the LCM Mk3. The US Army bought the LCM 6 (also referred to as the Mk4) which had a 6-foot section added so it could transport the 30-ton Sherman tank.

Amphibians. DUKW. D (model year), U (amphibian), K (all-wheel drive), W (dual rear axle). Conceived by Rod Stevens, boat designer, and Dick Kerr, transportation specialist for Arabian-American Oil Company. P.C. Putman became the project chairman of the national Defense research Committee (NDRC) which became the Office of Strategic Research and Development (OSRD). In 1942, they decided to convert a GMC 2 ½-ton truck to amphibian capability. The pattern was standardized in October 1942. Were designed to discharge a platoon of men. "Build me a truck that can swim."
Floating causeway. Pontoon bridge. Mulberry system.

Over-the-beach Doctrine.
Engineer Special Brigades (Amphibious Engineers) conduct amphibious landings then handed off the over-the-beach operations to the Port Commands. 1st, 5th, and 6th ESBs conducted the landings in North Africa, Mediterranean, and European Theater. 2nd, 3rd, and 4th ESBs conducted the landings in the Pacific Islands.

Over-the-beach Operations for North Africa, Mediterranean, and European Theater.
1942. Oran, North Africa. 3rd Port.
1943. Lavita, Sicily. 10th Port.
9 Sep 43 - Salerno and Naples, Italy. 6th Port.
23 Jan 44. Anzio. 10th Port.

6 Jun – Sep 44. Omaha Beach, Normandy, France. Mulberry A (artificial harbor). 11th Port.
15 Aug 44. Southern France. 6th Port.
2 Oct 44. Le Harve, France. 16th Port.
Jun 44. Cherbourg Port. 28 days DUKWs through the break wall until the port was rehabilitated. 4th Port.

Cold War.
Normandy was the largest LOTS operation of WWII. The post-war development of LOTS would focus on how to improve on Normandy. Since achievement in terminal operations is measured by tonnage, the direction of development was size of vehicles and water craft.

All Engineer Special Brigades were inactivated after WWII except the 2nd ESB. It participated in the landings at Inchon, Korea, 15-16 September 1950 and Iwon, Korea, 29 October to 8 November 1950.

Doctrine change. 1954. 2nd Engineer Special Brigade was inactivated and 159th Boat Battalion assumed the responsibility for combat landings and LOTS. Transportation boat companies will conduct both landings and terminal operations.

Landing Craft.

LCM 8. Built in 1955 and issued to Co.s A – D, 159th Boat Battalion
LCU 1466. Built in 1952 and issued to the 329th Trans Co., 159th Bn.
USAT John U.D. Page. Largest Army watercraft of its kind.

Amphibians.

Super DUKW. Handled like a truck that could swim. The Army needed a vehicle that handled like a boat in the water and truck on land.

Lighter Amphibious Resupply Cargo (LARC) V. 5-ton capacity. The COT, MG Paul Yount, directed the US Army Research Command (USATRECOM) in 1956 to build a boat with the ability to drive on land. The prototype was built in July 1959 with final design produced in 1963. Besson, who was COT from 1958 to 1962, was instrumental in the purchase of them. They LARC V did not handle the way it was expected so many were given to around 35 reserve companies. The active duty 165th, 305th, 344th, 458th, and 461st Trans Co.s received them.

LARC XV, 1960. 15-ton capacity.

BARC/LARC LX, 1954. 60-ton capacity. First BARC platoon organized at Ft Story, with four BARCs to a platoon in 1954. 1LT George Hendrickson commanded the platoon and 2LT William Hill was the XO. The first use of BARCs on an operation was SUNEC 55 at Frobisher Bay, Canada. The BARC stood for Barge Amphibious Resupply Cargo but was affectionately known as “Besson’s Ark.”

Prefabricated port.

Delong Peir. The floating causeway at Omaha Beach wrecked by the storm of 14 June, inspired Colonel Leon B. DeLong to design a portable pier that could stand up to rough seas. After the war his company constructed the 50 by 250-foot DeLong Piers. The USAF first used it in 1951 to offload materials to construct a runway in Thule, Greenland, Operation BLUE JAY. The next year the US Army awarded him the contract for eventually 17 piers.

Aerial Tramway system.

The aerial tramway, developed by John A. Roeblings' Sons, Corp. of Trenton, NJ, consisted of two towers that connected a DeLong floating pier to the shore by two track of aerial cable and four cargo cars, that operated like elevated street cars. It was first erected by the 577th Aerial Tramway Company, at Little Creek, VA, during Operation TRAMTEST, from 14-18 November 1955. It was first stationed at Camp Wallace, a Fort Eustis subpost, but moved to Fort Eustis in 1956. The Aerial Tramway had the capability to conduct offshore discharge where there was no beach on which landing craft or amphibians could land such as steep cliffs. In the summer of 1961, the 577th Aerial Tramway Company became the Army's only active duty aerial tramway company. The 408th and 458th were in the Reserves.

Floating Causeway
CONEX, mid 1960s.

Exercises, 1950-1964.

These exercises off the northern shore of France were conducted to test new concepts and rehearse for another Normandy like operation in the event the Soviet Union destroyed the fixed ports with nuclear bombs.

Offshore Discharge Exercise (ODEX). Supply-over-the-beach Operations off the Northern Coast of France. Part of the COMZ development in the event the Soviet Union would disable the fixed ports by a nuclear attack. Note that because common use of acronyms the Transportation Corps changed supply over-the-beach to logistics-over-the-shore (LOTS) because soldiers got tired of working on the SOB.

New Offshore Discharge Exercises (NODEX). 1954-1964. DeGualle kicked the US Army out of his country in 1964. 1958 tested the Sky Tram.

LOTS II, Ft Story, VA., 1957.

LOTS Operations.

Operation BLUE JAY, summer 1951. 373rd Transportation Major Port, Thule, Greenland. Construction of the Distance Early Warning (DEW) Line, which stretched from Alaska across the Arctic Circle to Greenland to watch the skies for the feared bomber attack by Russia.

Support Northern Army Command (SUNAC) 1952. 373rd TMP offshore discharge at Thule, Sondrestrom and Narassuak Air Bases Greenland, Labrador and Baffin Island, Canada in support of DEW Line East.

Support Northeastern Command (SUNEC) 1953-65. All landing craft were prepositioned so crews from Ft Eustis deployed to Thule to conduct LOTS to support the DEW Line. The first BARC platoon discharged cargo at Frobisher Bay, Baffin Island, Canada, during SUNEC 55.

Lebanon Crisis, Khalde, near Beirut Airport, 1958.

Vietnam War.

LST Beaches at Cam Ranh Bay and Qui Nhon, 1965-1973. All units arriving in Vietnam were landed by LCMs for ship-to-shore. After the DeLong Piers were established, the LST beaches were used for the discharge of ammunition. For safety reasons, ammunition ships had to remain off shore.

Beach discharge in Mekong Delta (IV Corps Tactical Zone), 1965-1973.

I Corps Tactical Zone. The shallow nature of the beaches in I Corps did not make it practical to build piers, so the resupply was primarily conducted by beach operations. Because of the need for beach support, Military Assistance Command, Vietnam, assigned the US Navy and Marines to this area. In late 1968, the US Army assumed an increasing role in this area.

LOTS at Sau Hugynh, 1967. This LOTS operation conducted by the 159th Terminal Bn supported a brigade of the 101st Abn Div at Duc Pho along the coastal highway. This was conducted by landing craft. Sau Hugynh had a protected shore while the beach at Duc Pho was open ocean subject to rough seas. It was cleared for both LARC LXs and LCUs.

Battle of Hue, 1968. Army LCUs joined Navy YFUs to sail in convoys up the Qua Viet River to Hue and the Perfume River to Dong Ha to deliver supplies. The enemy conducted rolling ambushes along the river. One LCU was destroyed by a command detonated bomb in the water as it passed over. After the Tet Offensive, the US Army established the DaNang Support Command in I CTZ and the Army continued to deliver cargo to Dong Ha and the Navy Ramp at Hue.

LOTS at Wunder Beach, March – September 1968. 159th Terminal Bn supported the 1st Cavalry Division in its operation to break the siege of Khe Sanh and clear the NVA out of Ashau Valley. This was conducted by LARC Vs and LXs because the beach gradient was too shallow.

LOTS at Vung Ro Bay, 1968. This was conducted by LARC Vs and LXs.

Post Vietnam – Cold War.

Amphibians.

LACV 30. 3rd generation of amphibians. SK-5 was used in Vietnam in 1968. Type classified in 1978, in use by 1983. First tested during Offshore Discharge of Container Ship Exercise II (OSDOCII) at Ft Story, VA. It was designed to replace LARCs because its speed improved the time of loading and unloading and its range. Its drawbacks were its costs and 8-hours of routine maintenance.

Landing craft.

LCU 1600, 1976

LCU 2000. Built by Lockheed Shipbuilding Corp. Shipyard in Thunderbolt, GA. They delivered the first 25 in 1988.

LSV. Logistical Support Vessel. 1987 Inspired by the success of the *USAT John U. D. Page* and its successor the *USAT Bunker*.

Containerization. Joint Review Board directed the development of containers in 1969. They came into use in 1970. Offshore Discharge of Container Ship Exercise (OSDOCI) at Ft Story, VA, in December 1970, tested the ability of helicopters to lift containers off ships.

Exercises.

Offshore Discharge of Container Ship (ODSOC) I, December 1970. It tested the new 20-foot containers.

JLOTS I, 1977. It tested the Navy's LASH vessel.

ODSOC II, 1983. Tested the LCV30.

JLOTS II, Ft Story, VA., 1984. It tested the Navy's Temporary container Discharge Facility (TCDF).

TRANSLOTS, Ft Story, 1985. Test USAR and USNG units.

Post Cold War.

Rough Terrain Cargo Handler (RTCH), 1984.

Operation NIMROD DANCER. Panama. (11 May 1989) Around 1,000 soldiers of the 9th Infantry Regiment (-) deployed to Panama. COL David Hale felt that the roads were not safe to move his brigade (-) so he asked to move it by air and water. The 1097th Medium Boat shuttled the brigade from Howard Air Base through the canal to Fort Sherman on the other side.

Operation JUST CAUSE. Panama. Beginning D+1, (21 December 1989) 1097th Medium Boat detailed four LCM8s to shuttle refugees from the Atlantic side to Fort Clayton on the Pacific side. The LCM delivered a SF team to Coca Solo.

Desert Shield/Storm, 1990-91. LOTS conducted for the discharge of ammunition.

Operation RESTORE HOPE, Somalia, 1994. TF-24. 10th Mountain Division sent in a battalion to Kismayo along the coast. They requested support by Army watercraft since they did not want to secure the land line of communication.

Operation PROMOTE LIBERTY, Haiti, 1994-5. LCUs of the 97th and 329th Heavy Boat Companies under TF-10 moved men and cargo from Port Au Prince to the US Army units along the coast since the roads were bad and the likelihood of refugees attacking the trucks high.

KALMAR RTCH, 1994.
Theater Support Vessel. 2001. Lessons from Desert Storm and Somalia is that the Transportation Corps needed vessels that could travel faster than 10 to 20 knots.
HSV-X1, 2001
TSV-1, 2002

Operation IRAQI FREEDOM, 2003. 24th Trans Bn conducted LOTS at Kuwaiti Naval Base (KNB) to offload ammunition ships. COL Veditz, Commander of the 7th Trans Group, attached the TSV, LSV-4 and LSV-6 to CJFLCC as theater assets to shuttle preposition stocks from Qatar to KNB and au Shuaiba. This saved the cost of using MSC vessels and AMC aircraft. LT-1974 cleared the port of Um Qsar.

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