US Army Corps of Engineers
Philadelphia District

CONGRESSIONAL FACT SHEET

U.S. Army Corps of Engineers
Hopper Dredge McFARLAND

January 2011

CONGRESSIONAL INTEREST: Reps. Carney (DE-AL), Andrews (NJ-1), LoBiondo (NJ-2), Runyan (NJ-3), Brady (PA-1), Meehan (PA-7), Fitzpatrick (PA-8), Schwartz (PA-13)

ABOUT THE McFARLAND: One of four oceangoing hopper dredges owned and operated by the U.S. Army Corps of Engineers as part the Corps' "minimum fleet" for national security and safe navigation, the *McFarland* is the only dredge in the world with triple capability for direct pumpout, bottom discharge and sidecasting or boom discharge.

Designed by the Corps' Marine Design Center, it was built in April 1967. Its name honors the late Arthur McFarland, a Corps of Engineers authority on dredging. The *McFarland* has a twofold mission: 1) Emergency and national defense dredging — as required and on short notice — anywhere in the world. 2) Planned dredging tests in the Delaware River and Bay

DREDGE McFARLAND STATUS: As of 31 December 2009, Hopper Dredge McFarland was placed in a Ready Reserve status to be used solely for urgent and emergency purposes as per Section 2047(a) of the Water Resources Development Act (WRDA) of 2007.

The vessel periodically (annually) performs routine underway dredging tests of the equipment (not to exceed 70 days per year) of the vessel in a ready reserve status to ensure the ability of the vessel to perform urgent and emergency work. These dredging tests are limited to occur only in the Delaware River and Bay. The dredge will remain in a fully operational state and perform up to 70 days of dredging operations to test equipment and keep the crew trained and prepared. At all other times, the McFarland will remain at the dock to respond within 72 hours to any urgent or emergency dredging requirement identified by the Secretary of the Army via the Chief of Engineers. The dredge will be placed in an active status in order to perform work in those instances when private industry fails to submit a responsive or responsible bid for advertised dredging work, or where industry has failed to perform under an existing contract or in situations where industry cannot meet the demands of current dredging requirements due to work load or lack of available private industry dredges.

HOW IT WORKS: Dredging is accomplished by a dragarm on each side of the ship with a draghead at each end. As the ship navigates the channel with its dredging pumps engaged, the dragheads are lowered to the channel bottom. Like vacuum cleaners, they pull the dredged material into the ship's hoppers.

The *McFarland* can then discharge the material any of three ways:

1. As a conventional hopper dredge with bottom discharge into deep water.
2. As a sidecaster discharging dredged material aside the channel.
3. As a pipeline dredge pumping material into disposal areas or through a direct ship-to-shore pipeline to confined upland areas.

WHAT IT CAN DO: The *McFarland* offers a degree of performance and flexibility unmatched by any other dredge: It can handle a variety of materials including silt, sand, clay, shell and mixtures, thanks to these features:

- High-powered pumps, large single open-hopper design amidships, and hopper distribution system with retention capability for efficient handling of fine materials
- It can dredge year-round in any environment, working around the clock while on assignment.
- Its average removal rate in a typical year (140 days) is 1.5 to 2 million cubic yards — enough dredged material to fill the area of a football field 900 to 1,200 feet high.

ABOUT THE CREW: The *McFarland* is operated by a civilian crew of about 45. Many of the members, including all the deck and engine room officers, hold U.S. Coast Guard licenses. Certified as an oceangoing vessel, it undergoes regular annual safety inspections by the U.S. Coast Guard and the American Bureau of Shipping.