

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) operates hundreds of navigation locks and dams across the country, more than half of which are over 50 years old. Despite the USACE's multi-billion dollar investment in navigation structures, many locks, dams, and reservoirs are falling into disrepair due to age, lack of funding, and the general difficulty and hazards of conducting underwater inspections. In order to maintain essential hydroelectric infrastructure across the United States, many USACE units rely on VideoRay ROVs for regular inspections.

Initially, some of the USACE units used larger ROVs for inspections, a solution with notable logistical shortcomings. A 2007 USACE Report, based on observations at facilities in the Detroit and Mobile Districts, reported that the larger ROVs used in Detroit were much less effective than the VideoRay ROVs used by the Mobile District. Larger ROVs could not complete inspections efficiently due to the time, resources, and manpower required to deploy and operate the heavy equipment. The report described navigating tight and unusually-shaped spaces with the large ROV as "awkward" and cited the equipment's inability to operate in strong currents created by the propellers of ships passing through the inspection areas. Because the ROV needed to be deployed frequently throughout any given year, the Detroit District quickly grew frustrated with the limitations of their equipment.



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Meanwhile, the report found that the smaller inspection class VideoRay ROVs implemented by the Mobile District allowed for faster mobilization and easier interleaving with vessel traffic. Unlike the other ROV, the VideoRay could be easily deployed without interfering in vessel traffic, navigate small openings, and utilized the manipulator arm to remove debris, significantly reducing the use of divers. The report also outlined the benefit/cost analysis for each method, finding that the VideoRay provided greater benefits at a much lower cost - a figure that included initial procurement, resources necessary for operation, and regular maintenance. Combined with the cost-savings and greater utilization, the VideoRay ROV's portability, ease-of-use, and advanced technology made upgrading the USACE's existing ROV technology even more attractive.

