

Table 3-1. Recommended Depth Accuracy Standards for Corps of Engineers Surveys of Federal Navigation Projects based on Performance Test Results. <sup>1</sup>

Project	Typical <sup>2</sup> Repeatability (feet)	Typical <sup>3</sup> Standard Deviation (± feet at 95%)
Coastal Deep Draft Projects (15>d<75 ft):		
Dredge measurement & payment surveys		
Channel clearance/acceptance		
Project condition surveys		
Maintenance Dredging (soft sand/silt bottom)	0.3 ft	±0.8 ft
New Work or Rock Cuts <sup>4</sup>	0.2 ft	±0.8 ft
Coastal Shallow Draft Projects (d<15 ft)	0.3 ft	±0.8 ft
Inland Navigation Projects (d<15 ft)	0.3 ft	±0.5 ft

NOTES:

1. These standards are recommended "target" tolerances that may be specified for the various navigation projects listed. They are primarily applicable to dredging measurement and payment surveys where Performance Tests are conducted. They are representative of "typical" or "average" USACE navigation projects, and should be modified to meet specific project conditions and survey capabilities; as such, they are not mandatory standards. Refer to the discussions and definitions in this chapter and in Appendix D.
2. Refer to Chapters 4 and 6 for performance testing procedures and survey bias assessment.
3. Standard Deviations are usually derived from Performance Tests. In certain cases, these standards may be considered nearly equivalent to Total Vertical Uncertainty; and, as such, they are an IHO "Special Order" standard.
4. These recommended tolerances may be difficult to meet on some single-beam system cross-line Performance Tests if an insufficient number of comparison points are tested.

If no Performance Test was conducted on a specific dredging project, then the drawing (metadata file) should note whether these target standards were likely met based on historical (long-term) repeated Performance Test capabilities of the vessel/system. Alternatively, for any dredging or project condition survey, an estimated TPU (or IHO Standard) may be noted.

Accuracy, QC, and QA performance criteria for coastal engineering and other civil works water control projects are found in their respective chapters.

EXHIBIT A