

Tables

Table 1
Summary of Bathymetry Investigations in the Lower Passaic River Study Area

Event	Date(s)	Location (RM)	Description
USACE Bathymetry Survey	1932	10.7 to 11.5	Digitized from charts on transects spaced approximately 25 feet apart.
USACE Bathymetry Survey	1948	10.4 to 11.3	Digitized from charts on transects spaced approximately 200 feet apart.
USACE Bathymetry Surveys	1949 and 1950	1949: RM 2.5 to RM 5; 1950: RM 5 to RM 6.8	Digitized from maps of point data with approximately 30-foot spacing in a grid pattern; post-dredge data.
USACE Bathymetry Survey	1966	RM 2.3 to RM 7.8	Digitized from maps of point data on transects spaced approximately 90 feet apart.
USACE Bathymetry Surveys	1975 (pre-dredge) and 1976 (post-dredge)	RM 8 to RM 12.5	Digitized from maps of point data on transects spaced approximately 100 feet apart.
USACE Bathymetry Survey	1989	0 to 15	Digitized from maps of point data on transects spaced approximately 100 feet apart.
Tierra Solutions, Inc. – Single-Beam Bathymetry Surveys	1995, 1996, 1997, 1999, and 2001	RM 1 to RM 7	Single-beam surveys on 100-foot-spacing transects with points taken every 2 feet. Single-beam surveys were used for direct comparison at co-incident transects.
USACE – Single-Beam Bathymetry	2004	RM 0 to RM 17.4	Single-beam surveys using 100-foot spacing of transects; performed by Rogers Surveying, Inc.
Aqua Survey, Inc. – Pilot Study Survey Area Single-Beam Survey	2004	Between Jackson Street Bridge and New Jersey Turnpike	Single-beam survey using 25-foot spacing transects bank-to-bank (mean lower water) to cover the Pilot Study Dredging Area.
Gahagan & Bryant Associates, Inc. – Multi-Beam Survey	2007	RM 0 to RM 14.2	Survey obtained 100% coverage in navigable water with a 5-foot grid.
Gahagan & Bryant Associates, Inc. – Single-Beam Survey	2007	RM 0.5 to RM 8.2; RM 14.3 to RM 16.5	Survey was performed to duplicate the methods and equipment used during previous surveys of the river so that comparisons could be made with previous single-beam surveys. Transects were spaced 100 feet; points were taken every 0.5 foot.
Gahagan & Bryant Associates, Inc. – Multi-Beam and Single-Beam Surveys	2008	RM 0 to RM 14	Co-located 2008 survey with 2007 survey in order to correlate 2007 data. Single-beam survey was conducted along 13 transects for a direct comparison with pre-2007 data. Multi-beam survey included main channel and side slopes on a 5-foot grid.
Gahagan & Bryant Associates, Inc. – Multi-Beam Survey	2010	RM 0.5 to RM 14.2	Survey obtained 100% coverage in navigable water with a 5-foot grid.
Gahagan & Bryant Associates, Inc. – RM 10.9 Characterization	2011	RM 10 to RM 12	Multi-beam (RM 10 to RM 12) and single-beam (RM 10.6 to RM 11.3; 86 transects at 50-foot intervals). Performed in July 2011, this survey occurred prior to storm Irene.
Gahagan & Bryant Associates, Inc. – Post-Irene Survey	2011	RM 0.5 to RM 14.2	Multi-beam; single-beam on transects from RM 1.6 to RM 8.0, as previously performed in 2008 and 2010.
Gahagan & Bryant Associates, Inc. – Multi-Beam and Single-Beam Surveys	2012	RM 0.5 to RM 14.2	Single-beam performed in shallow (2 to 6 feet) areas over RM 0 to RM 11; multi-beam from RM 0 to RM 14; intended to characterize bed under extended low river flow conditions.
CH2M Hill/Great Lakes Dredge and Dock – Single-Beam Surveys During RM 10.9 Removal Action	2013	RM 10.65 to RM 11.2	Single-beam surveys on 10-foot transects conducted during the RM 10.9 Removal Action for pre-dredging bathymetry and post-dredging confirmation in dredged and capped Acceptance Areas.

Notes:
Sources consulted to compile the information presented in the table include: TAMS and Malcolm Pirnie, Inc. (2005), TSI (2003, 2004), Aqua Survey (2006), AECOM (2010, 2013), The Louis Berger Group (2014), and site databases (e.g., ourpassaic.org).
RI/FS: Remedial Investigation/Feasibility Study
RM: river mile
TSI: Tierra Solutions, Inc.
USACE: U.S. Army Corps of Engineers

Table 2
Bathymetry Data

Subreach	Year														
	1932	1948	1966	1975	1989	1995	2004	2007	2008	2010	Pre-Irene 2011	Post-Irene 2011	Pre- and Post-Irene 2011	2012	2013
Dundee Dam to Confluence with Saddle River							x	x							
Saddle River to RM 14					x		x	x	x	x		x	x	x	
RM 14 to RM 12.5					x		x	x	x	x		x	x	x	
RM 12.5 to Confluence with Third River	x	x		x	x		x	x	x	x	x	x	x	x	x
Third River to Avondale Bridge	x	x		x	x		x	x	x	x	x	x	x	x	x
Avondale Bridge to RM 9.2				x	x		x	x	x	x	x	x	x	x	
RM 9.2 to WR Railroad Drawbridge			x	x	x	x	x	x	x	x		x	x	x	
WR Railroad Drawbridge to RM 5					x	x	x	x	x	x		x	x	x	
RM 5 to No-Point Conrail Bridge			x		x	x	x	x	x	x		x	x	x	
No-Point Conrail Bridge to Mouth					x	x	x	x	x	x		x	x	x	

Note:

RM: river mile

Table 3

Summary of Elevation Differences Between Surveys at Locations Where No Differences Are Expected

Differences Between Static Features	2008-2007	2008-2010	2008-2011	2011-2010
	Inches	Inches	Inches	Inches
Minimum	-2.9	-1.7	0.4	-0.1
Maximum	-4.2	-3.4	-2.5	-2.8
Mean	-3.6	-2.4	-1.2	-1.2

Notes:

Negative differences indicate the first survey is yielding greater depth.

Table from Table 4-3 of Attachment B of Appendix M