



**US Army Corps  
of Engineers®**  
Engineer Research and  
Development Center



## **Publications of the U.S. Army Engineer Research and Development Center**

Appendix D: FY19 (October 2018-September 2019)

Compiled by James A. Dolan

November 2019

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# **Publications of the U.S. Army Engineer Research and Development Center**

Appendix D: FY19 (October 2018-September 2019)

Compiled by James A. Dolan

*Information Technology Laboratory  
U.S. Army Engineer Research and Development Center  
3909 Halls Ferry Road  
Vicksburg, MS 39180-6199*

Final report

Approved for public release; distribution is unlimited.

Prepared for U.S. Army Engineer Research and Development Center  
3909 Halls Ferry Road  
Vicksburg, MS 39180-6199

## Abstract

Publications issued October 2018 through September 2019 by the U.S. Army Engineer Research and Development Center (ERDC) are listed. The publications are grouped according to the technical laboratories or technical program for which they were prepared. Procedures for obtaining ERDC reports are included in the Preface.

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## Preface

The purpose of this report is to provide an annual update of existing literature produced by the U.S. Army Engineer Research and Development Center (ERDC). Publications issued October 2018 through September 2019 are listed herein. The publications are grouped according to the technical laboratories and/or technical programs for which they were prepared.

ERDC publications containing the statement “Approved for Public Release; Distribution is Unlimited” are available electronically by clicking on the Digital Object Identifier (DOI) link located under each report or from the ERDC Library’s digital repository at <https://erdc-library.erdcdren.mil/>. A footnote by the report number denotes a limited distribution report. Limited distribution reports are available to qualified agencies from the Defense Technical Information Center (DTIC) at [www.dtic.mil](http://www.dtic.mil). For ordering purposes and when available, Accession Document (AD) numbers have been supplied.

When electronic access is not an option, library-to-library loaning is available through Online Computer Library Center (OCLC). The ERDC Library’s OCLC symbol is AERDC. Requestors should contact their local library for interlibrary loans. The ERDC Library does not loan directly to individuals. The loaning of limited distribution reports is at the discretion of the ERDC Library and only if the requestor meets the qualifications of the report’s limited distribution statement.

This report was compiled by the U.S. Army Engineer Research and Development Center, Information Technology Laboratory (ERDC-ITL), under the general supervision of Ms. Molly S. McManus, Chief, Information Science and Knowledge Management Branch, ITL; Mr. Ken Pathak, Chief, Software Engineering and Informatics Division, ITL; Ms. Patti S. Duett, Deputy Director, ITL; and Dr. David A. Horner, Director, ITL.

At the time of publication, COL Teresa A. Schlosser was the Commander of ERDC. Dr. David W. Pittman was the Director.

# 1 Engineer Research and Development Center (ERDC)

## Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
<sup>1</sup> ERDC SR-18-4	Nov 2018	Geotechnical Assessment of Sinkholes at Fort Jackson, Columbia, South Carolina, by G.A. Riveros, J.R. Kelley, and D.W. Harrelson	AD1081139
ERDC SR-19-1	Feb 2019	Geospatial Accuracy of Small Unmanned Airborne System Data in the Coastal Environment, by R.L. Fischer, J.G. Ruby, A.J. Armstrong, J.D. Edwards, N.J. Spore, and K.L. Brodie <a href="http://dx.doi.org/10.21079/11681/32302">http://dx.doi.org/10.21079/11681/32302</a>	AD1067894

## Technical Notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TN-19-1-	Feb 2019	Thin Layer Placement: Technical Definition for U.S. Army Corps of Engineers Applications, by J.F. Berkowitz, C. Piercy, T. Welp, and C. VanZomeren <a href="http://dx.doi.org/10.21079/11681/32283">http://dx.doi.org/10.21079/11681/32283</a>	AD1067526

## Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TR-14-6 Rpt. 3	Apr 2019	Development of the Particle-Scale Definition of Stress and Strain for the Discrete Element Method: Report 3 in "Discrete Nano-Scale Mechanics and Simulations" Series, by W.D. Hodo, J.F. Peters, L.E. Walizer, D.P. McInnis, and A.R. Carrillo <a href="http://dx.doi.org/10.21079/11681/32572">http://dx.doi.org/10.21079/11681/32572</a>	AD1071284
<sup>1</sup> ERDC TR-18-16	Oct 2018	Geology of the Negev Tunnel Test Site, Near Kerem Shalom, Israel, by K.B. Parkman, J.B. Dunbar, L.J. Perren, R.E. North, and A.L. Tillotson	AD1063036

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<sup>1</sup> Limited distribution; see Preface.

ERDC TR-18-18	Nov 2018	Corrosion Inhibitive Hygroscopic Organic-Based Dust Palliatives: Final Report on Project F12-AR11, by S.W. Morefield, J.K. Newman, C.A. Weiss Jr., C.C. Thomas, and P.G. Malone <a href="http://dx.doi.org/10.21079/11681/29970">http://dx.doi.org/10.21079/11681/29970</a>	AD1081140
ERDC TR-18-19	Nov 2018	Simulated Vehicle Decontamination and Field Evaluation of the Decontamination Effluent Treatment System (DETS), 27 June 2017, and Associated Background Studies, by V.F. Medina, S.A. Waisner, E. Martinez-Guerra, J. Johnson, J. Brame, E. Gao, and M. Page <a href="http://dx.doi.org/10.21079/11681/30641">http://dx.doi.org/10.21079/11681/30641</a>	AD1076433
<sup>1</sup> ERDC TR-18-20	Dec 2018	Transmitter Enhancement to R2TD EMI for Tunnel Detection: Evaluation of Cable-Loop TX Compared to Existing R2TD EMI Puck TX, by L.J. Perren, K.B. Parkman, E.W. Smith, J.D. Ables, and J.R. Picucci	AD1065762
ERDC TR-19-1	Jan 2019	Using EASEE's Acoustical Calculations in MATLAB, by D.K. Wilson, R.E. Alter, K.M. Burch, and M.E. Swearingen <a href="http://dx.doi.org/10.21079/11681/32009">http://dx.doi.org/10.21079/11681/32009</a>	AD1081189
ERDC TR-19-2	Jan 2019	Deep Installation Method for Three-Component Seismic Sensors, by A.P. Lester, E.P. Simpson, G.J. Rigaud, and J.R. Picucci <a href="http://dx.doi.org/10.21079/11681/32271">http://dx.doi.org/10.21079/11681/32271</a>	AD1067420
ERDC TR-19-3	Jan 2019	Cross-Comparison of Advanced Oxidation Processes for Remediation of Organic Pollutants in Water Treatment Systems, by E.K. Ambrogi, E. Asenath-Smith, W.A. Ballard, L.C. Moores, and J.A. Brame <a href="http://dx.doi.org/10.21079/11681/32319">http://dx.doi.org/10.21079/11681/32319</a>	AD1068199
ERDC TR-19-4	Feb 2019	Trends in the USACE Ocean Disposal Database (1976-2015), by J.L. Wilkens, B.C. Suedel, and K.N. Mitchell <a href="http://dx.doi.org/10.21079/11681/32351">http://dx.doi.org/10.21079/11681/32351</a>	AD1068672
<sup>1</sup> ERDC TR-19-5	Mar 2019	Ground Resistivity Imaging System (GRIS): Evaluation of COTS GRIS Technology for Void Detection in Expeditionary and Persistent Modes of Deployment, by L.J. Perren, K.B. Parkman, E.W. Smith, J.R. Picucci, and E.P. Simpson	AD1069137
ERDC TR-19-6	Jun 2019	Improved Levee Resilience Through Soil Application of a Natural Organic Polymer; Field Study: Kaufman Levee No. 1, by S.L. Larson, M.K. Corcoran, D.B. Gent, A.D. Butler, and C.C. Nestler <a href="http://dx.doi.org/10.21079/11681/33068">http://dx.doi.org/10.21079/11681/33068</a>	AD1081304

<sup>1</sup> Limited distribution; see Preface.

ERDC TR-19-7	May 2019	Numerical Simulation of Biological Structures: Paddlefish Rostrum, by F.J. Acosta, G.A. Riveros, R.R. Patel, and W.D. Hodo <a href="http://dx.doi.org/10.21079/11681/32749">http://dx.doi.org/10.21079/11681/32749</a>	AD1081195
ERDC TR-19-8	Jun 2019	Rapid Airfield Damage Recovery Technology Integration Experiment, by H.P. Bell, B.C. Cox, L. Edwards, L.I. Garcia, N.R. Hoffman, M. Mejías-Santiago, and J.L. Johnson <a href="http://dx.doi.org/10.21079/11681/33049">http://dx.doi.org/10.21079/11681/33049</a>	AD1081305
ERDC TR-19-9	Jul 2019	Additive Manufacturing of Metallic Materials with Controlled Microstructures: Multiscale Modeling of Direct Metal Laser Sintering and Directed Energy Deposition, by Z.B. McClelland, J.D. Shannon, R.D. Moser, J.B. Allen, A. Tekalur, M. Killian, J. Carroll, J. Kallivayalil, B. Schultheis, and A. Chaudhary <a href="http://dx.doi.org/10.21079/11681/33481">http://dx.doi.org/10.21079/11681/33481</a>	AD1076544
ERDC TR-19-10	Jun 2019	Development of Deceleration-based Runway Friction Measurement Methods, by A.B. Ward, C.A. Rutland, and J.S. Tingle <a href="http://dx.doi.org/10.21079/11681/33333">http://dx.doi.org/10.21079/11681/33333</a>	AD1076083
ERDC TR-19-11	Jun 2019	Assessment of LiDAR- and Photogrammetry-based Airfield Roughness Profiling Techniques, by A.B. Ward, J.K. Newman, and G.B. Herring IV <a href="http://dx.doi.org/10.21079/11681/33370">http://dx.doi.org/10.21079/11681/33370</a>	AD1081201
<sup>1</sup> ERDC TR-19-12	Jun 2019	Remote Assessment from LiDAR and Radar for Airfield Surface Analysis, by S.S. Jackson, S.G. Bourne, T.E. Berry, and J.K. Newman	AD1076139
ERDC TR-19-13	Jun 2019	Urban Terrain Data Availability and Gaps, by J.L. Boone, L.R. Breithaupt, M.T. Stevens, B.T. Webb, J.G. Green, J.R. Fairley, and S.J. Price <a href="http://dx.doi.org/10.21079/11681/33387">http://dx.doi.org/10.21079/11681/33387</a>	AD1076236
<sup>1</sup> ERDC TR-19-14	Jul 2019	Characterization of Unfrozen Dry Poorly Graded Sand with Silt (SP-SM) in Unfrozen and Frozen Buried Blast Experiments, by T.N. Williams, S.A. Akers, S.S. Graham, K.J. Ratliff, and A.P. Bernier	AD1076521
<sup>1</sup> ERDC TR-19-15	Jul 2019	Vehicle-Borne Improvised Explosive Device (VBIED) Experiments: Results of IRON WARRIOR Experiments I – IV, by J.E. Payne, Z.K. Crosby, D.L. Vaughan, J.Q. Ehrgott, Jr., D.D. Rickman, A.R. Jackson, B. Herring, J.E. Windham, D.P. Danko, R.L. Talbott, Jr., C.W. Crowder, and T.A. Waddell	AD1081823

<sup>1</sup> Limited distribution; see Preface.

ERDC TR-19-16	Jul 2019	Feasibility of Discontinuous Quoin Blocks for USACE Miter Gates, by B.A. Eick, M.D. Smith, and T.B. Fillmore <a href="http://dx.doi.org/10.21079/11681/33490">http://dx.doi.org/10.21079/11681/33490</a>	AD1077359
<sup>1</sup> ERDC TR-19-17	Jul 2019	Results of Underbelly Blast Experiments and Simulations to Quantify Effects of Frozen Soil on Aboveground Impulse, by G.K. Doles, N.T. Williams, J.Q. Ehrgott, Jr., S.A. Shoop, R.L. Jeffers, and J.L. Morrow	AD1077674
<sup>1</sup> ERDC TR-19-18	Jul 2019	Evaluation of the Effects of Explosive Charge Tamping on Cratering: Results and Analyses of Flat-Terrain and Embankment Tests, by G.K. Doles, D.D. Rickman, S.D. Turner, J.L. Morrow, and J.M. Brown	AD1078472
<sup>1</sup> ERDC TR-19-19	Aug 2019	Barrier and Shelter Performance – Iron Warrior Experiment 1, by C.S. Stephens, O.G. Flores, R.E. Walker, C.E. Grey, and J.S. Davidson	AD1078025
<sup>1</sup> ERDC TR-19-20	Aug 2019	Ground Resistivity Imaging System (GRIS) Phase II: Evaluation of the COTS GRIS Technology for Void Detection Using Both COTS Surface Electrodes and Prototype Subsurface Electrodes, by K.B. Parkman, L.J. Perren, I.J. Stephens, D.R. Glaser, E.W. Smith, J.R. Picucci, and E.P. Simpson	AD1078139
ERDC TR-19-21	Aug 2019	A High-throughput Method for Counting Cyanobacteria Using Fluorescence Microscopy, by K. Pokrzywinski, B. Boyd, and J. Smith <a href="http://dx.doi.org/10.21079/11681/33870">http://dx.doi.org/10.21079/11681/33870</a>	AD1079243
<sup>1</sup> ERDC TR-19-22	Aug 2019	Additive Manufacturing Processes Enabled by Multi-Scale Simulation, by J. Kallivayalil, A. Tekalur, J. Carroll, M. Killian, B. Schultheis, A. Chaudhary, Z.B. McClelland, J.B. Allen, J.D. Shannon, and R.D. Moser	AD1079636
ERDC TR-19-23	Sep 2019	Projecting Shifts in Human and Ecological Zones, by K.A. Cotterman, J.D. Westervelt, J.M. Roningen, and A.M. Rhodes <a href="http://dx.doi.org/10.21079/11681/34094">http://dx.doi.org/10.21079/11681/34094</a>	AD1080494
ERDC TR-19-24	Sep 2019	Analyzing the St. Marys Rapids for Suitable Fish Habitat: An Engineering with Nature® Demonstration Project, by T.J. Calappi, K.A. Labuhn, P.S. Fowler, B.C. Suedel, J.L. Wilkens, G. Savant, M. Bachand, and G. Guénard <a href="http://dx.doi.org/10.21079/11681/33990">http://dx.doi.org/10.21079/11681/33990</a>	AD1079972

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<sup>1</sup> Limited distribution; see Preface.

ERDC TR-19-25      Sep 2019      Optimizing Maximally Stable Extremal Regions (MSER) Parameters Using the Particle Swarm Optimization Algorithm, by J.E. Davis, A.E. Bednar, and C.T. Goodin  
<http://dx.doi.org/10.21079/11681/34160>

AD1080875

## 2 Coastal and Hydraulics Laboratory (CHL)

### Contract reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CR-19-1	May 2019	Practical Resilience Metrics for Coastal Infrastructure Features, by B.M. Ayyub <a href="http://dx.doi.org/10.21079/11681/32889">http://dx.doi.org/10.21079/11681/32889</a>	AD1073955

### Letter reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>
<sup>1</sup> ERDC/CHL LR-19-1	Mar 2019	Digitizing Port Characteristics Remotely Using the Port Operations Rating Tool, by B.H. Hargis, A. Stehno, A.R. Byrd, C. LaHatte, D. Brown, and J.L. Gutenson
<sup>1</sup> ERDC/CHL LR-19-2	Mar 2019	Operational Scenarios Designed to Test the Planning Logistics Analysis Network System (PLANS), by B. Hargis, J. Fowler, P. Holder, and J. Strickler
<sup>1</sup> ERDC/CHL LR-19-4	May 2019	Fundamental Analysis of Environmental Stressors on Port Logistics within the Port Operations Rating Tool (PORT), by K.A. Cotterman and B.H. Hargis
<sup>1</sup> ERDC/CHL LR-19-6	Feb 2019	Charleston Harbor Wave Climate and Vessel Wake Data Collection and Analysis: For the Charleston District of the USACE South Atlantic Division, by B.M. Scully, R. Styles, J. Smith, and M. Hartman
<sup>1</sup> ERDC/CHL LR-19-8	Jul 2019	Tacoma Harbor Feasibility Ship Simulation Study Report, by M.M. Johnston
<sup>1</sup> ERDC/CHL LR-19-10	Jul 2019	DOTS: Assessment of Wind-Waves for the Mordecai Island, New Jersey Vicinity, by M.A. Bryant and B. Boyd
<sup>1</sup> ERDC/CHL LR-19-12	Jun 2019	State of Hawaii – Navigation Information System: For the Honolulu District of the USACE Pacific Ocean Division, by P.K. DiJoseph, D. Arnold, A. Byrd, B. Hargis, and B. Tetreault (USACE-ERDC-CHL), S. Dale, A. Liu (HI-DOT), T. Smith, M. Yoshimoto (USACE-POH), Hawaii Pilots Association

<sup>1</sup> Limited distribution; see Preface.

## Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL SR-18-3	Nov 2018	Continuously Operating Dune-Mounted Lidar System at the Field Research Facility: A Report Detailing Lidar Collection, Processing, Evaluation, and Product Development, by K.L. Brodie, A.T. Dyer, N.J. Spore, R.K. Slocum, A.M. O'Dea, E.T. Whitesides, and A.D. Renaud <a href="http://dx.doi.org/10.21079/11681/30836">http://dx.doi.org/10.21079/11681/30836</a>	AD1081467
ERDC/CHL SR-18-4	Dec 2018	USACE-ERDC Coastal System Resilience Research, by K.F. Touzinsky and J.D. Rosati <a href="http://dx.doi.org/10.21079/11681/31353">http://dx.doi.org/10.21079/11681/31353</a>	AD1065722
ERDC/CHL SR-19-1	Jan 2019	Quantification of Uncertainty in Probabilistic Storm Surge Models: Literature Review, by V.M. Gonzalez, N.C. Nadal-Caraballo, J.A. Melby, and M.A. Cialone <a href="http://dx.doi.org/10.21079/11681/32295">http://dx.doi.org/10.21079/11681/32295</a>	AD1067548
ERDC/CHL SR-19-2	Apr 2019	Literature Review of Nearshore Berms, by K.E. Brutsche, B.C. McFall, D.B. Bryant, and P. Wang <a href="http://dx.doi.org/10.21079/11681/32509">http://dx.doi.org/10.21079/11681/32509</a>	AD1070335
ERDC/CHL SR-19-3	Jun 2019	Strategic Placement for Beneficial Use of Dredged Material, by J. Gailani, K.E. Brutsché, E. Godsey, P. Wang, and M.A. Hartman <a href="http://dx.doi.org/10.21079/11681/33169">http://dx.doi.org/10.21079/11681/33169</a>	AD1075332
ERDC/CHL SR-19-4	Jun 2019	Coastal Lidar and Radar Imaging System (CLARIS) Lidar Data Report: 2011 – 2017, by N.J. Spore, A.D. Renaud, I.W. Conery, and K.L. Brodie <a href="http://dx.doi.org/10.21079/11681/33377">http://dx.doi.org/10.21079/11681/33377</a>	AD1076355
ERDC/CHL SR-19-5	Jul 2019	Field Research Facility: A User's Guide to the Survey Lines Dataset, by W.A. Birkemeier and M.F. Forte <a href="http://dx.doi.org/10.21079/11681/33653">http://dx.doi.org/10.21079/11681/33653</a>	AD1077984
ERDC/CHL SR-19-6	Aug 2019	Review of Coastal Tidal Inlet Morphodynamics in the Context of Barrier-Inlet Sustainability, by T.M. Beck <a href="http://dx.doi.org/10.21079/11681/33788">http://dx.doi.org/10.21079/11681/33788</a>	AD1078459

## Technical notes

### Section I – Waves and coastal flooding

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-I-95	Nov 2018	Profiling and Optimization of FUNWAVE-TVD on High Performance Computing (HPC) Machines, by M.Y.-H. Lam, M. Malej, F. Shi, and K. Ghosh <a href="http://dx.doi.org/10.21079/11681/30037">http://dx.doi.org/10.21079/11681/30037</a>	AD1081206
ERDC/CHL CHETN-I-96	Jun 2019	Simulation of Coastal Storm Surge and Rainfall Flooding Scenarios at Camp Lejeune with GSSHA, by N. Raj Pradhan, C.W. Downer, S.N. Sinclair, and C. LaHatte <a href="http://dx.doi.org/10.21079/11681/33185">http://dx.doi.org/10.21079/11681/33185</a>	AD1076105
ERDC/CHL CHETN-I-97	Aug 2019	The Coastal Model Test Bed Initialization and Setup: CMS-Wave, by S. Bak, Z. Demirbilek, and L. Lin <a href="http://dx.doi.org/10.21079/11681/33643">http://dx.doi.org/10.21079/11681/33643</a>	AD1078452
ERDC/CHL CHETN-I-98	Aug 2019	Coastal Modeling System: Dredging Module Simulation with Multiple Grain Sizes, by C.W. Reed and M.E. Brown <a href="http://dx.doi.org/10.21079/11681/33664">http://dx.doi.org/10.21079/11681/33664</a>	AD1078577

### Section III – Coastal structures

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-III-81	Nov 2018	Assessing Jetty Effectiveness via Statistical Analysis of AIS Data, by D.L. Young and B.M. Scully <a href="http://dx.doi.org/10.21079/11681/30030">http://dx.doi.org/10.21079/11681/30030</a>	AD1081207

### Section IV – Inlets and estuary channels

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IV-113	Nov 2018	Initialization and Setup of the Coastal Model Test Bed: Integrated Bathymetry, by D.L. Young, A.S. Bak, and M.F. Forte <a href="http://dx.doi.org/10.21079/11681/30023">http://dx.doi.org/10.21079/11681/30023</a>	AD1069565
ERDC/CHL CHETN-IV-114	Jan 2019	Design and Deployment of Mini-Argus Systems for Rapid Coastal Imaging, by B. Bruder, K. Hathaway, K. Brodie, and S. Harrison <a href="http://dx.doi.org/10.21079/11681/31463">http://dx.doi.org/10.21079/11681/31463</a>	AD1067054

ERDC/CHL CHETN-IV-115	Mar 2019	Initialization and Setup of the Coastal Model Test Bed: CSHORE, by D.L. Young, A.S. Bak, and B.D. Johnson <a href="http://dx.doi.org/10.21079/11681/32387">http://dx.doi.org/10.21079/11681/32387</a>	AD1069565
ERDC/CHL CHETN-IV-116	Apr 2019	Post-Irma Unmanned Aircraft System (UAS) Coastal Storm Impact Surveys, by K. Brodie, N. Spore, B. Bruder, A. Renaud, T. Hesser, V. Wilhelm, and K. Hodgins <a href="http://dx.doi.org/10.21079/11681/32463">http://dx.doi.org/10.21079/11681/32463</a>	AD1070326
ERDC/CHL CHETN-IV-117	Apr 2019	Basic Logic for the Construction of an AdH Estuarine Model, by J. McAlpin and J. Sharp <a href="http://dx.doi.org/10.21079/11681/32543">http://dx.doi.org/10.21079/11681/32543</a>	AD1071953
ERDC/CHL CHETN-IV-118	May 2019	U.S. Tidal Inlets Atlas: An Update to the CIRP Inlets Database, by T.M. Beck and D. Arnold <a href="http://dx.doi.org/10.21079/11681/32666">http://dx.doi.org/10.21079/11681/32666</a>	AD1073564
ERDC/CHL CHETN-IV-119	Jun 2019	Modeling Sea Level Change Using the Coastal Modeling System, by H. Li and M.E. Brown <a href="http://dx.doi.org/10.21079/11681/33204">http://dx.doi.org/10.21079/11681/33204</a>	AD1076201

### Section V – Coastal ecology

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-V-24	Sep 2019	Validation of Numerical Modeling for Flows near Draghead in Operation, by M.M. Johnston, A. Hammack, and D.L. Smith <a href="http://dx.doi.org/10.21079/11681/33923">http://dx.doi.org/10.21079/11681/33923</a>	AD1080036

### Section VI – Miscellaneous coastal subjects

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-VI-48	Nov 2018	An Interagency Collaboration to Identify Federal Resilience Factors for the U.S. Marine Transportation System, by K. Touzinsky, L. Knapp, and A. Renaud <a href="http://dx.doi.org/10.21079/11681/30140">http://dx.doi.org/10.21079/11681/30140</a>	AD1081208
ERDC/CHL CHETN-VI-49	Jan 2019	Coastal Resilience Metrics from Beach-fx, by M. Durkin and K. Chambers <a href="http://dx.doi.org/10.21079/11681/31462">http://dx.doi.org/10.21079/11681/31462</a>	AD1066589
ERDC/CHL CHETN-VI-50	Feb 2019	Historical Analysis of the Change in Percent Fines during Beach Nourishment, by J.L. Coor and J.D. Ousley <a href="http://dx.doi.org/10.21079/11681/32912">http://dx.doi.org/10.21079/11681/32912</a>	AD1074732

### Section VII – River engineering and sedimentation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-VII-20	May 2019	Modeling Ship-Wake-Induced Sediment Transport and Morphological Change - Sediment Module in FUNWAVE-TVD, by M. Malej, F. Shi, and J.M. Smith <a href="http://dx.doi.org/10.21079/11681/32911">http://dx.doi.org/10.21079/11681/32911</a>	AD1074624
ERDC/CHL CHETN-VII-21	Jun 2019	Overview of Historical Reservoir Flushing Events and Screening Guidance, by T.A. Dahl and M. Ramos-Villanueva <a href="http://dx.doi.org/10.21079/11681/33003">http://dx.doi.org/10.21079/11681/33003</a>	AD1075972

### Section VIII – Flood management

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-VIII-12	Jan 2019	Impact of Mud Aggregate Processes in Sediment Transport Studies, by D.W. Perkey and S.J. Smith <a href="http://dx.doi.org/10.21079/11681/32005">http://dx.doi.org/10.21079/11681/32005</a>	AD1067500

### Section IX – Navigation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IX-47	Nov 2018	Methodology Supporting Civil Works Implementation of Tainter Gate Trunnion Friction Structural Health Monitoring, by M.D. Smith and T.B. Fillmore <a href="http://dx.doi.org/10.21079/11681/29975">http://dx.doi.org/10.21079/11681/29975</a>	AD1081211
ERDC/CHL CHETN-IX-48	Dec 2018	Methodology Supporting Civil Works Implementation of Trunnion Rod Testing, by M.D. Smith and T.B. Fillmore <a href="http://dx.doi.org/10.21079/11681/30773">http://dx.doi.org/10.21079/11681/30773</a>	AD1081213
ERDC/CHL CHETN-IX-49	Jun 2019	Guided Wave Testing of Trunnion Rods at West Point Dam, Georgia, by J.D. Ray, R.W. Haskins, and J.A. Evans <a href="http://dx.doi.org/10.21079/11681/33244">http://dx.doi.org/10.21079/11681/33244</a>	AD1076218
ERDC/CHL CHETN-IX-50	Aug 2019	Lock Operations Management Application (LOMA) Aid to Navigation (AtoN) Monitoring and Recovery (LAMaR), by J.H. Farrar, M.F. Winkler, and J. Whitlow <a href="http://dx.doi.org/10.21079/11681/33629">http://dx.doi.org/10.21079/11681/33629</a>	AD1078561

## Section XII – Hydroinformatics

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-XII-1-	Aug 2019	Reducing Uncertainty and Improving Precision in Coincident Geospatial Datasets Using Weight-of-Evidence: Part 1, by J. Cegan, M. Wood, I. Linkov, and D.A. Loney <a href="http://dx.doi.org/10.21079/11681/33663">http://dx.doi.org/10.21079/11681/33663</a>	AD1078595

## Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL TR-18-15	Oct 2018	CSTORM-MS Storm Surge and Wave Modeling Comparison for Proposed Dyke Marsh Promontory Restoration, by T.C. Massey, Y. Ding, M. Owensby, G. Slusarczyk, and M.A. Bryant <a href="http://dx.doi.org/10.21079/11681/29863">http://dx.doi.org/10.21079/11681/29863</a>	
ERDC/CHL TR-18-16	Nov 2018	Corps Shoaling Analysis Tool: Predicting Channel Shoaling, by L.M. Dunkin, L.A. Coe, and J.J. Ratcliff <a href="http://dx.doi.org/10.21079/11681/30382">http://dx.doi.org/10.21079/11681/30382</a>	AD1081215
ERDC/CHL TR-18-17	Dec 2018	Hydraulic Modeling of Extreme Flows for the White Sands Missile Range Using Adaptive Hydraulics (AdH), by G.L. Bell, J.A. Sharp, J.W. Lewis, G. Savant, and J.N. McAlpin <a href="http://dx.doi.org/10.21079/11681/31337">http://dx.doi.org/10.21079/11681/31337</a>	AD1081379
ERDC/CHL TR-18-18	Dec 2018	Physical Model Analysis of the Foster Joseph Sayers Dam, by B. Burnham, M. Thomas, and J. Vaughan <a href="http://dx.doi.org/10.21079/11681/31365">http://dx.doi.org/10.21079/11681/31365</a>	AD1065772
ERDC/CHL TR-19-1	Jan 2019	Addressing Nearshore Placement near Lake Worth Inlet, Florida, by A. Condon, K. Legault, and B. McFall <a href="http://dx.doi.org/10.21079/11681/31598">http://dx.doi.org/10.21079/11681/31598</a>	AD1066375
ERDC/CHL TR-19-2	Mar 2019	Mississippi River Hydrodynamic and Delta Management Study: Delta Management Modeling; AdH/SEDLIB Multi-Dimensional Model Validation and Scenario Analysis Report, by G.L. Brown, J.N. McAlpin, K.C. Pevey, P.V. Luong, C.R. Price, and B.A. Kleiss <a href="http://dx.doi.org/10.21079/11681/32446">http://dx.doi.org/10.21079/11681/32446</a>	AD1081387

ERDC/CHL TR-19-3	Feb 2019	Numerical Model Study of the Flows around Pile Dikes and Conventional Rock Dikes in the Columbia River, by A. Hammack, M.M. Johnston, and D.S. Smith <a href="http://dx.doi.org/10.21079/11681/32273">http://dx.doi.org/10.21079/11681/32273</a>	AD1081391
ERDC/CHL TR-19-4	May 2019	Storm Recurrence Rate Models for Tropical Cyclones: Report 1, by N.C. Nadal-Caraballo, V.M. Gonzalez, and L. Chouinard <a href="http://dx.doi.org/10.21079/11681/32824">http://dx.doi.org/10.21079/11681/32824</a>	AD1073835
ERDC/CHL TR-19-5	May 2019	Charleston, South Carolina, Navigation Study: Charleston Harbor Deepening and Widening Ship Simulation Results, by D.W. Webb, K. Martin, and G.C. Lynch <a href="https://dx.doi.org/10.21079/11681/32750">https://dx.doi.org/10.21079/11681/32750</a>	AD1073500
ERDC/CHL TR-19-6	May 2019	Hydraulic Analysis of the Pickwick Lock Culvert Valves, by A. Hammack, D.S. Smith, M. Thomas, J.M. Vaughan, and M.M. Johnston <a href="http://dx.doi.org/10.21079/11681/32845">http://dx.doi.org/10.21079/11681/32845</a>	AD1073991
ERDC/CHL TR-19-7	May 2019	A Review of RSM Implementation Strategies and Recommendations for Ecosystem Restoration in Tampa Bay, Florida, by A. Hershoin, T. Ledford, B. Nist, M. Schrader, C. McCoy, B. Martin, and L. Lillycrop <a href="http://dx.doi.org/10.21079/11681/32843">http://dx.doi.org/10.21079/11681/32843</a>	AD1073913
ERDC/CHL TR-19-8	May 2019	Design Water Levels and Waves for Repairs of Buffalo Harbor North and South Breakwaters and LaSalle Park Seawall, Buffalo, New York, by Z. Demirbilek, L. Lin, O.G. Nwogu, W.P. Cross, C.M. O'Connell, S. Chader, M.C. Mohr, G.K. Hintz, S.E. Hint, and M.G. Draganac <a href="http://dx.doi.org/10.21079/11681/33024">http://dx.doi.org/10.21079/11681/33024</a>	AD1081395
ERDC/CHL TR-19-9	Jun 2019	Coastal Texas Region 1 (CTR1) Estuarine Numerical Modeling Report, by J. McAlpin, C. Ross, and J.McKnight <a href="http://dx.doi.org/10.21079/11681/33104">http://dx.doi.org/10.21079/11681/33104</a>	AD1081396
ERDC/CHL TR-19-10	Jun 2019	Houston Ship Channel and Vicinity Three-Dimensional adaptive Hydraulics (AdH) Numerical Model Calibration/Validation Report, by J. McAlpin, C. Ross, and J.McKnight <a href="http://dx.doi.org/10.21079/11681/33063">http://dx.doi.org/10.21079/11681/33063</a>	AD1074758
ERDC/CHL TR-19-11	Jun 2019	Beneficial Use of Dredged Material with Increased Fine Sediment Content: A Case Study at Egmont Key, Florida, by K.E. Brutsché, C.K. Maglio, Z.J. Tyler, J.D. Ousley, and P. Wang <a href="http://dx.doi.org/10.21079/11681/33363">http://dx.doi.org/10.21079/11681/33363</a>	AD1076140

ERDC/CHL TR-19-12	Jun 2019	Houston Ship Channel Expansion Channel Improvement Project (ECIP) Numerical Modeling Report, by J. McAlpin, J. McKnight, and C. Ross <a href="http://dx.doi.org/10.21079/11681/33334">http://dx.doi.org/10.21079/11681/33334</a>	AD1081222
ERDC/CHL TR-19-13	Aug 2019	Sediment Budget for the North Illinois Shore from the Wisconsin Border to Wilmette Harbor, by A. Morang, L.M. Dunkin, D.F. Bucaro, J.A. Wethington, M.J. Chrzastowski, and E.J. Theuerkauf <a href="http://dx.doi.org/10.21079/11681/33679">http://dx.doi.org/10.21079/11681/33679</a>	AD1078236
ERDC/CHL TR-19-14	Aug 2019	Probabilistic Flood Hazard Assessment Framework Development: Extreme Rainfall Analysis, by B.E. Skahill and J. Kanney <a href="http://dx.doi.org/10.21079/11681/33883">http://dx.doi.org/10.21079/11681/33883</a>	AD1079322
ERDC/CHL TR-19-15	Sep 2019	Inland Marine Transportation System Travel Time Atlas via Automatic Identification System (AIS) Data: Ohio River, Upper Mississippi River, and Illinois River, by P. DiJoseph, K.N. Mitchell, B.J. Tetreault, and J. Marshall <a href="http://dx.doi.org/10.21079/11681/34083">http://dx.doi.org/10.21079/11681/34083</a>	AD1080408
ERDC/CHL TR-19-16	Sep 2019	Calcasieu Lock Navigation Study, Louisiana: Calcasieu Lock Diversion Channel Ship Simulation Report, by M.M. Johnston <a href="http://dx.doi.org/10.21079/11681/34185">http://dx.doi.org/10.21079/11681/34185</a>	AD1081295
ERDC/CHL TR-19-17	Sep 2017	Norfolk Harbor Improvement Study, Virginia: Norfolk Harbor Deepening and Widening Ship Simulation Results, by S.K. Martin and D.W. Webb <a href="http://dx.doi.org/10.21079/11681/34186">http://dx.doi.org/10.21079/11681/34186</a>	AD1081300

### 3 Cold Regions Research Engineering Laboratory (CRREL)

#### Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL SR-19-1	May 2019	CRREL Environmental Wind Tunnel: Characteristics and Capabilities, by M.J. Torres, A.R. Stott, S.L. LeGrand, and M. Reilly-Collette <a href="http://dx.doi.org/10.21079/11681/32733">http://dx.doi.org/10.21079/11681/32733</a>	AD1073391
<sup>1</sup> ERDC/CRREL SR-19-2	Jun 2019	Environmental Awareness for Sensor and Emitter Employment (EASEE): Strategic Plan and Implementation, by D.K. Wilson, S.E. Kopczyński, M.A. Niccolai, and L.E. Waldrop	AD1076302
ERDC/CRREL SR-19-3	Jun 2019	Analysis of Recent Support-Column Survey Results for the Elevated Facility at Amundsen-Scott South Pole Station, by G. Blaisdell, J. Weale, and L. Barna <a href="http://dx.doi.org/10.21079/11681/33184">http://dx.doi.org/10.21079/11681/33184</a>	AD1075381

#### Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL TR-18-18	Oct 2018	Comprehensive Approach for Monitoring and Remediating Petroleum-Derived Contaminants in the Arctic: Case Study of the Former NARL Site near Utqiagvik, Alaska (Formerly Barrow), by K.L. Bjella, R.A. Barbato, A.M. Wagner, A.J. Barker, S.J. Doherty, K.L. Foley, R.M. Jones, C.A. Hiemstra, A.B. Gelvin, and S.P. Saari <a href="http://dx.doi.org/10.21079/11681/29611">http://dx.doi.org/10.21079/11681/29611</a>	AD1081224
<sup>1</sup> ERDC/CRREL TR-18-19	Dec 2018	Energy Efficiency through Waste-Heat Recovery, by M.W. Parker, M.I. Reilly-Coullette, A.R. Stott, and C.R. Williams	AD1069294
ERDC/CRREL TR-18-20	Oct 2018	Terrestrial Geospatial Remote Assessment for Ingress Locations (Terrestrial GRAIL), by S.A. Shoop and W.L. Wieder <a href="http://dx.doi.org/10.21079/11681/29927">http://dx.doi.org/10.21079/11681/29927</a>	AD1081240

<sup>1</sup> Limited distribution; see Preface.

ERDC/CRREL TR-18-21	Dec 2018	Evaluation of Insulated Pavements to Prevent Frost Damage, by M.J. Torres, A.R. Stott, and M.I. Reilly-Collette <a href="http://dx.doi.org/10.21079/11681/31449">http://dx.doi.org/10.21079/11681/31449</a>	AD1081244
ERDC/CRREL TR-19-1	Jan 2019	Microstructural Characterization of Snow Compaction Related to Snow Pavements, by Z.R. Courville, R.M. Lieblappen, T.D. Melendy, and A.P. Bernier <a href="http://dx.doi.org/10.21079/11681/31442">http://dx.doi.org/10.21079/11681/31442</a>	AD1081247
ERDC/CRREL TR-19-2	Feb 2019	Evaluation of Airfield Damage Repair Methods for Extreme Cold Temperatures, by E. Asenath-Smith, T.D. Melendy, Jr., A.M. Menke, A.P. Bernier, and G.L. Blaisdell <a href="http://dx.doi.org/10.21079/11681/32298">http://dx.doi.org/10.21079/11681/32298</a>	AD1081350
ERDC/CRREL TR-19-3	May 2019	Evaluation of Modeled and Reanalysis Estimates of Frost Depth through Comparison to Ground Observations, by L. Barna, C. Vuyovich, and K. Jones <a href="http://dx.doi.org/10.21079/11681/32730">http://dx.doi.org/10.21079/11681/32730</a>	AD1073394
ERDC/CRREL TR-19-4	May 2019	A Snow Runway for Supporting Wheeled Aircraft: Phoenix Airfield, McMurdo, Antarctica, by R.B. Haehnel, G.L. Blaisdell, T. Melendy, S. Shoop, and Z. Courville <a href="http://dx.doi.org/10.21079/11681/32731">http://dx.doi.org/10.21079/11681/32731</a>	AD1073325
ERDC/CRREL TR-19-5	May 2019	Using the Light Weight Deflectometer to Assess Groomed Snow and Ice Surfaces, by W.L. Wieder, S.A. Shoop, and L. Barna <a href="http://dx.doi.org/10.21079/11681/32732">http://dx.doi.org/10.21079/11681/32732</a>	AD1073272
ERDC/CRREL TR-19-6	May 2019	Physical Properties of Highly Organic Soils and Their Importance to Mobility Considerations, by S. Frankenstein and M.W. Parker <a href="http://dx.doi.org/10.21079/11681/32923">http://dx.doi.org/10.21079/11681/32923</a>	AD1081351
ERDC/CRREL TR-19-7	Jun 2019	Geophysical Investigation at Eielson Air Force Base, Alaska: Subsurface Features Influencing Building 6385, by G. Speeter, K. Bjella, S. Saari, and J. Maakestad <a href="http://dx.doi.org/10.21079/11681/33183">http://dx.doi.org/10.21079/11681/33183</a>	AD1075380
ERDC/CRREL TR-19-8	Jun 2019	Measuring Very High Frequency and Ultrahigh Frequency Radio Noise in Urban Environments: A Mobile Measurement System for Radio-Frequency Noise, by C.E. Haedrich and D.J. Breton <a href="http://dx.doi.org/10.21079/11681/33290">http://dx.doi.org/10.21079/11681/33290</a>	AD1076333

<sup>1</sup> ERDC/CRREL TR-19-9	Jul 2019	Demonstration of Unconventional Countermeasures Materials: Development, Application, and Testing of Hot-Water Solar Collectors, by M.L. Maxson, J.M. Fegyveresi, B.A. West, N.E. Parker, K.J. Claffey, and G.R. Hoch	AD1081354
ERDC/CRREL TR-19-10	Jul 2019	Visual Observations and Stratigraphy of the South Pole Ice Core (SPICEcore): A Preliminary Holocene (~10.2 ka) Accumulation Record and Depth-Age Chronology, by J.M. Fegyveresi, T.J. Fudge, D.G. Ferris, D.A. Winski, and R.B. Alley <a href="http://dx.doi.org/10.21079/11681/33378">http://dx.doi.org/10.21079/11681/33378</a>	AD1076962
ERDC/CRREL TR-19-11	Jul 2019	Ice Control to Prevent Flooding in Ship Creek, Alaska, by S.F. Daly, J.S. Rocks, M.I. Reilly-Collette, and A.B. Glevin <a href="http://dx.doi.org/10.21079/11681/33483">http://dx.doi.org/10.21079/11681/33483</a>	AD1077986
ERDC/CRREL TR-19-12	Jul 2019	Estimating Forest Parameters Using Ground-Based Techniques with Implications for Airborne Data, by N.E. Parker, S.S. Whitecloud, K.S. Messan, B.G. Quinn, H.H. Vermeulen, S.A. Shoop, and C.F. Aoki <a href="http://dx.doi.org/10.21079/11681/33620">http://dx.doi.org/10.21079/11681/33620</a>	AD1077995
ERDC/CRREL TR-19-13	Jul 2019	WorldIndex Database Update 2018, by L.A. Barna, S.F. Daly, K.F. Jones, and J.J. Gagnon <a href="http://dx.doi.org/10.21079/11681/33621">http://dx.doi.org/10.21079/11681/33621</a>	AD1077992
ERDC/CRREL TR-19-14	Aug 2019	SnowMicroPenetrometer Applications for Winter Vehicle Mobility, by T.G. Meehan, H. Marshall, E.J. Deeb, and S.A. Shoop <a href="http://dx.doi.org/10.21079/11681/33680">http://dx.doi.org/10.21079/11681/33680</a>	AD1078478
<sup>1</sup> ERDC/CRREL TR-19-15	Aug 2019	Recovery and Management of Slickspot Peppergrass ( <i>Lepidium papilliferum</i> ) at the Air Force Juniper Butte Training Range, Idaho, by N.E. Parker, A.M. Mossell, and T.J. Cary	AD1078481
ERDC/CRREL TR-19-16	Aug 2019	Macroscale Salt-Crust Formation on Indoor Play-Like Test Plots for Dust-Emission Research Applications: Methodology Assessment, by M.F. Bigl, S.L. LeGrand, S.A. Beal, A. Sopher, and D.B. Ringelberg <a href="http://dx.doi.org/10.21079/11681/33723">http://dx.doi.org/10.21079/11681/33723</a>	AD1081358
ERDC/CRREL TR-19-17	Aug 2019	Assessment of Field Methods for Measuring Mechanical Properties of Snow, by S.A. Shoop, W.L. Wieder, B.C. Elder, S.A. Beal, and E.J. Deeb <a href="http://dx.doi.org/10.21079/11681/33724">http://dx.doi.org/10.21079/11681/33724</a>	AD1081398

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<sup>1</sup> Limited distribution; see Preface.

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ERDC/CRREL TR-19-18	Sep 2019	Joint Base Cape Cod Small-Arms Ranges: Lead and Antimony Batch-Reaction Study, by A.J. Barker, S.A. Beal, and J.L. Clausen <a href="http://dx.doi.org/10.21079/11681/34105">http://dx.doi.org/10.21079/11681/34105</a>	AD1080803
ERDC/CRREL TR-19-19	Sep 2019	Influence of Wetland Indicator Status Ratings on the Extent of Hydrophytic Vegetation during Wetland Delineations, by C. Photos, L. Lefebvre, J. Klein, C.E. McKernan, J. Goulet, and R. Lichvar <a href="http://dx.doi.org/10.21079/11681/34184">http://dx.doi.org/10.21079/11681/34184</a>	AD1081131
ERDC/CRREL TR-19-20	Sep 2019	Unmanned Aerial Systems Electromagnetic Induction Sensor Development: Evaluation of Commercial-off-the-Shelf Unmanned Aerial System Motor Interference and Mitigation in Airborne Electromagnetic Induction Sensors, by B. Barrowes, D.R. Glaser, B.G. Quinn, M. Prishvin, and F. Shubitidze <a href="http://dx.doi.org/10.21079/11681/34104">http://dx.doi.org/10.21079/11681/34104</a>	AD1080860

## 4 Construction Engineering Research Laboratory (CERL)

### Letter reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>
<sup>1</sup> ERDC/CERL LR-19-1	Jan 2019	Finite Element Modeling of New Bulkheads for MacArthur Lock, by B.A. Eick

### Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
<sup>1</sup> ERDC/CERL SR-18-3	Jul 2018	Structural Inspection of Reinforced Concrete Buildings at Corpus Christi Army Depot, by G.K. Al-Chaar and M.L. Banko	AD1081741
<sup>1</sup> ERDC/CERL SR-18-4	Jul 2018	Structural Inspection of Steel Buildings at Corpus Christi Army Depot, by G.K. Al-Chaar and M.L. Banko	AD1081744
<sup>1</sup> ERDC/CERL SR-18-5	Jul 2018	Structural Inspection of Building 8 at Corpus Christi Army Depot, by G.K. Al-Chaar and M.L. Banko	
ERDC/CERL SR-18-7	Dec 2018	Knowledge-Based Condition Assessment Reference Manual for Building Component-Sections: For Use with BUILDER™ and BuilderRED™ (v. 3 series), by D.R. Uzarski, M.N. Grussing, and B.B. Mehnert <a href="http://dx.doi.org/10.21079/11681/31236">http://dx.doi.org/10.21079/11681/31236</a>	AD1081470
ERDC/CERL SR-19-1	Jun 2019	Pulverized Paper as a Soil Carbon Source for Degraded Training Lands: User Guide, by R. Busby, H.A. Torbet, and S.A. Prior <a href="http://dx.doi.org/10.21079/11681/33083">http://dx.doi.org/10.21079/11681/33083</a>	AD1081473
ERDC/CERL SR-19-3	Sep 2019	Pulverized Paper as a Soil Carbon Source for Degraded Training Lands: Final Report, by R. Busby, H.A. Torbet, and S.A. Prior <a href="http://dx.doi.org/10.21079/11681/34203">http://dx.doi.org/10.21079/11681/34203</a>	
ERDC/CERL SR-19-4	Sep 2019	Finding Space: A Field Guide for Incorporating Low Impact Developments into Military Historic Districts, by E.R. Hartman <a href="http://dx.doi.org/10.21079/11681/34303">http://dx.doi.org/10.21079/11681/34303</a>	

<sup>1</sup> Limited distribution; see Preface.

## Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CERL TR-17-26	Feb 2019	Systems Approach to Improved Facility Energy Performance, by J.P. Miller <a href="http://dx.doi.org/10.21079/11681/32944">http://dx.doi.org/10.21079/11681/32944</a>	AD1081474
ERDC/CERL TR-18-32	Oct 2018	Conflating Survey Data into Sociocultural Indicator Maps, by C.R. Ehlschlaeger, J.A. Burkhalter, N.R. Myers, C.L. Baxter, M.D. Hiatt, E.R. Hartman, S.A. Tweddale, J.D. Westervelt, R.C. Lozar, Y. Gao, D. Yin, M.V. Drigo, and D.A. Brown <a href="http://dx.doi.org/10.21079/11681/29921">http://dx.doi.org/10.21079/11681/29921</a>	AD1081477
ERDC/CERL TR-18-33	Oct 2018	ROOFER™ Energy Performance Assessment and Course of Action Analyses, by S.J. Vance, J.O. Flores, and K. Biswas <a href="http://dx.doi.org/10.21079/11681/29976">http://dx.doi.org/10.21079/11681/29976</a>	AD1070092
ERDC/CERL TR-18-34	Oct 2018	Demonstration of Dehumidification for Corrosion Control in Earth Covered Magazines: Final Report on Project F07-ARCTCO2, by M.K. McInerney, O.S. Marshall Jr., and L.A. Gintert <a href="http://dx.doi.org/10.21079/11681/29971">http://dx.doi.org/10.21079/11681/29971</a>	AD1081481
ERDC/CERL TR-18-35	Oct 2018	Cultural Resources Job Descriptions and Position Classification Standards, by M.W. Tooker, D.A. Morrison, and A.D. Smith <a href="http://dx.doi.org/10.21079/11681/29926">http://dx.doi.org/10.21079/11681/29926</a>	AD1081484
<sup>1</sup> ERDC/CERL TR-18-36	Dec 2018	Documentation of Buildings 45, 46, 47, 48, 374, 376, 378, and 380 at Fort Riley, Kansas, by S.I. Ensore and J.L. Webster	
ERDC/CERL TR-18-37	Dec 2018	Historic Landscape Inventory for Corinth National Cemetery, by S.I. Ensore, E.R. Hartman, and A.D. Smith <a href="http://dx.doi.org/10.21079/11681/31146">http://dx.doi.org/10.21079/11681/31146</a>	AD1081828
ERDC/CERL TR-18-38	Dec 2018	Determination of NRHP Eligibility for 26 Buildings at Fort McCoy, Wisconsin, by A.D. Smith and S.E. Adams <a href="http://dx.doi.org/10.21079/11681/31235">http://dx.doi.org/10.21079/11681/31235</a>	AD1081846
ERDC/CERL TR-18-39	Dec 2018	Evaluation of Roof Leak Detection Utilizing Unmanned Aircraft Systems Equipped with Thermographic Sensors, by S.J. Vance, M.E. Richards, and M.C. Walters <a href="http://dx.doi.org/10.21079/11681/31239">http://dx.doi.org/10.21079/11681/31239</a>	AD1081485

<sup>1</sup> Limited distribution; see Preface.

ERDC/CERL TR-19-1	Jan 2019	Application of the FICUS Data-Conflation Model to a Theoretical Humanitarian Crisis Analytical Framework, by E. Bastian, C. Munaretto, N.R. Myers, C.L. Baxter, J. Fishman, J.D. Westervelt, C.R. Ehlschlaeger, and J.A. Burkhalter <a href="http://dx.doi.org/10.21079/11681/32006">http://dx.doi.org/10.21079/11681/32006</a>	AD1081856
ERDC/CERL TR-19-2	Jan 2019	Demonstration of Dehumidification Technology for a Missile-Storage Facility: Final Report on Project F11-AR25, by M.K. McInerney, S.C. Sweeney, and O.S. Marshall <a href="http://dx.doi.org/10.21079/11681/32297">http://dx.doi.org/10.21079/11681/32297</a>	AD1081486
ERDC/CERL TR-19-3	Sep 2019	Evaluation of Turfgrass Replacement Options: Artificial Turf, by E.M. Jenicek and A.T. Rodriguez <a href="http://dx.doi.org/10.21079/11681/34244">http://dx.doi.org/10.21079/11681/34244</a>	
ERDC/CERL TR-19-4	Feb 2019	Demonstration and Validation of Polymer Concrete Piping for Corrosive Environments: Final Report on Project F14-AR07, by C.A. Wilson, J.S. Edwards, S.L. Lamkin, A. Delgado-Connor, and P.C. Simonton <a href="http://dx.doi.org/10.21079/11681/32320">http://dx.doi.org/10.21079/11681/32320</a>	AD1069296
ERDC/CERL TR-19-5	Feb 2019	Pre-Reconstruction Planning, by G. Al-Chaar, C.L. Baxter, A.H. Elmajdoub, K. Cupka-Head, and G.C. Calfas <a href="http://dx.doi.org/10.21079/11681/32321">http://dx.doi.org/10.21079/11681/32321</a>	AD1069295
ERDC/CERL TR-19-6	May 2019	Historic Landscape Inventory for Chattanooga National Cemetary, by S.I. Ensore, A. Smith, M.W. Tooker, and E.R. Hartman <a href="http://dx.doi.org/10.21079/11681/32866">http://dx.doi.org/10.21079/11681/32866</a>	AD1081770
ERDC/CERL TR-19-7	Apr 2019	A Framework for Prioritizing Conservation of Listed and At-Risk Species Across Taxa and Installations : A Demonstration using the DoD and Plant Biodiversity Hotspot of California, by M.G. Hohmann and W.A. Wall <a href="http://dx.doi.org/10.21079/11681/32569">http://dx.doi.org/10.21079/11681/32569</a>	AD1081489
ERDC/CERL TR-19-8	May 2019	Flood Resilience of Traditional Building Materials: Report of Simulated Flood Immersion According to ASTM E3075 Standard Procedures, by P.B. Stynoski, T.A. Carlson, A.M. Brake, C.M. Arnett, M.L. Banko, and M.M. Landi <a href="http://dx.doi.org/10.21079/11681/32823">http://dx.doi.org/10.21079/11681/32823</a>	AD1081490
ERDC/CERL TR-19-9	Aug 2019	Raven Rock Mountain Complex Site C Archaeological Phase I Survey, by C.L. Baxter, A.D. Smith, and E.R. Hartman <a href="http://dx.doi.org/10.21079/11681/33725">http://dx.doi.org/10.21079/11681/33725</a>	AD1078617

ERDC/CERL TR-19-10	Aug 2019	Raven Rock Mountain Complex Site R Archaeological Site Revisit, by C.L. Baxter, A.D. Smith, and E.R. Hartman <a href="http://dx.doi.org/10.21079/11681/33705">http://dx.doi.org/10.21079/11681/33705</a>	AD1078618
ERDC/CERL TR-19-11	Mar 2019	A Regional Population Viability Approach for Threatened and Endangered Species Management on Army Installations, by W.R. Fields, W.A. Wall, B.A. DeGregorio, and M.G. Hohmann <a href="http://dx.doi.org/10.21079/11681/33205">http://dx.doi.org/10.21079/11681/33205</a>	AD1076309
ERDC/CERL TR-19-13	Sep 2019	Development of a Cholera Epidemiological Risk Assessment Framework, by E. Bastian, C. Munaretto, N.R. Myers, C.L. Baxter, J. Fishman, J.D. Westervelt, C.R. Ehlschlaeger, and J.A. Burkhalter <a href="http://dx.doi.org/10.21079/11681/34162">http://dx.doi.org/10.21079/11681/34162</a>	AD1081298
ERDC/CERL TR-19-14	Sep 2019	Quantifying Uncertainty in Population Weighting of Twitter Analyses for Urban Risk Assessment, by E.G. Bastian, N.R. Myers, C.R. Ehlschlaeger, and J.A. Burkhalter <a href="http://dx.doi.org/10.21079/11681/34163">http://dx.doi.org/10.21079/11681/34163</a>	AD1081128
ERDC/CERL TR-19-15	Aug 2019	Rehabilitation of Deteriorated Wood Railroad Ties Using Inorganic Polymers: Final Report on Project F17-AR03, by G.K. Al-Chaar, K. Sankar, and W.M. Kriven <a href="http://dx.doi.org/10.21079/11681/33628">http://dx.doi.org/10.21079/11681/33628</a>	AD1078014
ERDC/CERL TR-19-16	Sep 2019	Air Force Native American Graves Protection and Repatriation Act (NAGPRA) Review and Summary, 2019, by A.M. Hamblin and D.A. Morrison <a href="http://dx.doi.org/10.21079/11681/34164">http://dx.doi.org/10.21079/11681/34164</a>	AD1081121
ERDC/CERL TR-19-17	Sep 2019	Demonstration of Electro-Osmotic Pulse and Dehumidification Technologies to Mitigate Corrosion in Earth Covered Magazines: Final Report on Project F08-AR23, by M.K. McInerney, O.S. Marshall Jr., L. Clark, C. Olaes, P. Noyce and P. Reedy <a href="http://dx.doi.org/10.21079/11681/34023">http://dx.doi.org/10.21079/11681/34023</a>	AD1080651
ERDC/CERL TR-19-18	Aug 2019	Demonstration of Electro-Osmotic Pulse Technology to Mitigate Alkali-Silica Reaction in Concrete Pavement: Final Report on Project F08-AR24, by M.K. McInerney, O.S. Marshall Jr., P.A. Noyce, and G. Blohm <a href="http://dx.doi.org/10.21079/11681/34123">http://dx.doi.org/10.21079/11681/34123</a>	AD1082124
ERDC/CERL TR-19-22	Sep 2019	Beale Air Force Base Architectural Inventory: 1942-1978, by E.R. Hartman and S.I. Ensore <a href="http://dx.doi.org/10.21079/11681/34243">http://dx.doi.org/10.21079/11681/34243</a>	

## 5 Environmental Laboratory (EL)

### Contract reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL CR-19-1	Jul 2019	Determination of Nanomaterials' Film Thickness Using Filmetrics F40-UV Thin-Film Analyzer; Standard Operating Procedure Series : Characterization (C), by Q. Wu, K. Kremer, and S. Gibbons <a href="http://dx.doi.org/10.21079/11681/33627">http://dx.doi.org/10.21079/11681/33627</a>	AD1077727
ERDC/EL CR-19-2	Aug 2019	Investigations into Biological Control for Common Reed and Flowering Rush, by P. Häfliger, C. Ellison, and H.L. Hinz <a href="http://dx.doi.org/10.21079/11681/33795">http://dx.doi.org/10.21079/11681/33795</a>	AD1078574

### Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL SR-18-8	Oct 2018	Engineering with Nature: An Atlas, by T.S. Bridges, E.M. Bourne, J.K. King, H.K. Kuzmitski, E.B. Moynihan, and B.C. Suedel <a href="http://dx.doi.org/10.21079/11681/27929">http://dx.doi.org/10.21079/11681/27929</a>	AD1081504
ERDC/EL SR-19-1	May 2019	Determination of Fluorescence Emission and UV-Vis-NIR Absorbance for Nanomaterials Solution Using a HRIBA Scientific NanoLog® Soetrofluorometer, by Q. Wu, K. Kremer, S. Gibbons, and A.J. Kennedy <a href="http://dx.doi.org/10.21079/11681/32969">http://dx.doi.org/10.21079/11681/32969</a>	AD1074355
ERDC/EL SR-19-2	May 2019	Determination of Metal Ion Contents in Nanomaterials Solution Using Inductively Coupled Plasma - Mass Spectrometry (ICP-MS): Nano Risk SOP-P, by Q. Wu, K. Kremer, Y. Jiang, S. Gibbons, and A.J. Bednar <a href="http://dx.doi.org/10.21079/11681/32729">http://dx.doi.org/10.21079/11681/32729</a>	AD1073269
ERDC/EL SR-19-3	May 2019	Bioassay to Assess Toxicity of Water-Dispersed Engineered Nanomaterials in Plants; Scientific Operating Procedure Series: Toxicology (T), by A.J. Kennedy, N. Smith, A. Linan, and L. Kovacs <a href="http://dx.doi.org/10.21079/11681/33388">http://dx.doi.org/10.21079/11681/33388</a>	AD1074176
ERDC/EL SR-19-4	Jun 2019	Maintaining Salt Marshes in the Face of Sea Level Rise — Review of Literature and Techniques, by C.M. VanZomeren, D. Acevedo-Mackey, E.O. Murray, and T.J. Estes <a href="http://dx.doi.org/10.21079/11681/33297">http://dx.doi.org/10.21079/11681/33297</a>	AD1075958

ERDC/EL SR-19-5	Jun 2019	A Review of Coastal Vulnerability Assessments: Definitions, Components, and Variables, by C. VanZomeren and D. Acevedo-Mackey <a href="http://dx.doi.org/10.21079/11681/33289">http://dx.doi.org/10.21079/11681/33289</a>	AD1075869
ERDC/EL SR-19-6	Jun 2019	Determination of Contact Angle and Surface Tension of Nanomaterial Solutions by Optical Contact Angle System, by Q. Wu, K. Kremer, S. Gibbons, and A.J. Kennedy <a href="http://dx.doi.org/10.21079/11681/33395">http://dx.doi.org/10.21079/11681/33395</a>	AD1076386
ERDC/EL SR-19-7	Jun 2019	Saccharomyces cerevisiae (Budding Yeast); Standard Operating Procedure Series: Toxicology (T), by C. Campbell, C. Horstmann, K. Kim and A.J. Kennedy <a href="http://dx.doi.org/10.21079/11681/33688">http://dx.doi.org/10.21079/11681/33688</a>	AD1076361
ERDC/EL SR-19-8	Jul 2019	Determining the Bacterial Cytotoxicity of Silver Nanomaterials; Scientific Operating Procedure Series: Toxicity (T), by P.W. Schweiger, B. Tribell, M. Blank, and A.J. Kennedy <a href="http://dx.doi.org/10.21079/11681/33448">http://dx.doi.org/10.21079/11681/33448</a>	AD1076428

## Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TN-18-1	Dec 2018	Taxonomic Soils Geomatics Investigation, by A. Davis, J. Furey, C. Morgan, and J. Seiter-Moser <a href="http://dx.doi.org/10.21079/11681/31458">http://dx.doi.org/10.21079/11681/31458</a>	AD1066196

## Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TR-18-12	Oct 2018	Abiotic Removal of Phosphate From Surface Water - Bench Scale to Meso-Scale, by C.M. Jung, J.O. Eberly, G.A. Blakeney, and H.M. Knotek-Smith <a href="http://dx.doi.org/10.21079/11681/29535">http://dx.doi.org/10.21079/11681/29535</a>	AD1061242
ERDC/EL TR-18-13	Dec 2018	Framework for a General Restoration Model for Ecosystems with Anadromous Fish for U.S. Army Corps of Engineers. Phase 1: Conceptual Model Development, by B.D. Herman, T.M. Swannack, M.K. Reif, N. Richards, T. Barnes, and C.D. Piercy <a href="http://dx.doi.org/10.21079/11681/32265">http://dx.doi.org/10.21079/11681/32265</a>	AD1067419

ERDC/EL TR-18-15	Dec 2018	Analysis of Environmentally Acceptable Lubricants (EALs) for U.S. Army Corps of Engineers (USACE) Dams, by V.F. Medina, M.T. Wynter, T.M. Paulus, and J.R. Wilson <a href="http://dx.doi.org/10.21079/11681/30837">http://dx.doi.org/10.21079/11681/30837</a>	AD1081506
<sup>1</sup> ERDC/EL TR-19-1	Feb 2019	Wastewater Treatment Technologies for Insensitive Munitions Production at McAlester Army Ammunition Plant, by D.R. Felt, J.L. Johnson, L.A. Gurtowski, S. Sullivan, A. Holcomb, and L. Thomas	AD1069870
ERDC/EL TR-19-2	Feb 2019	Physicochemical Treatment of Cyanobacteria and Microcystin by Hydrodynamic Cavitation and Advanced Oxidation, by C.C. Thomas, A.D. Butler, V.F. Medina, C.S. Griggs, and A.W. Katzenmeyer <a href="http://dx.doi.org/10.21079/11681/32313">http://dx.doi.org/10.21079/11681/32313</a>	AD1068056
ERDC/EL TR-19-3	Mar 2019	Genetic and Morphological Differences of Water Chestnut (Myrtales: Lythraceae: Trapa): Populations in the Northeastern United States, Japan, and South Africa, by L.L. Dodd, N. Rybicki, R. Thum, Y. Kadono, and K. Ingram <a href="http://dx.doi.org/10.21079/11681/32506">http://dx.doi.org/10.21079/11681/32506</a>	AD1070329
ERDC/EL TR-19-4	Jun 2019	Draft Standard Monitoring Protocols for Herbaceous Vegetation, by B.D. Herman <a href="http://dx.doi.org/10.21079/11681/33123">http://dx.doi.org/10.21079/11681/33123</a>	AD1075121
ERDC/EL TR-19-5	Jun 2019	Crosslinking Graphene Oxide and Chitosan to Form Scalable Water Treatment Membranes, by J. Mattei-Sosa, V.F. Medina, C.S. Griggs, and V.G. Gude <a href="http://dx.doi.org/10.21079/11681/33263">http://dx.doi.org/10.21079/11681/33263</a>	AD1075867
ERDC/EL TR-19-6	Aug 2019	Methods Evaluation for Assessing Release of Manufactured Nanomaterials from Polymers, Consistent with the NanoGRID Framework; Advanced and Additive Materials: Sustainability for Army Acquisitions, by L.T. Haber, A.J. Bednar, A.J. Kennedy, M.L. Ballentine, and R.A. Canady <a href="http://dx.doi.org/10.21079/11681/33704">http://dx.doi.org/10.21079/11681/33704</a>	AD1078320
ERDC/EL TR-19-7	Jun 2019	Using Automatic Identification System (AIS) Data to Assess Collision and Grounding Risk in U.S. Coastal Ports, by M.T. Schultz and S.G. Bourne <a href="http://dx.doi.org/10.21079/11681/33343">http://dx.doi.org/10.21079/11681/33343</a>	AD1076224

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<sup>1</sup> Limited distribution; see Preface.

ERDC/EL TR-19-8	Jul 2019	Conceptual Development and Testing of a Chitosan/Graphene Oxide (CSGO) "Bandage" to Isolate and Remove Chemical Contamination from Surfaces, by V.F. Medina, C. Noel, and J. Mattei-Sosa <a href="http://dx.doi.org/10.21079/11681/33403">http://dx.doi.org/10.21079/11681/33403</a>	AD1076380
ERDC/EL TR-19-9	Jul 2019	Simulated Field Evaluation of the Decontamination Effluent Treatment System (DETS) for Wash Water from Mass Personnel Decontamination (MPD), Road Test, and Evaluation Treating Perfluorinated Alkyl Substances (PFAS), by V.F. Medina, S.A. Waisner, J. Mattei-Sosa, E. Martinez-Guerra, C.S. Griggs, J.M. Lalley, D.L. Henderson, L.C. Moores, and B.H. Prager <a href="http://dx.doi.org/10.21079/11681/33411">http://dx.doi.org/10.21079/11681/33411</a>	AD1076433
ERDC/EL TR-19-10	Aug 2019	Synthetic Biology: Research Needs for Assessing Environmental Impacts, by C.M. Warner, S.R. Carter, R.F. Lance, F.H. Crocker, H.N. Meeks, B.L. Adams, M.L. Magnuson, E.J. Perkins, T.E. Rycroft, and K.L. Pokrzywinski <a href="http://dx.doi.org/10.21079/11681/33681">http://dx.doi.org/10.21079/11681/33681</a>	AD1078268
ERDC/EL TR-19-11	Aug 2019	Evaluation of Water Quality/Environmental Management Surveys on USACE Managed Reservoirs and Waterways, by V.F. Medina, A.D. Butler, E.B. Emery, and G.A. Clyde <a href="http://dx.doi.org/10.21079/11681/33703">http://dx.doi.org/10.21079/11681/33703</a>	AD1078285
ERDC/EL TR-19-12	Sep 2019	Development and Testing of the Training Range Environmental Evaluation and Characterization System (TREECS™) for Arctic/Sub-Arctic Conditions, by M.S. Dortch, J.L. Ryder, J.A. Gerald, and B.E. Johnson <a href="http://dx.doi.org/10.21079/11681/34103">http://dx.doi.org/10.21079/11681/34103</a>	AD1080577
ERDC/EL TR-19-13	Aug 2019	Shale Barren Mapping and Threatened and Endangered Species Surveys for Raystown Lake, PA: U.S. Army Corps of Engineers, Baltimore District, by M.P. Guilfoyle, K.D. Philley, E.R. Britzke, A.B. Harrison, W.T. Slack, and N. Schoppmann <a href="http://dx.doi.org/10.21079/11681/33963">http://dx.doi.org/10.21079/11681/33963</a>	AD1081748
ERDC/EL TR-19-14	Sep 2019	Development of an Automated Digital System for Delivery of Aquatic Herbicides, by B.M. Sabol, B. Bultemeier, R.E. Melton Jr., K.D. Getsinger, and M.D. Netherland <a href="http://dx.doi.org/10.21079/11681/33983">http://dx.doi.org/10.21079/11681/33983</a>	AD1079946

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<sup>1</sup> ERDC/EL TR-19-15	Sep 2019	Pilot-Scale Evaluation of an IMX-101 Process Water Management System, by L.A. Gurtowski, J.L. Johnson, S.G. Zetterholm, D.B. Gent, K.N. Noel, C. Nestler, and S.L. Larson	AD1079984
ERDC/EL TR-19-16	Sep 2019	Demonstration and Evaluation of Eurasian Watermilfoil Control using Aquatic Herbicides in Fort Peck Lake, MT, by R.L. Podkowka, K.D. Getsinger, J.G. Skogerboe, P.L. Gilbert, and T.G. Pennington <a href="http://dx.doi.org/10.21079/11681/33991">http://dx.doi.org/10.21079/11681/33991</a>	AD1080018
ERDC/EL TR-19-17	Sep 2019	Comparison of Generic and Proprietary Aquatic Herbicides for Control of Invasive Vegetation: Part 1. Floating Plants, by C.R. Mudge and K.D. Getsinger <a href="http://dx.doi.org/10.21079/11681/34183">http://dx.doi.org/10.21079/11681/34183</a>	AD1081072
ERDC/EL TR-19-18	Sep 2019	Evaluating Effects of Dredging-Induced Underwater Sound on Aquatic Species: A Literature Review, by B.C. Suedel, A.D. McQueen, J.L. Wilkens, and M.P. Fields <a href="http://dx.doi.org/10.21079/11681/34245">http://dx.doi.org/10.21079/11681/34245</a>	

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<sup>1</sup> Limited distribution; see Preface.

## 6 Geospatial Research Laboratory (GRL)

### Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>
<sup>1</sup> ERDC/GRL MP-19-1	Mar 2019	Robust Forest Cover Indices for Multispectral Images, by S.J. Becker, C.S.T. Daughtry, and A.L. Russ

### Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TN-19-1	Apr 2019	Parts Unmapped: Linear Multi-variate Analysis of Food, Water, and Temperature Requirements for Regional Stability, by K.R. Miner and R.E. Rodgers <a href="http://dx.doi.org/10.21079/11681/32565">http://dx.doi.org/10.21079/11681/32565</a>	AD1081507
ERDC/GRL TN-19-2	Aug 2019	Boolean Decomposition of Spatiotemporal Tensors, by C. Chen, C.L. Ellison, Z.J. Roth, and M.A. Simper <a href="http://dx.doi.org/10.21079/11681/33849">http://dx.doi.org/10.21079/11681/33849</a>	AD1078957

### Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TR-19-1	Sep 2019	Forest Cover Index for Tree Cover Detection Using Landsat-7 Multispectral Imagery, by L.I. Feliciano-Cruz, S.J. Becker, K.D. Lasko, C.S.T. Daughtry, and A.L. Russ <a href="http://dx.doi.org/10.21079/11681/34072">http://dx.doi.org/10.21079/11681/34072</a>	AD1080372

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<sup>1</sup> Embargo in place until March 2020.

## 7 Geotechnical and Structures Laboratory (GSL)

### Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
<sup>1</sup> ERDC/GSL SR-19-1	Aug 2019	User's Guide for PENCURV+: Version 2.8, by M.D. Adley, K.T. Danielson, B.C. Patterson, R.P. Berger, A.J. Burroughs, T.A. Waddell, and D.D. Boswell	
<sup>1</sup> ERDC/GSL SR-19-2	Sep 2019	The Hardened Alternative Trailer System (HATS) Deployment Guide: Living Document, by J.M. Roberts, M.J. Roth, and C.R. Ackerman	

### Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TN-19-1	Jan 2019	Geophysical Feasibility Study to Identify Signs of Chimney Drain/Drainage Blanket Clogging in Canyon Dam Canyon Lake, Comal County, Texas, by J. Simms and K. Martin <a href="http://dx.doi.org/10.21079/11681/31461">http://dx.doi.org/10.21079/11681/31461</a>	AD1066195

### Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TR-18-28	Oct 2018	Wave-Speed-Based Performance Indicators for Portugues Dam, by Z.H. Duron, P. Orme, S. Anderson, H. Diaz-Alvarez, V.P. Chiarito, and M.H. McKenna <a href="http://dx.doi.org/10.21079/11681/29854">http://dx.doi.org/10.21079/11681/29854</a>	AD1081509
<sup>1</sup> ERDC/GSL TR-18-29	Oct 2018	Full- and 0.67-Scale Model Studies of Explosive Attacks on Non-Water-Backed Zoned Embankment Dams: The Red Zone Experimental Effort for the United States Bureau of Reclamation, by A.A. Armstrong, D.D. Rickman, S.D. Turner, R.G. Rhett, K. Langston, and G.H. Sutley	AD1081750

<sup>1</sup> Limited distribution; see Preface.

<sup>1</sup> ERDC/GSL TR-18-30	Oct 2018	0.67-Scale Model Studies of Explosive Attacks on Water-Backed Zoned Embankment Dams: The Water Red Zone Experimental Effort for the United States Bureau of Reclamation, by A.A. Armstrong, D.D. Rickman, S.D. Turner, N. Nakamoto, and G.H. Sutley	AD1081751
ERDC/GSL TR-18-31	Oct 2018	Mechanical Behavior of Cor-Tuf Ultra-High Performance Concrete Considering Aggregate and Paste Effects, by I.L. Howard, A. Carey, M. Burcham, D.A. Scott, J.D. Shannon, R.D. Moser, and M.F. Horstemeyer <a href="http://dx.doi.org/10.21079/11681/29642">http://dx.doi.org/10.21079/11681/29642</a>	AD1081511
ERDC/GSL TR-18-32	Nov 2018	Little Rock Air Force Base Aggregate and Concrete Testing, by J.D. Shannon <a href="http://dx.doi.org/10.21079/11681/30368">http://dx.doi.org/10.21079/11681/30368</a>	AD1081512
ERDC/GSL TR-18-33	Dec 2018	Laboratory Evaluation of Next-Generation Backfill Materials and Methods for Airfield Damage Repair, by T.R. Johnson, C.A. Weiss, Jr., L. Edwards, J.S. Tingle, W.S. Harmon, and T.J. Talbot <a href="http://dx.doi.org/10.21079/11681/31445">http://dx.doi.org/10.21079/11681/31445</a>	AD1066172
<sup>1</sup> ERDC/GSL TR-18-34	Dec 2018	Experimental Results for Fragment-Induced Dry Spillage from Containers using a Fragment Launcher, by P.W. Graham, R.E. Magee, and K.L. Tillman	AD1070168
<sup>1</sup> ERDC/GSL TR-18-35	Dec 2018	DBA-105P Re-Development, Explosive Property Testing with Indian Head Oxidizer: 500-Gallon Scale, by S.L. Garlington, M.J. Roth, B.W. Bullock, T.A. Carriveau, D.C. Guynes, A.J. Jackson, R.E. Magee, and D.V. Senior	AD1081755
<sup>1</sup> ERDC/GSL TR-19-1	Jan 2019	Experimental Results for Bimodal Test Series 2 (Triacetin): Tests BM21 through BM41, by P.W. Graham and J.K. Minor	AD1070176
<sup>1</sup> ERDC/GSL TR-19-2	Feb 2019	An Evaluation of the Effects of Soil Type and Placement Parameters on Explosive Cratering: Results and Analyses of Intermediate-Scale Flat Terrain Tests, by G.K. Doles, D.D. Rickman, S.S. Graham, M.D. Marshall, L.L. Jeffers, and J.M. Brown	AD1070537
ERDC/GSL TR-19-3	Feb 2019	Localization and Mapping of Unknown Locations with Unmanned Ground Vehicles, by D.M. Turnage <a href="http://dx.doi.org/10.21079/11681/32277">http://dx.doi.org/10.21079/11681/32277</a>	AD1067505

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<sup>1</sup> Limited distribution; see Preface.

ERDC/GSL TR-19-4	Feb 2019	Evaluation of Commercially Available Screeds for Finishing of Rapid-Setting Concrete, by W.D. Carruth <a href="http://dx.doi.org/10.21079/11681/32311">http://dx.doi.org/10.21079/11681/32311</a>	AD1067956
ERDC/GSL TR-19-5	Mar 2019	Scour Level II Assessment of U.S. Army Installation Bridge; Facility Number: BRG15 Fort Stewart, Georgia, by S.M. Arias-Román and D. Suazo-Dávila <a href="http://dx.doi.org/10.21079/11681/32361">http://dx.doi.org/10.21079/11681/32361</a>	AD1068787
<sup>1</sup> ERDC/GSL TR-19-6	Mar 2019	Literature Review: Survey of Blast Testing on Concrete Perimeter Walls, by J.K. Fulk, D.H. Nelson, R.E. Walker, O.G. Flores, M.J. Roth, and C.R. Ackerman	AD1069446
<sup>1</sup> ERDC/GSL TR-19-7	Mar 2019	Assault Amphibious Vehicle Survivability Upgraded Soft-Soil Testing – One Pass Vehicle Cone Index(VCl <sub>1</sub> ), by J.E. Osorio, B.W. Towne, and J.T. Carrillo	AD1069196
ERDC/GSL TR-19-8	Mar 2019	Determination of Structural Properties of Airfield Matting, by L. Gacia and N.R. Hoffman <a href="http://dx.doi.org/10.21079/11681/32402">http://dx.doi.org/10.21079/11681/32402</a>	AD1069209
ERDC/GSL TR-19-9	Mar 2019	Introducing Additional Energy Dissipation Mechanisms in Steel Fiber Reinforcement for Ultra-High Performance Concrete, by D.A. Scott, R.D. Moser, Z.B. McClelland, S.L. Williams, B.A. Williams, W.R. Long, B.H. Green, K.E. Walker, C.N. Downey, and A.J. Tillotson <a href="http://dx.doi.org/10.21079/11681/32405">http://dx.doi.org/10.21079/11681/32405</a>	AD1069253
ERDC/GSL TR-19-10	Mar 2019	Development of a Lightweight Airfield Anchor Test Kit, by A.B. Groeneveld, M.W. Trim, M. Mejías-Santiago, and C.A. Rutland <a href="http://dx.doi.org/10.21079/11681/32505">http://dx.doi.org/10.21079/11681/32505</a>	AD1081759
ERDC/GSL TR-19-11	Mar 2019	Residual Expansion Capacity and Degradation of Mechanical Properties in Alkali-Silica Reaction (ASR) Damaged Concrete, by M.A. Ramsey, S.G. Wood, and R.D. Moser <a href="http://dx.doi.org/10.21079/11681/32485">http://dx.doi.org/10.21079/11681/32485</a>	AD1070091
ERDC/GSL TR-19-12	Apr 2019	A Multiscale Meshfree Approach to Modeling Damage of Cor-Tuf without Fibers Using Fracture Energy Experiments, by J.A. Sherburn, W.F. Heard, B.A. Williams, and P.A. Sparks <a href="http://dx.doi.org/10.21079/11681/32547">http://dx.doi.org/10.21079/11681/32547</a>	AD1070537

<sup>1</sup> Limited distribution; see Preface.

ERDC/GSL TR-19-13	Apr 2019	Laboratory Tensile Performance of Joint Adhesive for Asphalt Pavements, by W.J. Robinson, J.D. Doyle, and J.A. Harrison <a href="http://dx.doi.org/10.21079/11681/32546">http://dx.doi.org/10.21079/11681/32546</a>	AD1070333
<sup>1</sup> ERDC/GSL TR-19-14	Apr 2019	Experiments and Simulations to Quantify Blast-Wave Interaction with Generic Vehicles for Ideal and Homemade Explosive Detonations, by A.A. Doles, G.K. Doles, N.T. Williams, J.Q. Ehr Gott, Jr., J.E. Windham, J.L. Morrow, and R.L. Jeffers	AD1081761
<sup>1</sup> ERDC/GSL TR-19-15	May 2019	SIAM Deployment and Documentation: A Guide and Case Study, by C.P. Simpson, S.L. McComas, R.D. Whitlow, K.M. McLaughlin, M.H. McKenna, and B.G. Quinn	AD1081762
<sup>1</sup> ERDC/GSL TR-19-16	Apr 2019	Buried Blast Tests and Simulations to Investigate Surface Area Effect on Impulse, by N.T. Williams, G.K. Doles, J.Q. Ehr Gott, Jr., S.A. Akers, J.E. Windham, J.L. Morrow, L.L. Jeffers, and J.M. Brown	AD1081764
ERDC/GSL TR-19-17	Apr 2019	Scour Assessment for a Bridge with Limited Site Data: Bridge 00B06, Milan Army Ammunition Plant, Tennessee, by S.M. Arias-Román and D. Suazo-Dávila <a href="http://dx.doi.org/10.21079/11681/32585">http://dx.doi.org/10.21079/11681/32585</a>	AD1071724
<sup>1</sup> ERDC/GSL TR-19-18	Apr 2019	Blast Protection for Cast-Iron Tunnel Walls: Experimental Results, by B.W. Foust, J.O. Torres-Alamo, and L.K. Davis	AD1072750
ERDC/GSL TR-19-20	Apr 2019	Investigation of the Mechanisms for the Delamination Resistance Found in Bio-Engineered Composites Found in Nature: Bi-Layered Exoskeleton Fish Scales, by W.D. Hodo <a href="http://dx.doi.org/10.21079/11681/32680">http://dx.doi.org/10.21079/11681/32680</a>	AD1072804
ERDC/GSL TR-19-21	May 2019	Rock Demolition and Hazardous Debris Removal for Ecosystem Restoration on the Elwha River, by C.W. Ertle, M.J. Roth, J.S. Judson and G.H. Vankirk <a href="http://dx.doi.org/10.21079/11681/33090">http://dx.doi.org/10.21079/11681/33090</a>	AD1081525
ERDC/GSL TR-19-22	May 2019	Ultra-Accelerated Alkali-Silica Reaction Testing Using Autoclaving Methods, by R.D. Moser, S.G. Wood, M.A. Ramsey, J.S. Tingle, E.R. Reed-Gore, C.M. Strack, and C.A. Rutland <a href="http://dx.doi.org/10.21079/11681/32709">http://dx.doi.org/10.21079/11681/32709</a>	AD1081766

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<sup>1</sup> Limited distribution; see Preface.

<sup>1</sup> ERDC/GSL TR-19-23	May 2019	Investigation of Constituent Materials used to Develop Ultra-High Performance Concrete in Guam, by B.A. Williams, W.F. Heard, D.A. Scott, and M.I. Hammons	AD1074260
ERDC/GSL TR-19-24	May 2019	Constituent Materials Characterization for Virtual Concrete Microstructure Generation, by J.D. Shannon, C.M. Strack, and R.D. Moser <a href="http://dx.doi.org/10.21079/11681/33054">http://dx.doi.org/10.21079/11681/33054</a>	AD1074554
ERDC/GSL TR-19-25	May 2019	Mesoscale Modeling of Cementitious Materials: Phase I, by M.Q. Chandler, W.B. Lawrimore, M.C. Edwards, R.D. Moser, J.D. Shannon, and J.L. O'Daniel <a href="http://dx.doi.org/10.21079/11681/32980">http://dx.doi.org/10.21079/11681/32980</a>	AD1074409
<sup>1</sup> ERDC/GSL TR-19-26	Jun 2019	Laboratory Evaluation of Lightweight Flexible Matting Systems, by L. Garcia	AD1075836
ERDC/GSL TR-19-27	Jun 2019	Developmental Design of the Remotely Piloted Vehicle System, by D.M. Turnage, B.W. Towne, B.Q. Gates, C.L. Cummins, R.D. Ellison, and C.A. Barela <a href="http://dx.doi.org/10.21079/11681/33234">http://dx.doi.org/10.21079/11681/33234</a>	AD1076328
<sup>1</sup> ERDC/GSL TR-19-28	Jun 2019	Study of the Design Methodology for Curtain Walls with Four-Side Structural Silicone Glazing in Blast Loading Environments, by J.B. Jordan	AD1076097
ERDC/GSL TR-19-29	Jun 2019	Evaluation of Concrete Spall Repair Materials, by A.J. Falls <a href="http://dx.doi.org/10.21079/11681/33309">http://dx.doi.org/10.21079/11681/33309</a>	AD1076383
<sup>1</sup> ERDC/GSL TR-19-30	Jun 2019	Implementation of Impulse Reduction Factors into the Simplified Survivability Assessment Overhead Cover Design Application for Design and Evaluation of Triggering Layer Module, by O. Esquilin-Mangual, F.J. Acosta, C.S. Stephens, D.H. Nelson, and O.G. Flores	AD1076209
<sup>1</sup> ERDC/GSL TR-19-31	Jun 2019	Active Seismic Imaging Improved (ASII): Evaluation of the Next Generation of the ASI System, by S.D. Sloan, E.P. Simpson, D.Z. Feigenbaum, J.R. Picucci, R.D. Miller, J. Anderson, B. Bennett, A. Hoch, J. Scobee, B. Wedel, S. Morton, Y. Wang, J. Ivanov, and S.L. Peterie	AD1076474

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<sup>1</sup> Limited distribution; see Preface.

<sup>1</sup> ERDC/GSL TR-19-32	Jul 2019	Development of the Modular Protective System Overhead Cover: Evaluation of E-glass as a Triggering Material, by O. Esquilin-Mangual, D.K. Sham, B.A. Jones, W.J. McCleave, O.G. Flores, R.N. Boone, M.E. Glynn, and O. Carrasquillo-Franco	AD1076529
ERDC/GSL TR-19-33	Jul 2019	Predicting Service Life Utilizing Freeze-thaw Modeling of Aging Navigation Structures, by J.D. Shannon, R.D. Moser, and S.G. Wood <a href="http://dx.doi.org/10.21079/11681/33469">http://dx.doi.org/10.21079/11681/33469</a>	AD1076472
<sup>1</sup> ERDC/GSL TR-19-34	Jun 2019	A Soldier-based Assessment of the Installation and Operation of the Linear Sensing System: Findings, by E.P. Simpson, A.L. Tillotson, S.W. Williams, W.E. Coronel, and J.D. Ellis	AD1077031
<sup>1</sup> ERDC/GSL TR-19-35	Jul 2019	Laboratory Characterization and Material Property Prediction Methodology of Fort Polk-15 SP Sand, by S.S. Graham, K.J. Ratliff, S.A. Akers, Z.K. Crosby, T.N. Williams, and M.D. Adley	AD1077334
ERDC/GSL TR-19-36	Jul 2019	Investigation of Sand Boils near Ware, IL, Middle Mississippi River, Preston Levee District, by J.R. Kelley, K.B. Parkman, R.C. Strange, B.R. Breland, J.B. Dunbar, and M.K. Corcoran <a href="http://dx.doi.org/10.21079/11681/33619">http://dx.doi.org/10.21079/11681/33619</a>	AD1077720
ERDC/GSL TR-19-37	Jul 2019	Mixture Proportioning and Characterization of Standard Grout Mixtures for Use at Fort Polk, by D.A. Scott, R.A. Andreatta, W.R. Long, B.H. Green, V.P. Chiarito, K.E. Walker, C.P. Rusche, and C.N. Downey <a href="http://dx.doi.org/10.21079/11681/33749">http://dx.doi.org/10.21079/11681/33749</a>	AD1078619
ERDC/GSL TR-19-38	Aug 2019	Laboratory Measure of SWCC for a Poorly Graded Fine Sand, by L.A. Walshire, O.-D.S. Taylor, and W.W. Berry <a href="http://dx.doi.org/10.21079/11681/33676">http://dx.doi.org/10.21079/11681/33676</a>	AD1078208
ERDC/GSL TR-19-39	Aug 2019	Development of an Integrated Pavement Screed for Screeding Asphalt or Concrete Crater Repairs, by B.C. Cox and N.R. Hoffman <a href="http://dx.doi.org/10.21079/11681/33671">http://dx.doi.org/10.21079/11681/33671</a>	AD1078175
<sup>1</sup> ERDC/GSL TR-19-40	Aug 2019	Analysis of Alternatives for Pavement Damage Cut Out and Removal: E-ADR Spiral 1, by H.P. Bell, S.D. Turner, D.D. Rickman, and J.Q. Ehrgott, Jr.	AD1078945

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<sup>1</sup> Limited distribution; see Preface.

<sup>1</sup> ERDC/GSL TR-19-41	Aug 2019	The Virtual Material Laboratory (VML), Version 3.0: New Capabilities for the Modeling of Blast Protection of Platforms and Personnel, by M.D. Adley and K.T. Danielson	AD1079124
<sup>1</sup> ERDC/GSL TR-19-42	Aug 2019	Analysis of Alternatives for Spiral 2: Crater Fill Materials Processing, Placement, and Compaction, by M. Mejias-Santiago, L. Garcia, and L. Edwards	AD1079460
<sup>1</sup> ERDC/GSL TR-19-43	Aug 2019	Characterizing Effects from a HELLFIRE R9E Warhead Buried in a Simulated Concrete Roadbed, by W.S. Myers, Jr., J.Q. Ehrgott, Jr., J.E. Windham, J. Ramos-Delgado, T.A. Waddell, and S. Bartyczak	AD1079586
ERDC/GSL TR-19-44	Sep 2019	Erosion Control of Earth Covered Magazines to Maintain Minimum Cover Requirements, by J.D. Shannon <a href="http://dx.doi.org/10.21079/11681/34089">http://dx.doi.org/10.21079/11681/34089</a>	AD1081527
<sup>1</sup> ERDC/GSL TR-19-45	Sep 2019	Experimental Results for Cased-Bomb Expansion Rate Tests: Scoping Tests ST15-1 through ST15-24, Measured by a High-Speed Camera, by P.W. Graham	AD1080753
<sup>1</sup> ERDC/GSL TR-19-46	Sep 2019	Experimental Results for a Bare Explosive Blast Load on Nearby Containers: Scoping Test ST4-1, Air Shock Pressure Damage to Containers, by P.W. Graham	AD1081782
<sup>1</sup> ERDC/GSL TR-19-47	Sep 2019	Experimental Results for Bomb Fragment Velocity Tests: Scoping Tests ST14-1 through ST14-53, Measured by a High-Speed Camera, by P.W. Graham	AD1080802
<sup>1</sup> ERDC/GSL TR-19-48	Sep 2019	Experimental Results for Targeting Containers Filled with Pyrotechnic Fuel Mixture VI: Scoping Tests ST12-1 through ST12-13 and ST12-13Cal, by P.W. Graham, J.K. Minor, and K.L. Tillman	AD1081791
<sup>1</sup> ERDC/GSL TR-19-49	Sep 2019	Experimental Results for Bimodal Test Series 4 (Triacetin): Tests BM63 through BM83, by P.W. Graham and R.E. Bennett	AD1081804
<sup>1</sup> ERDC/GSL TR-19-50	Sep 2019	Experimental Results for a Bomb Fragment Debris Filtering Test: Scoping Test ST13-1, by P.W. Graham and K.L. Tillman	AD1081669

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<sup>1</sup> Limited distribution; see Preface.

## 8 Information Technology Laboratory (ITL)

### Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL SR-17-1 App. C	Dec 2018	Publications of the U.S. Army Engineer Research and Development Center. Appendix C: FY18 (October 2017-September 2018), by James A. Dolan <a href="http://dx.doi.org/10.21079/11681/31406">http://dx.doi.org/10.21079/11681/31406</a>	AD1066198
<sup>1</sup> ERDC/ITL SR-18-1	Nov 2018	One-Stop Assessment of Building 335, General Purpose Warehouse, at Rock Island, Illinois, by G.A. Riveros	AD1081532
<sup>1</sup> ERDC/ITL SR-18-2	Nov 2018	One-Stop Assessment of Building 338, General Purpose Warehouse, at Rock Island Arsenal, Rock Island, Illinois, by G.A. Riveros	AD1081533
<sup>1</sup> ERDC/ITL SR-18-3	Nov 2018	One-Stop Assessment of Building 144, Flammable Material Storage, at Rock Island Arsenal, Rock Island, Illinois, by G.A. Riveros	AD1081535
ERDC/ITL SR-18-4	Dec 2018	How to Prepare Technical Publications for the Engineer Research and Development Center: Policies, Standards, and Practices, by W.J. Wolfe <a href="http://dx.doi.org/10.21079/11681/32004">http://dx.doi.org/10.21079/11681/32004</a>	AD1081536
ERDC/ITL SR-19-1	Jul 2019	TradeAnalyzer v4.0 User Guide, by E.R. Mixon, J.Q. Church, K.D. Niles, and T.W. Garton <a href="http://dx.doi.org/10.21079/11681/33474">http://dx.doi.org/10.21079/11681/33474</a>	AD1076452
ERDC/ITL SR-19-2	Jun 2019	Google Search Appliance End of Life and Replacement Recommendations, by B.M. Garton, J.S. Broderick, and B.K. Randle <a href="http://dx.doi.org/10.21079/11681/33410">http://dx.doi.org/10.21079/11681/33410</a>	AD1076371
ERDC/ITL SR-19-3	Jul 2019	Threatened and Endangered Species Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33509">http://dx.doi.org/10.21079/11681/33509</a>	AD1077395
ERDC/ITL SR-19-4	Jul 2019	Analytical Model Software Integration Methods, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33516">http://dx.doi.org/10.21079/11681/33516</a>	AD1077412
ERDC/ITL SR-19-5	Jul 2019	Building Maintenance Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33523">http://dx.doi.org/10.21079/11681/33523</a>	AD1077408

<sup>1</sup> Limited distribution; see Preface.

ERDC/ITL SR-19-6	Jul 2019	Frequency of Extreme Weather Events Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33549">http://dx.doi.org/10.21079/11681/33549</a>	AD1077416
ERDC/ITL SR-19-7	Jul 2019	Range Days Lost to Fire Risk Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33555">http://dx.doi.org/10.21079/11681/33555</a>	AD1077439
ERDC/ITL SR-19-8	Jul 2019	Growing Degree Days Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33562">http://dx.doi.org/10.21079/11681/33562</a>	AD1077449
ERDC/ITL SR-19-9	Jul 2019	Heating and Cooling Degree Days Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33569">http://dx.doi.org/10.21079/11681/33569</a>	AD1077452
ERDC/ITL SR-19-10	Jul 2019	Range Days Lost to Heat Risk Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33576">http://dx.doi.org/10.21079/11681/33576</a>	AD1081539
ERDC/ITL SR-19-11	Jul 2019	Heating and Cooling Cost Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33591">http://dx.doi.org/10.21079/11681/33591</a>	AD1077520
ERDC/ITL SR-19-12	Jul 2019	Range Encroachment Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33599">http://dx.doi.org/10.21079/11681/33599</a>	AD1077523
ERDC/ITL SR-19-13	Jul 2019	Temperature and Precipitation Projections Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33606">http://dx.doi.org/10.21079/11681/33606</a>	AD1077529
ERDC/ITL SR-19-14	Jul 2019	Water Balance Model User's Guide, by B.M. Garton <a href="http://dx.doi.org/10.21079/11681/33614">http://dx.doi.org/10.21079/11681/33614</a>	AD1077533
ERDC/ITL SR-19-15	Aug 2019	TradeAnalysis Visualization Comparisons, by K.D. Niles, J.E. Jabour, J.Q. Church, and T.W. Garton <a href="http://dx.doi.org/10.21079/11681/33809">http://dx.doi.org/10.21079/11681/33809</a>	AD1078751
ERDC/ITL SR-19-16	Sep 2019	Guided-Wave Inspection of California Department of Water Resources Tainter Gate Trunnion Rods: Inspection of Oroville Dam, Thermalito Bypass, and Pyramid Dam, by J.D. Ray, R.D. Brown, and J.A. Evans <a href="http://dx.doi.org/10.21079/11681/34007">http://dx.doi.org/10.21079/11681/34007</a>	AD1080041
ERDC/ITL SR-19-17	Sep 2019	Setting up a Local Database From an Existing .mdf File, by A.I. Santiago Lugo, K.E. Mixon, A.E. Bednar, and B.C. White <a href="http://dx.doi.org/10.21079/11681/34153">http://dx.doi.org/10.21079/11681/34153</a>	AD1080865
ERDC/ITL SR-19-18	Sep 2019	TradeAnalysis v1.1 Technical Guide, by J.Q. Church <a href="http://dx.doi.org/10.21079/11681/34169">http://dx.doi.org/10.21079/11681/34169</a>	AD1081014

## Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL TR-18-2	Dec 2018	Analysis of a River Bank, Levee, or Floodplain I-Wall Embedded in Stratified Soil Layers During Flood Events Using Corps_I-Wall (CI-Wall) Version 2.0, by R.M. Ebeling, B.C. White, and M.T. Fong <a href="http://dx.doi.org/10.21079/11681/31502">http://dx.doi.org/10.21079/11681/31502</a>	AD1081807
ERDC/ITL TR-19-1	May 2019	Underwater Fatigue Repair of Steel Panels Using Carbon Fiber Reinforced Polymers, by G.A. Riveros, H. Mahmoud, M. Memari, C. Lozano, A. Valsangkar, and B. Ahmadi <a href="http://dx.doi.org/10.21079/11681/32789">http://dx.doi.org/10.21079/11681/32789</a>	AD1073615
ERDC/ITL TR-19-2	Apr 2019	Determining Miter Gate Plate Corrosion and Thickness of Anti-Corrosion Coatings; and Development of a Mobile Sensor Inspection Platform, by J.A. Evans, J.R. Tallent, R.D. Brown, A. Netchaev, and C.R. Thurmer <a href="http://dx.doi.org/10.21079/11681/32568">http://dx.doi.org/10.21079/11681/32568</a>	AD1071197
ERDC/ITL TR-19-3	May 2019	Engineered Resilient Systems: TradeAnalyzer, by T.W. Garton, W.H. Brown, E.R. Mixon, and J.Q. Church <a href="http://dx.doi.org/10.21079/11681/32987">http://dx.doi.org/10.21079/11681/32987</a>	AD1074426
ERDC/ITL TR-19-4	Jun 2019	Multiaxial Fatigue Strength of Structural Bolts Under Combined Cyclic Axial and Shear Demands, by G.A. Riveros, H.N. Mahmoud, and S.R. Lopez <a href="http://dx.doi.org/10.21079/11681/33270">http://dx.doi.org/10.21079/11681/33270</a>	AD1075868
ERDC/ITL TR-19-5	Jun 2019	Load Factors for Earth Retaining, Reinforced Concrete Hydraulic Structures Based on a Reliability Index ( $\beta$ ) Derived from the Probability of Unsatisfactory Performance(PUP): Phase 1 Study, by R.M. Ebeling and B.C. White <a href="http://dx.doi.org/10.21079/11681/33227">http://dx.doi.org/10.21079/11681/33227</a>	AD1075670
ERDC/ITL TR-19-6	Aug 2019	A/E/C Graphics Standard: Release 2.1, by S.C. Spangler <a href="http://dx.doi.org/10.21079/11681/33814">http://dx.doi.org/10.21079/11681/33814</a>	AD1078774
ERDC/ITL TR-19-7	Aug 2019	A/E/C Computer-Aided Design (CAD) Standard: Release 6.1 <a href="http://dx.doi.org/10.21079/11681/33829">http://dx.doi.org/10.21079/11681/33829</a>	AD1078917
ERDC/ITL TR-19-8	Sep 2019	Initial Benchmarking of the Intel 3DStacked MCDRAM, by B.S. Parsons <a href="http://dx.doi.org/10.21079/11681/34161">http://dx.doi.org/10.21079/11681/34161</a>	AD1080853

## 9 Aquatic Plant Control Research Program (APCRP)

### Technical notes

#### Biological control

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN APCRP-BC-42	Feb 2019	Suitability of Introduced Nymphoides spp. (Nymphoides cristata, N. peltata) as Targets for Biological Control in the United States, by N.E. Harms and J.G. Nachtrieb <a href="http://dx.doi.org/10.21079/11681/32347">http://dx.doi.org/10.21079/11681/32347</a>	AD1068632

# 10 Dredging Operations and Environmental Research Program (DOER)

## Technical notes

### Dredged material management

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-D21	Nov 2018	Evaluation of Capacitance Staffs to Measure Vertical Accretion in Tidal Environments, by B.M. Boyd and D.B. Bryant <a href="http://dx.doi.org/10.21079/11681/30623">http://dx.doi.org/10.21079/11681/30623</a>	AD1081606

### Environmental resource protection

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-E43	Feb 2019	Summary of Threatened and Endangered Species Team Workshop: ESA Section 7(A)(1) Conservation Planning in the South Pacific Division, by M.P. Guilfoyle, R.A. Fischer, and J.F. Jung <a href="http://dx.doi.org/10.21079/11681/32312">http://dx.doi.org/10.21079/11681/32312</a>	AD1068051

### Innovative operations technologies

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-I7	May 2019	Bubble Image Velocimetry with an Acoustic Camera, by D.L. Young, B.C. McFall, and D.B. Bryant <a href="http://dx.doi.org/10.21079/11681/32863">http://dx.doi.org/10.21079/11681/32863</a>	AD1074587

# 11 Dredging Operations Technical Support Program (DOTS)

## Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOTS-19-1	Jan 2019	Monitoring a Nearshore Beneficial Use Site: Application of a Benthic Sled and Video Annotation, by J. Wilkens, J. Norton, and G.C. Roegner <a href="http://dx.doi.org/10.21079/11681/31593">http://dx.doi.org/10.21079/11681/31593</a>	AD1066371

## 12 Ecosystem Management and Restoration Research Program (EMRRP)

### Environmental benefits assessment (EBA)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMMRP-EBA-23	Mar 2019	Marsh Assessment and Restoration Implementation at Three Salt Marshes in Response to Relative Sea Level Rise: A Report from Webinars and Supplemental Findings, by C.M. VanZomeren, E.O. Murray, and D. Acevedo-Mackey <a href="http://dx.doi.org/10.21079/11681/32412">http://dx.doi.org/10.21079/11681/32412</a>	AD1069314
ERDC/TN EMMRP-EBA-24	May 2019	Relating Seagrass Habitat to Geomorphology and Substrate Characteristics Around Ship Island, MS, by E.R. Eisemann, S. Altman, D. Acevedo-Mackey, and M.K. Reif <a href="http://dx.doi.org/10.21079/11681/33023">http://dx.doi.org/10.21079/11681/33023</a>	AD1074585

### Ecosystem impacts (EI)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-EI-05	Jul 2019	Tools for Predicting Wildlife Species Distribution Response to Ecological Shifts, by A. Davis, A. Fuentes, J.F. Jung, H. Theel, E. Britzke, and R.A. Fischer <a href="http://dx.doi.org/10.21079/11681/33482">http://dx.doi.org/10.21079/11681/33482</a>	AD1077124

### Species information (SI)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-SI-38	Jun 2019	Developing Best Management Practices for Coastal Engineering Projects that Benefit Atlantic Coast Shoreline-dependent Species, by M.P. Guilfoyle, J.F. Jung, R.A. Fischer, and D.D. Dickerson <a href="http://dx.doi.org/10.21079/11681/33203">http://dx.doi.org/10.21079/11681/33203</a>	AD1075485

**Stream restoration (SR)**

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-SR-85	Mar 2019	Habitat Provision Associated with Environmental Flows, by N.V. Bhattacharjee, J.R. Willis, E.W. Tollner, and S.K. McKay <a href="http://dx.doi.org/10.21079/11681/32406">http://dx.doi.org/10.21079/11681/32406</a>	AD1069271
ERDC/TN EMRRP-SR-86	Mar 2019	Retrospective Sustainability and Resilience: Complementary Concepts for Managing Systems, by K.F. Chambers, A.C. Baker, S.K. McKay, and H. Morgan <a href="http://dx.doi.org/10.21079/11681/32407">http://dx.doi.org/10.21079/11681/32407</a>	AD1069283
ERDC/TN EMRRP-SR-87	May 2019	HEC-RAS-RVSM (Riparian Vegetation Simulation Module), by Z. Zhang, B. Johnson, and B. Greimann <a href="http://dx.doi.org/10.21079/11681/32864">http://dx.doi.org/10.21079/11681/32864</a>	AD1074004
ERDC/TN EMRRP-SR-88	Jun 2019	Application and Validation Study of the HEC-RAS-RVSM Model to the Sacramento River, by Z. Zhang, B. Johnson, J. Wang, and B. Greimann <a href="http://dx.doi.org/10.21079/11681/33245">http://dx.doi.org/10.21079/11681/33245</a>	AD1075823
ERDC/TN EMRRP-SR-89	Aug 2019	Aligning Ecological Model Development with Restoration Project Planning, by S.K. McKay, N. Richards, and T.S. Swannack <a href="http://dx.doi.org/10.21079/11681/33863">http://dx.doi.org/10.21079/11681/33863</a>	AD1079288

## 13 Engineering with Nature Program (EWN)

### Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EWN-19-1	Jan 2019	Threatened and Endangered Species Team Approach USACE Southeastern Region Opportunity Assessment Working Meeting: Advancing Cost-Efficient & Effective ESA Compliance and Mission Sustainability Through Engineering With Nature and ESA Section 7(a)(1) Conservation Plans, by J.G. Brown, R.A. Fischer, and C.J. Banks <a href="http://dx.doi.org/10.21079/11681/32262">http://dx.doi.org/10.21079/11681/32262</a>	AD1067160
ERDC/TN EWN-19-2	Feb 2019	Plant Community Approach to Establishing Vegetation on DMPAs and CDFs, by P. Bailey, S. Miller, T. Cary, S. Bourne, and T. Sekoni <a href="http://dx.doi.org/10.21079/11681/32296">http://dx.doi.org/10.21079/11681/32296</a>	AD1067651
ERDC/TN EWN-19-3	Feb 2019	Realizing Multiple Benefits in U.S. Army Corps of Engineers (USACE) Baltimore District Dredging Projects through Application of Engineering With Nature® Principles, by D.M. Szimanski, A.D. McQueen, and B.C. Suedel <a href="http://dx.doi.org/10.21079/11681/32288">http://dx.doi.org/10.21079/11681/32288</a>	AD1067538

## 14 Regional Sediment Management Demonstration Program (RSM)

### Technical Notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN RSM-18-8	Oct 2018	Hawaii Regional Sediment Management: West Maui Region; Nearshore Sedimentation at Honokowai Stream, by J.H. Podoski, L. Molina, Z. Demirbilek, and L. Lin <a href="http://dx.doi.org/10.21079/11681/29708">http://dx.doi.org/10.21079/11681/29708</a>	AD1081609
ERDC/TN RSM-18-9	Oct 2018	Hawaii RSM: Advance Planning for the Beneficial Reuse of Dredged Material at Haleiwa Harbor, Island of Oahu, Hawaii, by L.K. Molina and J.H. Podoski <a href="http://dx.doi.org/10.21079/11681/29729">http://dx.doi.org/10.21079/11681/29729</a>	AD1081610
ERDC/TN RSM-18-10	Nov 2018	Alternatives to Manage Sediment at the Intersection of the Gulf Intracoastal Waterway (GIWW) and the Corpus Christi Ship Channel (CCSC), by P. Hamilton, E. Wood, L. Lin, T. Campbell, L. Olson, S. Jones, S. Howard, and K. Skalbeck <a href="http://dx.doi.org/10.21079/11681/30383">http://dx.doi.org/10.21079/11681/30383</a>	AD1081817
ERDC/TN RSM-19-1	Mar 2019	Implementing Regional Sediment Management (RSM): Policy Guidance and Authorities Pertinent to Improving the Use of Dredged Sediments, by M.H. Schrader <a href="http://dx.doi.org/10.21079/11681/32383">http://dx.doi.org/10.21079/11681/32383</a>	AD1069405
ERDC/TN RSM-19-2	Mar 2019	Kikiaola Light Draft Harbor, Island of Kauai; Hawaii: Regional Sediment Management (RSM), by L.K. Molina, T.D. Smith, and C.T. Blay <a href="http://dx.doi.org/10.21079/11681/32389">http://dx.doi.org/10.21079/11681/32389</a>	AD1069480
ERDC/TN RSM-19-3	Mar 2019	Identification of Alternatives to Reduce Shoaling and for Beneficial Use at the Bolivar Flare of the Gulf Intracoastal Waterway, by P. Hamilton, A. Burgin, S. Jones, L. Lin, and J. Miller <a href="http://dx.doi.org/10.21079/11681/32388">http://dx.doi.org/10.21079/11681/32388</a>	AD1069500
ERDC/TN RSM-19-4	Mar 2019	Evaluating Post-Wildfire Impacts to Flood Risk Mngement (FRM): Las Conchas Wildfire – New Mexico, by I.E. Floyd, M. Ramos-Villanueva, R.E. Heath, and S.W. Brown <a href="http://dx.doi.org/10.21079/11681/32910">http://dx.doi.org/10.21079/11681/32910</a>	AD1074727

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ERDC/TN RSM-19-5	Aug 2019	Analysis of a Hydrosuction Sediment Removal System for Tuttle Creek Lake, Kansas, by J. Shelley <a href="http://dx.doi.org/10.21079/11681/33583">http://dx.doi.org/10.21079/11681/33583</a>	AD1078013
ERDC/TN RSM-19-6	Aug 2019	Feasibility of Nearshore Placement Near the Swinomish Navigation Channel; Puget Sound, Washington, by D.R. Michalsen and S.H. Brown <a href="http://dx.doi.org/10.21079/11681/33885">http://dx.doi.org/10.21079/11681/33885</a>	AD1079678
ERDC/TN RSM-19-7	Aug 2019	Modeling Sediment Concentrations during a Drawdown Reservoir Flush: Simulating the Fall Creek Operations with HEC-RAS, by S. Gibson and J. Crain <a href="http://dx.doi.org/10.21079/11681/33884">http://dx.doi.org/10.21079/11681/33884</a>	AD1079682

## 15 Miscellaneous Publications

### Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Tech Note No. 7	Dec 2018	Executive Summary Mississippi River and Tributaries Flowline Assessment, by J.A. Ashley and J.W. Lewis <a href="http://dx.doi.org/10.21079/11681/32647">http://dx.doi.org/10.21079/11681/32647</a>	AD1081657

### Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Report No. 21	Oct 2018	Analysis of the 2011 Mississippi River Flood from Natchez, MS, to Baton Rouge, LA, Using a Three-Dimensional Sediment Model: Model Development and Calibration, by S.K. Ayres <a href="http://dx.doi.org/10.21079/11681/30181">http://dx.doi.org/10.21079/11681/30181</a>	AD1081659
MRG&P Report No. 22	Oct 2018	Mississippi River Bedform Roughness and Streamflow Conditions near Vicksburg, Mississippi: Data Collection Summary and Analysis, by M.T. Ramirez, S.J. Smith, J.W. Lewis, and T.C. Pratt <a href="http://dx.doi.org/10.21079/11681/30369">http://dx.doi.org/10.21079/11681/30369</a>	AD1082136
MRG&P Report No. 23	Oct 2018	Morganza Control Structure Forebay: Numerical Hydraulic Model Investigation, by R.E. Heath, D.P. May, J.R. Leech, G. Savant, and P.V. Luong <a href="http://dx.doi.org/10.21079/11681/30303">http://dx.doi.org/10.21079/11681/30303</a>	AD1082141
MRG&P Report No. 24 Vol.1	Dec 2018	Mississippi River and Tributaries Flowline Assessment Main Report by J. Lewis, C. McKinnie, K. Parrish, W. Crosby, C. Cruz, M. Dove, R.A. Gaines, S. Girdner, R. Gambill, D. Ramirez, R. Taylor, M. Agnew, W. Veatch, M. Dircksen, T. Brown, F. Griggs, R. Copeland, B. Rentfro, J. Ashley, J. Windham, and E. Howe <a href="http://dx.doi.org/10.21079/11681/32623">http://dx.doi.org/10.21079/11681/32623</a>	AD1082147
MRG&P Report No. 24 Vol.2	Dec 2018	Mississippi River and Tributaries Flowline Assessment Hydrology Report, by R.A. Gaines, S.E. Girdner, and B.J. Frederick <a href="http://dx.doi.org/10.21079/11681/32693">http://dx.doi.org/10.21079/11681/32693</a>	AD1082154

MRG&P Report No. 24 Vol.3	Dec 2018	Mississippi River and Tributaries Flowline Assessment Hydraulics Report, by J. Lewis, E. Howe, C.A. Cruz, M.L. Dove, W.A. Crosby, R.J. Taylor, D.A. Ramirez, M.S. Dirksen, and R. Gambill <a href="http://dx.doi.org/10.21079/11681/32665">http://dx.doi.org/10.21079/11681/32665</a>	AD1082157
MRG&P Report No. 24 Vol.4	Dec 2018	Mississippi River and Tributaries Flowline Assessment: Mississippi River Sedimentation Report, by R.R. Copeland <a href="http://dx.doi.org/10.21079/11681/32664">http://dx.doi.org/10.21079/11681/32664</a>	AD1081662
MRG&P Report No. 24 Vol.5	Dec 2018	Mississippi River and Tributaries Flowline Assessment: Atchafalaya River Sedimentation Model Report, by J.W. Lewis and R.R. Copeland <a href="http://dx.doi.org/10.21079/11681/32663">http://dx.doi.org/10.21079/11681/32663</a>	AD1081663
MRG&P Report No. 25	Dec 2018	HEC-RAS Unsteady Flow and Sediment Model of the Mississippi River: Tarbert Landing to the Gulf, by T.A. Dahl, R.E. Heath, S.A. Gibson, and C.J. Nygaard <a href="http://dx.doi.org/10.21079/11681/31782">http://dx.doi.org/10.21079/11681/31782</a>	AD1081664
MRG&P Report No. 26	Dec 2018	Hydrodynamics in the Morganza Floodway and Atchafalaya Basin Report 2: Phase 2, by G.L. Bell, D.D. Abraham, and N.D. Clifton <a href="http://dx.doi.org/10.21079/11681/31446">http://dx.doi.org/10.21079/11681/31446</a>	AD1082162
MRG&P Report No. 27	Mar 2019	Hydrodynamic, Salinity, and Morphological Modeling Study of a Sediment Diversion: An Application of the Adaptive Hydraulics Model/SEDLIB Sediment Transport Library, by G.L. Brown and K.C. Pevey <a href="http://dx.doi.org/10.21079/11681/32445">http://dx.doi.org/10.21079/11681/32445</a>	AD1081667
MRG&P Report No. 28	Sep 2019	Mississippi River and Tributaries Future Flood Conditions, by J.W. Lewis, A.A. Tavakoly, C.A. Martin, and C.D. Moore <a href="http://dx.doi.org/10.21079/11681/34206">http://dx.doi.org/10.21079/11681/34206</a>	AD1081345

# REPORT DOCUMENTATION PAGE

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