

**US Army Corps of Engineers**<sub>®</sub> Engineer Research and Development Center



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

Appendix C: FY18 (October 2017-September 2018)

Compiled by James A. Dolan

December 2018

**The U.S. Army Engineer Research and Development Center (ERDC)** solves the nation's toughest engineering and environmental challenges. ERDC develops innovative solutions in civil and military engineering, geospatial sciences, water resources, and environmental sciences for the Army, the Department of Defense, civilian agencies, and our nation's public good. Find out more at www.erdc.usace.army.mil.

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

Appendix C: FY18 (October 2017-September 2018)

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 2017 through September 2018 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 2017 through September 2018 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 <u>https://erdc-library.erdc.dren.mil/</u>. 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 <u>www.dtic.mil</u>. 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 Ivan P. Beckman was the Commander of ERDC. Dr. David W. Pittman was the Director.

# 1 Engineer Research and Development Center (ERDC)

## **Special reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC SR-18-1	Apr 2018	Sustainability-Related Publications Calendar Years 2016 – 2017, by F. H. Holcomb, P. N. Deliman, and D. B. Ringelberg http://dx.doi.org/10.21079/11681/27808	AD1064121
ERDC SR-18-2	Apr 2018	Building Identification Wizard: Version 1.5.1, by B. M. Garton, S. T. Montgomery, and M. J. Roth http://dx.doi.org/10.21079/11681/26917	AD1051208
ERDC SR-18-3	Jun 2018	Unmanned Aircraft Systems to Support Environmental Applications within USACE Civil Works, by G. M. Suir, M. Reif, S. Hammond, S. Jackson, and K. Brodie <u>http://dx.doi.org/10.21079/11681/27428</u>	AD1061251

#### **Technical Notes**

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	AD Number
ERDC TN-18-1	Jun 2018	To Complain or Not to Complain: Spatial Analysis of Complaint Behavior Around Military Installations, by D. A. Morrison, E. T. Nykaza, and N. M. Wyant http://dx.doi.org/10.21079/11681/27355	AD1064122

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TR-17-11	Oct 2017	Early Detection Of Failure Mechanisms In Resilient Biostructures: A Network Flow Study, by R. R. Patel, G. A. Riveros, D. S. Thompson, F. J. Acosta, E. J. Perkins, J. J. Hoover, J. F. Peters, and A. Tordesillas http://dx.doi.org/10.21079/11681/24960	AD1040514

ERDC TR-17-13	Oct 2017	Sustainable Carbon Dioxide Sequestration as Soil Carbon to Achieve Carbon Neutral Status for DoD Lands, by S. L. Larson, R. Busby, W. A. Martin, V. F. Medina, P. Seman, C. A. Hiemstra, U. Mishra, and T. Larson	AD1041089
		http://dx.doi.org/10.21079/11681/25406	
ERDC TR-17-14	Dec 2017	Refinement of Foam Backfill Technology for Expedient Airfield Damage Repair; Phase II: Development of Prototype Foam Dispensing Equipment and Improved Tactics, Techniques and Procedures, by J. L. Johnson, M. Mejías-Santiago, L. A. Gurtowski, C. S. Griggs, and C. A. Rutland http://dx.doi.org/10.21079/11681/25903	AD1043654
ERDC TR-17-15	Dec 2017	Development of an Engineering Soil Database, by M. Zakikhani, P. T. Gidley, and J. S. Tingle <a href="http://dx.doi.org/10.21079/11681/25962">http://dx.doi.org/10.21079/11681/25962</a>	AD1044224
ERDC TR-17-17	Dec 2017	Identifying Key Factors Relevant for Base Camp Siting, by J. C. Cegan, G. W. Calfas, and M. E.Bates http://dx.doi.org/10.21079/11681/26472	AD1049310
ERDC TR-18-1	Jan 2018	Revised Rapid Soils Analysis Kit (RSAK) - Wet Methodology, by E. S. Berney IV, N. B. Ganesh, and D. R. Daily	AD1046485
		http://dx.doi.org/10.21079/11681/26411	
ERDC TR-18-2	Apr 2018	Miter Gate Gap Detection Using Principal Component Analysis, by B. A. Eick, Z. R. Treece, B. F. Spencer Jr., M. D. Smith, S. C. Sweeney, Q. G. Alexander, and S. D. Foltz <u>http://dx.doi.org/10.21079/11681/27365</u>	AD1064124
ERDC TR-18-3	Apr 2018	Modeling Transport of Nanoparticles: Pilot Study, by T. C. Lackey, S. A. Diamond, R. D. Moser, C. A Weiss Jr., and A. J. Kennedy <u>http://dx.doi.org/10.21079/11681/27261</u>	AD1052720
ERDC TR-18-4	May 2018	Use of an Acoustic Camera to Evaluate the Performance of Tickler Chains and Draghead Deflectors for Sea Turtle Protection during Hopper Dredging in the United States of America, by D. Dickerson, T. Welp, S. Willis, and D. Novy http://dx.doi.org/10.21079/11681/27301	AD1053406
ERDC TR-18-5	Jun 2018	Corrosion and Migration of Zero-Valent Depleted Uranium Products in Soil, by V. F. Medina, M. Wynter, S. L. Larson, R. D. Moser, and C. C. Nestler <u>http://dx.doi.org/10.21079/11681/27350</u>	AD1064126

ERDC TR-18-6	Jun 2018	A Photogrammetric Method for Obtaining Soil Density, by E. S. Berney IV, N. B. Ganesh, and T. C. Pratt http://dx.doi.org/10.21079/11681/27685	AD1057055
ERDC TR-18-7	Jul 2018	Impact of Parametric Uncertainties on Scattered Signal Distributions and Receiver Operating Characteristics, by D. K. Wilson, D. J. Breton, C. R. Hart, C. L. Pettit, E. T. Nykaza, and V. E. Ostashev http://dx.doi.org/10.21079/11681/28016	AD1064130
ERDC TR-18-8	Jul 2018	Moisture Detection of Stored Rapid-Setting Cementitious Materials, by J. D. Shannon, W. D. Carruth, G. J. Norwood, and H. T. Carr http://dx.doi.org/10.21079/11681/28008	AD1063184
<sup>1</sup> ERDC TR-18-9	Jul 2018	Automated Construction of Expeditionary Structures (ACES): Results from Blast Load Simulator Experiments, by J. F. Burroughs, C. F. Johnson, F. D. Shirley, M. L. Banko, G. K. Al-Chaar, C. C. Dorrell, A. C. Hopkins, and M. P. Case	AD1064134
ERDC TR-18-10	Aug 2018	Flavonoids Differentially Influence Rhizosphere Bacterial Communities from Native and Introduced Lespedeza Roots, by R. R. Busby, D. B. Ringelberg, and C. M. Jung http://dx.doi.org/10.21079/11681/28063	AD1064136
ERDC TR-18-11	Aug 2011	Heterotrophic Microbial Communities in Biological Soil Crusts: Responses to Temperature and Precipitation, by S. J. Doherty, S. L. LeGrand, K. L. Foley, S. A. Rosten, R. M. Jones, A. R. Fisher, M. Sikaroodi, P. Gillevet, and R. A. Barbato http://dx.doi.org/10.21079/11681/28491	AD1064138
ERDC TR-18-12	Aug 2018	Levee Setback Utility for Mission Integration in the Sangamon River Floodplain: Illinois Waterway, by C. H. Theiling, T. A. Kirkeeng, C. P. Haring, and T. A. Dahl http://dx.doi.org/10.21079/11681/28984	AD1064139
<sup>1</sup> ERDC TR-18-13	Aug 2018	Jefferson Proving Ground Old Timbers Lake Dam Engineering Analyses Comparison: Hydraulics and Geotechnical, by M. C. L. Quinn, C. S. Engel, S. R. Stanton, and J. D. Ellis	AD1064141
<sup>1</sup> ERDC TR-18-14	Sep 2018	Using a Distributed Hydrologic Model for a Dam Safety Study in a Small, Ungauged Basin, by C. S. Engel, M. C. L. Quinn, S. R. Stanton, and J. D. Ellis	AD1064142

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

ERDC TR-18-15	Sep 2018	Technical Transfer of the System Master Planner-	AD1064144
		Net Zero Planner (SMPL-NZP) Tool™ from Research	
		to Production: Risk Management Framework	
		Guidelines, by R. J. Liesen, J. A. Johnson,	
		M. M. Swanson, J. T. Stinson, and M. P. Case	
		http://dx.doi.org/10.21079/11681/29507	

## **2** Coastal and Hydraulics Laboratory (CHL)

#### **Special reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CHL SR-18-1	Jun 2018	Literature Review of Dredging Physical Models, by B. C. McFall, D. B. Bryant, and T. L. Welp http://dx.doi.org/10.21079/11681/27348	AD1054154
ERDC/CHL SR-18-2	Jul 2018	Evaluation of Unmanned Aircraft Systems for Flood Risk Management: Field Experiment Conspectus, by B. L. Bruder, A. D. Renaud, N. J. Spore, and K. L. Brodie http://dx.doi.org/10.21079/11681/27799	AD1064151

#### **Technical notes**

#### Section IV – Inlets and estuary channels

Report Number	<u>Date</u>	Title	AD Number
ERDC/CHL CHETN-IV-111	Aug 2018	Numerical Framework to Link the Adaptive Hydraulics (AdH) Code to the Nutrient Simulation Module-I (NSMI), by G. Savant, T. O. McAlpin, and D. S. Smith http://dx.doi.org/10.21079/11681/28644	AD1064152
ERDC/CHL CHETN-IV-112	Sep 2018	Formulation, Implementation and Testing of the Diffusive Wave (DW) Module of Adaptive Hydraulics (AdH), by G. Savant, C. J. Trahan, and T. O. McAlpin http://dx.doi.org/10.21079/11681/29351	AD1064153

#### Section VI – Miscellaneous coastal subjects

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CHL CHETN-VI-47	Mar 2018	Automatic Mesh Generation and Element Filtering: The AutoMesh Tool, by D. A. Loney, E. M. Yeates, and B. H. Hargis http://dx.doi.org/10.21079/11681/26530	AD1064155

#### Section VII – River engineering and sedimentation

Report Number	<u>Date</u>	Title	AD Number
ERDC/CHL CHETN-VII-18	Jan 2018	Laboratory Techniques and Procedures Using Lidar, by G. L. Bell, J. A. Sharp, T. O. McAlpin, A. R. Jackson, and G. B. Herring http://dx.doi.org/10.21079/11681/26288	AD1064158
ERDC/CHL CHETN-VII-19	Jun 2018	Modeling Flap Gate Culverts in Adaptive Hydraulics (AdH), by C. J. McKnight, G. Savant, J. N. McAlpin, and T. O. McAlpin http://dx.doi.org/10.21079/11681/27414	AD1063041

#### **Section VIII – Flood management**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CHL CHETN-VIII-9	Jan 2018	Identification and Selection of Representative Storm Events from a Probabilistic Storm Data Base, by M. B. Gravens and D. R. Sanderson http://dx.doi.org/10.21079/11681/26341	AD1064159
ERDC/CHL CHETN-VIII-10	May 2018	Representative Storm Selection Tool: An Automated Procedure for the Selection of Representative Storm Events from a Probabilistic Database, by D. Sanderson and M. Gravens <u>http://dx.doi.org/10.21079/11681/26829</u>	AD1064160
ERDC/CHL CHETN-VIII-11	Jul 2018	Modeling Sluice Gates in Adaptive Hydraulics (AdH), by C. J. McKnight, G. Savant, J. N. McAlpin, and T. O. McAlpin http://dx.doi.org/10.21079/11681/27925	AD1064161

#### Section X – Engineering Hydrology

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CHL CHETN-X-4	Dec 2017	Development of an Automatic Soil Texture Extraction Routine Using Combined SSURGO and STATSGO2 Dataset, by K. A. Cotterman and N. R. Pradhan http://dx.doi.org/10.21079/11681/25794	AD1064163

Report Number	<u>Date</u>	Title	AD Number
ERDC/CHL TR-17-17	Nov 2017	General Model Study of Scour at Proposed Pier Extensions - Santa Ana River at BNSF Bridge, Corona, California, by J. A. Sharp, T. O. McAlpin, G. L. Bell, H. E. Park, and R. E. Heath http://dx.doi.org/10.21079/11681/25796	AD1042835
ERDC/CHL TR-17-18	Oct 2017	Numerical Modeling of Wave Overtopping of Buffalo Harbor Confined Disposal Facility (CDF4), by Z. Demirbilek, L. Lin, O. G. Nwogu, M. C. Mohr, S. Chader, and G. K. Hintz http://dx.doi.org/10.21079/11681/25505	AD1041581
ERDC/CHL TR-17-19	Dec 2017	Nearshore Survey System Evaluation, by M. F. Forte, W. A. Birkemeier, and J. R. Mitchell http://dx.doi.org/10.21079/11681/26031	AD1045534
ERDC/CHL TR-18-1	Jan 2018	Numerical Hydrodynamic Study of Hypothetical Levee Setback Scenarios, by W. Echevarria-Doyle and T. A. Dahl http://dx.doi.org/10.21079/11681/26361	AD1046050
ERDC/CHL TR-18-2	Feb 2018	Brazos Santiago Inlet, Texas, Shoaling Study, by D. B. King Jr., M. A. Bryant, R. Styles, T. C. Lackey, E. Smith, and R. Visperas http://dx.doi.org/10.21079/11681/26481	AD1047951
ERDC/CHL TR-18-3	Mar 2018	Nearshore Placement Techniques in Southern Lake Michigan, by D. E. Arnold, B. C. McFall, K. E. Brutsché, E. C. Maloney, and D.F. Bucaro http://dx.doi.org/10.21079/11681/26643	AD1050543
ERDC/CHL TR-18-4	Apr 2018	Silver Creek: A Study of Stream Velocities and Erosion along the Ohio River near Clarksville, Indiana: McAlpine Lock and Dam Numerical Model, by K. E. Jones, D. D. Abraham, G. L. Bell, and N. D. Clifton http://dx.doi.org/10.21079/11681/26669	AD1049916
ERDC/CHL TR-18-5	May 2018	Wave Characteristics and Sediment Resuspension by Recreational Vessels in Coastal Plain Saltmarshes, by R. Styles and M.A. Hartman http://dx.doi.org/10.21079/11681/27262	AD1052728

ERDC/CHL TR-18-6	Jun 2018	Field Measurements, Sediment Tracer Study, and Numerical Modeling at Coos Bay Inlet, Oregon, by H. Li, T. C. Lackey, T. M. Beck, H. R. Moritz, K. C. Groth, T. Puckette, and J. Marsh http://dx.doi.org/10.21079/11681/27606	AD1056709
ERDC/CHL TR-18-7	Jun 2018	Merrimack Estuary and Newburyport Harbor Sediment Management Studies, by H. Li, M. Brown, T. Beck, A. Frey, J. Rosati, M. Habel, J. Winkelman, E. O'Donnell, and I. Watts http://dx.doi.org/10.21079/11681/27405	AD1057044
ERDC/CHL TR-18-8	Jun 2018	Use of Dolos Armor Units to Repair Hurricane Sandy-Damaged Great Lakes Harbor Breakwaters, by M. C. Mohr, G. J. Hinds, W. P. Cross, S. A. Chader, and J. A. Melby http://dx.doi.org/10.21079/11681/27772	
ERDC/CHL TR-18-9	Jul 2018	Modeled Sedimentation in the Lower White River Countyline Levee Setback, Washington State: Comparison of 1D (HEC- RAS) and 2D (AdH) Results, by K. E. Jones, T. A. Dahl, and Z. P. Corum http://dx.doi.org/10.21079/11681/27787	AD1064169
ERDC/CHL TR-18-10	Jul 2018	Analytical and Numerical Model Study on Reducing the Risk of Aquatic Nuisance Species Transfer through Brandon Road Lock, by E. A. Hammack, D. S. Smith, R. Styles, and R. L. Stockstill http://dx.doi.org/10.21079/11681/27815	
ERDC/CHL TR-18-11	Aug 2018	Oceanographic Observations Dataset: Data Management Plan, by K. K. Hathaway, J. L. Hanson, K. Knee, A. Bird, and R. Fratantonio http://dx.doi.org/10.21079/11681/28794	AD1064171
ERDC/CHL TR-18-12	Jul 2018	Long-Term Morphology Modeling for Barrier Island Tidal Inlets, by R. Styles, M. E. Brown, K. E. Brutsché, H. Li, T. M. Beck, and A. Sánchez http://dx.doi.org/10.21079/11681/28013	
ERDC/CHL TR-18-13	Aug 2018	Bonneville Second Powerhouse ERDC Turbine Model Operating Range Investigation, by R. A. Davidson http://dx.doi.org/10.21079/11681/28462	

ERDC/CHL TR-18-14

Aug 2018Laboratory Study to Reduce the TransportAD1059255of Asian Carp by Barges, by D. B. Bryant,<br/>C. Callegan, L. Coe, J. Smith, R. Styles, and<br/>C. Moore.<a href="http://dx.doi.org/10.21079/11681/28991">http://dx.doi.org/10.21079/11681/28991</a>

# 3 Cold Regions Research Engineering Laboratory (CRREL)

#### **Contract reports**

Report Number	<u>Date</u>	Title	AD Number
ERDC/CRREL CR-18-1	Jun 2018	The Upstream Event of a River Network: A Review of Scientific Knowledge of Channel Heads, by E. Wohl http://dx.doi.org/10.21079/11681/27410	AD1064175

#### **Special reports**

Report Number	<u>Date</u>	Title	AD Number
ERDC/CRREL SR-17-5	Dec 2017	Choosing a Global Positioning System Device for Use in U.S. Army Corps of Engineers Regulatory Districts, by J. J. Goulet, L. E. Lefebvre, and Y. J. Chung http://dx.doi.org/10.21079/11681/25912	AD1049194
<sup>1</sup> ERDC/CRREL SR-18-1	Jun 2018	SPoTbot-Class Operator's Manual, by J. H. Lever, E. C. Brown, and G. R. Hoch	AD1064179
ERDC/CRREL SR-18-2	Sep 2018	Modeling Relevant to Safe Operations of Naval Vessels in Arctic Conditions: Numerical Modeling of Ice Loads, by A. Song, M. Parno, B. West, and D. O'Connor http://dx.doi.org/10.21079/11681/29536	AD1064180

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CRREL TR-17-16	Oct 2017	The Potential Risks and Future Impact of a Large Leverett Glacier Crevasse along the South Pole Traverse (SPoT), by J. M. Fegyveresi http://dx.doi.org/10.21079/11681/24835	AD1046331
ERDC/CRREL TR-17-17	Nov 2017	Use of Heat and Fire-Risk Indices to Project Local Climate Impacts on Selected Army Installations: Climate Models, Scenarios, Climate Datam and Indices, by J. W. Weatherly and M. A. Rosenbaum http://dx.doi.org/10.21079/11681/26650	AD1064181

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

ERDC/CRREL TR-17-18	Aug 2018	Projections of Climate Impacts and Extremes for Sites in the Continental United States, by J. W. Weatherly http://dx.doi.org/10.21079/11681/29171	AD1064182
ERDC/CRREL TR-18-1	Feb 2018	Surface Wettability Using Contact Angle Goniometry, by J. Heller and E. Asenath-Smith http://dx.doi.org/10.21079/11681/26471	AD1064183
ERDC/CRREL TR-18-2	Mar 2018	Compression Strength of Frozen Gravel Materials from McMurdo Station, Antarctica, by R. T. Affleck, T. Melendy, A. Menke, A. Bernier, and C. Smith <u>http://dx.doi.org/10.21079/11681/26625</u>	AD1064184
ERDC/CRREL TR-18-3	Mar 2018	Measuring the Non-Line-of-Sight Ultra-High- Frequency Channel in Mountainous Terrain: A Spread-Spectrum, Portable Channel Sounder, by S. S. Streeter, D. J. Breton, and J. M. Corgan http://dx.doi.org/10.21079/11681/26602	AD1049252
ERDC/CRREL TR-18-4	Mar 2018	Using Ground-Penetrating Radar to Delineate Regions of Massive Ice at McMurdo Station, Antarctica, by S. Sinclair, S. Campbell, S. Arcone, and R. Affleck <u>http://dx.doi.org/10.21079/11681/26626</u>	AD1064185
ERDC/CRREL TR-18-5	Apr 2018	Using GRAIL Tools to Remotely Assess Terrain Conditions for Austere Entry, by S. A. Shoop, W. L. Wieder, E. S. Ochs, and S. N. Sinclair http://dx.doi.org/10.21079/11681/27113	AD1064186
ERDC/CRREL TR-18-6	Apr 2018	Structure and Stability of the McMurdo Ice Shelf Transition Zone and Glaciated Hillside near Scott Base, Antarctica, by S. Campbell, N. Lamie, and K. Schild http://dx.doi.org/10.21079/11681/26913	AD1064187
ERDC/CRREL TR-18-7	Jun 2018	Utility of Machine Learning Algorithms for Natural Background Photo Classification, by L. E. Waldrop, C. R. Hart, N. E. Parker, C. L. Pettit, and S. McIntosh <u>http://dx.doi.org/10.21079/11681/27344</u>	AD1064189
ERDC/CRREL TR-18-8	Jun 2018	Geotechnical and Foundation Review for the McMurdo Master Plan, by K. Bjella, R. T. Affleck, and G. Blaisdell http://dx.doi.org/10.21079/11681/27345	AD1064190
ERDC/CRREL TR-18-9	Jun 2018	Building Envelope Assessment Using Thermal Infrared and Lidar Scanning: Palmer Station, Antarctica, by E. J. Deeb and A. L. LeWinter <u>http://dx.doi.org/10.21079/11681/27353</u>	AD1064192

ERDC/CRREL TR-18-10	Jun 2018	Building Envelope and Infrastructure Assessment Using an Integrated Thermal Imaging and Lidar Scanning System: Amundsen-Scott South Pole Station, Antarctica, by A. L. LeWinter, D. C. Finnegan, E. J. Deeb, and P. J. Gadomski http://dx.doi.org/10.21079/11681/27385	AD1064193
ERDC/CRREL TR-18-11	Jul 2018	Infrastructure Impact for Human Safety and Resilience: A Case Study, by R. T. Affleck <a href="http://dx.doi.org/10.21079/11681/27788">http://dx.doi.org/10.21079/11681/27788</a>	AD1064194
ERDC/CRREL TR-18-12	Jul 2018	Ice Forces along the Missouri River Shoreline of the Lower Brule Sioux Tribe Lands, by J. Giovando, R. B. Haehnel, T. Baldwin, and S. F. Daly	AD1064196
		http://dx.doi.org/10.21079/11681/28005	
ERDC/CRREL TR-18-13	Aug 2018	A Comparison of Simulated Dust Produced by Three Dust-Emission Schemes in WRF-Chem: Case-Study Assessment, by T. W. Letcher and S. L. LaGrand	AD1064197
		<u>http://dx.doi.org/10.21079/11681/28868</u>	
ERDC/CRREL TR-18-14	Aug 2018	Soil Strength Analysis of Sonoran Desert Landforms, by S. A. Shoop, S. A. Beal, W. L. Wieder, and E. V. McDonald http://dx.doi.org/10.21079/11681/29266	AD1064198
ERDC/CRREL TR-18-15	Sep 2018	Dynamic Representation of Terrestrial Soil Predictions of Organisms' Response to the Environment, by R. A. Barbato, L. Waldrop, K. Messan, R. Jones, S. J. Doherty, K. Foley, C. Felt, M. Morgan, and Y. Han <u>http://dx.doi.org/10.21079/11681/29349</u>	AD1064200
ERDC/CRREL TR-18-16	Sep 2018	Dynamic Modeling of Atmospheric Watch Observatory (AWO) Transport by Greenland Inland Traverse (GrIT), by A. J. Song and J. H. Lever http://dx.doi.org/10.21079/11681/29508	AD1064204
ERDC/CRREL TR-18-17	Sep 2018	Snow Strategic Science Plan, by C. M. Vuyovich, E. J. Deeb, C. Polashenski, Z. R. Courville, C. A. Hiemstra, A. M. Wagner, J. B. Eylander, and R. E. Davis http://dx.doi.org/10.21079/11681/29554	AD1064215

# 4 Construction Engineering Research Laboratory (CERL)

#### **Contract reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
<sup>1</sup> ERDC/CERL CR-17-2	Oct 2017	SMART Energy Efficient Deployable Shelters (SEEDS): Test and Evaluation Report, by A. H. Shaaban, S. Escobar, and A. M. Yacout	AD1048861
ERDC/CERL CR-17-3	Oct 2017	Historic Structure Assessment for Building 839, Carlisle Barracks: Carlisle, Pennsylvania, by T. Vitanza, M. Slater, and C. Slinton-Selin http://dx.doi.org/10.21079/11681/25419	
ERDC/CERL CR-17-4	Dec 2017	Hydrophobic Concrete Admixture Product Testing and Validation: Contractor's Supplemental Report for CPC Project F09- AR05A, by L. R. Wachowski, P. G. Tourney, M. A. Miltenberger, and N. S. Berke http://dx.doi.org/10.21079/11681/26076	AD1049188
ERDC/CERL CR-17-5	Dec 2017	Modeling the Effect of a Hydrophobic Concrete Admixture on Chloride Ingress: Contractor's Supplemental Report for CPC Project F09-AR05A, by E. Samson and T. Zhang http://dx.doi.org/10.21079/11681/26087	AD1049191
ERDC/CERL CR-18-1	Apr 2018	Laboratory Investigation of Natural Cementation Road Surfacing for Corrosion Control of Aluminum on Army Vehicles: Contractor's Supplemental Report for Project F10-AR06, by P. S. K. Ooi and M. K. Coskey http://dx.doi.org/10.21079/11681/26824	AD1064217
ERDC/CERL CR-18-2	Jul 2018	Measurement of Blast Waveforms with Condenser Microphones: Measurement Interpretation and Correction, by T. B. Gabrielson http://dx.doi.org/10.21079/11681/28011	AD1064218

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

## **Miscellaneous papers**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CERL MP-17-4	Dec 2017	Military Climate Resilience Planning and Contemporary Urban Systems Thinking, by J. P. Allen and B. M. Deal http://dx.doi.org/10.21079/11681/26506	AD1049312
ERDC/CERL MP-17-5	Dec 2017	Improving U.S. Army Civil Affairs Assessment: A Consideration of Social Power, by L. A. Whalley, J. M. Vendrzyk, and G. W. Calfas http://dx.doi.org/10.21079/11681/26588	AD1049313
ERDC/CERL MP-17-6	Dec 2017	Proposal for Funding the ENSITE Project: Under ERDC Environmental Quality & Installations and Geospatial Research and Engineering Business Areas, by G. W. Calfas http://dx.doi.org/10.21079/11681/26591	AD1064220

## **Special reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CERL SR-17-15	Nov 2017	Development of Analytical Plug-Ins for ENSITE: Version 1.0, by M. D. Hiett, N. R. Myers, G. W. Calfas, E. G. Bastian, K. O. Fay, N. W. Garfinkle, E. R. Hartman, R. W. Keeling, E. L. Kreiger, K. A. Morozova, J. M. Wilhoit, and D. M. Williams http://dx.doi.org/10.21079/11681/25441	AD1049199
ERDC/CERL SR-17-16	Nov 2017	Refugees Flexing Social Power as Agents of Stability: Creating Modes of Economic Livelihoods in Kenya's Camps, by L. L. Larkin and S. A. Clark http://dx.doi.org/10.21079/11681/25761	AD1049211
ERDC/CERL SR-17-17	Dec 2017	Military Critiques of the Current Assessment Process for the Human Domain – An Annotated Bibliography, by J. M. Vendrzyk, L. A. Whalley, and G. W. Calfas <u>http://dx.doi.org/10.21079/11681/26485</u>	AD1049314
ERDC/CERL SR-18-1	Jan 2018	Army RCx Technical Guide: A Phased Approach for in-House or Contracted Existing Building Commissioning, by B. C. Clark, M. M. Swanson, S. M. Wallace, E. T. Westervelt, and J. H. Tulley http://dx.doi.org/10.21079/11681/26414	AD1064221

ERDC/CERL SR-18-2	May 2018	A Proposed Knowledge, Skills, and Abilities (KSA) Database Tool for ERDC-CERL, by R. R Busby, D. R. Cockburn, L. M. Gioja, P. J. Guertin, J. P. Miller, and T. C. Patel <u>http://dx.doi.org/10.21079/11681/27720</u>	AD1064222
ERDC/CERL SR-18-6 Vol. 1	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual: Volume 1 – Overview, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27927	
ERDC/CERL SR-18-6 Vol. 2	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual: Volume 2 - Concrete Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27928	
ERDC/CERL SR-18-6 Vol. 3	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual : Volume 3 - Wood Elements, by S. E. Adams and A. D. Smith	
ERDC/CERL SR-18-6 Vol. 4	Jun 2018	http://dx.doi.org/10.21079/11681/27930 USMMA Historic District Property Maintenance and Repair Manual: Volume 4 - Brick Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27931	
ERDC/CERL SR-18-6 Vol. 5	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual : Volume 5 - Metal Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27932	
ERDC/CERL SR-18-6 Vol. 6	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual: Volume 6 - Roofing Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27933	
ERDC/CERL SR-18-6 Vol. 7	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual : Volume 7 - Stucco Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27934	AD1064274
ERDC/CERL SR-18-6 Vol. 8	Jun 2018	USMMA Historic District Property Maintenance and Repair Manual: Volume 8 - Mechanical System Elements, by S. E. Adams and A. D. Smith http://dx.doi.org/10.21079/11681/27935	

## **Technical notes**

Report Number	<u>Date</u>	Title	AD Number
ERDC/CERL TN-17-2	Nov 2017	Use of Heating and Cooling Degree Days to Project Relative Changes in Heating and Cooling Costs in Repsonse to Climate Change on Selected Army Installations, by S. A. Tweddale <u>http://dx.doi.org/10.21079/11681/26648</u>	

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/CERL TR-17-37	Nov 2017	Material Selection for Bumpers and Fenders for Lock Gates and Guidewalls, by R. G. Lampo and S. D. Foltz http://dx.doi.org/10.21079/11681/27305	AD1064278
ERDC/CERL TR-17-38	Oct 2017	Rotary Kiln Gasification of Solid Waste for Base Camps, by S. D. Cosper http://dx.doi.org/10.21079/11681/26600	AD1044597
ERDC/CERL TR-17-39	Oct 2017	Demonstration and Validation of Advanced Rebar Materials in Salt- Exposure Applications: Final Report on Project F09-AR13, by S. C. Sweeney, O. S. Marshall, J. Taylor, L. Clark, and R. Miles http://dx.doi.org/10.21079/11681/25601	AD1049285
ERDC/CERL TR-17-40 Vol. 1	Nov 2017	Social and Political Event Data to Support Army Requirements: Volume 1, by T. K. Perkins, C. D. Wood, R. F. Dos Santos Jr., W. D. Meyer, N. W. Garfinkle, X. Wang, S. I. Enscore, L. A. Selig, and G. W. Calfas http://dx.doi.org/10.21079/11681/25702	AD1049286
ERDC/CERL TR-17-41	Nov 2017	Historic Landscape Inventory for Marietta National Cemetery, by S. I. Enscore, A. D. Smith, E. R. Hartman, and M. W. Tooker http://dx.doi.org/10.21079/11681/25664	AD1049288
ERDC/CERL TR-17-42	Nov 2017	Method for Localizing and Differentiating Bacteria within Biofilms Grown on Indium Tin Oxide: Spatial Distribution of Exoelectrogenic Bacteria within Intact ITO Biofilms via FISH, by C. M. Arnett and J. D. T. Lange http://dx.doi.org/10.21079/11681/25701	AD1049290

ERDC/CERL TR-17-43	Nov 2017	3-D Scanning of Headstones at the U.S. Naval Plot, Mount Moriah Cemetery, Philadelphia, PA, by C. L. Baxter, A. M. Hamblin, and S. I. Enscore http://dx.doi.org/10.21079/11681/25807	AD1049292
ERDC/CERL TR-17-44	Dec 2017	Method of Construction for Geopolymer Soil Stabilized Platforms, by G. K. Al-Chaar, P. B. Stynoski, M. M. Landi, and M. L. Banko http://dx.doi.org/10.21079/11681/26029	AD1049293
ERDC/CERL TR-17-45	Dec 2017	Demonstration of thermoplastic composite I-beam design bridge at Camp Mackall, NC : final report on Projects FY08-16 and FY09-31, by R. G. Lampo, T. J. Nosker, G. Nagle, S. B. Nemeth, K. Palutke, and L. Clark http://dx.doi.org/10.21079/11681/26030	AD1049294
ERDC/CERL TR-18-1	Feb 2018	Operational-Scale Demonstration of Propagation Protocols and Comparative Demographic Monitoring for Reintroducing Five Southeastern Endangered and At-Risk Plants: Final Report, by M. G. Hohmann and W. A. Wall http://dx.doi.org/10.21079/11681/26525	
ERDC/CERL TR-18-2	Feb 2018	Landscape Management Plan for the United States Merchant Marine Academy, NY by M. W. Tooker and A. D. Smith http://dx.doi.org/10.21079/11681/26581	
ERDC/CERL TR-18-3	May 2018	Demonstration of an In Situ Pipe-Lining Technology for a Fire Suppression Deluge System at Fort Drum, NY: Final Report on Project F07-AR17, by O. S. Marshall Jr., S. W. Morefield, B. J. Danielson, S. Mori, and E. Brockmire http://dx.doi.org/10.21079/11681/27151	
<sup>1</sup> ERDC/CERL TR-18-4	May 2018	Structural Evaluation of Heavy Wood Trusses at Corpus Christi Army Depot, Texas, by M. L. Banko, J. W. Harper, and G. Al-Chaar	

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

ERDC/CERL TR-18-5	Jun 2018	Projection of Climate-Change Impacts on Army Installation Energy, by J. P. Miller, I. H. Kim, and D. M. Underwood <u>http://dx.doi.org/10.21079/11681/29354</u>
ERDC/CERL TR-18-6	May 2018	Development of a Genetic Memory Platform for Detection of Metals in Water: Use of mRNA and Protein Destabilization Elements as a Means to Control Autoinduction from the CUP1 Promoter of Saccharomyces cerevisiae, by J. L. Luther, H. V. Goodson, and C. M. Arnett http://dx.doi.org/10.21079/11681/27275
ERDC/CERL TR-18-7	Jun 2018	Demonstration and Validation of Single- Well Electro-Osmotic Dewatering Systems for Corrosion Mitigation: Final Report on Project F10-AR07, by M. K. McInerney, C. Athmer, and L. Clark http://dx.doi.org/10.21079/11681/27271
ERDC/CERL TR-18-8	Jun 2018	Demonstration and Validation of Portable Electrochemical Impedance Spectroscopy Technology: Final Report on Project F11-AR08, by C. Olaes, R. G. Lampo, L. Clark, S. A. Drozdz, and J. P. Ryan http://dx.doi.org/10.21079/11681/27349
ERDC/CERL TR-18-9	Jun 2018	Sustainment Management System Dams Inspection Module: Department of Defense Dams Inventory and Inspection Template, by J. P. Allen, S. D. Foltz, and M. H. Werth http://dx.doi.org/10.21079/11681/27351
ERDC/CERL TR-18-10	Jun 2018	Remote Structural Health Monitoring and Corrosion-Rate Modeling of Steel Bridges: Final Report on Project F08- AR13, by S. C. Sweeney, R. G. Lampo, V. F. Hock, and R. B. Mason, Jr. http://dx.doi.org/10.21079/11681/27352
ERDC/CERL TR-18-11	Jun 2018	Potential Sinkhole Identification with Light Detection and Ranging (LiDAR) Data at Fort Leonard Wood, MO, by S. A. Tweddale
		http://dx.doi.org/10.21079/11681/27670
ERDC/CERL TR-18-12	Jun 2018	Permafrost and Road Degradation in Alaska, by J. M. McMillan-Wilhoit, H. R. Howard, and K. A. Morozova http://dx.doi.org/10.21079/11681/29350

Jun 2018	Water Use Intensity at U.S. Army Facilities: An Investigation into Factors That Influence Potable Water End Use, by E. M. Jenicek, N. W. Garfinkle, A. Hur, N. Bartholomew, S. Buchhorn, K. Chen, L. Miller, M. Mithaiwala, and B. Oberg http://dx.doi.org/10.21079/11681/28040
Jul 2018	Investigation of Natural Cementation to Mitigate Corrosion-Promoting Characteristics of Unsurfaced Roadways: Final Report on Project F10-AR06, by D. M. Bailey and S. W. Morefield http://dx.doi.org/10.21079/11681/28183
Aug 2018	Comparison of Regulations and Life Cycle Cost Analysis Pertaining to Underground and Aboveground Storage Tanks: Options for Retail Fueling Applications at U.S. Army Installation Management Command Installations, by D. J. Schell, J. T. Jones, S. D. Cosper, and G. Rodriguez http://dx.doi.org/10.21079/11681/29347
Aug 2018	Performance Testing of a Novel Dry-Fog Mold Remediation and Prevention Process, by S. D. Hirschi and D. L. Herron <u>http://dx.doi.org/10.21079/11681/29685</u>
Aug 2018	High Efficiency Dehumidification System: Cost and Performance Report, by S. M. Duncan and D. Chu http://dx.doi.org/10.21079/11681/29925
Aug 2018	High Efficiency Dehumidification System, by S. M. Duncan and D. Chu <u>http://dx.doi.org/10.21079/11681/30302</u>
Sep 2018	Standard Protocol for Protective Storage of Dormant Army Facilities, by D. Chu, J. P. Miller, D. M. Underwood, S. D. Foltz, S. M. Lux, E. T. Westervelt, J. L. Davila- Perez, B. Mehnert, M. Grussing, M. D. Ginsberg, K. J. Hay, K. W. Ticknor, and G. D. Ray http://dx.doi.org/10.21079/11681/29289
Sep 2018	Multi-fuel Combustion Technology for Water Heating with Waste Oil, by J. Lindstrom and S. Lux http://dx.doi.org/10.21079/11681/30440
	Jul 2018 Aug 2018 Aug 2018 Aug 2018 Aug 2018 Sep 2018

ERDC/CERL TR-18-23       Aug 2018       Analysis of Steam and Hot Water Heat Systems at Fort Polk, LA: Retrofit Options, by A. M. Zhivov, J. L. Vavrin, A. Woody, S. Richter, and N. Paetz http://dx.doi.org/10.21079/11681/29521         ERDC/CERL TR-18-24       Sep 2018       Methods of Analysis to Remotely Determine Material Degradation, by E. L. Kreiger, J. A. Gamez, P. J. Guertin, and G. W. Calfas http://dx.doi.org/10.21079/11681/29356         ERDC/CERL TR-18-25       Sep 2018       Feasibility Study of a Qualified Recycling Program at Fort Huachuca, Arizona, by D. S. Gilbert, S. D. Cosper, A. M. Brake, and G. Rodriguez http://dx.doi.org/10.21079/11681/29388         ERDC/CERL TR-18-26       Sep 2018       Facility Data Exchange Pilot Demonstration for the Army General Fund Enterprise Business System (GFEBS), by B. A. Brucker, M. Carrasquillo-Mangual, A. C. Temeyer, J. M. Martin, and C. S. Mudd http://dx.doi.org/10.21079/11681/29355         ERDC/CERL TR-18-27       Sep 2018       Parameters Used in the Tactical Airfield Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29357         ERDC/CERL TR-18-28       Sep 2018       Self-Repairing Polymer Networks for High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29350         ERDC/CERL TR-18-29       Sep 2018       Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29516	ERDC/CERL TR-18-22	Aug 2018	Testing Maximum Entropy Analysis to Define Population Distributions, by R. C. Lozar, S. A. Tweddale, C. R. Ehlschlaeger, C. L. Baxter, and J. A. Burkhalter http://dx.doi.org/10.21079/11681/29352
Determine Material Degradation, by E. L. Kreiger, J. A. Gamez, P. J. Guertin, and G. W. Calfas http://dx.doi.org/10.21079/11681/29356ERDC/CERL TR-18-25Sep 2018Feasibility Study of a Qualified Recycling Program at Fort Huachuca, Arizona, by D. S. Gilbert, S. D. Cosper, A. M. Brake, and G. Rodriguez http://dx.doi.org/10.21079/11681/29388ERDC/CERL TR-18-26Sep 2018Facility Data Exchange Pilot Demonstration for the Army General Fund Enterprise Business System (GFEBS), by B. A. Brucker, M. Carrasquillo-Mangual, A. C. Temeyer, J. M. Martin, and C. S. Mudd http://dx.doi.org/10.21079/11681/29355ERDC/CERL TR-18-27Sep 2018Parameters Used in the Tactical Airfield Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29357ERDC/CERL TR-18-28Sep 2018Self-Repairing Polymer Networks for High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29510ERDC/CERL TR-18-29Sep 2018Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark	ERDC/CERL TR-18-23	Aug 2018	Systems at Fort Polk, LA: Retrofit Options, by A. M. Zhivov, J. L. Vavrin, A. Woody, S. Richter, and N. Paetz
<ul> <li>Program at Fort Huachuca, Arizona, by D. S. Gilbert, S. D. Cosper, A. M. Brake, and G. Rodriguez http://dx.doi.org/10.21079/11681/29388</li> <li>ERDC/CERL TR-18-26 Sep 2018 Facility Data Exchange Pilot Demonstration for the Army General Fund Enterprise Business System (GFEBS), by B. A. Brucker, M. Carrasquillo-Mangual, A. C. Temeyer, J. M. Martin, and C. S. Mudd http://dx.doi.org/10.21079/11681/29355</li> <li>ERDC/CERL TR-18-27 Sep 2018 Parameters Used in the Tactical Airfield Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29357</li> <li>ERDC/CERL TR-18-28 Sep 2018 Self-Repairing Polymer Networks for High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29510</li> <li>ERDC/CERL TR-18-29 Sep 2018 Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark</li> </ul>	ERDC/CERL TR-18-24	Sep 2018	Determine Material Degradation, by E. L. Kreiger, J. A. Gamez, P. J. Guertin, and G. W. Calfas
Demonstration for the Army General Fund Enterprise Business System (GFEBS), by B. A. Brucker, M. Carrasquillo-Mangual, A. C. Temeyer, J. M. Martin, and C. S. Mudd http://dx.doi.org/10.21079/11681/29355ERDC/CERL TR-18-27Sep 2018Parameters Used in the Tactical Airfield Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29357ERDC/CERL TR-18-28Sep 2018Self-Repairing Polymer Networks for High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29510ERDC/CERL TR-18-29Sep 2018Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark	ERDC/CERL TR-18-25	Sep 2018	Program at Fort Huachuca, Arizona, by D. S. Gilbert, S. D. Cosper, A. M. Brake, and G. Rodriguez
<ul> <li>Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29357</li> <li>ERDC/CERL TR-18-28 Sep 2018 Self-Repairing Polymer Networks for High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29510</li> <li>ERDC/CERL TR-18-29 Sep 2018 Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark</li> </ul>	ERDC/CERL TR-18-26	Sep 2018	Demonstration for the Army General Fund Enterprise Business System (GFEBS), by B. A. Brucker, M. Carrasquillo-Mangual, A. C. Temeyer, J. M. Martin, and C. S. Mudd
High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark http://dx.doi.org/10.21079/11681/29510 ERDC/CERL TR-18-29 Sep 2018 Demonstration of a Standard Steel Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark	ERDC/CERL TR-18-27	Sep 2018	Siting Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas
Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark	ERDC/CERL TR-18-28	Sep 2018	High-Performance Coatings: Final Report on Project F12-AR12, by B. A. Divan, R. G. Lampo, and L. Clark
	ERDC/CERL TR-18-29	Sep 2018	Coating System Modified with a Vapor- Phase Corrosion Inhibitor: Final Report on Project F12-AR14, by B. A. Divan, R. G. Lampo, and L. Clark

ERDC/CERL TR-18-31 Se

Sep 2018 Selection Parameters Used in the Touchdown Point Selection Module for ENSITE, by J. A. Gamez, P. J. Guertin, E. L. Kreiger, and G. W. Calfas http://dx.doi.org/10.21079/11681/29604

# **5** Environmental Laboratory (EL)

## **Special reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/EL SR-17-4	Oct 2017	Utilizing Wetlands for Phosphorus Reduction in Great Lakes Watersheds: A Review of Available Literature Examining Soil Properties and Phosphorus Removal Efficiency, by S. J. Currie, C. M. VanZomeren, and J. F. Berkowitz <u>http://dx.doi.org/10.21079/11681/24838</u>	AD1040511
ERDC/EL SR-18-1	Mar 2018	Weight-of-Evidence Concepts: Introduction and Application to Sediment Management, by M. E. Bates, O. C. Massey, and M. D. Wood http://dx.doi.org/10.21079/11681/26559	AD1048843
ERDC/EL SR-18-2	Apr 2018	Evaluation of Sludge Pump Clogging Issue for an Industrial Waste Pretreatment Plant in the Ceres Industrial Park, Vicksburg, MS, by V. F. Medina, S. A. Waisner, and M. Wynter http://dx.doi.org/10.21079/11681/27280	AD1053296
ERDC/EL SR-18-3	Jun 2018	Sediment Spiking Methodologies for Nanomaterial Powders and Aqueous Suspensions for Aquatic Toxicity Bioassays; Scientific Operating Procedure Series: SOP-T-3, by J. G. Coleman, A. J. Kennedy, J. K. Stanley, and L. Rabalais http://dx.doi.org/10.21079/11681/27642	AD1055740
ERDC/EL SR-18-4	Jul 2018	Assessing Aquatic Toxicity of Insensitive Munitions (IM) compounds Using Larval Fathead Minnows (Pimephales promelas); Scientific Operating Procedure Series: Characterization of IMX Ecotoxicological Effects, by G. R. Lotufo, J. K. Stanley, and M. L. Ballentine http://dx.doi.org/10.21079/11681/27814	
ERDC/EL SR-18-5	Jul 2018	Assessing the Aquatic Toxicity of Insensitive Munitions (IM) Compounds Using 10-Day Aqueous Exposures with the Amphipod Hyalella Azteca; Scientific Operating Procedure Series: Characterization of IMX Ecotoxicological Effects, by G. R. Lotufo, J. K. Stanley, and M. L. Ballentine http://dx.doi.org/10.21079/11681/27811	

ERDC/EL SR-18-6	Jul 2018	Characterization of Carbon Nanomaterials Using the Thermogravimetric Analyzer: Standard Operating Procedure Series: Characterization (C), by Q. Wu, K. Kremer, Y. Jiang, S. Gibbons, and A. J. Kennedy http://dx.doi.org/10.21079/11681/27805
ERDC/EL SR-18-7	Jul 2018	Assessing the Chronic and Sublethal Aquatic Toxicity of Insensitive Munitions (IM) Compounds Using Aqueous Exposures with the Amphipod Hyalella Azteca; Scientific Operating Procedure Series: Characterization of IMX Ecotoxicological Effects, by G. R. Lotufo and J. D. Farrar http://dx.doi.org/10.21079/11681/27971
ERDC/EL SR-18-9	Sep 2018	Assessing the Sediment Toxicity of Insensitive Munitions (IM) Compounds Using 10-day Whole-Sediment Exposures with Freshwater Invertebrates; Scientific Operating Procedure Series: Characterization of IMX Ecotoxicological Effects, by G. R. Lotufo and J. D. Farrar http://dx.doi.org/10.21079/11681/29524
ERDC/EL SR-18-10	Sep 2018	Preparation of Sediment Amended with Insensitive Munitions (IM) Compounds for Use in Toxicity Tests with Freshwater Invertebrates; Scientific Operating Procedure Series: Characterization of IMX Ecotoxicological Effects, by G. R. Lotufo http://dx.doi.org/10.21079/11681/29527

#### **Technical notes**

Report Number	<u>Date</u>	Title	AD Number
ERDC/EL TN-17-1	Oct 2017	The Influence of Dissolved Organic Carbon on Acute Lethality in Zebrafish (Danio rerio) Exposed to Silver Nanoparticles and Silver Nitrate, by A. D. Hawkins, C. Thornton, W. Guyton, J. K. Stanley, A. J. Kennedy, J. A. Steevens, and K. L. Willett http://dx.doi.org/10.21079/11681/24828	

<u>Report Number</u>	<u>Date</u>	Title	<u>AD Number</u>
ERDC/EL TR-17-17	Oct 2017	Review and Synthesis of Evidence Regarding Environmental Risks Posed by Munitions Constituents (MC) in Aquatic Systems, by G. R. Lotufo, M. A. Chappell, C. L. Price, M. L. Ballentine, A. A. Fuentes, T. S. Bridges, R. D. George, E. J. Glisch, and G. Carton http://dx.doi.org/10.21079/11681/25402	AD1040973
ERDC/EL TR-17-19	Nov 2017	Methylmercury Screening Models for Surface Water Habitat Restoration: A Case Study in Duluth-Superior Harbor, by P. T. Gidley, J. P. Kreitinger, M. Zakikhani, and B. C. Suedel http://dx.doi.org/10.21079/11681/25606	AD1042058
ERDC/EL TR-18-1	Jan 2018	Development and Characterization of Small- Scale Washing Systems for Removal of Depleted Uranium Oxides, by R.J. Unz, J.P. McCown, C.A. Waggoner, S.L. Larson, and J.H. Ballard http://dx.doi.org/10.21079/11681/26383	
ERDC/EL TR-18-2	Jan 2018	Evaluation of Koontz Lake (North Indiana) Ecological Restoration Options – Comparison of Dredging and Aeration – and Broad Application to USACE Projects, by V.F. Medina, K. Pokrzywinski, and E. Martinez-Guerra http://dx.doi.org/10.21079/11681/26408	AD1046318
ERDC/EL TR-18-3	Feb 2018	Use of Remote Sensing to Detect and Predict Aquatic Nuisance Vegetation Growth in Coastal Louisiana: Summary of Findings, by G.M. Suir, K.J. Suir, and S. Sapkota http://dx.doi.org/10.21079/11681/26649	AD1050544
ERDC/EL TR-18-4	Mar 2018	Restoring Bottomland Hardwood Forests on U.S. Army Corps of Engineers Lands: 2016 Monitoring Report, by J.F. Berkowitz, D.E. Evans, K.D. Philley, J.P. Pietroski, C. Ehorn, and N.R. Beane http://dx.doi.org/10.21079/11681/26652	AD1049742
ERDC/EL TR-18-5	Apr 2018	Evaluation of Sulfide Emissions from a Hydraulic System at the Blue River Dam, by V.F. Medina, M. Wynter, C. Jung, A. Russell, T. Paulus, and C.S. Griggs http://dx.doi.org/10.21079/11681/27276	AD1053143

ERDC/EL TR-18-6	Jul 2018	The Demonstration and Validation of a Linked Watershed Riverine Modeling System for DOD Installations-Calleguas, California: Resource Conservation and Climate Change Projects, RC-201302, Version 2.00, by B.E. Johnson, M. George, and Z. Zhang http://dx.doi.org/10.21079/11681/27990
ERDC/EL TR-18-7	Jul 2018	Acute Toxicity Testing and Culture Methods for Calanoid Copepods in Water Column (Elutriate) Toxicity Evaluations, by L.K. Rabalais, J.G. Laird, A.J. Kennedy, J.D. Farrar, G.R. Lotufo, and J.M. Biedenbach http://dx.doi.org/10.21079/11681/27968
ERDC/EL TR-18-8	Aug 2018	Biological Phosphorous Removal From Impacted Water, by C.M. Jung and J.O. Eberly http://dx.doi.org/10.21079/11681/29348
ERDC/EL TR-18-9	Aug 2018	Geospatial Assessments of Phragmites australis Die-Off in South Louisiana: Preliminary Findings, by G.M. Suir, C.L. Saltus, and M.K. Reif http://dx.doi.org/10.21079/11681/28998
ERDC/EL TR-18-10	Sep 2018	Watershed Level Effects of Multiple Ecosystem Restoration Projects, by C.M. Foran, C. Fox-Lent, C. Chadderton, W. Gendron, L. Oliver, E. Monroy, J. Turek, P. Edwards, and B. Suedel http://dx.doi.org/10.21079/11681/29528
ERDC/EL TR-18-11 Phase 1	Aug 2018	Proctor Creek Ecological Model (PCEM): Phase 1- Site Screening, by S.K McKay, B.A. Pruitt, B.A. Zettle, N. Hallberg, C. Hughes, A. Annaert, M. Ladart, and J. McDonald http://dx.doi.org/10.21079/11681/29514
ERDC/EL TR-18-11 Phase 2	Aug 2018	Proctor Creek Ecological Model (PCEM): Phase 2- Benefits Analysis, by S.K. McKay, B.A. Pruitt, B.A. Zettle, N. Hallberg, V. Moody, A. Annaert, M. Ladart, M. Hayden, and J. McDonald http://dx.doi.org/10.21079/11681/29515

## **6 Geospatial Research Laboratory (GRL)**

#### **Technical notes**

Report Number	<u>Date</u>	Title	AD Number
ERDC/GRL TN-18-1	Sep 2018	Non-acoustical Variable Contribution to Military Blast Noise Annoyance, by N. Wayant http://dx.doi.org/10.21079/11681/29534	
Technical reports			

Report Number	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TR-18-1	Sep 2018	Determining Soil Moisture at Moderately High Resolution via Soil Moisture Active Passive (SMAP) and Landsat using Inferred Learning, by M.G. Lewis, A. Fisher, and C. Smith http://dx.doi.org/10.21079/11681/29520	

# 7 Geotechnical and Structures Laboratory (GSL)

### **Special reports**

Report Number	<u>Date</u>	Title	AD Number
ERDC/GSL SR-17-4 rev.	Nov 2017	SWCC Prediction: Seep/W Add-In Functions, by L. Walshire and B. Robbins http://dx.doi.org/10.21079/11681/25652	AD1049301
<sup>1</sup> ERDC/GSL SR-18-1	Feb 2018	Chemistry and Mineralogy of Regionally-Based Strong Concrete (RBSC) Constituent Materials, by B.H. Green, E.R. Reed-Gore, and T.R. Johnson	AD1048097
ERDC/GSL SR-18-2		Report Withdrawn	
ERDC/GSL SR-18-3	Jul 2018	Characterization of Nanosized Crystallites Using X-ray Diffraction (XRD): Standard Operating Procedure Series: Characterization (C), by E.R. Reed-Gore, R.D. Moser, and C.A. Weiss, Jr. http://dx.doi.org/10.21079/11681/27802	

#### **Technical reports**

Report Number	<u>Date</u>	Title	AD Number
ERDC/GSL TR-16-27 Rep. 4	Jun 2018	Blast Load Simulator Experiments for Computational Model Validation: Report 4, by A.T. Barnes, C.F. Johnson, and J.L. O'Daniel http://dx.doi.org/10.21079/11681/27376	
ERDC/GSL TR-16-27 Rep. 5	Jun 2018	Blast Load Simulator Experiments for Computational Model Validation: Report 5, by A.T. Barnes, C.F. Johnson, and J.L. O'Daniel http://dx.doi.org/10.21079/11681/27388	<u>AD1057051</u>
ERDC/GSL TR-16-31 Rep. 2	Aug 2018	Modeling the Blast Load Simulator Airblast Environment Using First Principles Codes; Report 2: Blast Load Simulator Environment, Single Structures, by G.C. Bessette, J.L. O'Daniel, S.A. Akers, A.T. Barnes, G. Emmanuelli, M.A. Hunt, and R.A. Weed http://dx.doi.org/10.21079/11681/28465	
ERDC/GSL TR-17-26	Nov 2017	Inclement Weather Crater Repair Tool Kit, by H.P. Bell and J.S. Tingle http://dx.doi.org/10.21079/11681/25667	AD1042379

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

ERDC/GSL TR-17-27	Dec 2017	Evaluation of Expedient Surfaces for Remote Piloted Aircraft, by L. Garcia, T.W. Rushing, and C.A. Rutland http://dx.doi.org/10.21079/11681/25920	AD1043964
<sup>1</sup> ERDC/GSL TR-17-28	Dec 2017	Hardened Installation Protection for Persistent Operations (HIPPO) II; Advanced Computational Mechanics: Prediction Calculations and Experiments, by J.A. Sherburn, A.O. Frank, A.J. Burroughs, M.D. Adley, R.S. Browning IV, M.I. Hammons, R.E. Moxley, and M.J. Roth	AD1044773
ERDC/GSL TR-17-29	Dec 2017	Rapid Airfield Damage Recovery: Deployable Saw Technology Evaluation, by H.P. Bell and J.F. Rowland http://dx.doi.org/10.21079/11681/26585	AD1044385
ERDC/GSL TR-18-1	Jan 2018	Performance Prediction Relationships for AM2 Airfield Matting Developed from Full-Scale Accelerated Testing and Laboratory Experimentation, by T.W. Rushing http://dx.doi.org/10.21079/11681/26424	AD1046721
<sup>1</sup> ERDC/GSL TR-18-2	Mar 2018	Aberdeen Test Center Engineered Roadbed Soil: Laboratory Characterization, by K.J. Ratliff, S.S. Graham, S.A. Akers, and M.D. Adley	AD1048695
<sup>1</sup> ERDC/GSL TR-18-3	Mar 2018	Experimental Results for Ram Angle Test Series 3 (Triacetin and Ethanol): Tests RA43 through RA60, by P.W. Graham and G.E. Albritton	AD1048873
<sup>1</sup> ERDC/GSL TR-18-4	Mar 2018	Experimental Results for Ram Angle Test Series 4 (H <sup>2</sup> O with Surfactant): Tests RA61 through RA72, by P.W. Graham and R.E. Bennett	AD1049501
<sup>1</sup> ERDC/GSL TR-18-5	Apr 2018	The Influence of Concrete Saturation Level on Projectile Penetration: A Computational Investigation Using the HRB Model and the EPIC Hydrocode, by A.O. Frank, G.H. Vankirk, and J. Roth	AD1050527
ERDC/GSL TR-18-6	Apr 2018	Wet Weather Crater Repair Technologies for Grooved and Smooth Pavements, by H.P. Bell, C.L. Dean, and C.A. Rutland http://dx.doi.org/10.21079/11681/27103	AD1051533
ERDC/GSL TR-18-7	Apr 2018	Evaluation of AM2 2-1 Lay Pattern Over a 25 CBR Subgrade, by N.R. Hoffman, L. Garcia, and T.W. Rushing http://dx.doi.org/10.21079/11681/27106	AD1051495

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

<sup>1</sup> ERDC/GSL TR-18-8	May 2018	Development and Evaluation of Modified Light- Duty AM2 Airfield Matting, by N.R. Hoffman, L. Garcia, T.W. Rushing, B. Jordon, and P. Allison	AD1053017
<sup>1</sup> ERDC/GSL TR-18-9	Jun 2018	Site Stabilization for the Improved Ribbon Bridge (IRB) Bridge Supplementary Set (BSS), by D.E. Harder and J.F. Rushing	AD1057052
ERDC/GSL TR-18-10	Jun 2018	Modified Light-Duty AM2 Capability Assessment, by N.R. Hoffman and L. Garcia http://dx.doi.org/10.21079/11681/27369	AD1054517
<sup>1</sup> ERDC/GSL TR-18-11	Jun 2018	Airblast and Cratering Equivalencies from Hemispherical Field Experiments: C4, ANFO, and Select Home-Made Explosives, by J.E. Payne, Z.K. Crosby, D.L. Vaughan, J.Q. Ehrgott, Jr., D.D. Rickman, and J.E.Windham	
ERDC/GSL TR-18-12	Jul 2018	Near Surface Laboratory Testing Protocol Development, by W.W. Berry, A.L. Cunningham, K.E. Winters, OD.S. Taylor, W.R. Rowland, and M.D. Antwine http://dx.doi.org/10.21079/11681/27848	
ERDC/GSL TR-18-13	Jul 2018	Evaluation of Lightweight Airfield Matting for the AMX Program, by L. Garcia and N.R. Hoffman <a href="http://dx.doi.org/10.21079/11681/27867">http://dx.doi.org/10.21079/11681/27867</a>	
<sup>1</sup> ERDC/GSL TR-18-14	Jul 2018	Backfill Construction and Quality Control: Procedures for Wet Sand Experiments, by G.K. Doles, J.Q. Ehrgott, Jr., S.A. Akers, T.N. Williams, and J.E. Windham	
<sup>1</sup> ERDC/GSL TR-18-15	Jul 2018	Forensic Evaluation of Concrete Pole Failures and Production Capacity in Puerto Rico Following Hurricane Maria, by O. Esquilin-Mangual, F.J. Acosta, S.G. Wood, W.R. Long, C.K. Crane, O.G. Flores, and C.W. Ertle	
ERDC/GSL TR-18-16	Aug 2018	Experimental Evaluation of Kovács' Equations for Estimating Critical Gradients, by A. Montalvo- Bartolomei, B.A. Robbins, and J.W. Murphy http://dx.doi.org/10.21079/11681/28066	
ERDC/GSL TR-18-17	Aug 2018	Geomorphic Investigation of the Great Bend Region, Red River, by P.E. Albertson, M.K. Corcoran, W.J. Autin, J. Kruger, and T. Foster http://dx.doi.org/10.21079/11681/28327	
ERDC/GSL TR-18-18	Aug 2018	Evaluation of the WavTrac Expeditionary Mobility Matting System: Supplementary Testing, by W.C. Floyd http://dx.doi.org/10.21079/11681/28216	

<sup>&</sup>lt;sup>1</sup> Limited distribution; see Preface.
<sup>1</sup> ERDC/GSL TR-18-19	Aug 2018	Tests, Modeling, and Simulation Investigating Confinement and Homemade Explosive Type on Impulse to an Aboveground Rigid Structure, by G.K. Doles, N.T. Williams, J.Q. Ehrgott, Jr., M.D. Marshall, J.M. Brown, and R.L. Bufkin
ERDC/GSL TR-18-20	Aug 2018	Camouflet Repair Alternatives, by B.C. Cox and T.A. Carr http://dx.doi.org/10.21079/11681/28330
<sup>1</sup> ERDC/GSL TR-18-21	Aug 2018	Development of Penetration Resistance Functions for Ultra-High Performance Concrete, by M.D. Adley and B.C. Patterson
ERDC/GSL TR-18-22	Aug 2018	Laboratory Investigations of Cohesionless Shear Strength in Low Confinement Environments, by K.E. Winters, OD.S. Taylor, W.W. Berry, A.L. Cunningham, W.R. Rowland, and M.D. Antwine
		http://dx.doi.org/10.21079/11681/28461
ERDC/GSL TR-18-23 Vol.1	Aug 2018	Analysus and Comparison of Documented Seepage and Sand Boil Events on the Lower Mississippi River from 1937 to 2011. Volume 1: Main Text, by J.B. Dunbar, A.L. Ensign, N. Torres, and M.K. Corcoran http://dx.doi.org/10.21079/11681/28597
ERDC/GSL TR-18-23 Vol.2	Aug 2018	Analysus and Comparison of Documented Seepage and Sand Boil Events on the Lower Mississippi River from 1937 to 2011. Volume 2: Occurences of Seepage and Sand Boil Incidents during the 2011 Flood on Geology Maps, by J.B. Dunbar, A.L. Ensign, N. Torres, and M.K. Corcoran http://dx.doi.org/10.21079/11681/28475
ERDC/GSL TR-18-23 Vol.3	Aug 2018	Analysus and Comparison of Documented Seepage and Sand Boil Events on the Lower Mississippi River from 1937 to 2011. Volume 3: Occurences of Seepage and Sand Boil Incidents During the 2001 Flood on Photo Maps, by J.B. Dunbar, A.L. Ensign, N. Torres, and M.K. Corcoran http://dx.doi.org/10.21079/11681/28478
ERDC/GSL TR-18-24	Aug 2018	Comparison of Levee Underseepage Analysis Methods Using Blanket Theory and Finite Element Analysis, by T.L. Brandon, A. Batool, M. Jimenez, N.D. Vroman, and M.K. Corcoran http://dx.doi.org/10.21079/11681/28472

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

<sup>1</sup> ERDC/GSL TR-18-25	Aug 2018	Nuclear Airblast and Thermal Environments Testing and Modeling. FY16: Two-Structure Scenarios, by A.T. Barnes, J.L. O'Daniel, G.C. Bessette, G. Emmanuelli, M.A. Hunt, and R.A. Weed	
ERDC/GSL TR-18-26	Aug 2018	Rapid-Setting Flowable Fill Performance in Cold Weather for Airfield Damage Repair, by L. Edwards, W.D. Carruth, J.S. Tingle, and I.L. Howard http://dx.doi.org/10.21079/11681/29531	AD1061970
<sup>1</sup> ERDC/GSL TR-18-27	Sep 2018	Nuclear Airblast and Thermal Environments Testing and Modeling. FY16: Single Structure Scenarios, by J.L. O'Daniel, A.T. Barnes, and G.C. Bessette	

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

# 8 Information Technology Laboratory (ITL)

### **Special reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/ITL SR-17-1 App. B	Jun 2018	Publications of the U.S. Army Engineer Research and Development Center. Appendix B: January 2017 – December 2017, by J.A. Dolan http://dx.doi.org/10.21079/11681/27267	AD1053297

### **Technical reports**

Report Number	<u>Date</u>	Title	AD Number
ERDC/ITL TR-17-3	Dec 2017	Corroded Anchor Structure Stability/Reliability (CAS_Stab-R) Software for Hydraulic Structures, by T.W. Warren, B.C. White, and R.M. Ebeling http://dx.doi.org/10.21079/11681/26273	AD1045526
ERDC/ITL TR-18-1	Aug 2018	A Comparative Analysis of LiDAR and Structure from Motion Photogrammetry Utilizing a small Unmanned Aerial System (sUAS) Approach for Structural Mapping and Inspection, by M.A. Schwind, R.A. Scheid, and J.L. Boone http://dx.doi.org/10.21079/11681/29513	

# 9 Aquatic Nuisance Species Research Program (ANSRP)

Report Number	<u>Date</u>	Title	AD Number
ERDC/TN ANSRP-17-1	Dec 2017	Simulation of a Non-physical Barrier in the Brandon Road Lock and Dam Approach Channel, by A. Bell, D.L. Smith, and M. Farthing http://dx.doi.org/10.21079/11681/25972	
ERDC/TN ANSRP-18-1	Feb 2018	Maximum Swim Speed of Migrating Sea Lamprey (Petromyzon marinus): Reeanalysis of Data from a Prior Study, by J.J. Hoover and C.E. Murphy http://dx.doi.org/10.21079/11681/26413	

# **10 Dredging Operations and Environmental Research Program (DOER)**

#### **Technical notes**

#### **Dredged material management**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/TN DOER-D20	May 2018	Quantifying Sediment Accumulation and Accretion using <sup>210</sup> Pb and <sup>137</sup> Cs, by B.M. Boyd <u>http://dx.doi.org/10.21079/11681/27146</u>	

#### Risk

Report Number	<u>Date</u>	Title	AD Number
ERDC/TN DOER-R26	Aug 2018	Toxicity Reduction (and Identification) for Dredging Evaluations: Methods for Whole Sediment Elutriate Bioassays, by N.L. Melby, A.J. Kennedy, J.D. Farrar, A.J. Bednar, D.W. Moore, and W. Lehmann http://dx.doi.org/10.21079/11681/28467	
ERDC/TN DOER-R27	Aug 2018	Improving Spatial Monitoring of Dredging Operations: A Small Unmanned Aerial System Application to Map Turbidity, by J. L. Wilkens, B.C. Suedel, A.V. Davis, and J.M. Corbino <u>http://dx.doi.org/10.21079/11681/28978</u>	

# **11 Ecosystem Management and Restoration Research Program (EMRRP)**

#### **Technical notes**

### Species information (SI)

Report Number	<u>Date</u>	Title	AD Number
ERDC/TN EMRRP-SI-37	Dec 2017	Rapid Assessment of Invasive Riparian Trees for Planning and Implementing USACE Ecosystem Restoration Projects, by M.P. Giulfoyle and R.A. Fischer http://dx.doi.org/10.21079/11681/25941	AD1064297

#### Stream restoration (SR)

Report Number	<u>Date</u>	Title	AD Number
ERDC/TN EMRRP-SR-82	Dec 2017	Barrier Prioritization in the Tributaries of the Hudson-Raritan Esturary, by S.K. McKay, M. Reif, J. Coynigham, and D. Kohtio http://dx.doi.org/10.21079/11681/25911	AD1064294
ERDC/TN EMRRP-SR-84	Jan 2018	Upper Narragansett Bay Fish Passage: Case Studies in Connectivity Restoration, by L.R. Oliver and W.C. Gendron http://dx.doi.org/10.21079/11681/26265	AD1064296

# **12 Engineering with Nature Program (EWN)**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/TN EWN-17-3	Oct 2017	Creating Nesting Habitat for the Common Tern (Sterna hirundo) on the Repaired Ashtabula Breakwater: Lessons Learned 2014 – 2016, by M.P. Guilfoyle, R.J. Ruby, B.C. Suedel, T.J. Fredette, P. Bijhouwer, A. Hannes, K. Adair, C.J. Banks, and A.M. Friona http://dx.doi.org/10.21079/11681/24825	AD1064290

# **13 Regional Sediment Management** Demonstration Program (RSM)

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC/TN RSM-17-4	Dec 2017	Regional Sediment Dynamics in Mobile Bay, Alabama: A Sediment Budget Perspective, by M.R. Byrnes, J.L. Berlinghoff, and S.F. Griffee <u>http://dx.doi.org/10.21079/11681/25970</u>	
ERDC/TN RSM-18-1	Jan 2018	Understanding Regional Shoreline Change and Coastal Processes at the Sunset Beach Region, Oahu, Hawaii, by T.D. Smith, J.H. Podoski, Z. Demirbilek, and L. Lin http://dx.doi.org/10.21079/11681/26285	
ERDC/TN RSM-18-2	Jan 2018	American Samoa RSM: Numerical Modeling of Waves and Currents in the Utulei Beach Region, by L.K. Molina and J.H. Podoski http://dx.doi.org/10.21079/11681/26402	
ERDC/TN RSM-18-3	Jan 2018	The Cross Section Viewer: A Tool for Automating Geomorphic Analysis Using Riverine Cross- Section Data, by J. Shelley and P. Bailey http://dx.doi.org/10.21079/11681/26284	
ERDC/TN RSM-18-4	Jan 2018	User's Guide for the Sediment Mobility Tool Web Application, by B.C. McFall and K.E. Brutsché <a href="http://dx.doi.org/10.21079/11681/26412">http://dx.doi.org/10.21079/11681/26412</a>	
ERDC/TN RSM-18-5	Mar 2018	Potential RSM Projects; Utulei Beach Region, American Samoa, by T.D. Smith http://dx.doi.org/10.21079/11681/26601	
ERDC/TN RSM-18-6	Apr 2018	Physical Monitoring Methods for the Nearshore Placement of Dredged Sediment, by Z.J. Tyler, B.C. McFall, K.E. Brutsché, E.C. Maloney, and D.F. Bucaro http://dx.doi.org/10.21079/11681/26661	
ERDC/TN RSM-18-7	Jul 2018	Reservoir Sediment Management Workshop for Regulators, Planners, and Managers by J. Shelley, P. Boyd, T. Dahl, I. Floyd, and M. Ramos-Villanueva http://dx.doi.org/10.21079/11681/27926	

### **14 Water Quality Research Program (WQRP)**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
ERDC WQTN-18-1	Jan 2018	Evaluation of a Proposed Chemical Treatment Lock for the Control of Aquatic Invasive Species in the Chicago Area Waterway System (CAWS), by V.F. Medina, K.J. Killgore, and J.J. Hoover http://dx.doi.org/10.21079/11681/26266	AD1064291

# **15 Wetlands Regulatory Assistance Program** (WRAP)

Report Number	<u>Date</u>	Title	AD Number
ERDC/TN WRAP-18-1	Sep 2018	Unmanned Aircraft Systems (UAS) and Satellite Imagery Collections in a Coastal Intermediate Marsh to Determine the Land-Water Interface, Vegetation Types, and Normalized Difference Vegetation Index (NDVI) Values, by W.P. Broussard III, G.M. Suir, and J.M. Visser <u>http://dx.doi.org/10.21079/11681/29517</u>	AD1064289

### **16 Miscellaneous Publications**

#### **Technical notes**

Report Number	<u>Date</u>	Title	AD Number
MRG&P Tech Note No. 4	Mar 2018	Attributes of the Lower Mississippi River Batture, by D. S. Biedenharn, K. J. Killgore, C. D. Little, Jr., C. E. Murphy, and B. A. Kleiss http://dx.doi.org/10.21079/11681/26582	
MRG&P Tech Note No. 5	Apr 2018	2016 Old River Control Complex Sedimentation Data: Supplement to Old River Control Complex Sedimentation Investigation (MRG&P Report No. 6), by K. E. Jones, D. D. Abraham, T. O. McAlpin, and N. B. Ganesh http://dx.doi.org/10.21079/11681/27109	
MRG&P Tech Note No. 6	Apr 2018	Morganza Floodway: Soft Opening Scenarios, by N. D. Clifton, J. W. Lewis, D. D. Abraham, and G. L. Bell http://dx.doi.org/10.21079/11681/27115	

### **Technical reports**

Report Number	<u>Date</u>	<u>Title</u>	AD Number
MRG&P Report No. 15	Nov 2017	Mississippi River 2016 Winter Stage Trends, by D. P. May, D. S. Biedenharn, B. S. Johnson, and E. Howe http://dx.doi.org/10.21079/11681/25604	
MRG&P Report No. 16	Dec 2017	Bed Material Sizes, Variability, and Trends in the Lower Mississippi River and Their Significance to Calculated Bed Material Loads, by C. R. Thorne, D. S. Biedenharn, C. D. Little, Jr., K. Wofford, T. McCullough, and C. C. Watson http://dx.doi.org/10.21079/11681/25809	
MRG&P Report No. 17	Mar 2018	The Influence of Geology on the Morphologic Response of the Lower Mississippi River, by D. S. Biedenharn, J. B. Dunbar, R. A. Gaines, and C. D. Little, Jr. http://dx.doi.org/10.21079/11681/26566	

MRG&P Report No. 18	Apr 2018	Bed-Load and Water Surface Measurements during the 2011 Mississippi River Flood at Vicksburg, Mississippi, by K. E. Jones, D. D. Abraham, and T. O. McAlpin http://dx.doi.org/10.21079/11681/27112
MRG&P Report No. 19	Aug 2018	Mississippi River: Natchez to Baton Rouge Hydraulic and Sediment Transport Model, by J. R. Leech, D. P. May, T. O. McAlpin http://dx.doi.org/10.21079/11681/28012
MRG&P Report No. 20	Aug 2018	Two-Dimensional Hydraulics and Sediment Transport Modeling of the Racetrack Reach of the Mississippi River, 1965–1969, by J. R. Leech, D. P. May, and T. O. McAlpin, and B. Kleiss http://dx.doi.org/10.21079/11681/28039

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