

ERDC/ITL SR-17-1

Information Technology Laboratory



**US Army Corps
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Engineer Research and
Development Center



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

Appendix F: FY21 (October 2020-September 2021)

Compiled by James A. Dolan

January 2022

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

Appendix F: October 2020-September 2021

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

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

Abstract

Publications issued October 2020 through September 2021 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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Contents

Abstract	ii
Preface	v
1 Engineer Research and Development Center (ERDC)	1
Brochures	1
Special reports	1
Miscellaneous papers.....	2
Technical reports.....	4
2 Coastal and Hydraulics Laboratory (CHL)	8
Letter reports.....	8
Miscellaneous papers.....	9
Special reports	9
Technical notes.....	10
<i>Section I – Waves and coastal flooding</i>	10
<i>Section IV – Inlets and estuary channels</i>	10
<i>Section VII – River engineering and sedimentation</i>	10
<i>Section IX – Navigation</i>	11
Technical reports.....	11
3 Cold Regions Research Engineering Laboratory (CRREL)	14
Miscellaneous papers.....	14
Special reports	17
Technical notes.....	17
Technical reports.....	18
4 Construction Engineering Research Laboratory (CERL)	20
Miscellaneous papers.....	20
Technical notes.....	20
Technical reports.....	20
5 Environmental Laboratory (EL)	24
Miscellaneous papers.....	24
Special reports	26
Technical notes.....	27
Technical reports.....	27
6 Geospatial Research Laboratory (GRL)	30
Miscellaneous papers.....	30
Technical reports.....	30
7 Geotechnical and Structures Laboratory (GSL)	31
Miscellaneous papers.....	31
Special reports	31

Technical notes.....	32
Technical reports.....	32
8 Information Technology Laboratory (ITL).....	37
Miscellaneous papers.....	37
Special reports	38
Technical notes.....	40
Technical reports.....	40
9 Aquatic Nuisance Species Research Program (ANSRP)	41
Technical notes.....	41
10 Aquatic Plant Control Research Program (APCRP)	42
Technical notes.....	42
<i>Chemical control</i>	42
<i>Miscellaneous</i>	42
11 Dredging Operations and Environmental Research Program (DOER)	43
Technical notes.....	43
<i>Contaminated Sediments / Risk Management</i>	43
<i>Dredged material management</i>	43
<i>Risk</i>	43
12 Dredging Operations Technical Support Program (DOTS).....	44
Technical notes.....	44
13 Ecosystem Management and Restoration Research Program (EMRRP)	45
<i>Environmental benefits assessment (EBA)</i>	45
<i>Species information (SI)</i>	45
14 Regional Sediment Management Demonstration Program (RSM).....	46
Technical Notes	46
15 Miscellaneous Publications	47

Report Documentation Page

Preface

The purpose of this report is to provide an annual update of literature produced by the U.S. Army Engineer Research and Development Center (ERDC). Publications issued October 2020 through September 2021 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. For ordering purposes and when available, Accession Document (AD) numbers have been supplied.

Some Miscellaneous Papers (MP) were originally published as a journal article or conference proceeding paper. The link and document will be accessible after a 12-month embargo.

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. Quincy G. Alexander, Chief, Software Engineering and Informatics Division, ITL; Dr. Jackie S. Pettway, 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)

Brochures

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC B-21-2	Sep 2021	KM Tools: Making Connections, by U.S. Engineer Research and Development Center http://dx.doi.org/10.21079/11681/41924	AD1147646

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC SR-21-1	Mar 2021	The Power of ERDC: ERDC 2020-2030 Strategy, by D.W. Pittman, J.P. Buchanan, and D.H. Quimby http://dx.doi.org/10.21079/11681/40382	AD1128471
ERDC SR-21-2	Apr 2021	Engineering with Nature®: An Atlas, Volume 2, by T.S. Bridges, E.M. Bourne, B.C. Suedel, E.B. Moynihan, and J.K. King http://dx.doi.org/10.21079/11681/40124	AD1127124
ERDC SR-21-3	Aug 2021	Rapid Tidal Reconstruction with UTide and the ADCIRC Tidal Database, by M.J. Torres and N.C. Nadal-Caraballo http://dx.doi.org/10.21079/11681/41503	AD1145211
ERDC SR-21-4	Aug 2021	Expert Elicitation Workshop for Planning Wetland and Reef Natural and Nature-Based Features (NNBF) Futures, by C.D. Piercy, S. Altman, T.M. Swannack, C.C. Carrillo, E.R. Russ, and J.H. Winkelman http://dx.doi.org/10.21079/11681/41665	AD1145898
ERDC SR-21-5	Sep 2021	Overview: International Guidelines on Natural and Nature-Based Features for Flood Risk Management, by T.S. Bridges, J.K. King, J.D. Simm, M.W. Beck, G. Collins, Q. Lodder, and R.K. Mohan http://dx.doi.org/10.21079/11681/41945	AD1149687
ERDC SR-21-6	Sep 2021	International Guidelines on Natural and Nature-Based Features for Flood Risk Management, by T.S. Bridges, J.K. King, J.D. Simm, M.W. Beck, G. Collins, Q. Lodder, and R.K. Mohan http://dx.doi.org/10.21079.11681/41946	AD1149708

ERDC SR-21-7	Sep 2021	Threatened, Endangered, and At-Risk Species for Consideration into Climate Change Models in the Northeast, by J.F. Jung, M.P. Guilfoyle, A.V. Davis, C.L. Saltus, E.R. Britzke, and R.A. Fischer http://dx.doi.org/10.21079/11681/42143	AD1148942
¹ ERDC SR-21-8	Sep 2021	Mobility in Complex Urban Environments Sensor Deployment Methods, by J.G. Laird, E. Lord, T.E. Berry, M.P. Fields, S. Hammond, K. Matheson, J. Wilkins, R.E. Boyd, M. Graves, J.R. Kelley, S. Price, B. Towne, and J.R. Fairley	AD1149389

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC MP-20-2	Oct 2020	A Measurement System for the Study of Nonlinear Propagation Through Arrays of Scatterers, by C.R. Hart and G.W. Lyons http://dx.doi.org/10.21079/11681/38621	AD1113759
² ERDC MP-21-1	May 2021	A Computational Prototyping Environment Interface for DoD CREATE™-AV Helios Simulations, by R.B. Haehnel, S.D. Christensen, J.L. Whitlow, A.C. Bauer, A. Meyer, G. Rangarajan, Y. Wenren, D. Hardin, B. Hoch, S. Clark, and A. Eiseman http://dx.doi.org/10.21079/11681/40582	AD1132602
² ERDC MP-21-2	May 2021	Vertical and Slanted Sound Propagation in the Near-Ground Atmosphere: Amplitude and Phase Fluctuations, by M.J. Kamrath, V.E. Ostashev, D.K. Wilson, M.J. White, C.R. Hart, and A. Finn http://dx.doi.org/10.21079/11681/40680	AD1133605
² ERDC MP-21-3	Jun 2021	In Situ Analysis and Visualization to Enable Better Workflows with CREATE-AV™ Helios, by A.C. Bauer, J.R. Forsythe, J. Sitaraman, A. Wissink, B. Jayaraman, and R.B. Haehnel http://dx.doi.org/10.21079/11681/40846	AD1135033
² ERDC MP-21-4	Jun 2021	Helicopter Rotor Blade Multiple-Section Optimization with Performance Considerations, by L.D. Allen, J.W. Lim, R.B. Haehnel, and I.D. Dettwiller http://dx.doi.org/10.21079/11681/41031	AD1137635

¹ Limited distribution; see Preface.

² 12-month embargo; see Preface.

¹ ERDC MP-21-5	Jun 2021	Rotor Blade Design Framework for Airfoil Shape Optimization with Performance Considerations, by L.D. Allen, J.W. Lim, R.B. Haehnel, and I.D. Dettwiller http://dx.doi.org/10.21079/11681/41037	AD1137765
ERDC MP-21-6	Jul 2021	Dimensional Analysis of Structural Response in Complex Biological Structures, by R.R. Patel, D.S. Thompson, G.A. Riveros, W.D. Hodo, J.F. Peters, and F.J. Acosta http://dx.doi.org/10.21079/11681/41082	AD1139956
¹ ERDC MP-21-7	Jul 2021	Machine-learning of Long-range Sound Propagation Through Simulated Atmospheric Turbulence, by C.R. Hart, D.K. Wilson, C.L. Pettit, and E.T. Nykaza http://dx.doi.org/10.21079/11681/41182	AD1141520
ERDC MP-21-8	Jul 2021	Modernizing Environmental Signature Physics for Target Detection, by J. Clausen, R. Affleck, C. Felt, M. Musty, S. Peckham, S. Frankenstein, A. Wagner, R. Kala, and A. Trautz http://dx.doi.org/10.21079/11681/41240	AD1142655
¹ ERDC MP-21-9	Jul 2021	An Epigenetic Modeling Approach for Adaptive Prognostics of Engineered Systems, by M.A. Seale, N. Garcia-Reyero, R.C. Salter, and A. Ruvinsky http://dx.doi.org/10.21079/11681/41282	AD1143421
ERDC MP-21-10	Aug 2021	Metal Accumulation Capacity in Indigenous Alaska Vegetation Growing on Military Training Lands, by R.R. Busby, T.A. Douglas, J.J. LeMonte, D.B. Ringelberg, and K.J. Indest http://dx.doi.org/10.21079/11681/41443	AD1144846
ERDC MP-21-11	Aug 2021	Methods for Simultaneous Determination of Legacy and Insensitive Munition (IM) Constituents in Aqueous, Soil/Sediment, and Tissue Matrices, by R.A. Crouch, J.C. Smith, B.S. Stromer, C.T. Hubley, S. Beal, G.R. Lotufo, A.D. Butler, M.T. Wynter, A.L. Russell, J.G. Coleman, K.M. Wayne, J.L. Clausen, and A.J. Bednar http://dx.doi.org/10.21079/11681/41720	AD1146120
ERDC MP-21-12	Aug 2021	A Definition and Categorization System for Advanced Materials: The Foundation for Risk-Informed Environmental Health and Safety Testing, by A. Kennedy, J. Brame, T. Rycroft, M. Wood, V. Zemba, C. Weiss Jr., M. Hull, C. Hill, C. Geraci, and I. Linkov http://dx.doi.org/10.21079/11681/41803	AD1146776

¹ 12-month embargo; see Preface.

ERDC MP-21-13	Sep 2021	Computational Mechanics of the Paddlefish Rostrum, by G.A. Riveros, F.J. Acosta, R.R. Patel, and W. Hodo http://dx.doi.org/10.21079/11681/41860	AD1147183
ERDC MP-21-14	Sep 2021	Leveraging Chemical Actinometry and Optical Radiometry to Reduce Uncertainty in Photochemical Research, by E. Asenath-Smith, E.K. Ambrogi, L.C. Moores, S.D. Newman, and J.A. Brame http://dx.doi.org/10.21079/11681/42080	AD1148501
ERDC MP-21-15	Sep 2021	CuO Enhances the Photocatalytic Activity of Fe ₂ O ₃ through Synergistic Reactive Oxygen Species Interactions, by E. Asenath-Smith, E.K. Ambrogi, E. Barnes, J.A. Brame http://dx.doi.org/10.21079/11681/42131	AD1148835

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TR-20-23	Oct 2020	Army Installations of the Future Industry Day 2019: Summary Report, by L.R. Marrano, A.P. Koster, S.R. Wolters, L.B. Bartels, I. Chu, B.C. Clark, T.C. Patel, E.T. Westervelt, I.A. Andsager, and S.M. Wallace http://dx.doi.org/10.21079/11681/38582	AD1113415
ERDC TR-20-25	Oct 2020	Evaluating the Conductive Properties of Melanin-Producing Fungus, <i>Curvularia lunata</i> , after Copper Doping, by R.M. Jones, E.V. Barnes, A.K. Thurston, and R.A. Barbato http://dx.doi.org/10.21079/11681/38641	AD1113965
ERDC TR-20-26	Nov 2020	Snow-Covered Obstacles' Effect on Vehicle Mobility, by M. Bodie, M.W. Parker, A. Stott, and B. Elder http://dx.doi.org/10.21079/11681/38839	AD1115605
ERDC TR-20-27	Nov 2020	Hydrologic Impacts on Human Health: El Niño Southern Oscillation and Cholera, by E.M. Yeates, K.A. Cotterman, and A.M. Rhodes http://dx.doi.org/10.21079/11681/39483	AD1120338
¹ ERDC TR-20-28	Mar 2021	Storytelling Algorithms for the Information Environment (SAFTIE): Summary Report, by T.K. Perkins, H. Yu, and S. Tra	AD1125175
ERDC TR-20-29	Dec 2020	Incorporating Color Change Propensity into Dredged Material Management to Increase Beneficial Use Opportunities, by J.F. Berkowitz, C.M. VanZomeren, A.M. Priestas, and J.J. Price http://dx.doi.org/10.21079/11681/39261	AD1118357

¹ Limited distribution; see Preface.

ERDC TR-21-1	Jan 2021	Optical and Acoustical Measurement of Ballistic Noise Signatures, by M.G. Blevins, G.W. Lyons, C.R. Hart, and M.J. White http://dx.doi.org/10.21079/11681/39501	AD1120489
ERDC TR-21-2		No Report	
ERDC TR-21-3	Feb 2021 Rev. Mar 2021	Automated Construction of Expeditionary Structures (ACES): Materials and Testing, by G.K. Al-Chaar, P.B. Stynoski, E. Kreiger, T.S. Rushing, L.A. Barna, J.F. Burroughs, J.L. Vavrin, and M.P. Case http://dx.doi.org/10.21079/11681/39721	AD1123157
ERDC TR-21-4	Mar 2021	First Generation Automated Assessment of Airfield Damage from LiDAR Point Clouds, by E.S. Berney IV, A.B. Ward, and N.B. Ganesh http://dx.doi.org/10.21079/11681/40042	AD1125506
¹ ERDC TR-21-5	Mar 2021	Distributed Acoustic Sensing Geotechnical Effects Test Bed: Installation, Troubleshooting, and Initial Results, by M.C. Quinn, K.E. Winters, J.D. Ellis, J.R. Picucci, and E.P. Simpson	AD1125538
ERDC TR-21-6	Apr 2021	Signal Propagation Modeling in Complex, Three-Dimensional Environments, by D.K. Wilson, D.J. Breton, L.E. Waldrop, D.R. Glaser, R.E. Alter, C.R. Hart, W.M. Barnes, M.T. Ekegren, M.B. Muhlestein, M. Mishra, M.A. Niccolai, M.J. White, C. Borden, and E. Fahy http://dx.doi.org/10.21079/11681/40321	AD1128284
ERDC TR-21-7	Apr 2021	Methodology for Remote Assessment of Pavement Distresses from Point Cloud Analysis, by E.S. Berney IV, N.B. Ganesh, A.B. Ward, J.K. Newman, and J.F. Rushing http://dx.doi.org/10.21079/11681/40401	AD1128937
ERDC TR-21-8	May 2021	Long-Term Performance of Sustainable Pavements Using Ternary Blended Concrete with Recycled Aggregates, by G.R. Lomboy, D.B. Cleary, S.M. Wagner, Y. Mehta, D.E. Kennedy, B.E. Watts, P.G. Bly, and J.I. Oren http://dx.doi.org/10.21079/11681/40780	AD1134344
ERDC TR-21-9	May 2021	Finite Element Analysis of Quoin Block Deterioration and Load Transfer Mechanisms in Miter Gates: Pintle and Pintle Connections, by D.L. Dixon and W.D. Hodo http://dx.doi.org/10.21079/11681/40842	AD1134988

¹ Limited distribution; see Preface.

ERDC TR-21-10	Jun 2021	Multi-Objective Source Scaling Experiment, by R.D. Costley, L.A. De Jesús Díaz, S. McComas, C.P. Simpson, J.W. Johnson, and M.H. McKenna http://dx.doi.org/10.21079/11681/40824	AD1134931
ERDC TR-21-11	Jul 2021	Application of a Radiation-Derived Temperature Index Model to the Willow Creek Watershed in Idaho, USA, by D. Hamill, J. Giovando, C. Engel, T. Dahl, and M. Bartles http://dx.doi.org/10.21079/11681/41360	AD1144235
ERDC TR-21-12	Aug 2021	Preparative, Extraction, and Analytical Methods for Simultaneous Determination of Legacy and Insensitive Munition (IM) Constituents in Aqueous, Soil or Sediment, and Tissue Matrices, by R.A. Crouch, J.C. Smith, B.S. Stromer, C.T. Hubley, S. Beal, G.R. Lotufo, A.D. Butler, M.T. Wynter, D.A. Rosado, A.L. Russell, J.G. Coleman, J.L. Clausen, and A.J. Bednar http://dx.doi.org/10.21079/11681/41480	AD1145072
ERDC TR-21-13	Sep 2021	Mat Sinking Unit Supply Study: Mississippi River Revetment, by J.A. Hicks, L.I. Yates, and J.S. Pettway http://dx.doi.org/10.21079/11681/41867	AD1147222
¹ ERDC TR-21-14	Sep 2021	Directed Energy Effects on Geomaterials; Part 1: Modeling and Simulation, by J. Allen, J. Furey, C. Sturm, and C.M. Strack	AD1147114
ERDC TR-21-15	Sep 2021	An Investigation of the Feasibility of Assimilating COSMOS Soil Moisture into GeoWATCH, by J.B. Eylander, M.G. Lewis, M.T. Stevens, J.G. Green, S.J. Price, and J.R. Fairley http://dx.doi.org/10.21079/11681/41966	AD1147836
¹ ERDC TR-21-16	Sep 2021	Unmanned Aircraft Systems Specifications for Use in Mobility Complex Urban Environments, by J.G. Laird, T.E. Berry, Jr., M. Fields, E. Lord, S. Hammond, J.R. Kelley, and M. Graves	AD1147729
ERDC TR-21-17	Sep 2021	Synthesis and Characterization of Biological Nanomaterial/Poly (vinylidene fluoride) Composites, by E. Barnes, J.A. Jefcoat, E.M. Alberts, H.R. Peel, L.C. Mimun, J.P. Buchanan, X. Guan, C.M. Warner, K.L. Klaus, E.R. Reed-Gore, and C.A. Weiss Jr. http://dx.doi.org/10.21079/11681/42132	AD1148854

¹ Limited distribution; see Preface.

ERDC TR-21-18	Sep 2021	Optimizing the Harmful Algal Bloom Interception, Treatment, and Transformation System (HABITATS), by M. Page, B. MacAllister, M. Campobasso, A. Urban, C. Thomas, C. Cender, C. Arnett, C. White, E. Martinez-Guerra, A. Boyd, E. Gao, A. Kennedy, T. Biber, K. Pokrzywinski, C. Grasso, B. Fernando, C. Veinotte, J. Riley, A. Gonzalez, J. Miller, K. Gunderson, L. Schideman, Y. Zhang, B.K. Sharma, D. Levy, B. Colona, D. Pinelli, T. Karst-Riddoch, and W. Lovins http://dx.doi.org/10.21079/11681/42223	AD1150054
ERDC TR-21-19	Sep 2021	Accelerating the Tactical Decision Process with High-Performance Computing (HPC) on the Edge: Motivation, Framework, and Use Cases, by A.I. Ruvinsky, T.W. Garton, D.P. Chausse, R.K. Agrawal, H.F. Yu, and E.L. Miller http://dx.doi.org/10.21079/11681/42169	AD1149132

2 Coastal and Hydraulics Laboratory (CHL)

Letter reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/CHL LR-21-1	Feb 2021	Nearshore Nourishment Practices near Coastal Structures, by D.R. Krafft, B.C. McFall, H. McCaw, B.M. Walker, and S.L. Spurgeon	
¹ ERDC/CHL LR-21-2	Mar 2021	Jacksonville Harbor 14k TEU Container Vessel Study: Letter Report, by K.I. Pazan, S.N. Stever, and M.C. Allison	
¹ ERDC/CHL LR-21-3	Apr 2021	Calibration and Validation of the Coastal Storm Modeling System (CSTORM-MS) for the South Atlantic Coastal Study (SACS) in the Gulf of Mexico, by T.C. Massey, M. Owensby, L. Provost, C. Dillon, T. Hesser, A. Tritinger, M. Bryant, J. Goertz, and E. Godsey	
¹ ERDC/CHL LR-21-4	Apr 2021	Calibration and Validation of the Coastal Storm Modeling System (CSTORM-MS) Setup for the South Atlantic Domain of the South Atlantic Coastal Study (SACS), by T.C. Massey, M. Owensby, L. Provost, M. Bryant, T. Hesser, A. Tritinger, C. Dillon, J. Goertz, and Y. Ding	
¹ ERDC/CHL LR-21-5	Aug 2021	Coastal Compound Flooding – Probabilistic Flood Hazard Assessment Pilot Study: Site Selection, by V.M. Gonzalez, M.O. Campbell, N.C. Nadal-Caraballo, E. Ramos-Santiago, T.C. Massey, and M.J. Torres	
¹ ERDC/CHL LR-21-6	Sep 2021	Coastal Storm (CSTORM) Modeling System Storm Surge Feasibility Study for Ocean City, MD Project Proposals, by A. Tritinger, M. Owensby, T.C. Massey, and F. Bukhari	

¹ Limited distribution; see Preface.

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/CHL MP-21-1	Jun 2021	Quantifying the Effect of Subcritical Water Repellency on Sorptivity: A Physically Based Model, by R.M. Shillito, M. Berli, and T.A. Ghezzehei http://dx.doi.org/10.21079/11681/41054	AD1139793
ERDC/CHL MP-21-2	Jul 2021	Spatial Variability of Coastal Foredune Evolution, Part A: Timescales of Months to Years, by K. Brodie, I. Conery, N. Cohn, N. Spore and M. Palmsten http://dx.doi.org/10.21079/11681/41322	AD1143856
ERDC/CHL MP-21-3	Aug 2021	Simultaneous Mapping of Coastal Topography and Bathymetry from a Lightweight Multicamera UAS, by K.L. Brodie, B.L. Bruder, R.K. Slocum, and N.J. Spore http://dx.doi.org/10.21079/11681/41440	AD1144811
ERDC/CHL MP-21-4	Aug 2021	The Response of Vegetated Dunes to Wave Attack, by D.B. Bryant, M.A. Bryant, J.A. Sharp, G.L. Bell, and C. Moore http://dx.doi.org/10.21079/11681/41580	AD1145525
ERDC/CHL MP-21-5	Sep 2021	Morphodynamics of Barrier-Inlet Systems in the Context of Regional Sediment Management, with Case Studies from West-Central Florida, USA, by T.M. Beck and P. Wang http://dx.doi.org/10.21079/11681/41984	AD1147968
ERDC/CHL MP-21-6	Sep 2021	Estimating Growing-Season Root Zone Soil Moisture from Vegetation Index-Based Evapotranspiration Fraction and Soil Properties in the Northwest Mountain Region, USA, by N.R. Pradhan http://dx.doi.org/10.21079/11681/42128	AD1148799

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL SR-21-1	May 2021	Applying Resilience Concepts to Inland River Systems, by K.F. Chambers and W. Echevarria-Doyle http://dx.doi.org/10.21079/11681/40743	AD1134115

¹ 12-month embargo; see Preface.

ERDC/CHL SR-21-2	Jul 2021	2017 Hurricane Season: Recommendations for a Resilient Path Forward for the Marine Transportation System, by K. Chambers, J. Murphy, and K. McIntosh http://dx.doi.org/10.21079/11681/41285	AD1143479
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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-100	Mar 2021	Utilizing Data from the NOAA National Data Buoy Center, by C. Hall and R.E. Jensen http://dx.doi.org/10.21079/11681/40059	AD1125614
ERDC/CHL CHETN-I-101	Aug 2021	Rapid Tidal Reconstruction for the Coastal Hazards System and StormSim Part II: Puerto Rico and US Virgin Islands, by M.J. Torres, N.C. Nadal-Caraballo, and A.A. Taflanidis http://dx.doi.org/10.21079/11681/41482	AD1145215

Section IV – Inlets and estuary channels

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IV-127	Feb 2021	altWIZ: A System for Satellite Radar Altimeter Evaluation of Modeled Wave Heights, by C.O. Collins III and T. Hesser http://dx.doi.org/10.21079/11681/39699	AD1123016
ERDC/CHL CHETN-IV-128	Aug 2021	In Situ Measurements of Directional Wave Spectra from an Unmanned Aerial System, by C.O. Collins III and K. Brodie http://dx.doi.org/10.21079/11681/41701	AD1146530
ERDC/CHL CHETN-IV-129	Sep 2021	Field Evaluation of GNSS/GPS Based RTK, RTN, and RTX Correction Systems, by J.R. Mitchell and M.F. Forte http://dx.doi.org/10.21079/11681/41864	AD1147796

Section VII – River engineering and sedimentation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-VII-24	Apr 2021	Channel Assessment Tools for Rapid Watershed Assessment, by C. Haring and D. Biedenharn http://dx.doi.org/10.21079/11681/40379	AD1128590

Section IX – Navigation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IX-54	Feb 2021	AIS Data Case Study: Selecting Design Vessels for New Jersey Back Bays Storm Surge Barriers Study, by M.M. Kress and S. Weintraub http://dx.doi.org/10.21079/11681/39779	AD1123635
ERDC/CHL CHETN-IX-55	May 2021	Suppressing the Pressure-Source Instability in Modeling Deep-Draft Vessels with Low Under-Keel Clearance in FUNWAVE-TVD, by M. Malej and F. Shi http://dx.doi.org/10.21079/11681/40639	AD1133356
ERDC/CHL CHETN-IX-56	May 2021	AIS Data Case Study: Quantifying Connectivity for Six Great Lakes Port Areas from 2015 through 2018, by M.M. Kress, D.L. Young, K.F. Chambers, and B.M. Scully http://dx.doi.org/10.21079/11681/40720	AD1134940
ERDC/CHL CHETN-IX-57	Jun 2021	AIS Data Case Study: Identifying AIS Coverage Gaps on the Ohio River in CY2018, by P.K. DiJoseph, B.J. Tetreault, and M.M. Kress http://dx.doi.org/10.21079/11681/40886	AD1136336

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL TR-21-1	Jan 2021	Simulations of Shoreline Changes along the Delaware Coast, by Y. Ding, S.-C. Kim, R.L. Permenter, R.B. Styles, and J.A. Gebert http://dx.doi.org/10.21079/11681/39559	AD1120914
ERDC/CHL TR-21-2	Feb 2021	Houston Ship Channel Expansion Channel Improvement Project (ECIP) Numerical Modeling Report: Increased Channel Width Analysis, by J. McAlpin and C. Ross http://dx.doi.org/10.21079/11681/39739	AD1123374
ERDC/CHL TR-21-3	Feb 2021	guiBathy: A Graphical User Interface to Estimate Nearshore Bathymetry from Hovering Unmanned Aerial System Imagery, by B. Bruder, K. Brodie, T. Hesser, N. Spore, M. Farthing, M. Geheran, and A. Renaud http://dx.doi.org/10.21079/11681/39700	AD1123010

¹ ERDC/CHL TR-21-4	Mar 2021	Full Closure Model of the Improved Ribbon Bridge with Existing Overhead Cabling System, by D.B. Bryant, J. Sharp, and G. Bell	AD1125605
ERDC/CHL TR-21-5	Apr 2021	Rough River Outlet Works Physical Model Study, by J.A. Sharp, L.M. Williams, D.B. Bryant, J.P. Allgeier, K.L. Pigg, G.L. Bell, and D.W. Moses http://dx.doi.org/10.21079/11681/41043	AD1138139
ERDC/CHL TR-21-6	May 2021	Brunswick Harbor Numerical Model, by J. McAlpin and J. Lavecchia http://dx.doi.org/10.21079/11681/40599	AD1132756
ERDC/CHL TR-21-7	May 2021	Approaches for Assessing Riverine Scour, by A. Howard, J. Pak, D. May, S. Gibson, C. Haring, B. Alberto, and M. Snyder http://dx.doi.org/10.21079/11681/40702	AD1133825
ERDC/CHL TR-21-8	May 2021	Elevation of Underlying Basement Rock, Ogdensburg Harbor, NY, by H.M. Wadman and J.E. McNinch http://dx.doi.org/10.21079/11681/40843	AD1135005
ERDC/CHL TR-21-9	Jun 2021	Field Measurement and Monitoring of Hydrodynamic and Suspended Sediment within the Seven Mile Island Innovation Laboratory, New Jersey, by K.A. Fall, D.W. Perkey, Z.J. Tyler, and T.L. Welp http://dx.doi.org/10.21079/11681/40980	AD1136666
ERDC/CHL TR-21-10	Jun 2021	Red River Structure Physical Model Study: Bulkhead Testing, by G.L. Bell and D.B. Bryant http://dx.doi.org/10.21079/11681/40970	AD1136566
ERDC/CHL TR-21-11	Jun 2021	Coastal Texas Protection and Restoration Feasibility Study: Coastal Texas Flood Risk Assessment: Hydrodynamic Response and Beach Morphology, by J.A. Melby, T.C. Massey, F. Diop, H. Das, N.C. Nadal-Caraballo, V. Gonzalez, M. Bryant, A. Tritinger, L. Provost, M. Owensby, and A. Stehno http://dx.doi.org/10.21079/11681/41051	AD1139393
ERDC/CHL TR-21-12	Aug 2021	Houston Ship Channel Expansion Channel Improvement Project (ECIP) Numerical Modeling Report: BABUS Cell and Bird Island Analysis, by J. McAlpin and C. Ross http://dx.doi.org/10.21079/11681/41581	AD1145556

¹ Limited distribution; see Preface.

ERDC/CHL TR-21-13	Aug 2021	Spatial Distribution and Thickness of Fine-Grained Sediment along the United States Portion of the Upper Niagara River, New York, by H.M. Wadman and J.E. McNinch http://dx.doi.org/10.21079/11681/41666	AD1145911
ERDC/CHL TR-21-14	Aug 2021	Cohesive Sediment Field Study: James River, Virginia, by S.J. Smith, D.W. Perkey, and K.A. Fall http://dx.doi.org/10.21079/11681/41640	AD1145761
ERDC/CHL TR-21-15; Rep. 1	Aug 2021	Sabine Pass to Galveston Bay, TX Pre-Construction, Engineering and Design (PED): Coastal Storm Surge and Wave Hazard Assessment: Report 1 - Background and Approach, by J.A. Melby, T.C. Massey, A.L. Stehno, N.C. Nadal-Caraballo, S. Misra, and V. Gonzalez http://dx.doi.org/10.21079/11681/41820	AD1146839

3 Cold Regions Research Engineering Laboratory (CRREL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/CRREL MP-20-16	Oct 2020	Geometric-Acoustics Analysis of Singly Scattered, Nonlinearly Evolving Waves by Circular Cylinders, by M.B. Muhlestein and C.R. Hart http://dx.doi.org/10.21079/11681/38521	AD1113338
¹ ERDC/CRREL MP-20-17	Oct 2020	Numerical Analysis of Weak Acoustic Shocks in Aperiodic Array of Rigid Scatterers, by M.B. Muhlestein and C.R. Hart http://dx.doi.org/10.21079/11681/38579	AD1113358
¹ ERDC/CRREL MP-20-18	Nov 2020	Distribution of the Two-Point Product of Complex Amplitudes in the Fully Saturated Scattering Regime, by D.K. Wilson, V.E. Ostashev and C.L. Pettit http://dx.doi.org/10.21079/11681/38701	AD1114611
¹ ERDC/CRREL MP-21-1	Apr 2021	Scale Invariance of Albedo-Based Wind Friction Velocity, by N.P. Ziegler, N.P. Webb, A. Chappell, S.L. LeGrand http://dx.doi.org/10.21079/11681/40499	AD1131042
ERDC/CRREL MP-21-2	Jun 2021	Application of Laser Induced Breakdown Spectroscopy (LIBS) for Environmental, Chemical, and Biological Sensing, by H. VerMeulen, J.L. Clausen, A. Mossell, M. Morgan, K. Messan, and S. Beal http://dx.doi.org/10.21079/11681/40986	AD1136829
ERDC/CRREL MP-21-3	Jun 2021	Meteorological Property and Temporal Variable Effect on Spatial Semivariance of Infrared Thermography of Soil Surfaces for Detection of Foreign Objects, by A.K. Workman and J.L. Clausen http://dx.doi.org/10.21079/11681/41024	AD1137406
ERDC/CRREL MP-21-4	Jun 2021	A Physics-Informed Neural Network for Sound Propagation in the Atmospheric Boundary Layer, by C.L. Pettit and D.K. Wilson http://dx.doi.org/10.21079/11681/41034	AD1137725

¹ 12-month embargo; see Preface.

ERDC/CRREL MP-21-5	Jun 2021	Mercury Isotopes Reveal Atmospheric Gaseous Mercury Deposition Directly to the Arctic Coastal Snowpack, by T.A. Douglas and J.D. Blum http://dx.doi.org/10.21079/11681/41046	AD1138228
¹ ERDC/CRREL MP-21-6	Jun 2021	Increased Rainfall Stimulates Permafrost Thaw Across a Variety of Interior Alaskan Boreal Ecosystems, by T.A. Douglas, M.R. Turetsky, and C.D. Koven http://dx.doi.org/10.21079/11681/41050	AD1138321
ERDC/CRREL MP-21-7	Jun 2021	Modeling of a Multi-Month Thermal IR Study, by J.L. Clausen, M. Musty, A.M. Wagner, S. Frankenstein, and J. Dorvee http://dx.doi.org/10.21079/11681/41060	AD1139851
ERDC/CRREL MP-21-8	Jul 2021	Sources and Sinks of Carbon in Boreal Ecosystems of Interior Alaska: A Review, by T.A. Douglas, M.C. Jones, C.A. Hiemstra and J.R. Arnold http://dx.doi.org/10.21079/11681/41163	AD1141434
ERDC/CRREL MP-21-9	Jul 2021	Degrading Permafrost Mapped with Electrical Resistivity Tomography, Airborne Imagery and LiDAR, and Seasonal Thaw Measurements, by T.A. Douglas, M.T. Jorgenson, D.R.N. Brown, S.W. Campbell, C.A. Hiemstra, S.P. Saari, K. Bjella, and A.K. Liljedahl http://dx.doi.org/10.21079/11681/41185	AD1141526
ERDC/CRREL MP-21-10	Jul 2021	A Pulse of Mercury and Major Ions in Snowmelt Runoff from a Small Arctic Alaska Watershed, by T.A. Douglas, M. Sturm, J.D. Blum, C. Polashenski, S. Stuefer, C. Hiemstra, A. Steffen, S. Filhol, and R. Prevost http://dx.doi.org/10.21079/11681/41203	AD1142248
¹ ERDC/CRREL MP-21-11	Jul 2021	Machine Learning Analyses of Remote Sensing Measurements Establish Strong Relationships Between Vegetation and Snow Depth in the Boreal Forest of Interior Alaska, by T.A. Douglas and C. Zhang http://dx.doi.org/10.21079/11681/41222	AD1142558
ERDC/CRREL MP-21-12	Jul 2021	Effects of Milling on the Metals Analysis of Soil Samples Containing Metallic Residues, by J.L. Clausen, S.A. Beal, T. Georgian, K.H. Gardner, T.A. Douglas, and A.M. Mossell http://dx.doi.org/10.21079/11681/41241	AD1142698

¹ 12-month embargo; see Preface.

ERDC/CRREL MP-21-13	Jul 2021	Sublimation of Terrestrial Permafrost and the Implications for Ice-loss Processes on Mars, by T.A. Douglas and M.T. Mellon http://dx.doi.org/10.21079/11681/41244	AD1142758
¹ ERDC/CRREL MP-21-14	July 2021	Hydrocarbon Treatability Study of Antarctica Soil with Fenton's Reagent, by S. Beal, A. Mossell, and J. Clausen http://dx.doi.org/10.21079/11681/41260	AD1143146
ERDC/CRREL MP-21-15	Jul 2021	VI Preferential Pathways: Rule or Exception, by J. Clausen, D. Moore, L. Cain, and K. Malinowski http://dx.doi.org/10.21079/11681/41305	AD1143608
ERDC/CRREL MP-21-16	Jul 2021	Geotechnical Effects on Fiber Optic Distributed Acoustic Sensing Performance, by M.C.L. Quinn http://dx.doi.org/10.21079/11681/41325	AD1143869
ERDC/CRREL MP-21-17	Aug 2021	Reproducibility Assessment and Uncertainty Quantification in Subjective Dust Source Mapping, by S.N. Sinclair and S.L. LeGrand http://dx.doi.org/10.21079/11681/41542	AD1145321
ERDC/CRREL MP-21-18	Aug 2021	The AFWA Dust Emission Scheme for the GOCART Aerosol Model in WRF-Chem v3.8.1, by S.L. LeGrand, C. Polashenski, T.W. Letcher, G.A. Creighton, S.E. Peckham, and J.D. Cetola http://dx.doi.org/10.21079/11681/41560	AD1145404
ERDC/CRREL MP-21-19	Aug 2021	Terrain Coefficients for Predicting Energy Costs of Walking over Snow, by P.W. Richmond, A.W. Potter, D.P. Looney, and W.R. Santee http://dx.doi.org/10.21079/11681/41602	AD1145596
ERDC/CRREL MP-21-20	Aug 2021	Sustainable Infrastructure in Conflict Zones: Police Facilities' Impact on Perception of Safety in Afghan Communities, by R.T. Affleck, K. Gardner, S. Aytur, C. Carlson, C. Grimm, and E. Deeb http://dx.doi.org/10.21079/11681/41700	AD1146014
ERDC/CRREL MP-21-21	Aug 2021	Photo-transformation of Aqueous Nitroguanidine and 3-nitro-1,2,4-triazol-5-one: Emerging Munitions Compounds, by J.B. Becher, S.A. Beal, S. Taylor, K. Dontsova, and D.E. Wilcox http://dx.doi.org/10.21079/11681/41743	AD1146270

¹ 12-month embargo; see Preface.

ERDC/CRREL MP-21-22	Sep 2021	Extra-Wide-Angle Parabolic Equations in Motionless and Moving Media, by V.E. Ostashov, M.B. Muhlestein, and D.K. Wilson http://dx.doi.org/10.21079/11681/42043	AD1148354
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Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/CRREL SR-20-2	Nov 2020	Integration of the ERDC-Geo Surface Erodibility Parameterization into the Weather Research and Forecasting Model with Chemistry v4.1, by T.S. Hodgdon, S.L. LeGrand, and T.W. Lechter	AD1114440
ERDC/CRREL SR-20-3	Nov 2020	Vibration Survey of Room 47 with a Laser Doppler Vibrometer: Main Laboratory Basement, U.S. Army ERDC-CRREL, by C.R. Hart http://dx.doi.org/10.21079/11681/38919	AD1116207
¹ ERDC/CRREL SR-21-1	Aug 2021	Cold Regions Research and Engineering Laboratory (CRREL) Traverse Navigation Tool (TNT), by J.T. Parno, W.L. Breikreutz, E.J. Deeb, and Z.R. Courville	AD1146220
ERDC/CRREL SR-21-2	Sep 2021	Technical Guide for the Development, Evaluation, and Modification of Stream Assessment Methods for the Corps Regulatory Program, by G.C.L. David, D.E. Somerville, J.M. McCarthy, S.D. MacNeil, F. Fitzpatrick, R. Evans, and D. Wilson http://dx.doi.org/10.21079/11681/42182	AD1149261

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL TN-21-1	Sep 2021	Shear and Tensile Delamination of Ice from Surfaces: The Ice Adhesion Peel Test (IAPT), by A.R. Lovell, G.R. Hoch, C.J. Donnelly, J.M. Hodge, R.B. Haehnel, and E. Asenath-Smith http://dx.doi.org/10.21079/11681/41781	AD1147237

¹ Limited distribution; see Preface.

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL TR-20-12	Mar 2021	Microscale Dynamics between Dust and Microorganisms in Alpine Snowpack, by Z.R. Courville, A.K. Thurston, L.B. Farnsworth, R. Lieblappen, S.A. Rosten, J.M. Fegyveresi, S.J. Doherty, R.M. Jones, and R.A. Barbato http://dx.doi.org/10.21079/11681/40079	AD1110373
ERDC/CRREL TR-21-1	Mar 2021	Long-Term Durability of Cold Weather Concrete: Phase II, by B.E. Watts, D.E. Kennedy, E.W. Thomas, A.P. Bernier, and J.I. Oren http://dx.doi.org/10.21079/11681/39579	AD1121217
ERDC/CRREL TR-21-2	Mar 2021	Ice Fog Monitoring Near Fairbanks, AK, by D.A. Vas, S.E. Peckham, C.G. Schmitt, M. Stuefer, R.G. Burgener, and T.E. Wong http://dx.doi.org/10.21079/11681/40019	AD1125413
¹ ERDC/CRREL TR-21-3	Mar 2021	U.S. Coast Guard MH-60 and MH-65 Acoustic Covert Standoff Ranges: Numerical and Experimental Results, by M.J. Kamrath, R.A. Romond, G.E. Boitnott, D.K. Wilson, M.A. Niccolai, and B.J. Jones	AD1126240
ERDC/CRREL TR-21-4	Apr 2021	Automated Terrain Classification for Vehicle Mobility in Off-Road Conditions, by T.S. Hodgdon, A.J. Fuentes, J.L. Olivier, B.G. Quinn, and S.A. Shoop http://dx.doi.org/10.21079/11681/40219	AD1127269
ERDC/CRREL TR-21-5	Apr 2021	The Effectiveness of Laser-Induced Breakdown Spectroscopy (LIBS) as a Quantitative Tool for Environmental Characterization, by E.J. Corriveau, A.M. Mossell, H.H. VerMeulen, S.A. Beal, and J.L. Clausen http://dx.doi.org/10.21079/11681/40263	AD1127691
ERDC/CRREL TR-21-6	Apr 2021	Wintertime Snow and Precipitation Conditions in the Willow Creek Watershed above Ririe Dam, Idaho, by J. Giovando, C. Engel, S.F. Daly, M. Warner, D. Hamill, and E. Heisman http://dx.doi.org/10.21079/11681/40479	AD1130541
ERDC/CRREL TR-21-7	Apr 2021	Application of Incremental Sampling Methodology for Subsurface Sampling, by E.J. Corriveau and J.L. Clausen http://dx.doi.org/10.21079/11681/40480	AD1130539

¹ Limited distribution; see Preface.

ERDC/CRREL TR-21-8	Jul 2021	Changes in Climate and Its Effect on Timing of Snowmelt and Intensity-Duration-Frequency Curves, by A.M. Wagner, C.A. Hiemstra, G.E. Liston, K.E. Bennett, D.S. Cooley, and A.B. Gelvin http://dx.doi.org/10.21079/11681/41402	AD1144610
ERDC/CRREL TR-21-9	Aug 2021	Hydrologic Analysis of Field Delineated Ordinary High-Water Marks for Rivers and Streams, by D. Hamill and G.C.L. David http://dx.doi.org/10.21079/11681/41681	AD1145977
ERDC/CRREL TR-21-10	Aug 2021	Spatial and Temporal Variance of Soil and Meteorological Properties Affecting Sensor Performance—Phase 2, by J.L. Clausen, S. Frankenstein, J.R. Dorvee, A. Workman, B.F. Morriss, K.J. Claffey, T.M. Sobecki, C.R. Williams, S.D. Newman, B.K. Booker, R.T. Affleck, C.E. Smith, M.L. Maxson, A.P. Bernier, and B.J. Jones http://dx.doi.org/10.21079/11681/41780	AD1146702
ERDC/CRREL TR-21-11	Sep 2021	Incorporating Terrain Roughness into Helicopter Landing Zone Site Selection by Using the Geomorphic Oscillation Assessment Tool (GOAT) v1.0, by M.T. Ekegren and S.L. LeGrand http://dx.doi.org/10.21079/11681/42162	AD1149094
ERDC/CRREL TR-21-12	Sep 2021	Determination of Residual Low-Order Detonation Particle Characteristics from IMX-104 Mortar Rounds, by M.F. Bigl, S.A. Beal, and C.A. Ramsey http://dx.doi.org/10.21079/11681/42163	AD1149101
ERDC/CRREL TR-21-13	Sep 2021	Installation Resilience in Cold Regions Using Energy Storage Systems, by C.A. Callaghan, D.R. Peterson, T.J. Cooke, B.K. Booker, and K.P. Trubac http://dx.doi.org/10.21079/11681/42200	AD1149456
ERDC/CRREL TR-21-14	Sep 2021	Characterizing Snow Surface Properties Using Airborne Hyperspectral Imagery for Autonomous Winter Mobility, by T.S. Hodgdon, A.J. Fuentes, B.G. Quinn, B.C. Elder, and S.A. Shoop http://dx.doi.org/10.21079/11681/42189	AD1149286

4 Construction Engineering Research Laboratory (CERL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CERL MP-21-1	Aug 2021	Print Time vs. Elapsed Time: A Temporal Analysis of a Continuous Printing Operation for Additive Constructed Concrete, by B. Diggs-McGee, E. Kreiger, M. Kreiger, and M. Case http://dx.doi.org/10.21079/11681/41422	AD1144690
ERDC/CERL MP-21-2	Aug 2021	Expression and Secretion of Active <i>Moringa oleifera</i> Coagulant Protein in <i>Bacillus subtilis</i> , by C. Arnett, J. Lange, A. Boyd, M. Page, and D. Cropek http://dx.doi.org/10.21079/11681/41546	AD1145354
ERDC/CERL MP-21-3	Aug 2021	Captive-Rearing Duration May Be More Important Than Environmental Enrichment for Enhancing Turtle Head-Starting Success, by S.J. Tetzlaff, J.H. Sperry, B.A. Kingsbury and B.A. DeGregorio http://dx.doi.org/10.21079/11681/41800	AD1146740

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CERL TN-21-1	Sep 2021	Autonomous Transport Innovation: A Review of Enabling Technologies, by M.T. Gross and J.L. Webster http://dx.doi.org/10.21079/11681/42028	AD1148536
ERDC/CERL TN-21-2	Sep 2021	Autonomous Transport Innovation: The Regulatory Environment of Autonomous Vehicles, by E.L. Smith, J.L. Webster, and A.L. Stumpf http://dx.doi.org/10.21079/11681/42025	AD1148534

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CERL TR-20-7	Aug 2020	Stormwater Management and Optimization Toolbox, by H.R. Howard, C. Helmle, and R. Dwivedi http://dx.doi.org/10.21079/11681/39480	AD1120325

ERDC/CERL TR-20-11	Nov 2020	Fort McCoy, Wisconsin Building 550 Maintenance Plan, by A.S. Fuelberth, A.D. Smith, and S.E. Adams http://dx.doi.org/10.21079/11681/38659	AD1114400
ERDC/CERL TR-20-12	Nov 2020	Fort McCoy WWII Buildings and Landscapes, by S.E. Adams, M.W. Tooker, and A. Smith http://dx.doi.org/10.21079/11681/38679	AD1114467
ERDC/CERL TR-20-13	Mar 2021	Nationwide Context and Evaluation Methodology for Farmstead and Ranch Historic Sites and Historic Archaeological Sites on DoD Property, by C.L. Baxter, S.I. Ensore, E.R. Hartman, B.C. Mertens, and D.A. Morrison http://dx.doi.org/10.21079/11681/39842	AD1124159
¹ ERDC/CERL TR-21-1	Sep 2021	Maneuver Area Analysis: Case Study from Fort Leonard Wood, by W.A. Hall, H. Howard, N. Svendsen, and D. Gambill	AD1149136
ERDC/CERL TR-21-2	Jan 2021	Fort Huachuca History of Development: Existing Reports and Contexts, by D.A. Morrison and A.D. Smith http://dx.doi.org/10.21079/11681/39479	AD1120307
ERDC/CERL TR-21-3	Jan 2021	Demonstration of Acoustic Sensing Techniques for Fuel-Distribution System Condition Monitoring: Final Report on Project F07-AR07, by M.K. McInerney and J.M. Carlyle http://dx.doi.org/10.21079/11681/39560	AD1120970
¹ ERDC/CERL TR-21-4	Jan 2021	Return on Investment Analysis of Advanced Anaerobic Wastewater Treatment Methods, by D.A. Morrison, A.C. Petri, K.A. Guy, N.M. Josefik, and D.S. Gilbert	AD1120636
¹ ERDC/CERL TR-21-5	Jan 2021	Structural Evaluation of Steel Truss Hangars 43, 44, 45, 46, 47, and Building 8 at Corpus Christi Army Depot, Texas, by G.K. Al-Chaar, M. Issa, and H. Issa	AD1121609
ERDC/CERL TR-21-6	Feb 2021	Automated Construction of Expeditionary Structures (ACES): Energy Modeling, by B.N. Diggs, R.J. Liesen, S. Hamoush, A.C. Megri, and M.P. Case http://dx.doi.org/10.21079/11681/39759	AD1122358

¹ Limited distribution; see Preface.

ERDC/CERL TR-21-7	Mar 2021	Sustainment Management System, Water Control Structures: Inventory and Inspection Template, by J.P. Allen, M.H. Werth, M.A. Campobasso, and Y.F. Kashlan http://dx.doi.org/10.21079/11681/39859	AD1124206
ERDC/CERL TR-21-8	Mar 2021	Camp Perry Historic District Landscape Inventory and Viewshed Analysis, by A.D. Smith, M.W. Tooker, and S.E. Adams http://dx.doi.org/10.21079/11681/39841	AD1124160
ERDC/CERL TR-21-9	Mar 2021	Army R-22 Refrigerant Phase-Out Strategy, by J.P. Miller, A.R. Latino, C. Konidala, R. Patenaude, and G. Perez http://dx.doi.org/10.21079/11681/40039	AD1125476
ERDC/CERL TR-21-10	Mar 2021	Study of Maintenance of High-Performance Sustainable Buildings (HPSB), by J.P. Miller, J.L. Vavrin, and S. Stidwell IV http://dx.doi.org/10.21079/11681/40080	AD1125936
ERDC/CERL TR-21-11	Mar 2021	Historic Landscape Inventory for Knoxville National Cemetery, by S.I. Ensore, A.D. Smith, and M.W. Tooker http://dx.doi.org/10.21079/11681/40179	AD1127579
¹ ERDC/CERL TR-21-13	Apr 2021	U.S. Army Garrison Bavaria Operational Readiness Training Complex Resilience Measures: Recommendations for Improving Energy and Water Resilience, by J. Vavrin, E. Jenicek, M. Swanson, H. Helstrom, M. Duczynski, A. Wu, and D. Takov	AD1128456
ERDC/CERL TR-21-14	Apr 2021	Lock Operation Improvements, by S.D. Foltz and D.E. Hooks http://dx.doi.org/10.21079/11681/40402	AD1128977
ERDC/CERL TR-21-15	Jun 2021	Historic Landscape Management Plan for the Fort Huachuca Historic District National Historic Landmark and Supplemental Areas, by M.W. Tooker and A.D. Smith http://dx.doi.org/10.21079/11681/41025	AD1139464
¹ ERDC/CERL TR-21-16	Aug 2021	Low-Water Crossing Analysis: Fort Leonard Wood, Missouri, by D.R. Gambill, S.A. Matus, H.R. Howard, and N.G. Svendsen	AD1145270
¹ ERDC/CERL TR-21-17	Aug 2021	Fort Leonard Wood, MO Net Zero Water: Documentation for Fiscal Year 2016, by E.M. Jenicek, N. Garfinkle, J. Alvey, N. Bartholomew, S. Bevelheimer, and A. Stumpf	AD1145808

¹ Limited distribution; see Preface.

ERDC/CERL TR-21-18	Sep 2021	Performance Testing and Modeling of a Transpired Ventilation Preheat Solar Wall: Performance Evaluation of Facilities at Fort Drum, NY, and Kansas Air National Guard, Topeka, KS, by S.M. Wallace, S.M. Lux, C.M. Mitsingas, I.A. Andsager, and T.C. Patel http://dx.doi.org/10.21079/11681/42000	AD1148099
ERDC/CERL TR-21-19	Sep 2021	Integration of Autonomous Electric Transport Vehicles into a Tactical Microgrid: Final Report, by A. Rolufs, A. Trout, K. Palmer, C. Boriack, B. Brillhart and A.L. Stumpf http://dx.doi.org/10.21079/11681/42007	AD1148242
ERDC/CERL TR-21-20	Sep 2021	Acoustic Nondestructive Testing and Measurement of Tension for Steel Reinforcing Members, by M.K. McInerney, M.W. Brenner, S.W. Morefield, R.A. Weber, and J.M. Carlyle http://dx.doi.org/10.21079/11681/42181	AD1149247
ERDC/CERL TR-21-21	Sep 2021	Autonomous Transport Innovation (ATI): Integration of Autonomous Electric Vehicles into a Tactical Microgrid, by A. Rolufs, A. Trout, K. Palmer, C. Boriack, B. Brillhart and A.L. Stumpf http://dx.doi.org/10.21079/11681/42160	AD1149073

5 Environmental Laboratory (EL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/EL MP-20-10	Nov 2020	Response of the Green June Beetle and its Gut Microbiome to RDX and Phenanthrene, by C.M. Jung, M. Carr, E. Fleischman, and C.J. Roesch http://dx.doi.org/10.21079/11681/38799	AD1115380
¹ ERDC/EL MP-21-1	Feb 2021	Computational Investigation on Interactions between Some Munition Compounds and Humic Substances, by T.C. Schutt and M.K. Shukla http://dx.doi.org/10.21079/11681/39703	AD1123015
¹ ERDC/EL MP-21-2	Jul 2021	Catalytic Role of Solvated Electron in the Spontaneous Degradation of Insensitive Munition Compounds: Computational Chemistry Investigation, by L.K. Sviatenko, L. Gorb, D. Leszczynska, S.I. Okovytyy, M.K. Shukla, and J. Leszczynski http://dx.doi.org/10.21079/11681/41122	AD1141149
ERDC/EL MP-21-3	Jul 2021	Deep Learning-Based Structure-Activity Relationship Modeling for Multi-Category Toxicity Classification: A Case Study of 10K Tox21 Chemicals with High-Throughput Cell-Based Androgen Receptor Bioassay Data, by G. Idakwo, S. Thangapandian, J. Luttrell, Z. Zhou, C. Zhang and P. Gong http://dx.doi.org/10.21079/11681/41302	AD1143571
ERDC/EL MP-21-4	Jul 2021	A Quantitative Risk Assessment Method for Synthetic Biology Products in the Environment, by T. Rycroft, K. Hamilton, C.N. Haas, I. Linkov http://dx.doi.org/10.21079/11681/41331	AD1143894
ERDC/EL MP-21-5	Aug 2021	Predicting the Impact of Aqueous Ions on Fate and Transport of Munition Compounds in the Environment, by T.C. Schutt and M.K. Shukla http://dx.doi.org/10.21079/11681/41481	AD1145085
ERDC/EL MP-21-6	Aug 2021	Quantifying Functional Increases Across a Large-Scale Wetland Restoration Chronosequence, by J.F. Berkowitz http://dx.doi.org/10.21079/11681/41500	AD1145201

¹ 12-month embargo; see Preface.

ERDC/EL MP-21-7	Aug 2021	Geographic and Genetic Variation in Susceptibility of <i>Butomus umbellatus</i> to Foliar Fungal Pathogens, by N. Harms, J. Shearer, J.T. Cronin, and J.F. Gaskin http://dx.doi.org/10.21079/11681/41662	AD1145866
ERDC/EL MP-21-8	Aug 2021	A Framework and Pilot Tool for the Risk-based Prioritization and Grouping of Nano-enabled Consumer Products, by T. Rycroft, S. Larkin, A. Ganin, T. Thomas, J. Matheson, T. Van Grack, X. Chen, K. Plourde, A. Kennedy and I. Linkov http://dx.doi.org/10.21079/11681/41721	AD1146139
ERDC/EL MP-21-9	Aug 2021	Variation in Inhibitor Effects on qPCR Assays and implications for eDNA Surveys, by R.F. Lance and X. Guan http://dx.doi.org/10.21079/11681/41740	AD1146197
ERDC/EL MP-21-10	Sep 2021	Variability in Weed Biological Control: Effects of Foliar Nitrogen on Larval Development and Dispersal of the Alligatorweed Flea Beetle, <i>Agasicles hygrophila</i> , by N.E. Harms and J.T. Cronin http://dx.doi.org/10.21079/11681/41886	AD1147343
ERDC/EL MP-21-11	Sep 2021	Photo Degradation Kinetics of Insensitive Munitions Constituents Nitroguanidine, Nitrotriazolone, and Dinitroanisole in Natural Waters, by L.C. Moores, S.J. Jones, G.W. George, D.L. Henderson, and T.C. Schutt http://dx.doi.org/10.21079/11681/41900	AD1147466
ERDC/EL MP-21-12	Sep 2021	Natural Language Indexing for Pedoinformatics, by J. Furey, A. Davis, and J. Seiter-Moser http://dx.doi.org/10.21079/11681/41960	AD1147802
ERDC/EL MP-21-13	Sep 2021	Identifying Degradation Products Responsible for Increased Toxicity of UV-Degraded Insensitive Munitions, by L.C. Moores, A.J. Kennedy, L. May, S.M. Jordan, A.J. Bednar, S.J. Jones, D.L. Henderson, L. Gurtowski, and K.A. Gust http://dx.doi.org/10.21079/11681/42020	AD1148258
ERDC/EL MP-21-14	Sep 2021	Initial Survey of Microplastics in Bottom Sediments from United States Waterways, by J.L. Wilkens, A.D. McQueen, J.J. LeMonte, and B.C. Suedel http://dx.doi.org/10.21079/11681/42021	AD1148266
ERDC/EL MP-21-15	Sep 2021	Field Site Analysis of Giant Salvinia Nitrogen Content and Salvinia Weevil Density, by J.G. Nachtrieb http://dx.doi.org/10.21079/11681/42060	AD1148376

ERDC/EL MP-21-16	Sep 2021	Rapid Formation of Iron Sulfides Alters Soil Morphology and Chemistry Following Simulated Marsh Restoration, by J.F. Berkowitz, C.M. VanZomeren, and N.D. Fresard http://dx.doi.org/10.21079/11681/42155	AD1149033
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Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL SR-20-6	Nov 2020	Formulation of a Multi-Scale Watershed Ecological Model Using a Statistical Approach, by B.A. Pruitt, K.J. Killgore, W.T. Slack, and R. Matuliauskaite http://dx.doi.org/10.21079/11681/38862	AD1115711
ERDC/EL SR-21-1	Apr 2021	The Demonstration and Validation of a Linked Watershed-Riverine Modeling System for DoD Installations: User Guidance Report Version 2.0, by B.E. Johnson and Z. Zhang http://dx.doi.org/10.21079/11681/40425	AD1129180
ERDC/EL SR-21-2	Jul 2021	Cyanobacteria Harmful Algal Blooms (HABs) and US Army Engineer Research and Development Center (ERDC): Research and Services, by K.L. Pokrzywinski, C.R. Grasso, and T.E. Rycroft http://dx.doi.org/10.21079/11681/41328	AD1143892
ERDC/EL SR-21-3	Aug 2021	Aligning Research and Monitoring Priorities for Benthic Cyanobacteria and Cyanotoxins: A Workshop Summary, by K. Pokrzywinski, K. Volk, T. Rycroft, S. Wood, T. Davis, and J. Lazorchak http://dx.doi.org/10.21079/11681/41680	AD1145973
ERDC/EL SR-21-4	Sep 2021	Summary of Collaborative Wildlife Protection and Recovery Initiative (CWPRI) Conservation Workshop: Least Bell's Vireo, by J.F. Jung, S. Hertz, and R.A. Fischer http://dx.doi.org/10.21079/11681/42102	AD1148620
ERDC/EL SR-21-5	Sep 2021	Inundation Depth and Duration Impacts on Wetland Soils and Vegetation: State of Knowledge, by G.M. Suir and J.F. Berkowitz http://dx.doi.org/10.21079/11681/42146	AD1148960
ERDC/EL SR-21-6	Sep 2021	Environmental Factors Affecting Coastal and Estuarine Submerged Aquatic Vegetation (SAV), by E. Eisemann, C. Thomas, M. Balazik, D. Acevedo-Mackey, and S. Altman http://dx.doi.org/10.21079/11681/42185	AD1149270

ERDC/EL SR-21-7	Sep 2021	Vegetation Community Changes in Response to Phragmites Management at Times Beach, Buffalo, New York, by A.N. Schad, G.O. Dick, K. Erickson, P. Fuhrmann, and L.L. Dodd http://dx.doi.org/10.21079/11681/42149	AD1148972
ERDC/EL SR-21-8	Sep 2021	Water Level Management for Enhanced Fish and Wildlife Habitat Production in Upper Mississippi River Navigation Pools: An Engineering with Nature® Review of Practice, by C. Theiling, B. McGuire, G. Benjamin, D. Busse, J. Hendrickson, K. Kenow, K. Landwehr, T. Schlagenhaft, and M. Stefanski http://dx.doi.org/10.21079/11681/42204	AD1149520

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TN-21-1	Sep 2021	Phenology of Competitive Interactions and Implications for Management of the Invasive Wetland Plant Alternanthera philoxeroides, by N.E. Harms and J.T. Cronin http://dx.doi.org/10.21079/11681/42188	AD1149273

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TR-19-17 Pt. 2	Feb 2021	Comparison of Generic and Proprietary Aquatic Herbicides for Control of Invasive Vegetation: Part 2. Emergent Plants, by C.R. Mudge and K.D. Getsinger http://dx.doi.org/10.21079/11681/39679	AD1122774
ERDC/EL TR-20-9	Nov 2020	Long-Term Stability and Efficacy of Historic Activated Carbon (AC) Deployments at Diverse Freshwater and Marine Remediation Sites, by T. Bridges, S. Newell, A. Kennedy, D. Moore, U. Ghosh, T. Needham, H. Xia, K. Kim, C.A. Menzie, and K. Kulacki http://dx.doi.org/10.21079/11681/38781	AD1115273
ERDC/EL TR-20-10	Dec 2020	Environmental Quality Requirements Model Program Objective Memorandum Fiscal Years 2021–2025, by H.M. Knotek-Smith and J.A. Gerald http://dx.doi.org/10.21079/11681/39101	AD1117259

ERDC/EL TR-21-1	Mar 2021	Demonstration of Autonomous Aerial Acoustic Recording Systems to Inventory Department of Defense Bird Populations, by D.A. Buehler, R.A. Fischer, J.B. Wilkerson, S. Worley, D.R. Smith, E. Hockman, and S. Prevost http://dx.doi.org/10.21079/11681/39921	AD1124578
ERDC/EL TR-21-2	Mar 2021	Monitoring the Milwaukee Harbor Breakwater: An Engineering With Nature® (EWN®) Demonstration Project, by E.J. Geisthardt, B.C. Suedel, and J.A. Janssen http://dx.doi.org/10.21079/11681/40022	AD1125409
ERDC/EL TR-21-3	Jun 2021	A Novel Laboratory Method for the Detection and Identification of Cyanobacteria Using Hyperspectral Imaging: Hyperspectral Imaging for Cyanobacteria Detection, by K. Pokrzywinski, C. Morgan, S. Bourne, M. Reif, K. Matheson, and S. Hammond http://dx.doi.org/10.21079/11681/40966	AD1136491
ERDC/EL TR-21-4	Jul 2021	An Assessment of Long-Term, Multipurpose Ecosystem Functions and Engineering Benefits Derived from Historical Dredged Sediment Beneficial Use Projects, by J.F. Berkowitz, N.R. Beane, K.D. Philley, N.R. Hurst, and J.F. Jung http://dx.doi.org/10.21079/11681/41382	AD1144436
ERDC/EL TR-21-5	Aug 2021	Trace Explosives Detection by Cavity Ring-Down Spectroscopy (CRDS), by B. Stromer, A. Bednar, M. Janjic, S. Becker, T. Kylloe, J. Allen, M. Trapani, J. Hargrove, and J. Hargrove http://dx.doi.org/10.21079/11681/41520	AD1145264
ERDC/EL TR-21-6	Sep 2021	An Evaluation of Soil Phosphorus Storage Capacity (SPSC) at Proposed Wetland Restoration Locations in the Western Lake Erie Basin, by J.F. Berkowitz, C.M. VanZomeren, N.R. Hurst, and K.J. Sebastian http://dx.doi.org/10.21079/11681/42108	AD1148665
ERDC/EL TR-21-7	Sep 2021	Comparison of Generic and Proprietary Aquatic Herbicides for Control of Invasive Vegetation; Part 3: Submersed Plants, by C.R. Mudge and K.D. Getsinger http://dx.doi.org/10.21079/11681/42061	AD1148383
ERDC/EL TR-21-8	Sep 2021	Efficacy of Florpyrauxifen-benzyl on Dioecious Hydrilla and Hybrid Water Milfoil - Concentration and Exposure Time Requirements, by C.R. Mudge, B.T. Sartain, K.D. Getsinger, and M.D. Netherland http://dx.doi.org/10.21079/11681/42062	AD1148392

ERDC/EL TR-21-9	Sep 2021	Phytomanagement of Soil and Groundwater at the Niagara Falls Storage Site (NFSS) Using Hybridized Trees, by A.D. Butler, C.C. Thomas, N.R. Beane, A.J. Bednar, and W.T. Frederick http://dx.doi.org/10.21079/11681/42083	AD1148516
ERDC/EL TR-21-10	Sep 2021	Chemical Management Strategies for Starry Stonewort: A Mesocosm Study, by K. Pokrzywinski, W. Bishop, C. Grasso, K. Volk, and K. Getsinger http://dx.doi.org/10.21079/11681/42040	AD1148344
ERDC/EL TR-21-11	Sep 2021	Methods for Simultaneous Determination of 29 Legacy and Insensitive Munition (IM) Constituents in Aqueous, Soil-Sediment, and Tissue Matrices by High-Performance Liquid Chromatography (HPLC), by B. Stromer, R. Crouch, K. Wayne, A. Kimble, J. Smith, and A. Bednar http://dx.doi.org/10.21079/1168142105	AD1148648
ERDC/EL TR-21-12	Sep 2021	Environmental Life Cycle Assessment on CNTRENE® 1030 Material and CNT Based Sensors, by M. Chappell, W.-S. Shih, C. Price, R. Patel, D. Janzen, J. Bledsoe, K. Mangelson, L. Miller, B. Stevens, J. LeMonte, J. Demster, V. Kayastha, C. Landorf, S. Gibbons, and C. Cox http://dx.doi.org/10.21079/11681/42086	AD1148528

6 Geospatial Research Laboratory (GRL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL MP-21-1	Sep 2021	Incorporating Sentinel-1 SAR Imagery with the MODIS MCD64A1 Burned Area Product to Improve Burn Date Estimates and Reduce Burn Date Uncertainty in Wildland Fire Mapping, by K. Lasko http://dx.doi.org/10.21079/11681/42122	AD1148740

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TR-21-1	Mar 2021	Evaluation of Automated Feature Extraction Algorithms Using High-resolution Satellite Imagery Across a Rural-urban Gradient in Two Unique Cities in Developing Countries, by A. Griffin, S. Griffin, K. Lasko, M. Maloney, S.B. Blundell, M. Collins, and N. Wayant http://dx.doi.org/10.21079/11681/40182	AD1126618
ERDC/GRL TR-21-2	Mar 2021	Micro-Terrain and Canopy Feature Extraction by Breakline and Differencing Analysis of Gridded Elevation Models: Identifying Terrain Model Discontinuities with Application to Off-Road Mobility Modeling, by S.B. Blundell http://dx.doi.org/10.21079/11681/40185	AD1126662
ERDC/GRL TR-21-3	Apr 2021	Monitoring Ecological Restoration with Imagery Tools (MERIT): Python-based Decision Support Tools Integrated into ArcGIS for Satellite and UAS Image Processing, Analysis, and Classification, by K. Lasko and S. Griffin http://dx.doi.org/10.21079/11681/40262	AD1127684
ERDC/GRL TR-21-4	Sep 2021	A Multi-biome Study of Tree Cover Detection Using the Forest Cover Index, by S.J. Becker, M.C. Maloney, and A.W.H. Griffin http://dx.doi.org/10.21079/11681/42003	AD1148145
ERDC/GRL TR-21-5	Sep 2021	Autonomous Navigation and Mapping in a Simulated Environment, by B. Christie, O. Ennasr, and G. Glaspell http://dx.doi.org/10.21079/11681/42006	AD1148167

7 Geotechnical and Structures Laboratory (GSL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL MP-21-1	May 2021	State of the Practice in Pavement Structural Design/Analysis Codes Relevant to Airfield Pavement Design, by E. Heymsfield and J.S. Tingle http://dx.doi.org/10.21079/11681/40542	AD1132147
ERDC/GSL MP-21-2	Jul 2021	Influence of High Volumes of Silica Fume on the Rheological Behavior of Oil Well Cement Pastes, by J.F. Burroughs, J. Weiss, and J.E. Haddock http://dx.doi.org/10.21079/11681/41288	AD1143487
ERDC/GSL MP-21-3	Aug 2021	Crevice Corrosion and Environmentally Assisted Cracking of High-Strength Duplex Stainless Steels in Simulated Concrete Pore Solutions, by R.D. Moser, P.M. Singh, L.F. Kahn, K.E. Kurtis, D. González Niño, Z.B. McClelland http://dx.doi.org/10.21079/11681/41620	AD1145688
ERDC/GSL MP-21-4	Aug 2021	The Behaviour of Near-Surface Soils Through Ultrasonic Near-Surface Inundation Testing, by O.S. Taylor, A.L. Cunningham, R.E. Walker, M.H. McKenna, K.E. Martin, and P.G. Kinnebrew http://dx.doi.org/10.21079/11681/41826	AD1146986
ERDC/GSL MP-21-5	Sep 2021	On Enhancing the Mechanical Behavior of Ultra-High Performance Concrete Through Multi-Scale Fiber Reinforcement, by K. Ragalwar, W.F. Heard, B.A. Williams, D. Kumar, and R. Ranade http://dx.doi.org/10.21079/11681/41940	AD1147795
ERDC/GSL MP-21-6	Sep 2021	Penetration Modeling of Ultra-High Performance Concrete using Multiscale Meshfree Methods, by P.A. Sparks, J.A. Sherburn, W.F. Heard, and B.A. Williams http://dx.doi.org/10.21079/11681/41963	AD1147816

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL SR-21-1		No Report	

¹ ERDC/GSL SR-21-2	Jul 2021	A Guide to the ISR-Related Deep Learning Graphical User Interface, by S.S. Carley and S.R. Price	AD1141217
ERDC/GSL SR-21-3	Aug 2021	Geotechnical Inspection and Technical Review of Santa Margarita River Marine Corps Air Station Levee, U.S. Marine Corps, Camp Pendleton, CA, 19-20 November 2019, by L.A. Walshire and J.B. Dunbar http://dx.doi.org/10.21079/11681/41526	AD1145268

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TN-21-1	Sep 2021	A Bathymetric Study of the Forebay at the Old River Low Sill Structure from 1963 to 2019, by J.R. Kelley, Dr. J.B. Dunbar, and Dr. M.K. Corcoran http://dx.doi.org/10.21079/11681/41829	AD1147002

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TR-20-36	Nov 2020	Magnetorheological Composite Materials (MRCMs) for Instant and Adaptable Structural Control, by T.L. Thornell, C.A. Weiss, Jr., S.L. Williams, J.A. Jefcoat, Z.B. McClelland, T.S. Rushing, and R.D. Moser http://dx.doi.org/10.21079/11681/38721	AD1114801
¹ ERDC/GSL TR-20-37	Dec 2020	Mechanical Characterization of Surrogate and Indigenous Optimized High-Performance Concrete for South Korea: OHPC Mixtures Containing Fine Aggregates, SK-1 And GA-1, by S.S. Graham, W.R. Long, B.H. Green, K.J. Ratliff, and D.E. Wilson	AD1117175
ERDC/GSL TR-20-38	Dec 2020	Evaluation of Thin Flexible Pavements under Simulated Aircraft Traffic, by W.J. Robinson http://dx.doi.org/10.21079/11681/39161	AD1117645
¹ ERDC/GSL TR-20-39	Dec 2020	Large Caliber Shaped-Charge Penetration, Modeling and Simulation, by A.O. Frank, G.H. Vankirk, M.J. Roth, and M.I. Hammons	AD1117948
¹ ERDC/GSL TR-20-40	Dec 2020	Protective Design for Oblique Penetration: Modeling, Simulation, and Experimental Validation, by A.O. Frank, J.L. Brown, J.B. Jordan, and M.J. Roth	AD1119184

¹ Limited distribution; see Preface.

ERDC/GSL TR-21-1	Feb 2021	Estimating Bridge Reliability by Using Bayesian Networks, by A.B. Groeneveld, S.G. Wood, E. Ruiz, and J.M. Roberts http://dx.doi.org/10.21079/11681/39601	AD1121983
ERDC/GSL TR-21-2	Feb 2021	Rapid Airfield Damage Recovery Next Generation Backfill Technologies Comparison Experiment: Technology Comparison Experiment, by M. Mejias-Santiago, L. Garcia, and L. Edwards http://dx.doi.org/10.21079/11681/39661	AD1122718
¹ ERDC/GSL TR-21-3	Mar 2021	Residual Penetration Resistance from Multi-Hit Events: Multi-Hit Experiments with Modeling and Simulation, by A.O. Frank, M.J. Roth, and W.F. Heard	AD1124347
ERDC/GSL TR-21-4	Mar 2021	Modernization and Structural Evaluation of the Improved Overhead Cable System, by M.W. Trim, M.P. Murray, and C.K. Crane http://dx.doi.org/10.21079/11681/40025	AD1125435
¹ ERDC/GSL TR-21-5	Mar 2021	A Framework for Creating Finite Element Meshes of Arbitrary Terrains, by J.J. Capper, J.A. Sherburn, and R.S. Browning IV	AD1125710
¹ ERDC/GSL TR-21-6	Mar 2021	Penetration Modeling of Generic Ultra-High Performance Concrete using the Nonlinear Meshfree Analysis Program (NMAP), by P.A. Sparks, J.A. Sherburn, W.F. Heard, B.A. Williams, D. Roman-Castro, and R. Magee	AD1126082
ERDC/GSL TR-21-7	Mar 2021	Laboratory Characterization of Cor-Tuf Baseline and UHPC-S, by D.A. Scott, S.S. Graham, B.P. Songer, B.H. Green, M.J. Grotke, and T.N. Brogdon http://dx.doi.org/10.21079/11681/40121	AD1126132
ERDC/GSL TR-21-8	Mar 2021	Joint Rapid Airfield Construction (JRAC) Program 2004 Demonstration Project--Fort Bragg, North Carolina, by G.L. Anderton, E.S. Berney IV, J.K. Newman, T.A. Mann, C. Gartrell, and D.K. Miller http://dx.doi.org/10.21079/11681/40139	AD1126227
¹ ERDC/GSL TR-21-9	Apr 2021	Vulnerability and Mitigation of Blast Damage to Radial Spillway Gates: Volume 1, Response of a Standard Gate design, by M.P. Murray, S.P. Rowell, W.M. Hossley, L.K. Davis, and T.A. Thornton	AD1127730
ERDC/GSL TR-21-10	Apr 2021	Detecting Clandestine Tunnels by Using Near-Surface Seismic Techniques, by S.D. Sloan, S.L. Peterie, R.D. Miller, J. Ivanov, J.T. Schwenk, and J.R. McKenna http://dx.doi.org/10.21079/11681/40419	AD1129044

¹ Limited distribution; see Preface.

¹ ERDC/GSL TR-21-11	Apr 2021	Influence of Chemical and Physical Properties of Poorly Ordered Silica on Reactivity and Rheology of Cementitious Materials, by J.F. Burroughs, C.A. Weiss Jr., J.D. Shannon, J.E. Haddock, and W.J. Weiss	AD1129100
¹ ERDC/GSL TR-21-12	Apr 2021	Development of the ERDC Representative Rock Properties, Version 1: Granite and Limestone, by J.E. Windham, M.D. Adley, M. Chandler, K.T. Danielson, and T.A. Waddell	AD1129202
ERDC/GSL TR-21-13	Apr 2021	Automated Characterization of Ridge-Swale Patterns Along the Mississippi River, by A.D. Downard, S.N. Semmens, and B.A. Robbins http://dx.doi.org/10.21079/11681/40439	AD1129384
ERDC/GSL TR-21-14	Apr 2021	Development of CORPS-STIF 1.0 with Application to Ultra-High Performance Concrete (UHPC), by I.L. Howard, T. Allard, A. Carey, M. Priddy, A. Knizley, and J.D. Shannon http://dx.doi.org/10.21079/11681/40440	AD1129466
ERDC/GSL TR-21-15	May 2021	Performance of Active Porcelain Enamel Coated Fibers for Fiber-Reinforced Concrete: The Performance of Active Porcelain Enamel Coatings for Fiber-Reinforced Concrete and Fiber Tests at the University of Louisville, by C.A. Weiss Jr., W.M. McGinley, B.P. Songer, M.A. Kuchinski, and F.A. Kuchinski http://dx.doi.org/10.21079/11681/40683	AD1133670
ERDC/GSL TR-21-16	Jun 2021	Alternatives for Large Crater Repairs using Rapid Set Concrete Mix®, by L. Edwards, H.P. Bell, and M.L. Opperman http://dx.doi.org/10.21079/11681/40969	AD1136548
¹ ERDC/GSL TR-21-17	Jul 2021	Effect of Asphalt Overlays on Pavement Resiliency, by J.K. Fulk, C.W. Fulk, A.O. Frank, M.J. Roth, and J.M. Stache	AD1141038
ERDC/GSL TR-21-18	July 2021	Evaluation of In-Place Asphalt Recycling for Airfield Applications, by W.D. Carruth http://dx.doi.org/10.21079/11681/41142	AD1141207
ERDC/GSL TR-21-19		Classified	
¹ ERDC/GSL TR-21-20	Jul 2021	Directed Energy Effects on Geomaterials, by C.M. Strack, B.A. Minkin, K.E. Walker, R.C. Goss, D.A. Scott, G.J. Borne, C.N. Downey, A.J. Tillotson, B.P. Songer, and R.D. Moser	AD1143955

¹ Limited distribution; see Preface.

¹ ERDC/GSL TR-21-21	Jul 2021	Overview and Future of MSB Virtual Environment Modeling: Muscatatuck Urban Training Center Case study, by J.G. Monroe, Z.S. Aspin, C.S. Davenport, D.P. McInnis, S.J. Price, and J.R. Fairley	AD1143967
¹ ERDC/GSL TR-21-22	Jul 2021	Static Target Concrete Development and Construction for HIPPO II, by D.A. Scott, K.E. Walker, G.H. Vankirk, B.P. Songer, C.N. Downey, A.J. Tillotson, and M.J. Roth	AD1143996
ERDC/GSL TR-21-23	Jul 2021	Aircraft Arrestor System Panel Joint Improvement, by J.D. Doyle, N.R. Hoffman, and M.K. Taylor http://dx.doi.org/10.21079/11681/41342	AD1144069
¹ ERDC/GSL TR-21-24	Jul 2021	Characterizing Debris from a Hellfire R9E Warhead Detonation inside an Adobe Structure, by G.K. Doles, W.S. Myers Jr., S.D. Turner, J.Q. Ehrgott Jr., S.L. Bartyczak, and L.A. Adams	AD1144055
¹ ERDC/GSL TR-21-25	Aug 2021	Feasibility Study: Using Explosive Means to Cut Damaged Sections of Airfields Pavements, by S.D. Turner, J.Q. Ehrgott Jr., and D.D. Rickman	AD1145102
¹ ERDC/GSL TR-21-26	Aug 2021	Characterizing Debris from a Hellfire R9E Warhead Detonation inside a Triple-Brick Structure, by G.K. Doles, S.D. Turner, W.S. Myers Jr., J.Q. Ehrgott Jr., M. Gallamore, and L.A. Adams	AD1145183
¹ ERDC/GSL TR-21-27	Aug 2021	Late-Time Calculations of Mk-82 Buried Blast Tests for Collateral Damage Estimation, by W.M. Furr, T.N. Williams, S.A. Akers, J.Q. Ehrgott Jr., M. Rivera, and M. Hopson	AD1145187
¹ ERDC/GSL TR-21-28	Sep 2021	Scale-Model Studies of Blast Effects within Embankment Dams: A Computational and Experimental Effort for the United States Bureau of Reclamation, by T.N. Williams, A.A. Doles, D.D. Rickman, S.D. Turner, and G.H. Sutley	AD1147008
¹ ERDC/GSL TR-21-29	Sep 2021	Evaluation of Modeling and Simulation to Predict Impact Signatures in Small-Arms Ballistic Events, by D.N. Lichlyter, T.N. Williams, Z.K. Crosby, and J.Q. Ehrgott Jr.	AD1147116
ERDC/GSL TR-21-30	Sep 2021	Geophysical Investigation to Assess Condition of Grouted Scour Hole: Old River Control Complex—Low Sill Concordia Parish, Louisiana, by J.E. Simms, B.R. Breland, and W.E. Doll http://dx.doi.org/10.21079/11681/41863	AD1147197

¹ Limited distribution; see Preface.

ERDC/GSL TR-21-31	Sep 2021	Corrosion and Performance of Dust Palliatives: Laboratory and Field Studies, by L. Edwards, C.A. Weiss Jr., J.K. Newman, F.A. Nichols Jr., L.R. Coffing, and Q. Mason http://dx.doi.org/10.21079/11681/42125	AD1148777
¹ ERDC/GSL TR-21-32	Sep 2021	Development of the ERDC Representative Rock Properties, Version 2: Sandstone and Tuff, by J.E. Windham, M.D. Adley, M. Chandler, K.T. Danielson, and T.A. Waddell	AD1148670
ERDC/GSL TR-21-33	Sep 2021	Backward Erosion Progression Rates from Small-Scale Flume Tests, by A.M. Montalvo-Bartolomei, B.A. Robbins, and J.F. López-Soto http://dx.doi.org/10.21079/11681/42135	AD1148871
ERDC/GSL TR-21-34	Sep 2021	Backward Erosion Testing: Magnolia Levee, by A.M. Montalvo-Bartolomei, B.A. Robbins, E. Medley, and B. Breland http://dx.doi.org/10.21079/11681/42140	AD1148924

¹ Limited distribution; see Preface.

8 Information Technology Laboratory (ITL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL MP-21-1	Jan 2021	Assessment of Workforce Systems Preferences/Skills Based on Employment Domain, by R. Jaradat, E. Stirgus, S.R. Goerger, R.K. Buchanan, N. U. I. Hossain, J. Ma, and R. Burch http://dx.doi.org/10.21079/11681/39399	AD1119599
ERDC/ITL MP-21-2	Apr 2021	A Framework for Modeling and Assessing System Resilience Using a Bayesian Network: A Case Study of an Interdependent Electrical Infrastructure Systems Documents, by N.U. Ibne Hossain, R. Jaradat, S. Hosseini, M. Marufuzzaman, and R.K. Buchanan http://dx.doi.org/10.21079/11681/40299	AD1128023
ERDC/ITL MP-21-3	Apr 2021	A Historical Perspective on Development of Systems Engineering Discipline: A Review and Analysis, by N.U. Ibne Hossain, R.M. Jaradat, M.A. Hamilton, C.B. Keating, and S.R. Goerger http://dx.doi.org/10.21079/11681/40259	AD1127676
¹ ERDC/ITL MP-21-4	Apr 2021	In Situ and Post-Processing Volume Rendering with Cinema, by A.C. Bauer, J. Abras, and N. Hariharan http://dx.doi.org/10.21079/11681/40502	AD1131123
ERDC/ITL MP-21-5	May 2021	Metrics for Assessing Overall Performance of Inland Waterway Ports: A Bayesian Network Based Approach, by N.U. Ibne Hossain, F. Nur, R. Jaradat, S. Hosseini, M. Marufuzzaman, S.M. Puryear, and R.K. Buchanan http://dx.doi.org/10.21079/11681/40545	AD1132198
ERDC/ITL MP-21-6	May 2021	Effect of Individual Differences in Predicting Engineering Students' Performance: A Case of Education for Sustainable Development, by M. Nagahi, R. Jaradat, M. Nagahisarchoghaei, G. Ghanbari, S. Poudyal, and S. Goerger http://dx.doi.org/10.21079/11681/40700	AD1133764

¹ 12-month embargo; see Preface.

¹ ERDC/ITL MP-21-7	May 2021	Holistic and Reductionist Thinker: A Comparison Study Based on Individuals' Skillset and Personality Types, by M. Nagahi, R. Jaradat, S. El Amrani, M. Hamilton, and S. Goerger http://dx.doi.org/10.21079/11681/40746	AD1134164
ERDC/ITL MP-21-8	May 2021	Challenges in Evaluating Efficacy of Scientific Visualization for Usability and Aesthetics, by J. Baca, D.W. Carruth, A. Calhoun, M. Stephens, and C. Lewis http://dx.doi.org/10.21079/11681/40800	AD1134512
¹ ERDC/ITL MP-21-9	Jun 2021	New Capabilities in CREATE™-AV Helios Version 11, by A. Wissink, D.P. Jude, B. Jayaraman, B. Roget, V. Lakshminarayan, J. Sitaraman, A.C. Bauer, J.R. Forsythe, R. Trigg, and N. Peters http://dx.doi.org/10.21079/11681/40883	AD1135538
¹ ERDC/ITL MP-21-10	Jun 2021	Summary of the SciTech 2020 Technical Panel on In Situ/In Transit Computational Environments for Visualization and Data Analysis, by E.P.N. Duque, S.M. Legensky, B.J. Whitlock, D.H. Rogers, A.C. Bauer, S.T. Imlay, D. Thompson, and S. Tsutsumi http://dx.doi.org/10.21079/11681/40887	AD1135647
ERDC/ITL MP-21-11	Jun 2021	Integrating Systems Thinking Skills with Multi-Criteria Decision-Making Technology to Recruit Employee Candidates, by S. Karam, M. Nagahi, V.L. Dayarathna (Nick), J. Ma, R. Jaradat, and M. Hamilton http://dx.doi.org/10.21079/11681/41026	AD1137456
ERDC/ITL MP-21-12	Jun 2021	Complex Network Analysis for Early Detection of Failure Mechanisms in Resilient Bio-structures, by R.R. Patel http://dx.doi.org/10.21079/11681/41042	AD1137959

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL SR-17-1 App. E	Dec 2020	Publications of the U.S. Army Engineer Research and Development Center; Appendix E: FY19 (October 2019-September 2020), by J.A. Dolan http://dx.doi.org/10.21079/11681/39201	AD1118050

¹ 12-month embargo; see Preface.

ERDC/ITL SR-20-1 Issue 2	Spring 2021	The Forefront: A Review of ERDC Publications, by K.J. Taylor and E.B. Moynihan http://dx.doi.org/10.21079/11681/40902	AD1136325
ERDC/ITL SR-21-1	Mar 2021	Investigating the USACE Operational Condition Assessment Process Current and Future, by W.H. Brown and J.K. Alt http://dx.doi.org/10.21079/11681/39999	AD1125202
ERDC/ITL SR-21-2	Mar 2021	Risk-Based Prioritization of Operational Condition Assessments: Stakeholder Analysis and Literature Review, by J.K. Alt, W.H. Brown, G.E. Gallarno, and J.P. Richards http://dx.doi.org/10.21079/11681/40162	AD1126393
¹ ERDC/ITL SR-21-3	Apr 2021	Structural Assessment of Volar Barracks Stairwells at Fort Gordon, Augusta, GA, by G.A. Riveros	AD1127424
¹ ERDC/ITL SR-21-4	Jun 2021	Machine-Assisted Mission Engineering: An Exploration of Reinforcement Learning with the Advanced Framework for Simulation, Integration, and Modeling (AFSIM), by H.R. Dozier and R.C. Salter	AD1135854
ERDC/ITL SR-21-5	Jun 2021	Topological Data Analysis: An Overview, by A.E.W. Bednar http://dx.doi.org/10.21079/11681/40943	AD1136048
ERDC/ITL SR-21-6	Aug 2021	Record Package Guidance: Best Practices, by S.C. Spangler, R.J. Fujan, C.A. Broyles, B.M. Baker, J.L. Jameson, G.L. Piotrowski, J.A. Groboski, and S.P. Hutsell http://dx.doi.org/10.21079/11681/41460	AD1144945
ERDC/ITL SR-21-7	Aug 2021	Data Documentation Tool (DDoT) User Manual, by L. Walker, J. Church, and A. Bednar http://dx.doi.org/10.21079/11681/41842	AD1147095
ERDC/ITL SR-21-8	Aug 2021	Iterative Learning Algorithm for Records Analysis (ILARA) User Manual, by J. Church, L. Walker, and A. Bednar http://dx.doi.org/10.21079/11681/41845	AD1147107
ERDC/ITL SR-21-9	Aug 2021	JAIC Predictive Maintenance Dashboard User Manual, by J. Church, L. Walker, and A. Bednar http://dx.doi.org/10.21079/11681/41823	AD1146900

¹ Limited distribution; see Preface.

ERDC/ITL SR-21-10	Sep 2021	Associated Words Explorer (AWE) User Manual, by J. Church, L. Walker, and A. Bednar http://dx.doi.org/10.21079/11681/41980	AD1147891
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Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL TN-21-1	Sep 2021	Thermal Camera Reliability Study: FLIR Pro One, by Q.G. Alexander and C.V. Lunderman http://dx.doi.org/10.21079/11681/42180	AD1149239

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL TR-20-4	Dec 2020	Data Enrichment and Enhanced Accessibility of Waterborne Commerce Numerical Data: Spatially Depicting the National Waterway Network, by T.W. Garton http://dx.doi.org/10.21079/11681/39223	AD1118191
ERDC/ITL TR-21-1	Mar 2021	Load and Resistance Factors for Earth Retaining, Reinforced Concrete Hydraulic Structures Based on a Reliability Index (β) Derived from the Probability of Unsatisfactory Performance (PUP): Phase 2 Study, by R.M. Ebeling and B.C. White http://dx.doi.org/10.21079/11681/39881	AD1124269
ERDC/ITL TR-21-2	Apr 2021	Data Lake Ecosystem Workflow, by R.C. Salter, Q.T. Dong, C.A. Coleman, M.A. Seale, A.I. Ruvinsky, L.K. Walker, and W.G. Bond http://dx.doi.org/10.21079/11681/40203	AD1126785
ERDC/ITL TR-21-3	Apr 2021	Classical and Innovative Methods of Fatigue and Fracture Repairs in Navigation Steel Structures, by C.M. Lozano and G.A. Riveros http://dx.doi.org/10.21079/11681/40422	AD1129082
ERDC/ITL TR-21-4	Sep 2021	USACE Advanced Modeling Object Standard: Release 1.0, by A. Ross, D. Johnson, H. Le, D. Griffin, C. Mudd, and D. Dawson http://dx.doi.org/10.21079/11681/42152	AD1148998
ERDC/ITL TR-21-5	Sep 2021	Alternative Analysis for Construction Progress Data Spatial Visualization, by J. Boone, B. Sells, M. Davis, and D. McDonald http://dx.doi.org/10.21079/11681/42166	AD1149118

9 Aquatic Nuisance Species Research Program (ANSRP)

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN ANSRP-21-1	Sep 2021	Observation of Silver Carp Spawning in a Mississippi River Tributary, by K.J. Killgore and S.G. George http://dx.doi.org/10.21079/11681/42100	AD1148598

10 Aquatic Plant Control Research Program (APCRP)

Technical notes

Chemical control

ERDC/TN APCRP-CC-22	Nov 2020	Evaluation of New Endothall and Florpyrauxifen-benzyl Use Patterns for Controlling Crested Floating Heart and Giant Salvinia, by C.R. Mudge and M.D. Netherland http://dx.doi.org/10.21079/11681/38859	AD1115682
ERDC/TN APCRP-CC-23	Sep 2021	Evaluation of Light Limitation and Depth on Germinated Seeds of Two Species of Water Chestnut Cultured Under Experimental Conditions, by L.L. Dodd and A.N. Schad http://dx.doi.org/10.21079/11681/41981	AD1147920
ERDC/TN APCRP-CC-24	Sep 2021	Efficacy of Florpyrauxifen-benzyl for Eurasian Watermilfoil Control and Nontarget Illinois Pondweed, Elodea, and Coontail Response, by C.R. Mudge, B.T. Sartain, B.P. Sperry, and K.D. Getsinger http://dx.doi.org/10.21079/11681/42063	AD1148395

Miscellaneous

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN APCRP-MI-9	Sep 2021	Evaluating Drone Truthing as an Alternative to Ground Truthing: An Example with Wetland Plant Identification, by G.M. Suir, C.L. Saltus, C.E. Sasser, J.M. Harris, M.K. Reif, R. Diaz, and G. Giffin http://dx.doi.org/10.21079/11681/42201	AD1149508

11 Dredging Operations and Environmental Research Program (DOER)

Technical notes

Contaminated Sediments / Risk Management

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-C37	Jan 2021	Environmental Applications of 3D Printing Polymer Composites for Dredging Operations, by A.J. Kennedy, M.L. Ballentine, A.D. McQueen, C.S. Griggs, A. Das, and M.J. Bortner http://dx.doi.org/10.21079/11681/39341	AD1121319

Dredged material management

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-D23	Aug 2021	Development of Three-Dimensional Wetting and Drying Algorithm for the Geophysical Scale Transport Multi-Block Hydrodynamic Sediment and Water Quality Transport Modeling System (GSMB), by R. Chapman, P. Luong, S-C. Kim, and E. Hayter http://dx.doi.org/10.21079/11681/41085	AD1140236

Risk

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-R30	May 2021	Field Survey to Prioritize Needs for Modernizing Dredged Material Evaluation Guidance, by A. Kennedy, D.W. Moore, and T.E. Rycroft http://dx.doi.org/10.21079/11681/40701	AD1133789
ERDC/TN DOER-R31	Sep 2021	Atlantic Sturgeon Movements in Relation to a Cutterhead Dredge in the James River, Virginia, by M. Balazik, S. Altman, K. Reine, and A. Katzenmeyer http://dx.doi.org/10.21079/11681/42101	AD1148605

12 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-20-1	Jan 2020 Rev. Jul 2021	Fate and Effects of Microcystin in Nearshore and Upland Environments: A Literature Review, by A.D. McQueen, M.W. Habberfield, K.G. Keil, and B.C. Suedel http://dx.doi.org/10.21079/11681/35274	AD1092361

13 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-25	Sep 2021	Developing Conceptual Models for Assessing Benefits and Impacts of USACE Activities on Freshwater Mussel Communities, by B. Herman, T. Slack, and T. Swannack http://dx.doi.org/10.21079/11681/42161	AD1149084

Species information (SI)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-SI-39	May 2021	Remotely Sensed Habitat Assessment of Bottomland Hardwood and Swamp Habitat: West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System Potential Impact Area, by C.L. Saltus and G.M. Suir http://dx.doi.org/10.21079/11681/40559	AD1132349

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-21-1	Apr 2021	Investigation for Shoaling Reduction along the Gulf Intracoastal Waterway (GIWW) at Caney Creek, Sargent, Texas, by P. Hamilton, L. Lin, and S. Jones http://dx.doi.org/10.21079/11681/40359	AD1128394
ERDC/TN RSM-21-2	Apr 2021	Modeling the Effect of Increased Sediment Loading on Bed Elevations of the Lower Missouri River, by J. Shelley http://dx.doi.org/10.21079/11681/40360	AD1128407
ERDC/TN RSM-21-3	Jul 2021	Metrics of Success for Nearshore Nourishment Projects Constructed with Dredged Sediment, by B.C. McFall, D.R. Krafft, H. McCaw, and B.M. Walker http://dx.doi.org/10.21079/11681/41160	AD1142291

15 Miscellaneous Publications

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Tech Note No. 8	Nov 2020	Seamless Digital Elevation Model (DEM) Creation for the Mississippi River in Louisiana to Support Hydrologic Modeling, by D. Arnold http://dx.doi.org/10.21079/11681/38960	AD1116362

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Report No. 35	Jan 2021	Mississippi River Adaptive Hydraulics Model Development and Evaluation, Commerce to New Madrid, Missouri, Reach, by R.A. Gaines, S.C. Sanborn, W.H. McAnally, and C.M. Wallen http://dx.doi.org/10.21079/11681/39519	AD1120592
MRG&P Report No. 36	Mar 2021	Empirical Analysis of Effects of Dike Systems on Channel Morphology of the Lower Mississippi River, by C.M. Mayne, D.P. May, and D.S. Biedenharn http://dx.doi.org/10.21079/11681/39799	AD1123882
MRG&P Report No. 37	May 2021	Hydraulic Dike Effects Investigation on the Mississippi River: Natchez to Baton Rouge, by D.P. May, D.S. Biedenharn, T.O. McAlpin, and T.V. Wamsley http://dx.doi.org/10.21079/11681/40539	AD1132086
MRG&P Report No. 38	Jun 2021	Effects of Geologic Outcrops on Long-Term Geomorphic Trends: New Madrid, MO, to Hickman, KY, by T.A. Dahl, J.S. Giles, K.A. Staebell, D.S. Biedenharn, and J.B. Dunbar http://dx.doi.org/10.21079/11681/41086	AD1140296

REPORT DOCUMENTATION PAGE

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1. REPORT DATE (DD-MM-YYYY) January 2022			2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Publications of the U.S. Army Engineer Research and Development Center; Appendix F: FY21 (October 2020 – September 2021)					5a. CONTRACT NUMBER	
					5b. GRANT NUMBER	
					5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) James A. Dolan					5d. PROJECT NUMBER	
					5e. TASK NUMBER	
					5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Information Technology Laboratory U.S. Army Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199					8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/ITL SR-17-1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Corps Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199					10. SPONSOR/MONITOR'S ACRONYM(S) ERDC	
					11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.						
13. SUPPLEMENTARY NOTES						
14. ABSTRACT Publications issued October 2020 through September 2021 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.						
15. SUBJECT TERMS						
Civil engineering-bibliography			Environmental engineering-bibliography			
Civil engineering -- Cold weather conditions-bibliography			Geotechnical engineering-bibliography			
Civil engineering – Design and construction-bibliography			Government publications – United States			
Coastal engineering-bibliography			Hydraulic engineering-bibliography			
Engineer Research and Development Center (U.S.) - Bibliography			Information technology-bibliography			
			Military engineering-bibliography			
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code)	
Unlimited	Unlimited	Unlimited	Unlimited	55		