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Engineer Research and
Development Center



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

Appendix G: FY22 (October 2021-September 2022)

Compiled by James A. Dolan

December 2022

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

Appendix G: October 2021-September 2022

Compiled by James A. Dolan

*Information Technology Laboratory
US 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 2021 through September 2022 by the US 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 literature produced by the US Army Engineer Research and Development Center (ERDC). Publications issued October 2021 through September 2022 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 Christian Patterson 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-22-1	Mar 2022	ERDC: Where Science and Engineering Meet http://dx.doi.org/10.21079/11681/43462	AD1162150
ERDC B-22-2	Mar 2022	Civil Works R&D Value to the Nation: 2022 Edition http://dx.doi.org/10.21079/11681/43465	AD1162170

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC SR-21-9	Oct 2021	Engineering With Nature®: Supporting Mission Resilience and Infrastructure Value at Department of Defense Installations, by T.S. Bridges, J.K. King, E.B. Moynihan, C.L. Allen, C.S. Vann, and K.L. Rhea http://dx.doi.org/10.21079/11681/42207	AD1150061
ERDC SR-22-1	May 2022	Summary of Ground-Based Snow Measurements for the Northeastern United States by C. Engel, R. Hastings, J. Giovando, E. Gabel, C. Duncan, and T. Dahl http://dx.doi.org/10.21079/11681/44122	AD1167729
ERDC SR-22-2	Jul 2022	A Tutorial on the Rapid Distortion Theory Model for Unidirectional, Plane Shearing of Homogeneous Turbulence, by C.R. Hart and G.W. Lyons http://dx.doi.org/10.21079/11681/44766	AD1174003

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC MP-22-1	Jan 2022	USACE Research and Development Strategy: Communication Products, by U.S. Army Corps of Engineers http://dx.doi.org/10.21079/11681/42983	AD1157248
ERDC MP-22-2	Feb 2022	Environmental Impact of Metals Resulting from Military Training Activities: A Review, by A.J. Barker, J.L. Clausen, T.A. Douglas, A.J. Bednar, C.S. Griggs, and W.A. Martin http://dx.doi.org/10.21079/11681/43348	AD1160383

¹ ERDC MP-22-3	Mar 2022	Beamforming for Line-Of-Bearing Estimates Using Distributed Acoustic Sensor Data from Airborne Sources, by A. Meyer, S. Vecherin, D. Peterson, K. Dunn, A. Wheeler, M. Moran, J. Desmond, and D. Costley	AD1165742
² ERDC MP-22-4	Sep 2022	A Fuzzy Epigenetic Model for Representing Degradation in Engineered Systems, by M. Seale, R.C. Salter, N. Garcia-Reyero, and A. Ruvinsky http://dx.doi.org/10.21079/11681/45582	AD1181309
² ERDC MP-22-5	Sep 2022	Resilience in Distributed Sensor Networks, by K. Ratmanski and S. Vecherin http://dx.doi.org/10.21079/11681/45680	AD1181761

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TN-22-1	Sep 2022	Practical Guidance for Numerical Modeling in FUNWAVE-TVD, by M.J. Torres, M.-A.Y.-H. Lam, and M. Malej http://dx.doi.org/10.21079/11681/45641	AD1181553

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC TR-21-14 Rpt 2	Apr 2022	Directed Energy Effects on Geomaterials; Part 2: Modeling and Simulation, by J. Allen, J. Furey, and C.M. Strack	AD1166137
ERDC TR-21-20	Oct 2021	Energy Atlas—Mapping Energy-Related Data for DoD Lands in Alaska: Phase 1—Assembling the Data and Designing the Tool, by C.A. Callaghan, M.F. Bigl, B.K. Booker, K.M. Elliott, P.H. Lintsai, M.J. Torres, K.P. Trubac, and J.M. Willan http://dx.doi.org/10.21079/11681/42226	AD1150119
ERDC TR-21-21	Nov 2021	Phase-Field Modeling of Nonequilibrium Solidification Processes in Additive Manufacturing, by J.B. Allen, R.D. Moser, Z.B. McClelland, M.M. Islam, and L. Liu http://dx.doi.org/10.21079/11681/42605	AD1155099
ERDC TR-21-22	Dec 2021	Infrasound Propagation in the Arctic, by D.K. Wilson, V.E. Ostashev, M.J. Shaw, M.B. Muhlestein, J.W. Weatherly, M.E. Swearingen, and S.L. McComas http://dx.doi.org/10.21079/11681/42683	AD1155936

¹ Limited distribution; see Preface.

² 12-month embargo; see Preface.

ERDC TR-22-1	Jan 2022	Energy Atlas—Mapping Energy-Related Data for DoD Lands in Alaska: Phase 2—Data Expansion and Portal Development, by M.F. Bigl, C.A. Callaghan, B.K. Booker, K.P. Trubac, J.M. Willan, P.H. Lintsai, and M.J. Torres http://dx.doi.org/10.21079/11681/43062	AD1157761
¹ ERDC TR-22-2	Jan 2022	High Sensitivity Seismic Sensor (HS3) Performance: A Laboratory Evaluation Study, by R.F. Lee, G. Galan-Comas, A.M. Montalvo-Bartolomei, H. Cudney, and L.J. Perren	AD1157891
ERDC TR-22-3	Feb 2022	Observation of Crack Arrest in Ice by High Aspect Ratio Particles during Uniaxial Compression, by E. Asenath-Smith, R. Lieblappen, S. Taylor, R.R. Winter, T.D. Melendy Jr., R.D. Moser, and R.B. Haehnel http://dx.doi.org/10.21079/11681/43145	AD1158498
ERDC TR-22-4	Mar 2022	Terrestrial Fate and Effects of Nanometer-Sized Silver, by D.R. Johnson, R.E. Boyd, A.J. Bednar, C.J. Banks, C.A. Weiss, Jr., J.G. Coleman, B.C. Suedel, and J.A. Steevens http://dx.doi.org/10.21079/11681/43800	AD1165447
ERDC TR-22-5	Apr 2022	Tombigbee River: River Miles 81.0–76.0 Sediment Management Study, by J.L. Brown, R.D. Davinroy, I.H. Nguyen, A.M. Rhoads, N.D. Lovelace, E.R. Russ, and J.A. Straub http://dx.doi.org/10.21079/11681/43942	AD1166650
¹ ERDC TR-22-6	Jun 2022	An Operational Scenario-Driven Mission-Based Adversarial Model, by J.E. Richards, R.K. Buchanan, C.H. Rinaudo, W.B. Leonard, K.N. Niles, K.M. Houe, D.M. Little, S.R. Goerger, C.A. Callaghan, J.D. Caddell, and G.S. Mathews	AD1173307
¹ ERDC TR-22-7	Jun 2022	Statistical Characterization of Urban Effects on Seismic Propagation, by A.C. Meyer, S.N. Vecherin, K.G. Dunn, R.F. Lee, and R. Zhou	AD1173345
ERDC TR-22-8	Jul 2022	Effects of Impure Water Sources on Early-Age Properties of Calcium Sulfoaluminate Cements for Rapid Airfield Damage Recovery, by W.R. Long, J.D. Doyle, E.L. Martinez-Guerra, and C.S. Griggs http://dx.doi.org/10.21079/11681/44780	AD1174052
ERDC TR-22-9	Aug 2022	Engineering With Nature® Principles in Action: Islands, by P.E. Whitfield, B.C. Suedel, K.A. Egan, J.M. Corbino, J.L. Davis, D.C. Carson, A.S. Tritinger, D.M. Szimanski, W.L. Balthis, J.Z. Gailani, and J.K. King http://dx.doi.org/10.21079/11681/44940	AD1176011

¹ Limited distribution; see Preface.

ERDC TR-22-10	Aug 2022	Supporting Bank and Near-bank Stabilization and Habitat Using Dredged Sediment: Documenting Best Practices, by J.Z. Gailani, B.C. Suedel, A.D. McQueen, T.J. Lauth, U. Scheiblechner, and R. Toegel http://dx.doi.org/10.21079/11681/44946	AD1176105
ERDC TR-22-11	Aug 2022	Simulating Environmental Conditions for Southwest United States Convective Dust Storms Using the Weather Research and Forecasting Model v4.1, by A.R. Gallagher, S.L. LeGrand, T.S. Hodgdon, and T.W. Letcher http://dx.doi.org/10.21079/11681/44963	AD1176215
ERDC TR-22-12	Aug 2022	A Community Engagement Framework Using Mental Modeling: The Seven Mile Island Innovation Lab Community Engagement Pilot—Phase I, by S. Thorne, D.C. Kovacs, J.Z. Gailani, and B.C. Suedel http://dx.doi.org/10.21079/11681/44983	AD1176422
ERDC TR-22-13	Aug 2022	Evaluation of Unmanned Aircraft Systems for Flood Risk Management: Results of Terrain and Structure Assessments, by A.D. Renaud, M.F. Forte, N.J. Spore, B.L. Bruder, K.L. Brodie, J.A. Straub, and J.G. Ruby http://dx.doi.org/10.21079/11681/45000	AD1176761
ERDC TR-22-14	Aug 2022	Swan Island: Monitoring and Adaptive Management Plan, by P.E. Whitfield, J.L. Davis, A.S. Tritinger, D.M. Szimanski, R.R. Golden, J.Z. Gailani, M.T. Ramirez, B.D. Herman, M. Whitbeck, and J.K. King http://dx.doi.org/10.21079/11681/45044	AD1177024
ERDC TR-22-15	Sep 2022	Informing the Community Engagement Framework for Natural and Nature-based Projects: An Annotated Review of Leading Stakeholder and Community Engagement Practices, by S.L. Thorne, D.C. Kovacs, J.Z. Gailani, and B.C. Suedel http://dx.doi.org/10.21079/11681/45400	AD1180152
¹ ERDC TR-22-16	Sep 2022	Simultaneous Mutli-Frequency Transmitter and Mobile Platform Enhancements to R2TD EMI for Tunnel Detection: RDT&E of SMX-TX and Mobile Platform, by L.J. Perren, K.B. Parkman, B. Barrowes, B. Jones, E.W. Smith, and D. Punt	AD1180231
ERDC TR-22-17	Sep 2022	Wave Attenuation of Coastal Mangroves at a Near-Prototype Scale, by M.A. Bryant, D.B. Bryant, L.A. Provost, N. Hurst, M. McHugh, A. Wargula, and T. Tomiczek http://dx.doi.org/10.21079/11681/45565	AD1181016
¹ ERDC TR-22-18	Sep 2022	Improved Ribbon Bridge Still-Water Testing, by M.W. Trim, S.E. Robert, N.B. Ganesh, C.K. Crane, and B.J. Sia	AD1180665

¹ Limited distribution; see Preface.

¹ ERDC TR-22-19	Aug 2022	(U) Distributed Acoustic Sensing Performance Observations: Soil Type, Soil Temperature, Soil Moisture, and Time In Situ, by M.C.L. Quinn, J.R. Picucci, K.E. Winters, W.J. McCleave, and D. Flynn	AD1181782
ERDC TR-22-20	Sep 2022	Landform Identification in the Chihuahuan Desert for Dust Source Characterization Applications: Developing a Landform Reference Data Set, by S.N. Cook, M.F. Bigl, S.L. LeGrand, N. Webb, G. Tyree, and R. Treminio http://dx.doi.org/10.21079/11681/45644	AD1181577

¹ Limited distribution; see Preface.

2 Coastal and Hydraulics Laboratory (CHL)

Letter reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL LR-21-7	Oct 2021	Empire Flood Gates Sedimentation Issue – Inital Findings and Hypotheses, by K.E. Harris, R.E. Heath, and G.L. Brown https://erdclibrary.on.worldcat.org/v2/oclc/1280062385	
ERDC/CHL LR-21-8	Nov 2021	Charleston Harbor Wave Climate and Vessel Wake Data Collection and Analysis: For the Charleston District of the USACE South Atlantic Division, by B.M. Scully, R. Styles, and J. Smith	
ERDC/CHL LR-22-2	Jan 2022	Hydrodynamic, Wave and Sediment Transport Modeling Around Third Port in Skiffes Creek and James River, by H. Li, H.N. Berckenhoff, J.W. McMahon, and M.A. Wood	
¹ ERDC/CHL LR-22-3	Feb 2022	ERDC John Day Turbine Model Phase 1 Support for Turbine Replacement and Generator Rewind, by R.A. Davidson and D.M. Guimbellot-Polk	
¹ ERDC/CHL LR-22-4	May 2022	Charleroi Locks and Dam: Grout-Bag Stilling Basin Apron Extension Modeling, by Y. Pagan-Albelo and B.D. Fuller	
¹ ERDC/CHL LR-22-5	Jul 2022	Military Hydrology Strategy Document, by J.B. Eylander, M.D. Wahl, A.A. Tavakoly, and J.L. Gutenson	
¹ ERDC/CHL LR-22-6	Aug 2022	St. Paul District Navigation Strategic Vision, by B.E. Emery, P.K. DiJoseph, and D.L. Jones	
¹ ERDC/CHL LR-22-7	Sep 2022	ADCIRC Circulation and Particle Tracking Modeling for Proposed St. Jerome Creek Inlet Jetties, by T.C. Massey, T. Lackey, and M. Owensby	
¹ ERDC/CHL LR-22-8	Sep 2022	Sediment Transport and Nearshore Nourishment History at Brunswick Harbor, GA, by D.R. Krafft and D.C. McFall	

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-22-1	Jun 2022	Inland Waterway Network Mapping of AIS Data for Freight Transportation Planning, by M.I. Asborno, S. Hernandez, K.N. Mitchell, and M. Yves http://dx.doi.org/10.21079/11681/44500	AD1171100

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL SR-22-1	Apr 2022	Sediment Budget Analysis System (SBAS) 2020 User's Guide: Version 1.0, by S.P. McGill, E.R. Eisemann, and R. Dopsovic http://dx.doi.org/10.21079/11681/44140	AD1167794
ERDC/CHL SR-22-2	May 2022	Improving Container Shipment Analysis, by W. Messer, T. Nettles, R. Stoner, and A. Sellers http://dx.doi.org/10.21079/11681/44380	AD1169769
ERDC/CHL SR-22-3	Jul 2022	Automatic Identification System Analysis Package User Guide, by M.M. Kress, P.K. DiJoseph, P. Donohue, and K.N. Mitchell http://dx.doi.org/10.21079/11681/44783	AD1174166
ERDC/CHL SR-22-4	Aug 2022	Current State of Practice of Nearshore Nourishment by the United States Army Corps of Engineers, by B.M. Walker, D.R. Krafft, B.C. McFall, H. McCaw, and S.L. Spurgeon http://dx.doi.org/10.21079/11681/45280	AD1179711

Technical notes

Section IV – Inlets and estuary channels

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IV-130	Aug 2022	Method to Evaluate Vessel Wake Forces on Wetland Scarps, by R. Styles, R.L. Bain, and A.M. Priestas http://dx.doi.org/10.21079/11681/45304	AD1179294

¹ 12-month embargo; see Preface.

Section VII – River engineering and sedimentation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-VII-25	Dec 2021	Data Collection Tools for River Geomorphology Studies: LiDAR and Traditional Methods, by C. Haring http://dx.doi.org/10.21079/11681/42502	AD1154176

Section IX – Navigation

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-IX-58	Jan 2022	AIS Data Case Study: Evaluating Reception of AIS Position Reports on the Missouri River by LOMA AIS Sites in April and August 2020, by B.J. Tetreault, M.M. Kress, and P.K. DiJoseph http://dx.doi.org/10.21079/11681/42980	AD1157348
ERDC/CHL CHETN-IX-59	Feb 2022	Vessel Speed Analysis before and after Dredging near Missouri River Mile 282 in November 2020, by M.M. Kress http://dx.doi.org/10.21079/11681/43283	AD1159888
ERDC/CHL CHETN-IX-60	May 2022	AIS Data Case Study: Dredge Material Placement Site Evaluation in Frederick Sound near Petersburg, Alaska, by M.W. Ferguson and M.M. Kress http://dx.doi.org/10.21079/11681/44141	AD1167863

Section XIII – Miscellaneous inland subjects

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL CHETN-XIII-4	Mar 2022	Setup and Data Collection Process of an Acoustic Doppler Velocimeter (ADV) in a Laboratory Setting, by L. Williams, G. Bell, and D. Bryant http://dx.doi.org/10.21079/11681/43741	AD1165707

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CHL TR-21-15 Rep. 2	Nov 2021	Sabine Pass to Galveston Bay, TX Pre-Construction, Engineering, and Design (PED): Coastal Storm Surge and Wave Hazard Assessment: Report 2 – Port Arthur, by A.L. Stehno, J.A. Melby, S. Misra, N.C. Nadal-Caraballo, and V. Gonzalez http://dx.doi.org/10.21079/11681/41901	AD1153188

ERDC/CHL TR-21-15 Rep. 3	Nov 2021	Sabine Pass to Galveston Bay, TX Pre-Construction, Engineering and Design (PED): Coastal Storm Surge and Wave Hazard Assessment: Report 3 – Orange County, by A.L. Stehno, J.A. Melby, S. Misra, N.C. Nadal-Caraballo, and V. Gonzalez http://dx.doi.org/10.21079/11681/41902	AD1153200
ERDC/CHL TR-21-15 Rep. 4	Nov 2021	Sabine Pass to Galveston Bay, TX Pre-Construction, Engineering and Design (PED): Coastal Storm Surge and Wave Hazard Assessment: Report 4 – Freeport, by A.L. Stehno, J.A. Melby, S. Misra, N.C. Nadal-Caraballo, and V. Gonzalez http://dx.doi.org/10.21079/11681/41903	AD1153232
¹ ERDC/CHL TR-21-16	Sep 2021	Regional Gap Crossing Analysis: Characterization of the Frequency and Occurrence of Gap Obstacles, by M.D. Wahl, K.H. Sparrow, K.A. Staebell, M.L. Follum, and E.E. Race	AD1152735
ERDC/CHL TR-21-17	Oct 2021	Mobile Harbor, Alabama Navigation Study: Ship Simulation Report, by M.M. Johnston, S.-C. Kim, and M.C. Allison http://dx.doi.org/10.21079/11681/42300	AD1151802
ERDC/CHL TR-21-18	Oct 2021	Houston Ship Channel Expansion Improvement Project – Navigation Channel Improvement Study: Ship Simulation Results, By S.K. Martin, L.L. Daggett, M.M. Johnston, C. Hewlett, K.I. Pazan, M.J. Sanchez, D.W. Webb, M.C. Allison, and G. Burkley http://dx.doi.org/10.21079/11681/42342	AD1152550
ERDC/CHL TR-21-19	Nov 2021	Sediment Transport Modeling at Stono Inlet and Adjacent Beaches, South Carolina, by H. Li, G.M. Maze, K.B. Conner, and J.M. Hazelton http://dx.doi.org/10.21079/11681/42501	AD1153959
ERDC/CHL TR-22-1	Jan 2022	Freight Fluidity for the Port of Baltimore: Vessel Approach and Maritime Mobility Metrics, by C.J. Kruse, D.H. Kang, K.N. Mitchell, P.K. DiJoseph, and M.M. Kress http://dx.doi.org/10.21079/11681/43000	AD1157454
ERDC/CHL TR-22-2	Feb 2022	Implementation of Flexible Vegetation into CSHORE for Modeling Wave Attenuation, by Y. Ding, Q.J. Chen, L. Zhu, J.D. Rosati, and B.D. Johnson http://dx.doi.org/10.21079/11681/43220	AD1159321

¹ Limited distribution; see Preface.

ERDC/CHL TR-22-3	Feb 2022	Walter Marine and Atlantic Reefmaker Wave Attenuator: Wave Transmission Testing Results, by D.B. Bryant and L.A. Provost http://dx.doi.org/10.21079/11681/43303	AD1159912
ERDC/CHL TR-22-4	Feb 2022	Wabash and Ohio River Confluence Hydraulic and Sediment Transport Model Investigation: A Report for US Army Corps of Engineers, Louisville District, by G. Bell, D. Abraham, N. Clifton, and K. Lamkin http://dx.doi.org/10.21079/11681/43441	AD1161809
ERDC/CHL TR-22-5	Mar 2022	Evaluating Cross-Shore Sediment Grain Size Distribution, Sediment Transport, and Morphological Evolution of a Nearshore Berm at Fort Myers Beach, Florida, by G.A. Zarillo, S.A. Ramos, K. Effinger, K. Becker, I. Watts, K.E. Brutsché, B.C. McFall, and D.R. Krafft http://dx.doi.org/10.21079/11681/43780	AD1165316
ERDC/CHL TR-22-6	Apr 2022	Optimization of Reach-Scale Gravel Nourishment on the Green River below Howard Hanson Dam, King County, Washington, by Z.P. Corum, E.L. Cheng, S.A. Gibson, and T.A. Dahl http://dx.doi.org/10.21079/11681/43887	AD1165932
ERDC/CHL TR-22-7	Apr 2022	Three-Dimensional Numerical Model Study of Flow near a Scour Hole in Isle of Wight Bay near Ocean City, Maryland, by A. Hammack and M.M. Johnston http://dx.doi.org/10.21079/11681/43921	AD1166611
ERDC/CHL TR-22-8	May 2022	Low-Sill Control Structure Gate Load Study, by J.A. Sharp, D.B. Bryant, and G. Savant http://dx.doi.org/10.21079/11681/44340	AD1169417
ERDC/CHL TR-22-9	Jun 2022	Foundational Principles in the Development of AdH-SW3, the Three-Dimensional Shallow Water Hydrodynamics and Transport Module within the Adaptive Hydraulics/Hydrology Model, by R.C. Berger http://dx.doi.org/10.21079/11681/44560	AD1173290
ERDC/CHL TR-22-10	Jun 2022	Tar-Pamlico and Neuse River Basins, North Carolina, Geomorphic Summary Report, by K.E. Harris and C.P. Haring http://dx.doi.org/10.21079/11681/44600	AD1173319
ERDC/CHL TR-22-11	Jul 2022	Impacts of Granular Activated Carbon (GAC) on Erosion Behavior of Muddy Sediment, by D.R.N. Tarpley and D.W. Perkey http://dx.doi.org/10.21079/11681/44841	AD1174714

¹ ERDC/CHL TR-22-12	Jul 2022	SPOD: Scaled Model Testing of a Modular Causeway System–Floating Causeway, by L.A. Provost, D.B. Bryant, M.A. Bryant, and M. Fowler	AD1175133
ERDC/CHL TR-22-13	Jul 2022	Sediment Provenance Studies of the Calcasieu Ship Channel, Louisiana, by D.W. Perkey, A.M. Priestas, J. Corbino, G.L. Brown, M. Hartman, D.R.N. Tarpley, and P.V. Luong http://dx.doi.org/10.21079/11681/44905	AD1175546
ERDC/CHL TR-22-14	Jul 2022	Using Geophysical and Erosion Properties to Identify Potential Beneficial Use Applications for Atlantic Intracoastal Waterway Sediments, by D.W. Perkey, D.R.N. Tarpley, and R.M. Styles http://dx.doi.org/10.21079/11681/44906	AD1175552
ERDC/CHL TR-22-15	Jul 2022	Investigation of Sources of Sediment Associated with Deposition in the Calcasieu Ship Channel, by G.L. Brown and P.V. Luong http://dx.doi.org/10.21079/11681/44907	AD1175557
ERDC/CHL TR-22-16	Aug 2022	Coastal Hazards System–Louisiana (CHS-LA), by N.C. Nadal-Caraballo, M.C. Yawn, L.A. Aucoin, M.L. Carr, A.A. Taflanidis, A.P. Kyrioti, J.A. Melby, E. Ramos-Santiago, V.M. Gonzalez, T.C. Massey, Z. Cobell, and A.T. Cox http://dx.doi.org/10.21079/11681/45286	AD1178936
ERDC/CHL TR-22-17	Aug 2022	Screening Dredged Material to Meet Placement Requirements, by T.L. Welp http://dx.doi.org/10.21079/11681/45262	AD1179696
ERDC/CHL TR-22-18	Sep 2022	A Revisit and Update on the Verification and Validation of the Coastal Modeling System (CMS): Report 1–Hydrodynamics and Waves, by H. Li, L. Lin, C.L. Johnson, Y. Ding, M.E. Brown, T.M. Beck, A. Sánchez, and W. Wu http://dx.doi.org/10.21079/11681/45444	AD1180390
ERDC/CHL TR-22-19	Sep 2022	Evaluation of Climatic and Hydroclimatic Resources to Support the US Army Corps of Engineers Regulatory Program, by K.H. Sparrow, J.L. Gutenson, M.D. Wahl, and K.A. Cotterman http://dx.doi.org/10.21079/11681/45484	AD1180603
ERDC/CHL TR-22-20	Sep 2022	Operational Modeling of Large Container-Type Vessel-Generated Waves with Related Erosion and Scour Effects, by M.-A. Y.-H. Lam, M. Malej, and F. Shi http://dx.doi.org/10.21079/11681/45483	AD1180580

¹ Limited distribution; see Preface.

3 Cold Regions Research Engineering Laboratory (CRREL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL MP-21-23	Nov 2021	Methodology for the Analysis of Geospatial and Vehicle Datasets in the R Language, by A.J. Fuentes, M.L. Michaels, and S.A. Shoop http://dx.doi.org/10.21079/11681/42422	AD1153392
ERDC/CRREL MP-21-24	Nov 2021	Joint Chilean and US Mobility Testing in Extreme Environments, by M. Parker, A. Stott, B. Quinn, B. Elder, T. Meehan, and S. Shoop http://dx.doi.org/10.21079/11681/42362	AD1152571
ERDC/CRREL MP-21-25	Nov 2021	Imagery Classification for Autonomous Ground Vehicle Mobility in Cold Weather Environments, by J. Olivier and S. Shoop http://dx.doi.org/10.21079/11681/42425	AD1153408
ERDC/CRREL MP-21-26	Nov 2021	A Detailed Approach to Autonomous Vehicle Control through Ros and Pixhawk Controllers, by B. Quinn, J. Bates, M. Parker, and S. Shoop http://dx.doi.org/10.21079/11681/42460	AD1153688
ERDC/CRREL MP-21-27	Nov 2021	Urban Noise Distributions and the Influence of Geometric Spreading on Skewness, by D.K. Wilson, M.J. Kamrath, C.E. Haedrich, D.J. Breton, and C.R. Hart http://dx.doi.org/10.21079/11681/42483	AD1153798
ERDC/CRREL MP-21-28	Dec 2021	Improving Winter Traction for Vehicles in Northern Operations, by S. Shoop, C. Witte, S. Karwaczynski, C. Ellis, E. Matthews, S. Bishel, B. Bomier, R. McCullough, M. Parker, S. Martin, N. Kamprath, O. Welling, and B. Elder http://dx.doi.org/10.21079/11681/42524	AD1154194
ERDC/CRREL MP-21-29	Dec 2021	Ground-penetrating Radar Profiles of the McMurdo Shear Zone, Antarctica, Acquired with an Unmanned Rover: Interpretation of Crevasses, Fractures, and Folds within Firn and Marine Ice, by S.A. Arcone, J.H. Lever, L.E. Ray, B.S. Walker, G. Hamilton, and L. Kaluziński http://dx.doi.org/10.21079/11681/42620	AD1155131

ERDC/CRREL MP-21-30	Dec 2021	Assessing the Feasibility of Detecting Epileptic Seizures Using Non-Cerebral Sensor Data, by A. Hamlin, E. Kobylarz, J.H. Lever, S. Taylor, and L. Ray http://dx.doi.org/10.21079/11681/42562	AD1154866
¹ ERDC/CRREL MP-21-31	Dec 2021	Velocity Field in the McMurdo Shear Zone from Annual Ground Penetrating Radar Imaging and Crevasse Matching, by L. Ray, M. Jordan, S.A. Arcone, L.M. Kaluziński, B. Walker, P.O. Koons, J. Lever, and G. Hamilton http://dx.doi.org/10.21079/11681/42623	AD1155139
ERDC/CRREL MP-21-32	Dec 2021	Revisiting Mechanics of Ice-Skate Friction: From Experiments at a Skating Rink to a Unified Hypothesis, by J.H. Lever, A.P. Lines, S. Taylor, G.R. Hoch, E. Asenath-Smith and D.S. Sodhi http://dx.doi.org/10.21079/11681/42642	AD1155224
¹ ERDC/CRREL MP-21-33	Dec 2021	Evidence that Abrasion Can Govern Snow Kinetic Friction, by J.H. Lever, S. Taylor, G.R. Hoch, and C. Daghljan http://dx.doi.org/10.21079/11681/42646	AD1155265
ERDC/CRREL MP-21-34	Dec 2021	Assessing the Mechanisms Thought to Govern Ice and Snow Friction and Their Interplay with Substrate Brittle Behavior, by J.H. Lever, E. Asenath-Smith, S. Taylor, and A.P. Lines http://dx.doi.org/10.21079/1168142742	AD1155891
¹ ERDC/CRREL MP-21-35	Dec 2021	The Mechanics of Snow Friction as Revealed by Micro-Scale Interface Observations, by J.H. Lever, S. Taylor, A.J. Song, Z.R. Courville, R. Lieblappen, and J.C. Weale http://dx.doi.org/10.21079/11681/42761	AD1156009
ERDC/CRREL MP-22-1	Jan 2022	Sampling Interplanetary Dust from Antarctic Air, by S. Taylor, J.H. Lever, K.D. Burgess, R.M. Stroud, D.E. Brownlee, L.R. Nittler, A. Bardyn, C.M. O'D. Alexander, K.A. Farley, J. Treffkorn, S. Messenger, and P.J. Wozniakiewicz http://dx.doi.org/10.21079/11681/43345	AD1160363
ERDC/CRREL MP-22-2	Jan 2022	Interior Alaska DoD Training Land Wildlife Habitat Vulnerability to Permafrost Thaw, an Altered Fire Regime, and Hydrologic Changes, by T.A. Douglas, M.T. Jorgenson, H. Genet, B.G. Marcot, and P. Nelsen http://dx.doi.org/10.21079/11681/43146	AD1158439

¹ 12-month embargo; see Preface.

ERDC/CRREL MP-22-3	Feb 2022	Dynamics Modeling and Robotic-Assist, Leader-Follower Control of Tractor Convoys, by J.T. Cook, L.E. Ray, and J.H. Lever http://dx.doi.org/10.21079/11681/43202	AD1158879
ERDC/CRREL MP-22-4	Feb 2022	VI Preferential Pathways of a Large Government Building, by J. Clausen, D. Moore, K. Miller, and L. Haines-Ecklund http://dx.doi.org/10.21079/11681/43260	AD1159542
ERDC/CRREL MP-22-5	Feb 2022	A Comparison of Handheld Field Chemical Sensors for Soil Characterization with a Focus on LIBS, by J. Clausen, R. Hark, R. Harmon, J. Plumer, S. Beal, and M. Bishop http://dx.doi.org/10.21079/11681/43282	AD1159668
¹ ERDC/CRREL MP-22-6	Feb 2022	Detection Limits of Trinitrotoluene and Ammonium Nitrate in Soil by Raman Spectroscopy, by T.R. Schlack, S.A. Beal, E.J. Corriveau, and J.L. Clausen http://dx.doi.org/10.21079/11681/43302	AD1159855
¹ ERDC/CRREL MP-22-7	Feb 2022	Use of a Portable Friction Tester on Snow and Ice Pavement, by A. Menke, S. Shoop, and B. Elder http://dx.doi.org/10.21079/11681/43380	AD1160674
ERDC/CRREL MP-22-8	Mar 2022	High Efficiency Fuel Sleds for Polar Traverses, by J.H. Lever and J.C. Weale http://dx.doi.org/10.21079/11681/43445	AD1161889
ERDC/CRREL MP-22-9	Mar 2022	Autonomous GPR Surveys using the Polar Rover <i>Yeti</i> , by J.H. Lever, A.J. Delaney, L.E. Ray, E. Trautman, L.A. Barna and A.M. Burzynski http://dx.doi.org/10.21079/11681/43600	AD1163518
¹ ERDC/CRREL MP-22-10	Mar 2022	Assessment of the COVID-19 Infection Risk at a Workplace Through Stochastic Microexposure Modeling, by S. Vecherin, D. Chang, E. Wells, B. Trump, A. Meyer, J. Desmond, K. Dunn, M. Kitsak and I. Linkov http://dx.doi.org/10.21079/11681/43740	AD1164931
ERDC/CRREL MP-22-11	May 2022	Ballistic Protection Using Snow, by G.L. Blaisdell, T.D. Melendy, and M.N. Blaisdell http://dx.doi.org/10.21079/11681/44360	AD1169497

¹ 12-month embargo; see Preface.

¹ ERDC/CRREL MP-22-12	Jul 2022	Short-range Near-surface Seismic Ensemble Predictions and Uncertainty Quantification for Layered Medium, by S. Vecherin, S. Ketcham, A. Meyer, K. Dunn, J. Desmond, and M. Parker http://dx.doi.org/10.21079/11681/45300	AD1179223
ERDC/CRREL MP-22-13	Aug 2022	Automated Detection of Austere Entry Landing Zones: A “GRAIL Tools” Validation Assessment, by S.N. Sinclair and S.A. Shoop http://dx.doi.org/10.21079/11681/45265	AD1179703
ERDC/CRREL MP-22-14	Aug 2022	Brine, Englacial Structure, and Basal Properties near the Terminus of McMurdo Ice Shelf, Antarctica, by S. Campbell, Z. Courville, S. Sinclair, and J. Wilner http://dx.doi.org/10.21079/11681/45303	AD1179258
ERDC/CRREL MP-22-15	Sep 2022	Ground-penetrating Radar Studies of Permafrost, Periglacial, and Near-surface Geology at McMurdo Station, Antarctica, by S. Campbell, R.T. Affleck, and S. Sinclair http://dx.doi.org/10.21079/11681/45320	AD1179543

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL SR-22-1	Mar 2022	The Blowing Snow Hazard Assessment and Risk Prediction Model: A Python Based Downscaling and Risk Prediction for Snow Surface Erodibility and Probability, by T.W. Letcher, S.L. LeGrand, and C. Polashenski http://dx.doi.org/10.21079/11681/43582	AD1163375
ERDC/CRREL SR-22-2		No report	
ERDC/CRREL SR-22-3	Aug 2022	SAGE-PEDD User Manual, by Y. Wenren, L. Allen, and R. Haehnel http://dx.doi.org/10.21079/11681/44960	AD1176195

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CRREL TR-21-15	Oct 2021	Artificial Ground Freezing Using Solar-Powered Thermosyphons, by A.M. Wagner, J.B. Maakestad, E. Yarmak Jr., and T.A. Douglas http://dx.doi.org/10.21079/11681/42421	AD1153377

¹ 12-month embargo; see Preface.

ERDC/CRREL TR-22-1	Jan 2022	A Study on the Delta-Bullington Irregular Terrain Radiofrequency Propagation Model: Assessing Model Suitability for Use in Decision Support Tools, by D.J. Breton http://dx.doi.org/10.21079/11681/42780	AD1156399
ERDC/CRREL TR-22-2	Jan 2022	Implementation of an Albedo-Based Drag Partition into the WRF-Chem v4.1 AFWA Dust Emission Module, by M.L. Michaels, T.W. Letcher, S.L. LeGrand, N.P. Webb, and J.B. Putnam http://dx.doi.org/10.21079/11681/42782	AD1156577
ERDC/CRREL TR-22-3		CLASSIFIED	ADC200344
ERDC/CRREL TR-22-4	Mar 2022	Modernizing Environmental Signature Physics for Target Detection—Phase 3, by J.L. Clausen, C. Felt, M. Musty, V. Truong, S. Frankenstein, A. Wagner, R. Affleck, S. Peckham, and C. Williams http://dx.doi.org/10.21079/11681/43442	AD1161836
ERDC/CRREL TR-22-5	Mar 2022	Continued Investigation of Thermal and Lidar Surveys of Building Infrastructure, by A.L. LeWinter, E.J. Deeb, D.L. Filiano, and D.C. Finnegan http://dx.doi.org/10.21079/11681/43820	AD1165536
ERDC/CRREL TR-22-6	Mar 2022	Field Guide to Identifying the Upper Extent of Stream Channels, by R.K. Rossi and G.C.L. David http://dx.doi.org/10.21079/11681/43560	AD1163235
ERDC/CRREL TR-22-7	Aug 2022	South Pole Station Snowdrift Model, by L. Allen, R. Haehnel, and Y. Wenren http://dx.doi.org/10.21079/11681/44943	AD1176163
ERDC/CRREL TR-22-8	Aug 2022	SAGE-PEDD Theory Manual: Modeling Windblown Snow Deposition around Buildings, by R.B. Haehnel, Y. Wenren, and L.D. Allen http://dx.doi.org/10.21079/11681/44942	AD1176179
ERDC/CRREL TR-22-9	Aug 2022	Understanding and Improving Snow Processes in Noah-MP over the Northeast United States via the New York State Mesonet, by T.W. Letcher, J.R. Minder, and P. Naple http://dx.doi.org/10.21079/11681/45060	AD1177083
ERDC/CRREL TR-22-10	Aug 2022	Thermal Infra-Red Comparison Study of Buried Objects between Humid and Desert Test Beds, by M. Musty, V. Truong, J.L. Clausen, S. Frankenstein, C. Williams, A. Trautz, S. Howington, and R. Kala http://dx.doi.org/10.21079/11681/45064	AD1177136
ERDC/CRREL TR-22-11	Aug 2022	McMurdo Snow Roads and Transportation: Final Program Summary, by S.A. Shoop, W.L. Wieder, and T.J. Melendy http://dx.doi.org/10.21079/11681/45200	AD1178286

ERDC/CRREL TR-22-12	Aug 2022	Determination of Residual Low-Order Detonation Particle Characteristics from Composition B Mortar Rounds, by M.F. Bigl, S.A. Beal, and C.A. Ramsey http://dx.doi.org/10.21079/11681/45260	AD1179689
ERDC/CRREL TR-22-13	Aug 2022	Live-Fire Validation of Command-Detonation Residues Testing Using a 60 mm IMX-104 Munition, by S.A. Beal, M.F. Bigl, and C.A. Ramsey http://dx.doi.org/10.21079/11681/45266	AD1179709
ERDC/CRREL TR-22-14	Aug 2022	Photographic Aerial Transects of Fort Wainwright, Alaska, by B.G. Marcot, M.T. Jorgenson, T.A. Douglas, and P. Nelsen http://dx.doi.org/10.21079/11681/45283	AD1179720
ERDC/CRREL TR-22-15	Sep 2022	Extracting Sintered Snow Properties from MicroCT Imagery to Initialize a Discrete Element Method Model, by T.S. Hodgdon, B.A. West, J.T. Parno, T.W. Letcher, Z.R. Courville, and L.B. Farnsworth http://dx.doi.org/10.21079/11681/45305	AD1179332
¹ ERDC/CRREL TR-22-16	Sep 2022	Chemical-Biological-Radiological Sensor Placement Tool, by D.K. Wilson and J.T. Bates	AD1180468
ERDC/CRREL TR-22-17	Sep 2022	Investigations into the Ice Crystallization and Freezing Properties of the Antifreeze Protein ApAFP752, by E. Asenath-Smith, E.C. Jeng, E.K. Ambrogj, G.R. Hoch, and J.L. Olivier http://dx.doi.org/10.21079/11681/45620	AD1181427
ERDC/CRREL TR-22-18	Sep 2022	Automated Ground-Penetrating-Radar Post-Processing Software in R Programming, by S.N. Cook, M.J. Torres, N.J. Lamie, L.J. Perren, S.M. Slone, and B.J. Jones http://dx.doi.org/10.21079/11681/45621	AD1181444
ERDC/CRREL TR-22-19	Sep 2022	Buried-Object-Detection Improvements Incorporating Environmental Phenomenology into Signature Physics, by J.L. Clausen, V. Truong, S. Bragdon, S. Frankenstein, A. Wagner, R. Affleck, and C. Williams http://dx.doi.org/10.21079/11681/45625	AD1181479
ERDC/CRREL TR-22-20	Sep 2022	Cold Regions Vehicle Start: Cold Performance of Ultracapacitor-Based Batteries for Stryker Vehicles, by K.P. Trubac, C.A. Callaghan, C.A. Hartshorn, T.J. Elliott, D.A. Punt, and C.J. Donnelly http://dx.doi.org/10.21079/11681/45640	AD1181534

¹ Limited distribution; see Preface.

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-21-4	Oct 2021	Solid-Phase Microextraction (SPME) for Determination of Geosmin and 2-Methylisoborneol in Volatile Emissions from Soil Disturbance, by M.W. Conrady, M. Bauer, K.D. Jo, D.M. Cropek, and R.R. Busby http://dx.doi.org/10.21079/11681/42289	AD1151706
ERDC/CERL MP-22-1	May 2022	Soil and Vegetation Responses to Amendment with Pulverized Classified Paper Waste, by R.R. Busby, H.A. Torbert, and S.A. Prior http://dx.doi.org/10.21079/11681/44202	AD1168091
ERDC/CERL MP-22-2	May 2022	Southern Flying Squirrels (<i>Glaucomys volans</i>) as Major Predators of Avian Nest Boxes in Conecuh National Forest, Alabama, by B.A. DeGregorio, J.H. Sperry, D.G. Kovar, and D.A. Steen http://dx.doi.org/10.21079/11681/44320	AD1169413
¹ ERDC/CERL MP-22-3	Jul 2022	You Can Go Your Own Way: No Evidence for Social Behavior Based on Kinship or Familiarity in Captive Juvenile Box Turtles, by S.J. Tetzlaff, J.H. Sperry, and B.A. DeGregorio http://dx.doi.org/10.21079/11681/44923	AD1175913

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/CERL SR-22-1	Aug 2022	Installation Utility Monitoring and Control System Technical Guide, by J. Bush, E. Westervelt, B. Clark, D. Schwenk, S. Briggs, D. Shepard, M.C. Long, T. Patel, M. Johnson, and E. Lynch http://dx.doi.org/10.21079/11681/45081	AD1177365
² ERDC/CERL SR-22-2	Aug 2022	Mountain Bike Trail Concept Plan, by W.D. Meyer, J. Carsten, A. Stumpf, and S. Bevelheimer	AD1177929

¹ 12-month embargo; see Preface.

² Limited distribution; see Preface.

ERDC/CERL SR-22-3	Sep 2022	Standard Operating Procedures for Open-Air Solid Waste Burning in Contingency Locations, by A.B. Urban, I.E. Wallingford, S.D. Cosper, A.M. Rice, W.K. Wolf, H.G. Anderson, M. Wolford, C.A. Gemeinhardt, and D.W. Stokes http://dx.doi.org/10.21079/11681/45363	AD1180058
¹ ERDC/CERL SR-22-4	Sep 2022	Summary Report for One World Complex Operational Environment, by T.K. Perkins, C.M. Armstrong, and C.R. Ehlschlaeger	AD1180312

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/CERL TR-21-12	Nov 2021	Seismic Testing of a Static Power Static Transfer Switch, by J. Wilcoski	AD1153717
ERDC/CERL TR-21-23	Nov 2021	Demonstration of Subsurface Passive Acoustic Monitoring (SPAM) to Survey for and Estimate Populations of Imperiled Underwater-calling Frogs, by P.J. Wolff, B.A. DeGregorio, and A.N. Rice http://dx.doi.org/10.21079/11681/42386	AD1153141
ERDC/CERL TR-21-24	Dec 2021	Camp Perry Historic District Contributing Buildings: Character-Defining Features, by A.D. Smith, A.S. Fuelberth, S.E. Adams, and C.L. Baxter http://dx.doi.org/10.21079/11681/42580	AD1154993
ERDC/CERL TR-21-25	Dec 2021	Fort Huachuca Ranges: A History and Analysis, by S.I. Ensore, D.A. Morrison, A.D. Smith, and S.E. Adams http://dx.doi.org/10.21079/11681/42720	AD1155786
ERDC/CERL TR-22-1	Jan 2022	Deconstruction Feasibility Assessment of Warehouse District Facilities at Fort Leonard Wood, Missouri, by S.J. Vance, T.A. Carlson, J.L. Davila-Perez, and D.S. Gilbert http://dx.doi.org/10.21079/11681/43120	AD1158185
¹ ERDC/CERL TR-22-2	Feb 2022	Maximizing Energy Resilience at Fort Leonard Wood, MO, by Expanding the Use of the Propane-Air Mixing Station, by W.D. Meyer, M. Swanson, S. Tweddale, A.L. Stumpf, and S.J. Bevelheimer	AD1159321
¹ ERDC/CERL TR-22-3	Feb 2022	Solid Waste Characterization Assessment at Fort Leonard Wood, MO, by D.S. Gilbert, A.B. Urban, G. Rodriguez, S.D. Cosper, and A.L. Stumpf	AD1161123

¹ Limited distribution; see Preface.

ERDC/CERL TR-22-4	Mar 2022	Evaluation of the Wharton & Northern Railroad, by M.W. Tooker, A.D. Smith, and K.E. Feinen http://dx.doi.org/10.21079/11681/43763	AD1165231
ERDC/CERL TR-22-5	Jun 2022	Operations & Maintenance (O&M) Facility Data Exchange Pilot Expansion to BUILDER SMS, by M. Carrasquillo-Mangual, J. Martin, B. Mehnert, J. Gairhan, V. Woods, and B. Brucker http://dx.doi.org/10.21079/11681/44501	AD1171211
¹ ERDC/CERL TR-22-6	Jun 2022	Precipitation Trends and Low Impact Development Resiliency at Fort Leonard Wood, MO, by D.R. Gambill and H.R. Howard	AD1173315
¹ ERDC/CERL TR-22-7	Aug 2022	Entry of Connected and Automated Vehicles at Checkpoints in Military Installations: Design Recommendation and Project Planning Guide, by L.L. Larkin, J.P. Allen, N.R.D. Myers, A.L. Stumpf, T.A. Carlson, A. Hainen, B. Balasubramanian, T. Atkinson, N. Jeong, J.P. Smith, C. Staggs, and W.M. Lee	AD1177536
¹ ERDC/CERL TR-22-8	Aug 2022	NRHP Evaluation of Bridges at Fort McCoy, Wisconsin, by M.W. Tooker, A.D. Smith, and A.S. Fuelberth	AD1179814
ERDC/CERL TR-22-9	Sep 2022	Evaluation of 11 Buildings in the Fort McCoy Cantonment, by S.E. Adams, M.L. Story, and A.D. Smith http://dx.doi.org/10.21079/11681/45350	AD1179943
ERDC/CERL TR-22-10	Sep 2022	Fort McCoy Firing Ranges and Military Training Lands: A History and Analysis, by M.L. Story, A.D. Smith, and S.E. Adams http://dx.doi.org/10.21079/11681/45600	AD1181348
ERDC/CERL TR-22-11	Sep 2022	White Sands Missile Range Thurgood Canyon Watershed: Analysis of Range Road 7 for Development of Best Management Practices and Recommendations, by D.R. Gambill, M.M. Stoklosa, S.A. Matus, H.R. Howard, and G.R. Feezor http://dx.doi.org/10.21079/11681/45622	AD1181455

¹ Limited distribution; see Preface.

5 Environmental Laboratory (EL)

Miscellaneous papers

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL MP-22-1	May 2022	Spatial and Temporal Variability of the Alligatorweed Pathogen, <i>Alternaria alternantherae</i> , in Louisiana, by N.E. Harms and J.F. Shearer http://dx.doi.org/10.21079/11681/44402	AD1169862
ERDC/EL MP-22-2	Jun 2022	Simulated Herbicide Spray Retention on Floating Aquatic Plants as Affected by Carrier Volume and Adjuvant Type, by B.P. Sperry, C.R. Mudge, and K.D. Getsinger http://dx.doi.org/10.21079/11681/44540	AD1173284

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL SR-22-1	Apr 2022	Determination of Nanomaterial Viscosity and Rheology Properties Using a Rotational Rheometer, by Q. Wu, K. Kremer, S. Gibbons, and A.J Kennedy http://dx.doi.org/10.21079/11681/43964	AD1166749
ERDC/EL SR-22-2	Jun 2022	A Review of Empirical Algorithms for the Detection and Quantification of Harmful Algal Blooms Using Satellite-Borne Remote Sensing, by R.A. Johansen, M.K. Reif, C.L. Saltus, and K.L. Pokrzywinski http://dx.doi.org/10.21079/11681/44523	AD1173270
ERDC/EL SR-22-3	Aug 2022	Evaluation of Methods for Monitoring Herbaceous Vegetation, by B. Herman http://dx.doi.org/10.21079/11681/45100	AD1177426
ERDC/EL SR-22-4	Aug 2022	Geospatial Suitability Indices (GSI) Toolbox: User's Guide, by C. Saltus, S.K. McKay, and T. Swannack http://dx.doi.org/10.21079/11681/45128	AD1177555
ERDC/EL SR-22-5	Sep 2022	Application of Clean Dredged Material to Facilitate Contaminated Sediment Source Control, by D.W. Moore, D. Acevedo-Acevedo, and P.T. Gidley http://dx.doi.org/10.21079/11681/45342	AD1179852
ERDC/EL SR-22-6	Sep 2022	<i>waterquality</i> for ArcGIS Pro Toolbox: User's Guide, by C. Saltus, M. Reif, and R. Johansen http://dx.doi.org/10.21079/11681/45362	AD1180038
ERDC/EL SR-22-7	Sep 2022	Microbial Dynamics of a Fluidized Bed Bioreactor Treating Perchlorate in Groundwater, by H. Knotek-Smith and C. Thomas http://dx.doi.org/10.21079/11681/45403	AD1180160

ERDC/EL SR-22-8	Sep 2022	Literature Review: Macrohabitat Metrics to Identify Presence of Chiroptera on the Landscape in the United States, by C.L. Saltus and E.R. Britzke http://dx.doi.org/10.21079/11681/45523	AD1180774
ERDC/EL SR-22-9	Sep 2022	Analytic Methods for Establishing Restoration Trajectories, by K. Runion, S. Altman, and E. Murray http://dx.doi.org/10.21079/11681/45562	AD1180994

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TN-22-1	Jun 2022	Evaluation of Multiparameter Water Meter for Environmental Toolkit for Expeditionary Operations, by L. Gurtowski, J. LeMonte, J. Bennett, M. Middleton, and B. Lafferty http://dx.doi.org/10.21079/11681/44520	AD1173264
ERDC/EL TN-22-2	Jul 2022	Synthesis of 2-methoxypropyl benzene for epitope imprinting, by L.C. Moores, P.U. A.I. Fernando, and G.W. George http://dx.doi.org/10.21079/11681/44883	AD1175201
ERDC/EL TN-22-3	Jul 2022	Organogel Synthesis Towards Electrochemical Sensing Applications, by P.U.A.I. Fernando, M.W. Glasscott, G.W. George, G.K. Kosgei, and L.C. Moores http://dx.doi.org/10.21079/11681/44903	AD1175516

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/EL TR-22-1	Feb 2022	Microbiome Perturbations During Domestication of the Green June Beetle (<i>Cotinis nitida</i>), by C.M. Jung, M. Carr, D.L. Lindsay, E. Fleischman, and C.J. Roesch http://dx.doi.org/10.21079/11681/43342	AD1160341
ERDC/EL TR-22-2	Mar 2022	Design, Construction, and Testing of the PFAS Effluent Treatment System (PETS), a Mobile Ion Exchange-Based System for the Treatment of Per-, Poly-Fluorinated Alkyl Substances (PFAS) Contaminated Water, by S.A. Waisner, V.F. Medina, C. Ellison, J. Mattei-Sosa, J. Brasher, J. Lalley, and C. Griggs http://dx.doi.org/10.21079/11681/43823	AD1165539

ERDC/EL TR-22-3	Mar 2022	Toward the Electrochemical Detection of 2,4-Dinitroanisole (DNAN) and Pentaerythritol Tetranitrate (PETN), by M.W. Glasscott, J.N. Jernberg, E.M. Alberts, and L.C. Moores http://dx.doi.org/10.21079/11681/43826	AD1165554
ERDC/EL TR-22-4	Mar 2022	A Literature Review of Beach Nourishment Impacts on Marine Turtles, by K.J. Reine http://dx.doi.org/10.21079/11681/43829	AD1165573
ERDC/EL TR-22-5	Jun 2022	Two Years of Post-Project Monitoring of a Navigation Solution in a Dynamic Coastal Environment, Smith Island, Maryland, by J.A. Seiple, L.E. Santiago, C.C. Spaur, S. Altman, M.T. Balazik, T. Laczó, D.O. Mensah, W.G. Amarasingha, A.W. Payson, and D. Szimanski http://dx.doi.org/10.21079/11681/44620	AD1173329
ERDC/EL TR-22-6	Jul 2022	Techniques for Developing Bars and Islands in Incising Channels, by R.M. McComas, S.J. Miller, D.R. Felt, J.C. Fischenich, M.D. Porter, and D.F. Hayes http://dx.doi.org/10.21079/11681/44720	AD1173710
ERDC/EL TR-22-7	Jul 2022	Boronic Acid Functionalized Ferrocene Derivatives Towards Fluoride Sensing, by P.U. Ashvin Iresh Fernando, G.K. Kosgei, M.W. Glasscott, G.W. George, E. Alberts, and L.C. Moores http://dx.doi.org/10.21079/11681/44762	AD1173937
ERDC/EL TR-22-8	Aug 2022	The Use of US Army Corps of Engineers Reservoirs as Stopover Sites for the Aransas–Wood Buffalo Population of Whooping Crane, by J.F. Jung, R.A. Fischer, C. McConnell, and P. Bates http://dx.doi.org/10.21079/11681/44980	AD1176388
ERDC/EL TR-22-9	Aug 2022	Environmental Evaluation and Management of Dredged Material for Beneficial Use: A Regional Beneficial Use Testing Manual for the Great Lakes, by K.G. Keil, T.J. Estes, J.P. Kreitinger, G.R. Lotufo, R.A. Price, B.C. Suedel, M.W. Habberfield, B.A. Hinterberger, A.M. Lenox, S.W. Pickard, M.P. Wargo, J.M. Miller, J.A. Miller, and P.R. Schroeder http://dx.doi.org/10.21079/11681/45024	AD1176887
ERDC/EL TR-22-10	Aug 2022	Identification and Preventative Treatment of Overwintering Cyanobacteria in Sediments: A Literature Review, by A.J. Calomeni, A.D. McQueen, C.M. Kinley-Baird, and G.A. Clyde, Jr. http://dx.doi.org/10.21079/11681/45063	AD1177106
ERDC/EL TR-22-11	Sep 2022	Properties and Detectability of Rogue Synthetic Biology (SynBio) Products in Complex Matrices, by C.M. Jung, K.J. Indest, M.R. Carr, R.F. Lance, L.A. Carrigee, and K.N. Clark http://dx.doi.org/10.21079/11681/45345	AD1179860

ERDC/EL TR-22-12	Sep 2022	Flowering Rush Control in Hydrodynamic Systems: Part 1: Water Exchange Processes, by B.T. Sartain, K.D. Getsinger, D.J. Walter, J.D. Madsen, and S. Levoy http://dx.doi.org/10.21079/11681/45425	AD1180267
ERDC/EL TR-22-13	Sep 2022	Qualification of Hanna Instruments HI9829 for the Environmental Toolkit for Expeditionary Operations, by L.A. Gurtowski, J. LeMonte, J. Bennett, B. Lafferty, and M. Middleton http://dx.doi.org/10.21079/11681/45520	AD1180768
ERDC/EL TR-22-14	Sep 2022	Occurrence of Silver, Bighead, and Black Carp in Waters Managed by the US Army Corps of Engineers, by A.J.M. Oliver, W.T. Slack, and A.W. Katzenmeyer http://dx.doi.org/10.21079/11681/45542	AD1180951
ERDC/EL TR-22-15	Sep 2022	Birds of the Craney Island Dredged Material Management Area, Portsmouth, Virginia, 2008-2020, by M.P. Guilfoyle, R.A. Beck, B. Williams, S.J. Reinheimer, L.D. Burgoon, S.S. Jackson, S.M. Beck, B.C. Suedel, and R.A. Fischer http://dx.doi.org/10.21079/11681/45604	AD1181390

6 Geospatial Research Laboratory (GRL)

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TN-22-1	Jun 2022	Adversarial Artificial Intelligence: Implications for Military Operations, by H. Yu and S. Chopra http://dx.doi.org/10.21079/11681/44640	AD1173342
ERDC/GRL TN-22-2	Sep 2022	Adapting Agile Philosophies and Tools for a Research Environment, by N.M. Wayant http://dx.doi.org/10.21079/11681/45442	AD1180349

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GRL TR-21-6	Nov 2021	ROS Integrated Object Detection for SLAM in Unknown, Low-Visibility Environments, by B. Christie, O. Ennasr, and G. Glaspell http://dx.doi.org/10.21079/11681/42385	AD1153093
ERDC/GRL TR-21-7	Nov 2021	Semi-Automated Land Cover Mapping Using an Ensemble of Support Vector Machines with Moderate Resolution Imagery Integrated into a Custom Decision Support Tool, by Dr. K. Lasko, Dr. E. Sava http://dx.doi.org/10.21079/11681/42402	AD1154796
ERDC/GRL TR-22-1	Aug 2022	User Guide: The DEM Breakline and Differencing Analysis Tool—Gridded Elevation Model Analysis with a Convenient Graphical User Interface, by S.B. Blundell http://dx.doi.org/10.21079/11681/45040	AD1176944
ERDC/GRL TR-22-2	Sep 2022	Analysis of Spectropolarimetric Responses in the Visible and Infrared for Differentiation between Similar Materials, by S.J. Becker, H.S. Sussman, S.B. Blundell, V.C. Vanderbilt, and I. Semyonov http://dx.doi.org/10.21079/11681/45422	AD1180249

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-22-1	Jun 2022	Probabilistic Neural Networks that Predict Compressive Strength of High Strength Concrete in Mass Placements using Thermal History, by M.M. Roberson, K.M. Inman, A.S. Carey, I.L. Howard, and J. Shannon http://dx.doi.org/10.21079/11681/44483	AD1170398

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TN-21-2	Dec 2021	Development of a Sand Boil Testing Laboratory and Preliminary Results, by I.J. Stephens, B.A. Robbins, and A.M. Keffer http://dx.doi.org/10.21079/11681/42542	AD1154725

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/GSL TR-21-35	Nov 2021	Laboratory Measurements of the Erodibility of Gravelly Soils, by J.F. López-Soto and B.A. Robbins http://dx.doi.org/10.21079/11681/42443	AD1153538
¹ ERDC/GSL TR-21-36	Nov 2021	First Generation Automated Detection of Unexploded Ordnance using LiDAR-generated 3-D Point Clouds, by A.B. Ward and E.S. Berney IV	AD1153525
ERDC/GSL TR-21-37	Nov 2021	Development of Smartphone-Based Semi-Prepared Runway Operations (SPRO) Models and Methods, by A.B. Ward, A.J. Falls, and C.A. Rutland http://dx.doi.org/10.21079/11681/42500	AD1153938
¹ ERDC/GSL TR-21-38	Nov 2021	Development and Calibration of an ANVEL Vehicle Model for the Palletized Loading System, by C. Davenport, A. Aspin, J.G. Monroe, and D. McInnis	AD1153967
ERDC/GSL TR-21-39	Dec 2021	Field Jet Erosion Tests on Benbrook Dam, Texas, by J.L. Wibowo and J.F. López-Soto http://dx.doi.org/10.21079/11681/42545	AD1154788

¹ Limited distribution; see Preface.

¹ ERDC/GSL TR-21-40	Dec 2021	Structural and Service Life Assessment of Earth Covered and Above Ground Magazines at Camp Stanley, by C.M. Strack, C.M. Moore, J.A. Morson, A.B. Bryant, and J.M. Umphrey	AD1154789
ERDC/GSL TR-21-41	Dec 2021	Evaluation of Geocell-Reinforced Backfill for Airfield Pavement Repair, by L. Garcia, J. Rowland, and J. Tingle http://dx.doi.org/10.21079/11681/42550	AD1154810
¹ ERDC/GSL TR-22-1	Jan 2022	Characterizing Effects from a HELLFIRE Warhead Buried in an In-Situ Roadbed, by G.K. Doles, S.D. Turner, J.Q. Ehrgott Jr., W.S. Myers Jr., M. Gallamore, L. Edgerton, and M. Ghent	AD1156633
¹ ERDC/GSL TR-22-2	Mar 2022	Results of Terminal Ballistics Testing on Outboard Engines with 7.62x51-mm Ammunition, by S.R. Wade, W.F. Heard, R.E. Magee, T.W. Smith, J.R. Carey, E.D. Gross, and J.R. Floyd	AD1162510
¹ ERDC/GSL TR-22-3	Mar 2022	Characterizing Effects from a HELLFIRE R9E Warhead Buried in a Dry Sand Soil, by G.K. Doles, W.S. Myers Jr., S.D. Turner, J.Q. Ehrgott Jr., M. Gallamore, L. Edgerton, and M. Ghent	AD1162617
ERDC/GSL TR-22-4	Mar 2022	Full-Scale Evaluation of Multi-axial Geogrids in Road Applications, by W.J. Robinson http://dx.doi.org/10.21079/11681/43549	AD1162925
ERDC/GSL TR-22-5	Apr 2022	Report on Evaluation of Apartment Towers 1–4 and Parking Garages 1–4 at Camp Walker, Daegu, South Korea, by C.K. Crane, O. Esquilin-Mangual, B.W. Foust, A.B. Groeneveld, W.F. Heard, J.M. Hoemann, K.L. Klaus, J.A. Morson, R.D. Moser, J.C. Ray, M.J. Roth, C.M. Strack, L.A. Walshire, S.G. Wood, and S.C. Woodson http://dx.doi.org/10.21079/11681/44102	AD1167482
¹ ERDC/GSL TR-22-6	Apr 2022	Dynamic Chaterization of High-Performance-Concretes – BBR9, 3MR, and Cor-Tuf, by G.H. Vankirk, B.A. Williams, W.F. Heard, and X. Nie	AD1167754
¹ ERDC/GSL TR-22-7	Apr 2022	Development and Characterization of 3MR Ultra-High-Performance Concrete, by B.A. Williams, S.S. Graham, W.F. Heard, M.J. Grotke, J.F. Burroughs, B.P. Songer, K.J. Ratliff, D.A. Scott, and R. Ranade	AD1167805
ERDC/GSL TR-22-8	Apr 2022	Calculation of Levee-Breach Widening Rates, by B.A. Robbins and M.K. Corcoran http://dx.doi.org/10.21079/11681/44163	AD1167856

¹ Limited distribution; see Preface.

ERDC/GSL TR-22-9	Apr 2022	Waterborne Geophysical Investigation to Assess Condition of Grouted Foundation: Old River Control Complex – Low Sill Structure, Concordia Parish, Louisiana, by B.R. Breland, J.E. Simms, W.E. Doll, J. Greenwood, and R. Kaufman http://dx.doi.org/10.21079/11681/44183	AD1167957
¹ ERDC/GSL TR-22-10	May 2022	Concrete Target Set Production for Joint DTRA/Air Force Penetration Project, by B.P. Songer and B.H. Green	AD1169870
¹ ERDC/GSL TR-22-11	May 2022	Development and Evaluation of E-glass, S-glass, and Basalt Composite Panels, by H.A. Hanna, J.A. Jefcoat, H.M. West, F.A. Nichols, H.E. Peterson, and Z.B. McClelland	AD1170116
¹ ERDC/GSL TR-22-12	May 2022	Field-Expedient Non-Lethal Vehicle Arresting Barrier (FENVAB), by C.G. Price, K.A. Flournoy, B.W. Foust, M.S. Holmer, B. Towne, M. Edwards, A. Tillotson, W. Coronel, and N. Torres	AD1170146
¹ ERDC/GSL TR-22-13	Jun 2022	Blast Loading of Steel Bridge Towers Constructed with New and Vintage Materials, by C.K. Crane, C.P. Rabalais, V.P. Chiarito, J.C. Minor, and J.C. Ray	AD1173278
¹ ERDC/GSL TR-22-14	Jun 2022	Expedient and Expeditionary Airfield Damage Repair (E-ADR) Joint Capabilities Technology Demonstration (JCTD). Operational Demonstration #1: Tyndall Air Force Base, FL, by H.P. Bell, W.D. Carruth, J.L. Daugherty, J.F. Rowland, J.R. Davis, Jr., J.W. Fisher, J.S. Tingle, L.I. Garcia, L. Edwards, and W.C. Floyd	AD1173282
¹ ERDC/GSL TR-22-15	Jun 2022	Forensic Encyclopedia Results Retrieval and Evaluation Tool (FERRET), by Z.K. Crosby, E.G. Cruz-Gutierrez, C.D. Thomas, J.E. Payne, J.Q. Ehrgott, Jr., D.P. Danko, J.E. Swain, C.W. Crowder, K.S. Polk, and T.A. Waddell	AD1173646
ERDC/GSL TR-22-16	July 2022	Validation of the Automatic Dynamic Cone Penetrometer, by E.S. Berney IV, J.L. Daugherty, and L. Edwards http://dx.doi.org/10.21079/11681/44704	AD1173710
¹ ERDC/GSL TR-22-17	Jul 2022	Style Guide for Naming and Organizing Assets for Virtual Environment Creation, by J.G. Monroe, D.P. McInnis, C.S. Davenport, B.S. Hansen, S.J. Price, and J.R. Fairley	AD1174844

¹ Limited distribution; see Preface.

¹ ERDC/GSL TR-22-18	Jul 2022	Soil Motion and Cratering from Small Charges: Computational Analysis to Guide Charge Applications, by D.G. Roman-Castro, A.O. Frank, M.L. Roth, and J.K. Fulk	AD1174967
¹ ERDC/GSL TR-22-19	Jul 2022	Suspension Cable Response to Explosive-Like Loading Conditions: A Report on Diagnostic Field Test Procedures Conducted at Fort Steuben Bridge, by Z.H. Duron, C.K. Crane, V.P. Chiarito, K. Lownsbery, N. Hill, E. Ritz, D. Chen, M. Cuenca, and S. Hanson	AD1175084
¹ ERDC/GSL TR-22-20	Jul 2022	Low-Cycle Fatigue Performance of Prototype AMX End Connector Designs, by T.W. Rushing, N.R. Hoffman, A.R. Cisko, and T.J. McCaffrey	AD1175532.
¹ ERDC/GSL TR-22-21	Sep 2022	Development of Ready Armor Protection for Instant Deployment (RAPID); Part 1: Prototyping, by O. Esquilin-Mangual, S.R. Wade, D.H. Rios-Estremera, D.G. Roman-Castro, E.M. Chappell, P.A. Sparks, J.L. Williamson, C.S. Stephens, and M.E. Glynn	AD1179834
ERDC/GSL TR-22-22	Sep 2022	Stability Analysis of Old River Low Sill Structure, by L.A. Walshire, J.B. Dunbar, and B.R. Breland http://dx.doi.org/10.21079/11681/45349	AD1179902
¹ ERDC/GSL TR-22-23	Sep 2022	Development of Thermoplastic Composite-Reinforced Ultra-High Performance Concrete Panels, by T.S. Rushing, J.F. Burroughs, R.M. Smith-Gillis, E.N. Landis, and R. Lopez-Anido	AD1180045
ERDC/GSL TR-22-24	Sep 2022	Evaluation of a Prototype Integrated Pavement Screed for Screeding Asphalt or Concrete Crater Repairs, by B.C. Cox, N.R. Hoffman, and T.A. Carr http://dx.doi.org/10.21079/11681/45406	AD1180169
¹ ERDC/GSL TR-22-25	Sep 2022	Tri-Service Airfield Tiedown Testing and Unification, by T.W. Rushing, N.R. Hoffman, B.A. Rutherford, J.S. Tingle, and C.A. Rutland	AD1180173
¹ ERDC/GSL TR-22-26	Sep 2022	Late-time Calculations of HFR9E 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	AD1180371
¹ ERDC/GSL TR-22-27	Sep 2022	Sustainable Organization and Archiving of Virtual Environments and Assets for Modeling and Simulation, by J.G. Monroe, D.P. McInnis, L.G. Phillips, S.J. Price, and J.R. Fairley	AD1181033

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-22-1	Jan 2022	In Situ Visualization with Temporal Caching, by D.E. DeMarle and A.C. Bauer http://dx.doi.org/10.21079/11681/43042	AD1157604
ERDC/ITL MP-22-2	Mar 2022	Investigating the Influence of Demographics and Personality Types on Practitioners' Level of Systems Thinking Skills, by M. Nagahi, N. Ullah Ibne Hossain, S. El Amrani, R. Jaradat, L. Khademibami, S.R. Goerger, and R. Buchanan http://dx.doi.org/10.21079/11681/43622	AD1163760
¹ ERDC/ITL MP-22-3	Mar 2022	A Dynamic Hyperbolic Surface Model for Responsive Data Mining, by W.G. Bond, M.A. Seale, and J.L. Hensley http://dx.doi.org/10.21079/11681/43886	AD1165860
ERDC/ITL MP-22-4	Sep 2022	The Impact of Practitioners' Personality Traits on Their Level of Systems-Thinking Skills Preferences, by M. Nagahi, R. Jaradat, S.R. Goerger, M. Hamilton, R.K. Buchanan, S. Abutabenjeh, and J. Ma http://dx.doi.org/10.21079/11681/45791	AD1183324
¹ ERDC/ITL MP-22-5	Jul 2022	Leveraging Production Visualization Tools In Situ, by K. Moreland, A.C. Bauer, B. Geveci, P. O'Leary, and B. Whitlock http://dx.doi.org/10.21079/11681/44844	AD1174739

Special reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL SR-17-1 App. F	Jan 2022	Publications of the U.S. Army Engineer Research and Development Center; Appendix F: FY21 (October 2020-September 2021), by J.A. Dolan http://dx.doi.org/10.21079/11681/42823	AD1156618
ERDC/ITL SR-20-1 Issue 3	Jul 2022	The Forefront: A Review of ERDC Publications, Summer 2022, by E.B. Moynihan, J.M. O'Donoghue, and contributors from ISKM http://dx.doi.org/10.21079/11681/44862	AD1175001

¹ 12-month embargo; see Preface.

¹ ERDC/ITL SR-22-1	Feb 2022	Engineering With Nature Technology Support Documentation, by M.A. Clement	AD1161067
ERDC/ITL SR-22-2	Mar 2022	Engineering With Nature Website User Guide, by M. Clement http://dx.doi.org/10.21079/11681/43440	AD1161768
ERDC/ITL SR-22-3	Mar 2022	2020 Guided Wave Inspection of California Department of Water Resources Tainter Gate Post-Tensioned Trunnion Anchor Rods: Oroville Dam, by J.D. Ray and C.R. Thurmer http://dx.doi.org/10.21079/11681/43762	AD1165133
ERDC/ITL SR-22-4	Mar 2022	Risk-Based Prioritization of Operational Condition Assessments: Jennings Randolph Case Study, by J.K. Alt, W.H. Brown, G.E. Gallarno, J.P. Richards, and T.L. Rice http://dx.doi.org/10.21079/11681/43862	AD1165802

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/ITL TN-22-1	Sep 2022	Ship Simulator of the Future in Virtual Reality, by K. Ervin, K. Smink, B. Vu, and J. Boone http://dx.doi.org/10.21079/11681/45502	AD1180671

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
¹ ERDC/ITL TR-21-6	Nov 2021	An Agent-Based Model Implementation for Forward Operating Base (FOB) Unmanned Aerial Systems (UAS) Detection and Defense Planning, by W.B. Leonard, C.H. Rinaudo, J.E. Richards, J.K. Alt, K.M. Houte, M.L. Lagarde, J.P. Richards, and S.R. Goerger	AD1153102

¹ Limited distribution; see Preface.

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-22-1	Apr 2022	Sustainable Harmful Algal Bloom Mitigation by 3D Printed Photocatalytic Oxidation Devices (3D-PODs), by A.J. Kennedy, A.D. McQueen, M.L. Ballentine, B.M. Fernando, L.R. May, J.A. Boyda, C.B. Williams, and M.J. Bortner http://dx.doi.org/10.21079/11681/43980	AD1166826
ERDC/TN ANSRP-22-2	Jul 2022	Chitosan as a Coagulant and Precipitant of Algae Present in Backwater, by C. Thomas, J. Broussard, and V. Medina http://dx.doi.org/10.21079/11681/44904	AD1175530

10 Aquatic Plant Control Research Program (APCRP)

Technical notes

Miscellaneous

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC TN APCRP-MI-10	May 2022	Growth Assessments of Starry Stonewort (<i>Nitellopsis obtusa</i>) in Various Substrate Types for Large-scale Cultivation Studies, by K. Pokrzywinski, C. Grasso, K. Volk, B. Sartain, and B. Fernando http://dx.doi.org/10.21079/11681/44403	AD1169894

11 Dredging Operations and Environmental Research Program (DOER)

Technical notes

Dredged material management

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-D24	Sep 2022	Systematic Beneficial Use of Dredged Sediments: Matching Sediment Needs with Dredging Requirements, by C.D. Piercy, B.M. Boyd, E.R. Russ, and K.D. Runion http://dx.doi.org/10.21079/11681/45443	AD1180359

Nearshore processes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN DOER-N17	Aug 2022	Development of a Three-Dimensional Vegetative Loss Mechanism 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/10.21079/11681/45041	AD1176961

12 Ecosystem Management and Restoration Research Program (EMRRP)

Environmental benefits assessment (EBA)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-EBA-26	Sep 2022	Ecological Model Development: Evaluation of System Quality, by S.K. McKay, N. Richards, and T.M. Swannack http://dx.doi.org/10.21079/11681/45380	AD1180096
ERDC/TN EMRRP-EBA-27	Sep 2022	Incorporating Social and Environmental Outputs in Decision-Making: Workshop Outcomes, by P.R. Gagnon, J.L. Gallihugh, S.B. Komlos, S.E. Durden, E.T. Vaughan, E.O. Murray, and T.J. Estes http://dx.doi.org/10.21079/11681/45700	AD1181843

Ecosystem impacts (EI)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-EI-6	Jul 2022	Environmental Effects of Sediment Release from Dams: Conceptual Model and Literature Review for the Kansas River Basin, by D.D. Hernandez-Abrams, S.E. Bailey, and S.K. McKay http://dx.doi.org/10.21079/11681/44880	AD1175125

Ecosystem restoration (ER)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-ER-22	Feb 2022	Approaches to Identify and Monitor for Potential Acid Sulfate Soils in an Ecological Restoration Context, by J.F. Berkowitz and C.M. VanZomeren http://dx.doi.org/10.21079/11681/43349	AD1160422
ERDC/TN EMRRP-ER-23	Jul 2022	Scenario Analyses in Ecological Modeling and Ecosystem Management, by D.D. Hernandez-Abrams, C.C. Carrillo, and T.M. Swannack http://dx.doi.org/10.21079/11681/44840	AD1174669

ERDC/TN EMRRP-ER-24	Aug 2022	Oyster Reef Connectivity: Ecological Benefits and Associated Vulnerabilities, by S. Altman, R.D. Harris, S.K. McKay, M.E. Kjelland, and T.M. Swannack http://dx.doi.org/10.21079/11681/45020	AD1176830
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Rapid quantification and assessment methods (RQ)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-RQ-03	Jun 2022	Other Social Effects and Social Vulnerability Analysis: Existing Resources, by S.E. Durden, T.E. Vaughan, and B.D. Herman http://dx.doi.org/10.21079/11681/44662	AD1173351

Species information (SI)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-SI-40	Jul 2022	Implementing Endangered Species Act (ESA) Section 7 (a)(1) Conservation Planning During US Army Corps of Engineers (USACE) Coastal Engineering Projects, by M.P. Guilfoyle, P. Hartfield, R.A. Fischer, J.F. Jung, and K.J. Reine http://dx.doi.org/10.21079/11681/44845	AD1174755

Stream restoration (SR)

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EMRRP-SR-90	Aug 2022	Ecological Model Development: Toolkit for interActive Modeling (TAM), by C.C. Carrillo, S.K. McKay, S. Altman, and T.M. Swannack http://dx.doi.org/10.21079/11681/45101	AD1177445
ERDC/TN EMRRP-SR-91	Sep 2022	Is Mean Discharge Meaningless for Environmental Flow Management?, by S.K. McKay http://dx.doi.org/10.21079/11681/45381	AD1180110

13 Engineering with Nature (EWN)

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN EWN-21-1	Nov 2021	Engineering With Nature: The Role of Mangroves in Coastal Protection, by T. Tomiczek, A. Wargula, N. Hurst, D. Bryant, and L. Provost http://dx.doi.org/10.21079/11681/42420	AD1153707
ERDC/TN EWN-22-1	Jul 2022	Engineering with Nature® in Fluvial Systems, by S.C. Franz, R. Mandel, C. Haring, and J.K. King http://dx.doi.org/10.21079/11681/44846	AD1174974
ERDC/TN EWN-22-2	Jul 2022	The Application of Engineering with Nature® Principles in Colorado Flood Recovery, by S.C. Franz, J. Cohn, R.H. Mandel, C. Haring, and J.K. King https://hdl.handle.net/11681/44847	AD1174999
ERDC/TN EWN-22-3	Aug 2022	Realizing Multiple Benefits in a Southeast Louisiana Urban Flood Control Project through Application of Engineering with Nature® Principles, by M. Bourne, J. Milazzo, and B. Suedel http://dx.doi.org/10.21079/11681/45021	AD1176848
ERDC/TN EWN-22-4	Aug 2022	Financing Natural Infrastructure: South Bay Salt Pond Restoration Project, California, by M.H. Kurth, B.N. Greenfeld, M.A. Smith, S.M. Fielding, M.S. Abellera, and J.K. King http://dx.doi.org/10.21079/11681/45240	AD1178596
ERDC/TN EWN-22-5	Aug 2022	Remote Sensing Capabilities to Support EWN® Projects: An R&D Approach to Improve Project Efficiencies and Quantify Performance, by G.M. Suir, M.K. Reif, and C.L. Saltus http://dx.doi.org/10.21079/11681/45241	AD1178616
ERDC/TN EWN-22-6	Sep 2022	Planning and Implementation of Environmental Pool Management at Lake Red Rock, Des Moines River, Iowa, by A.J. Calomeni, C. Theiling, and B.C. Suedel http://dx.doi.org/10.21079/11681/45524	AD1180782
ERDC/TN EWN-22-7	Sep 2022	Financing Natural Infrastructure: Exploration Green, Texas, by B.N. Greenfeld, M.H. Kurth, M.A. Smith, E. Kalaidjian, M.S. Abellera, and J.K. King http://dx.doi.org/10.21079/11681/45601	AD1181375

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-22-1	Apr 2022	South Shore of Long Island, New York Regional Sediment Management Investigation: An Overview of Challenges and Opportunities, by A.M. Jansson, A.K. Heer, S.S. Rice, F. Buonaiuto, D.M. Tommaso, L.M. Bocamazo, S.A. Couch, and J.M. McDonald http://dx.doi.org/10.21079/11681/43920	AD1166741
ERDC/TN RSM-22-2	Jun 2022	Development of a Two-Dimensional HEC-RAS Sediment Model for the Chippewa River, Wisconsin, for Software Development and Sediment Trend Analysis, by A. Nelson, S. Gibson, and A. Sanchez http://dx.doi.org/10.21079/11681/44561	AD1173299
ERDC/TN RSM-22-3	Jul 2022	National Sediment Placement Data Viewer Users Guide, by B.E. Emery http://dx.doi.org/10.21079/11681/44700	AD1173793
ERDC/TN RSM-22-4	Jul 2022	USACE Navigation Sediment Placement: An RSM Program Database (1998-2019), by N. Elko, K. Brutsche, Q. Robertson, M. Hartman, and Z. Dong http://dx.doi.org/10.21079/11681/44703	AD1173799
ERDC/TN RSM-22-5	Jul 2022	Baseline Data for a Cedar Tree Revetment Monitoring Site near Wichita, Kansas, by J. Shelley, N. Chrisman, and C. Haring http://dx.doi.org/10.21079/11681/44763	AD1174061
ERDC/TN RSM-22-6	Aug 2022	Coastal Resilience: Benefits of Wrack and Dune Systems and Current Management Practices, by L. Provost, M. Bryant, E. Eisemann, and D. Bryant http://dx.doi.org/10.21079/11681/45282	AD1179273
ERDC/TN RSM-22-7	Sep 2022	Sediment Mobility, Closure Depth, and the Littoral System – Oregon and Washington Coast, by A. Hudson, H. Moritz, and J. Norton http://dx.doi.org/10.21079/11681/45346	AD1179980

15 Water Quality Research Program (WQRP)

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC WQTN-22-1	Sep 2022	Preliminary Scoping of Watershed Planning: Pamet River, Massachusetts, by S.K. McKay and B. Rupp http://dx.doi.org/10.21079/11681/45566	AD1181082

16 Wetlands Regulatory Assistance Program (WRAP)

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
ERDC/TN WRAP-22-1	Feb 2022	Antecedent Precipitation Tool (APT) Version 1.0: Technical and User Guide, by J.L. Gutenson and J.C. Deters http://dx.doi.org/10.21079/11681/43160	AD1158889

17 Miscellaneous Publications

Technical notes

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Tech Note No. 9	Jan 2022	Vertical and Horizontal Datums Used in the Lower Mississippi Valley for US Army Corps of Engineers Projects, by J.B. Dunbar http://dx.doi.org/10.21079/11681/42781	AD1156429

Technical reports

<u>Report Number</u>	<u>Date</u>	<u>Title</u>	<u>AD Number</u>
MRG&P Report No. 39	Jan 2022	Hydrodynamics in the Morganza Floodway and Atchafalaya Basin, Report 3: Phase 3; A Report for the US Army Corps of Engineers, MRG&P, by G.L. Bell, D.D. Abraham, G. Savant, and A.G. Emiren http://dx.doi.org/10.21079/11681/42800	AD1156606
MRG&P Report No. 40	May 2022	Three-Dimensional Underseepage Evaluation for Profit Island Vicinity Levee, North of Baton Rouge, Louisiana, by F.T.-C. Tsai, N.H. Jafari, Y.-H Chen, and J.A. Cadigan http://dx.doi.org/10.21079/11681/44220	AD1168201
MRG&P Report No. 41, Vol. 1	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Main Report, by J.W. Lewis, J.A. Ashley, T.J. Lauth, D.S. Biedenharn, T.A. Dahl, R.R. Copeland, G. Savant, G.L. Brown, J.R. Leech, P.I. Donohue, K.E. Harris, C.M. Mayne, K.E. Jones, D.A. Fertitta, D.A. Ramirez, S. Ayres, M.E. Agnew, C.D. Little, Jr., J.B. Dunbar, S.L. Lucker, and N. Torres http://dx.doi.org/10.21079/11681/45080	AD1177793
MRG&P Report No. 41, Vol. 2	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Geomorphic Assessment, by T.J. Lauth, D.S. Biedenharn, T.A. Dahl, C.M. Mayne, K.E. Jones, C.D. Little, Jr., J.B. Dunbar, S.L. Lucker, and N. Torres http://dx.doi.org/10.21079/11681/45143	AD1177797
MRG&P Report No. 41, Vol. 3	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Channel Geometry Analysis, by C.D. Little, Jr., and D.S. Biedenharn http://dx.doi.org/10.21079/11681/45147	AD1177800

MRG&P Report No. 41, Vol. 4	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Mississippi River HEC-6T Model, by R.R. Copeland and J.W. Lewis http://dx.doi.org/10.21079/11681/45160	AD1177805
MRG&P Report No. 41, Vol. 5	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Atchafalaya River HEC-6T Model, by P.I. Donohue, R.R. Copeland, and J.W. Lewis http://dx.doi.org/10.21079/11681/45161	AD1177808
MRG&P Report No. 41, Vol. 6	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Mississippi River Multi-Dimensional Model, by G. Savant, G.L. Brown, and S. Ayres http://dx.doi.org/10.21079/11681/45162	AD1177812
MRG&P Report No. 41, Vol. 7	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: Red and Atchafalaya Rivers AdH Model, by J.R. Leech http://dx.doi.org/10.21079/11681/45165	AD1177816
MRG&P Report No. 41, Vol. 8	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: HEC-RAS Model, by D.A. Fertitta, M.E. Agnew, and D.A. Ramirez http://dx.doi.org/10.21079/11681/45170	AD1177820
MRG&P Report No. 41, Vol. 9	Aug 2022	Technical Assessment of the Old, Mississippi, Atchafalaya, and Red (OMAR) Rivers: HEC-RAS BSTEM Analysis of the Atchafalaya River, by K.E. Harris and T.A. Dahl http://dx.doi.org/10.21079/11681/45174	AD1177822
MRG&P Report No. 42	Aug 2022	Legacy Datums and Changes in Benchmark Elevation through Time at the Old River Control Structure, Louisiana, by J.B. Dunbar http://dx.doi.org/10.21079/11681/45261	AD1179694
MRG&P Report No. 43	Aug 2022	Sediment Supply from Bank Caving on the Lower Mississippi River, 1765 to Present, by A.S. Murray and D.S. Biedenharn http://dx.doi.org/10.21079/11681/45281	AD1179714

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