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of Engineers®**

ENGINEERING AND CONSTRUCTION BULLETIN

No. 2023-4

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SUBJECT: Engaging Centers of Expertise in Project Delivery Teams and New Website

CATEGORY: Directive and Policy.

1. References:

a. Engineer Regulation (ER) 1110-1-8158, Centers of Expertise Program, 01 April 2022
<https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201110-1-8158.pdf?ver=07iGp2f-1SR-7Ynpz6y6oA%3d%3d>

2. **Applicability.** All USACE Commands.

3. **Issue.** Centers of Expertise (CXs) are inconsistently engaged in project delivery teams across USACE due to a lack of awareness and understanding of their existence and purpose.

4. **Directive.** Project Managers and Technical Leads must engage and utilize CXs as detailed and described in ER 1110-1-8158. There are Mandatory Centers of Expertise (MCXs), Technical Centers of Expertise (TCXs) and Centers of Standardization (COS) defined in ER 1110-1-8158. These are listed in Attachment A. All Major Subordinate Commands and District Commands must coordinate with and use the expertise and services of the applicable MCXs to satisfactorily accomplish their mission. Consultation with applicable Technical Centers of Expertise (TCX) is recommended and must be considered for all projects. Project Managers and Technical Leads must engage all relevant CXs in project execution as early in the project schedule as possible.

5. **New Website.** To better facilitate information about each center and provide points of contact for each center, a new website has been established. This website describes the respective areas of expertise for each CX. The website lists the mandatory centers and their associated mandatory functions. The voluntary centers are also listed, along with their specific areas of technical expertise. The new website is located at the following: <https://mrsi.erdc.dren.mil/coe/>.

6. Background.

a. CXs are often not contacted until the final stages of a project or may not be contacted at all. This leads to risk in project execution. The benefits of CXs cannot be fully realized without early and consistent involvement across all USACE projects. Efforts must be made to promote awareness of the CXs, build relationships with the CXs, and to standardize their engagement.

b. The successful execution of projects requires a thorough working knowledge of a wide variety of highly specialized engineering, design, and operational activities. As it is neither cost effective nor possible for every USACE command to continuously have available all the skill sets necessary to be effective, the Centers of Expertise program was created.

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c. There are currently 49 highly specialized CXs with various technical specializations and capabilities across the USACE enterprise. Each mandatory CX has an individual Engineer Regulation (ER) that outlines its unique capabilities and describes those services that are mandatory and/or optional.

d. The ER 1110-1-8158 defines the role of the District Engineering Chief or the District Engineering and Construction Chief in this process. This position is ultimately responsible for ensuring the appropriate use of mandatory and optional CX services. However, at a practical level, it is often the responsibility of individual Project Managers and Technical Leads to know which CXs exist, which ones potentially relate to their project, and to establish contact, funding lines, and scheduling agreements with the various CXs.

7. Benefit to Army and USACE Project Stakeholders. Improved stakeholder engagement through consistent use of highly specialized subject matter experts across USACE is beneficial to USACE and our project stakeholders. Consistent use of the CXs improves the quality and standardization of product delivery across USACE.

8. Point[s] of Contact. HQUSACE point of contact for this ECB is Mr. Timothy Paulus, P.E., USACE HQ, Centers of Expertise Program Manager, 651-528-9457, timothy.m.paulus@usace.army.mil.

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Encl

Attachment A – Listing of Centers of Expertise

ATTACHMENT A - Listing of USACE Centers of Expertise

Visit <https://mrsi.ercd.dren.mil/coe/> for the most up-to-date listing.

<u>Name of Center</u>	<u>Place of Center</u>	<u>MCX, TCX, or COS</u>	<u>Website</u>	<u>Summary</u>
Aircraft Hangar Fire Protection	TAM	TCX	https://www.tam.usace.army.mil/Business-With-Us/Hangar-Fire-Protection/	Fire Protection TCX service is to provide professional fire protection services (guidance, design reviews, and participation in acceptance testing) to USACE Districts, Department of the Army (DA) agencies, Department of the Air Force agencies, and Department of Homeland Security.
Ballistic Missile Defense System (BMDS) Program	HNC	MCX	https://www.hnc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/622664/ballistic-missile-defense/	The BMDS MCX, established per ER 1110-2-8163 (30 September 2016), provides expert ballistic missile defense system support services to all HQUSACE elements, divisions, Districts, laboratories, field operations, the Missile Defense Agency and other DOD agencies.
Computer-Aided Design/Building Information Modeling (CAD/BIM) Technology Center	ERDC	TCX	https://cadbimcenter.ercd.dren.mil/	The CAD/BIM Technology Center for Facilities, Infrastructure, and Environment (CAD/BIM TCX) develops and supports a DOD-wide strategy and tactical plans for the integration of CAD and BIM, technologies in several mission areas including role in acquisition.
Centers of Standardization (All COSs)	Varies	COS	https://mrsi.ercd.dren.mil/cos/	The Army’s Facility Standardization Program continues to be the primary means through which we will deliver standard facilities. The MCX COS standard designs build models continue to be used as the baseline solution for execution of all standard facility types.
Collaboration and Public Participation Center (CPCX)	IWR	TCX	http://www.iwr.usace.army.mil/About/Technical-Centers/CPCX-Conflict-Resolution-Public-Participation/	The CPCX assists USACE in the collaboration, partnering, and public participation in water resources decision-making. CPCX’s mission is to help USACE staff anticipate, prevent, and manage water conflicts, ensuring that the interests of the public are addressed in USACE’s decision-making. The center achieves this mission by developing and expanding the application of collaborative tools to improve water resources decision-making.
Control System Cybersecurity (CSC)	HNC	MCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The CSC-MCX provides highly specialized expertise in cybersecurity, planning, engineering, design, and construction support to USACE activities, the Army, and other DOD and non-DOD federal agencies.

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Corrosion Control and Cathodic Protection	SAM	TCX	https://www.sam.usace.army.mil/Missions/Military-Engineering/Corrosion-Control-and-Cathodic-Protection-Systems/	<p>This TCX provides the following functions on the Corrosion Control and Cathodic Protection Systems and their related matters:</p> <ul style="list-style-type: none"> • Producing corrosion control and cathodic protection system designs • Consulting services in all phases of corrosion control and cathodic protection system planning, design, construction, final acceptance testing, operation, and maintenance
Cost Engineering Center of Expertise	NWW	MCX	http://www.nww.usace.army.mil/Missions/CostEngineering.aspx	<p>The Walla Walla District’s Cost Engineering Branch was established as the Cost Engineering MCX. The MCX serves a critical role in cost support activities for the overall USACE community, with a focus on the Civil Works, Military, and Interagency and International Support programs.</p>
USACE Critical Infrastructure Cybersecurity (UCIC)	SWL	MCX	https://wiki.usace.army.mil/index.php?title=SWD: Critical Infrastructure Cybersecurity Mandatory Center of Expertise&redirect=no	<p>The UCIC MCX mission is to assure that new and existing projects and facilities with control systems that are owned and operated by USACE are secured and authorized according to applicable DOD and Army regulations. The center serves to protect control systems throughout the system development lifecycle from internal and external cyber threats and enable the systems to obtain an Authority to Operate.</p>
Curation/Management of Archaeological Collections (CMAC)	MVS	MCX	http://www.mvs.usace.army.mil/Missions/CentersofExpertise/CurationMgmtofArchaeologicalCollections.aspx	<p>The MCX for CMAC in St. Louis District maintains state-of-the-art technical expertise in curating archaeological collections, collections management, special purpose designs and construction requirements of curation facilities, archival document processing and preservation, mass grave investigations, forensic support to other Government agencies, and archival/historic cartographic investigations to assist military and intelligence agencies.</p>
Dam Safety Modification	LRH	MCX	https://www.lrh.usace.army.mil/Missions/DSMMCX/	<p>The USACE Dam Safety Modification Mandatory Center of Expertise provides technical advice, oversight, review and production capability for all aspects of dam modification projects across USACE.</p>
DD1391/Engineer Form 3086 Review Center	HNC	TCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	<p>The Military Construction (MCA) DD Form 1391, ENG Form 3086, and supporting documentation TCX is responsible for execution of the Centrally Funded Planning Charrette program for the Army. Planning Charrettes are used to develop the DD Form 1391 for MCA projects. The TCX is responsible for reviewing MCA 1391s to ensure program-wide consistency and inclusion of the latest MILCON policy guidance.</p>

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DOD National Relocation Program (DNRP)	NAB	TCX	https://www.nab.usace.army.mil/Business-With-Us/Real-Estate/DNRP/	The DNRP is designed to provide: (1) hotline service 1-800-344-2501, (2) client services counselor, (3) destination services, (4) guaranteed home sale service with marketing assistance, and (5) property management.
Electronic Security Systems (ESS)	HNC	MCX	http://www.hnc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/482087/electronic-technology-division-electronic-security-systems/	The MCX for ESS was created to maintain state-of-the-art technical expertise in, and provide expert support to a number of mission areas including reviewing all DD 1391s that identify ESS; supporting all planning and design charrettes that involve the application of ESS; and performing electronic security surveys.
Environmental and Munitions	HNC	MCX	https://www.hnc.usace.army.mil/Missions/Environmental-and-Munitions/	The Environmental and Munitions CX is a quality assurance organization that provides mandatory document review, project technical support, training development and instruction, and guidance development for environmental and military munition compliance and clean-up activities.
Facilities Explosives Safety (FES)	HNC	MCX	https://www.hnc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/482080/facilities-explosives-safety/	The FES MCX, established per ECB 2017-21 (01 November 2017), provides expert facilities explosives safety technical support services to all HQUSACE elements, divisions, Districts, laboratories, field operations, Army, and other DOD and non-DOD federal agencies. Technical expertise in this area includes (1) determining explosives safety separation distances, (2) determining explosives effects such as overpressure and fragment/debris characteristics, (3) mitigation (protective construction) of explosives effects, and (4) requirements for lightning protection systems for explosives operations and storage.
Facility Systems Safety (FASS)	HNC	TCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The FASS CX currently performs all authorized services including training safety professionals and design engineers, providing FASS process guidance and review of requirements, and performing reviews of designs when requested. FASS supports design engineers in “designing out hazards” through the entirety of the facility or system lifecycle.

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Fuel Facilities (Petroleum, Oils, and Lubricants) (POL-MCX)	N W O	MCX	http://www.nwo.usace.army.mil/About/Centers-of-Expertise/Fuel-Systems/	The POL-MCX is a project lifecycle production center with mandatory authorities. Its matrix organization consists of project managers, engineers, architects, construction managers, and administrative staff in the USACE Omaha District. The POL-MCX monitors technological advancements and industry developments relative to military fuel systems and assists in developing design guidance and criteria related to military fuel systems.
Historic Structures and Buildings	NWS	TCX	http://www.nws.usace.army.mil/BusinessWithUs/HistoricPreservation.aspx	The administration and operation of the TCX as USACE’s technical and advisory center on matters of the historic building environment that fall within the agency’s scope of responsibility under the National Historic Preservation Act (NHPA). Program standards and guidance are defined primarily in the Secretary of the Interior’s Standards for the Rehabilitation of Historic Properties and in Sections 106 and 110 of the NHPA.
Homeowners Assistance Program (HAP)	SAS	MCX	http://www.usace.army.mil/Missions/Military-Missions/Real-Estate/HAP	The HAP provides the following functions: (1) Hotline Service Numbers: Savannah 1-800-861-8144; Fort Worth 1-888-231-7751; Sacramento 1-800-811-5532; (2) applicants counselor; (3) government acquisition; (4) private sale benefits; and (5) foreclosure benefits.
Heating, Ventilating, and Air Conditioning (HVAC)	HNC	TCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The HVAC-TCX provides technical engineering support to Army organizations including HQUSACE, USACE Divisions and Districts, Army Commands, individual garrisons, and field elements. Technical assistance includes a wide range of services such as answering technical questions, performing technical submittal reviews, specifications development, procurement documents development.
Hydroelectric Design Center (HDC)	NWP	MCX	https://www.nwp.usace.army.mil/about/hdc/	The MCX for hydroelectric design was established to consolidate the USACE hydroelectric economic and engineering expertise and workload at a centralized office. HDC is an MCX for hydroelectric power plant economic evaluation, engineering, and design, and a TCX for large pumping plant engineering and design.

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Hydrologic Engineering Center (HEC)	IWR	TCX	http://www.hec.usace.army.mil/	The HEC is a designated TCX. HEC is an organization within the USACE Institute for Water Resources (IWR). The primary goal of HEC is to support the nation in its water resources management responsibilities by increasing USACE technical capability in hydrologic engineering and water resources planning and management.
Inland Navigation Design Center (INDC)	MVR	MCX	https://www.mvr.usace.army.mil/About/Offices/Inland-Navigation-Design-Center-INDC/	The focus of the INDC MCX is providing engineering design, analysis, and review services for studies, new locks, new navigation dams, major rehabilitation of existing inland navigation locks and dams, and significant inland navigation lock and dam O&M projects.
Installation Support	HNC	TCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The Engineering and Support Center, Huntsville serves as the Installation Support CX and partners with USACE Districts and labs to provide support in public works business processes, systems, training, and contingency support. It provides quality engineering and design services in areas such as conforming storage facilities, intrusion detection systems, utility monitoring and control systems, and ranges and training lands management.
Joint Airborne Lidar Bathymetry Center (JALBTCX)	SAM	TCX	http://www.sam.usace.army.mil/Missions/NationalCenter/JALBTCX/JointAirborneLidarBathymetry.aspx	The JALBTCX mission is to perform operations, research, and development in airborne lidar bathymetry and complementary technologies to support coastal mapping and charting requirements of USACE, the U.S. Naval Meteorology and Oceanography Command, and the National Oceanic and Atmospheric Administration.
Marine Design Center	NAP	MCX	http://www.nap.usace.army.mil/Missions/MarineDesignCenter.aspx	The Marine Design Center is the USACE CX for development and application of innovative strategies and technologies for naval architecture and marine engineering. The MCX provides total project management including planning, engineering, and shipbuilding contract management supporting USACE, Army, DOD, and other federal agencies.

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Medical Facilities	HNC	MCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The U.S. Army Engineering and Support Center, Huntsville, Alabama, is USACE’s Medical Facilities Mandatory Center of Expertise and Standardization (MX). The MX partners with USACE project delivery teams, regional business centers/divisions, stakeholders, and geographical Districts to provide medical expertise and the highest quality medical and research facility lifecycle support to the DOD, other federal agencies, and foreign governments.
Military Housing Privatization Initiative (MHPI); includes PAL, RCI, and UPH	NAO	TCX	https://www.nao.usace.army.mil/Business-With-Us/RCI-Small-Installations-Privatization-Initiative/	The MHPI CX Team provides direct support to the Deputy Chief of Staff for Installations, Housing, and Partnerships and the USACE Director of Real Estate for the Residential Communities Initiative (RCI), Privatized Army Lodging (PAL) and Unaccompanied Personnel Housing (UPH) Programs under Army’s MHPI portfolio, on Army installations across the country.
Modeling, Mapping, and Consequences (MMC) Production Center	MVK	MCX	http://prod.mmc.usace.army.mil/mmc/	The MMC Production Center MCX supports the USACE IWR, Risk Management Center (RMC) and HQUSACE Office Homeland Security, Critical Infrastructure Protection and Resilience, by analyzing the potential consequences of dam and levee infrastructure failures.
Paint Technology Center (PTC)	CERL	TCX	http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/476731/paint-technology-center.aspx	The PTC-TCX is assigned to the Construction Engineering Research Laboratories (CERL) in Champaign, Illinois. Expertise in areas related to paints and coatings, including corrosion mitigation techniques and high-performance polymer materials, is also available from other personnel at this location. PTC-TCX maintains state-of-the-art technical expertise regarding all types of paints and coatings for use on Army military and Civil Works facilities.
Photogrammetric Mapping	MVS	TCX	http://www.mvs.usace.army.mil/Missions/CentersofExpertise/PhotogrammetricMapping.aspx	The mission of this CX is to provide rapid response, full-service photogrammetric mapping support, and maintain technical proficiency in all aspects of photogrammetry including: <ul style="list-style-type: none"> • Project Planning and Specification • Architect Engineer Contracting • Project Cost Estimation • Image Acquisition

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Power Reliability Enhancement Program (PREP)	HQ	TCX	https://www.usace.army.mil/Missions/Military-Missions/PREP/	The Power Reliability Enhancement Program provides expert power availability and reliability analysis for the electrical and mechanical systems that provide primary and back-up power for defense critical infrastructure, which includes Command, Control, Communications, Computer, Cyber, Intelligence, Surveillance and Reconnaissance facilities. PREP identifies single points of failures, troubleshoots, ensures redundancy of systems.
Protective Design Center (PDC)	N W O	MCX	https://www.nwo.usace.army.mil/pdc/home/	The PDC MCX was created to maintain state-of-the-art technical expertise in, and provide expert support to, a number of mission areas including design to conform to DOD Minimum Antiterrorism Standards for Buildings and Design to resist the effects of conventional and nuclear weapons and design that provides protection from chemical, biological, or radiological agents for people inside buildings. <ul style="list-style-type: none"> • Electromagnetic Pulse (EMP) and Geomagnetic Disturbance protection design, review, testing verification, and maintenance programs
Range Training Land Program (RTLTP)	HNC	MCX	http://www.hnc.usace.army.mil/Missions/Centers-of-Expertise	The RTLTP MCX is responsible for reviewing designs, conducting technical support inspections, and ensuring Army standards are maintained and met. This MCX provides planning, MILCON programming, and development of standard designs for Army automated ranges, and DD1391 preparation and validation.
Rapid Response (RR) Technical Center of Expertise	N W O	TCX	http://www.nwo.usace.army.mil/About/CentersofExpertise.aspx	The RR-TCX mission is to provide national and international time-sensitive and non-time-sensitive support of homeland security/defense, disaster, and infrastructure work where a discretionary and/or flexible cost reimbursement contract is required to accomplish the mission to serve the nation to support all federal agencies.

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Reserve Real Property Exchange (RPX) Program	SPK	MCX	https://www.spk.usace.army.mil/Portals/12/documents/sm%20all_business/Virtual%20BOOH%202021/Real_Estate_Division_Information.pdf?ver=noLd6tefpdqao16ccsSUCg%3D%3D	Title 10 United States Code §18240 is the authority for the RPX. Only a facility of a Reserve Component that is not excess to the needs of the Army Reserve may be exchanged. The value of the replacement facility or addition to an existing facility, including any utilities, equipment, and furnishings, must be at least equal to the fair market value of the facility conveyed. If the values are unequal, the values may not be equalized by any payment of cash consideration by either party to the agreement.
Risk Management Center (RMC)	IWR	MCX	http://www.iwr.usace.army.mil/About/TechnicalCenters/RMCRiskManagementCenter.aspx	The mission of the RMC is to support Civil Works by managing and assessing risks for dams and levee systems across the Corps, to support dam and levee safety activities throughout the Corps, and to develop policies, methods, tools, and systems to enhance those activities. The RMC serves as a Corps-wide resource for risk-related tools, assessments, knowledge and methods
Roller Compacted Concrete Technology Center (RCCT)	NWP/ NWW	TCX	https://www.nwp.usace.army.mil/experience/	The RCCT TCX consists of networked, selected, nationwide experts, including Waterways Experiment Station, providing reimbursable services for a variety of technical services for concrete structures and pavements.
Sign Standards Program	NWK	MCX	https://corpslakes.erdc.dren.mil/employees/sign/sign.cfm	The Sign Standards Program MCX began as a TCX in November 1994 and was converted into a MCX in June 1995. In October 1996, the Engineering Waterway Signs MCX and Sign Program MCX merged into one MCX.
Subsurface Exploration Center	SAM	TCX	http://www.sam.usace.army.mil/Missions/Military-Missions/Engineering/Subsurface-Exploration	The Subsurface Exploration TCX provides technical assistance and guidance to USACE commands and other government agencies on all aspects related to geotechnical and geologic investigations. Mobile District was selected to manage the TCX due to having over 60 years of successful drilling experience, proven leadership and reliability in the industry, high customer satisfaction, and an extensive knowledge base among its personnel.
Survey Engineering and Mapping Center (SEMTCX)	AGC	TCX	https://team.usace.army.mil/sites/AGC/PDT/SEMTCX/default.aspx	The SEMTCX was established at the Army Geospatial Center (AGC) to provide consistency in surveying and mapping projects in USACE and to provide expertise and knowledge in these areas: <ul style="list-style-type: none"> • Horizontal and Vertical Datums (Geodetic and Water Level) • Electronic Charting for Navigating

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Sustainment Management Systems (SMS)	CERL	TCX	https://www.sms.erdc.dren.mil/	SMS-TCX personnel are experts in the field of facility management; the SMS-TCX addresses USACE stakeholder needs by providing innovative solutions to facility assessment, investment identification, and requirements forecasting challenges for DOD installations in all regions of the U.S. and of the world. Some activities around the deployment and use of the SMS are not an enduring requirement and/or require specialized knowledge not found commonly throughout USACE.
Transportation Systems Center (TSC)	N W O	MCX	https://transportation.erdcdren.mil/tsmcx/Default.aspx	TSC was established in 1990 to support the Tri-Services (Army, Air Force, and Navy) for training, operations, and mobilization by providing expertise in the planning, design, construction, evaluation, and criteria development of military airfields, roads, and railroads. TSC also provides continuity, standardization, and technical excellence within the Army and as a benefit to all the DOD.
Tribal Nation (TNTCX)	SPA	TCX	https://www.spa.usace.army.mil/Missions/TNTCX/	The mission of the TNTCX is to improve USACE's quality and effectiveness in delivering water resource services to Indian Country. Moreover, to facilitate USACE's ability to support the responsibilities that the federal government has to Native American governments resulting from federal trust doctrine, treaties, statutes, regulations, Executive Orders, and agreements between the United States government and Tribal governments.
Utility Monitoring and Control System (UMCS)	HNC	MCX	https://www.hnc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/482088/utilities-monitoring-and-control-systems/	The UMCS MCX was created to maintain state-of-the-art technical expertise and provide expert support to a number of mission areas, including reviewing all DD 1391s that identify UMCS, supporting all planning and design charrettes that involve the application of UMCS, and performing UMCS surveys, if required.
Water and Wastewater Treatment	SAM	TCX	http://www.sam.usace.army.mil/Missions/MilitaryMissions/Engineering/WaterandWastewater.aspx	The Water and Wastewater Treatment TCX maintains state-of-the-art technical expertise in the field of water and wastewater treatment. Water and wastewater treatment includes potable water supply, treatment, storage and distribution; and domestic wastewater collection, pumping, treatment and disposal.

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Water Resources Remote Sensing/GIS Technology Center	CRREL	TCX	http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/6215/remote-sensinggeographic-information-systems-center.aspx	<p>The Water Resources Remote Sensing (RS)/Geographic Information System (GIS) Technology Center is the USACE TCX for Civil Works remote sensing (RS) and GIS technologies, providing mission-essential support to Civil Works programs. The RS/GIS TCX provides cost-effective centralized management and support through technology transfer and applications development for USACE mission responsibilities in practice areas including:</p> <ul style="list-style-type: none"> • Navigation • Flood and coastal storm damage reduction • Hydropower • Regulatory
Welding and Metallurgy Technical Center of Expertise	NWP	TCX	https://usace.dps.mil/sites/INTRA-NWP/SitePages/Welding-and-Metallurgy-Technical-Center.aspx?web=1	<p>The TCX for metallurgy and welding was created to maintain state-of-the-art technical expertise in, and provide expert support to, the following mission areas:</p> <ul style="list-style-type: none"> • Designing weldments for new hydraulic steel • Designing weldments to resist the effects of fatigue and fracture through proper welding details and techniques • Authoring and reviewing Weld Procedure Specifications and Procedure Qualification Records