

Teammates,

I am very pleased to announce the USACE 2021 Sustainability and Environmental Award Winners! Each year, the USACE Sustainability and Environmental Awards Program provides the opportunity to mark our significant contributions in the sustainability fields of energy efficiency, sustainable solutions, reduced impacts to the natural environment, and preserving and enhancing our natural resources. For 2021, we have added two environmental awards for Environmental Quality and Environmental Cleanup. This year's stellar nominations are exemplary of the great work being done in the field.

I also want to take a moment to state how much I appreciate ALL of the nominees for their considerable efforts. It is always inspiring to see the breadth and depth of great environmental work being done throughout and across Civil Works and Military Programs that supports our Environmental Operating Principles (EOPs), particularly EOP #1: "Foster sustainability as a way of life throughout the organization." Sustainability is indeed alive and well across USACE!

## **THE 2021 SUSTAINABILITY & ENVIRONMENTAL AWARD WINNERS ARE:**

### **Green Innovation Sustainability Award**

Energy and Sustainability Analysis for Operational Readiness Training in Germany  
Paul McCarty and Team  
Huntsville Engineering and Support Center

During calendar year 2020, Paul McCarty, Sandy Wood and Richard Olmedo at Huntsville Engineering and Support Center (CEHNC) prepared a detailed Energy and Sustainability Analysis for Operational Readiness Training Complexes at USAG Bavaria Grafenwohr, Germany and Hohenfels Camp Albertshof, Germany. Over 200 new buildings are planned to include 56 4-story barracks. Detailed computer modeling of building energy consumption on an hourly basis over a one-year period was developed to compare natural gas-fired district heating vs. all electric ground source heat pumps (GSHP). Detailed results for each building type showed that all electric GSHP's will use less energy and have a lower annual energy cost than district heat. Rooftop solar photovoltaic (PV) with battery energy storage system (BESS) was also included in the analysis. It indicated that 99.95% of the annual electrical energy requirements estimated by the energy model could be provided using PV and BESS. This analysis addresses climate change impact of burning fossil fuels by providing an all-electric, net-zero, carbon neutral campus solution using commercially available products that results in lower annual energy cost and consumption compared to district heat. Close collaboration was required between the USAG Bavaria, Construction Engineering Research Lab (CERL) and CEHNC. USAG Bavaria provided input regarding building parameters; blended utility rates; rooftop solar PV analysis based on location, roof area, roof slope, and building orientation; German Govt building envelope requirements; building occupancy/lighting/equipment schedules; and German Govt building ventilation

rates. CEHNC provided computer modeling output of building energy consumption to CERL to use in their resiliency study of this new complex. Numerous discussions between USAG Bavaria and CEHNC were held to narrow down the list of alternative campus heating systems to the most viable ones to consider in the detailed analysis. Specific contribution to client preparedness and resilience includes a detailed analysis at two Army locations that presents an all-electric system to consider during the planning phase that can foster compliance with future, more stringent requirements to mitigate climate change. The system net-zero aspect contributes to resilience. The general contribution is by providing an energy analysis and recommended approach that is not limited to these two locations but possibly many locations.

### **Environmental Quality Award**

Rio Chama Habitat Improvement Project  
Abiquiu Project Office  
Albuquerque District, South Pacific Division

This award is for the recently completed Rio Chama Habitat Improvement Project. Trout fishing is popular on the Rio Chama downstream of Abiquiu Dam, before this project the river channel was limited in aquatic habitat and structure for fish, and riparian vegetation providing leaf litter for aquatic insects. Historically, the Rio Chama supported a resilient ecosystem with diverse aquatic and riparian habitat. The Rio Chama downstream of Abiquiu Dam has been affected by channel degradation and loss of riparian habitat. The channel has become hardened with coarser sediment, reducing aquatic habitat complexity. Flood operations limit the safe channel capacity flow to levels lower than the existing terrace elevation downstream of the dam necessary to support native riparian vegetation recruitment. As a result of incision and other changes, stands of healthy native riparian habitat, including wetlands, are rare and scattered in the project area. Loss of riparian habitat is an important conservation issue in the arid Southwest. In addition to restoration efforts, opportunities existed to improve passive recreation opportunities associated with the restored aquatic habitat. Historically, the Rio Chama has been used by recreationists for fishing, hiking, bird watching, and picnicking. This project aimed to improve the overall riparian habitat, instream conditions, and recreational opportunities on the Rio Chama below Abiquiu Dam. The instream aquatic habitat features for trout and other fish species were designed by Riverbend Engineering based on techniques described in Stream Habitat Restoration Guidelines by Michelle Cramer 2012 and the Federal Interagency Stream Restoration Working Group (FISRWG) 1998. The project is about 61.7 acres through 2.7 miles of lands managed by USACE, BLM, USFS, and the New Mexico Land Office. Several types of features were used to create different types of fish habitat. The features include cross vane drop structures, pools, riffles, boulder clusters, and riparian vegetation. These features are designed to provide fish velocity refuge habitat at discharges between 50 and 1800 cfs.

## **Environmental Cleanup Award**

Fort Ord, CA BRAC Cleanup

Fort Ord BRAC Cleanup Project Delivery Team

Sacramento District, South Pacific Division

The Fort Ord PDT worked tirelessly to accomplish the Cleanup of all Units in the Bureau of Land Management (BLM) Area B - scheduled to be conveyed to the BLM except for a final prescribed burn and munitions and explosives of concern (MEC) removal in a single parcel (Unit A). During the same period the PDT accomplished the completion of construction of the New Groundwater Treatment Plant for Operable Unit 2 (OU-2). The new plant allows for greater groundwater treatment capacity which increases the effective capture of the VOC plume in both the A-level Aquifer and the 180-foot Aquifer. The PDT also has been very successful in the execution of habitat restoration in response to areas of the MEC cleanup that required removal of contaminants by means of sifting (a habitat damaging activity) as well as biological monitoring of floral and fauna communities for comparison to baselines in order to gauge success of the recovery of ecosystems in the post-burn and post-cut regimes. The PDT's recent and historic efforts were recognized by the U.S. Environmental Protection Agency with a National Award for Excellence in Site Reuse. The reuse includes a Veteran Affairs (VA) Hospital and Medical Care facility, a new California State University campus (CSUMB), an addition to the Monterey Peninsula College, and several hundred residential units within the Marina and Seaside communities, as well as new retail complexes. Finally, the PDT has been successful in faithfully executing all funds provided by BRAC-D for the last 10 years and wisely predicting the cost to complete for the near and distant future.

My congratulations to these most deserving winners,

Lara E. Beasley

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