

# ACE RESOURCES

A newsletter for the Association  
of Conservation Engineers

JULY 2020

Enhancing our Natural Resources

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Dear ACE Member and Past ACE Conference Attendees,

It doesn't seem so long ago that many of us were able to attend the 2019 ACE Conference in Gulf Shores, Alabama. Who could have imagined the changes that have taken place in each of our lives due to the COVID19 pandemic since that time. We have each had to learn to modify and adapt our social behavior to accommodate the changes that have occurred. After much consideration and thoughtful discussion, the ACE Executive Board has reached agreement that we will need to do the same for our plans for the 2020 ACE Conference that was scheduled for October 18-22, 2020, in Wyoming. We plan to cancel the on-site conference and conduct a shorter web-based virtual conference for this year (if there is enough interest) during the same time frame. The agenda and the goals of the virtual conference will be similar to the on-site conference that we are all used to, but format and platform will be different. I think most of us have been stretched to learn to do more work, school, communication, socializing, etc. on web based platforms. It is not the same as being together in person, but most of us are thankful that we have the technology to stay connected even when we are required to be physically separated. The reasons the board thinks this temporary change is necessary are as follows;

The current state of the economy would make it difficult for an onsite conference to be well attended.

The uncertainties of the current situation make it unwise for our organization to make the financial commitments necessary to plan a successful conference.

Current CDC health guidelines would make the arrangements needed to host a conference difficult.

We want whatever we work to provide for a conference to be beneficial to the greatest amount of our membership possible.

For us to be successful in this endeavor, we would like you to visit our website at the following link

<https://fs18.formsite.com/MeetingsNorthwest/form35/index.html> and to fill out a survey to help us to determine the following;

Who is interested in attending a virtual conference?

If professional development hours are offered for the online content, what do you think the optimal length of the conference should be?

Are you interested in presenting, if so, what are your ideas for a topic?

Would you be interested in providing a virtual field trip of a project or a facility that could be shared?

What do you think would be a reasonable charge for a days' worth of content/PDH's?

Do you have any other ideas for the virtual conference that you would like to share?

Please provide this input back by August 10, 2020, so that we will have time to plan adequately. Please contact me if you have any questions or comments that are not addressed in the survey and that you would like to share. Thank you for your support of ACE in the past and for your help in making ACE more successful in our mission to work with the natural environment and promote the application of sound engineering practices in the field of natural resource protection and recreation development.

Sincerely,

*Howard D. Thomas*

Howard D. Thomas, ACE President

Contact Info: (573) 522-4115, Ext 3755 , [Howard.Thomas@mdc.mo.gov](mailto:Howard.Thomas@mdc.mo.gov)

## Update from Alaska

The spring and summer of 2020 has presented some of the same challenges in Alaska as other states, but our relative isolation has also offered some opportunities. A major change has been the elimination of visits from major cruise ships. What was forecast to be a record summer of 1.4 million cruise passengers is now shaping up to be no more than a handful of small ships with a very limited number of passengers.

Although we've experienced the same lockdowns and health mandates as other states, our low population density still provides the opportunity to experience outdoor activities without close personal contact. State and university researchers are hoping to take advantage of the low level of human activity to obtain baseline air and water quality information that is sometimes lacking in environmental reviews. In many cases, engineers have been able to keep working with appropriate distancing and other protocols. The government mandates have defined "Essential Workforce" to include work on public works construction, food cultivation, and fishing. The major hatcheries have all continued operating with updated employee safety plans.

For people directly affected by the virus and recession, it's been a rough time. As of this writing, the state's infection rate is relatively low but every new case is important to many folks. The history of contagious disease in small isolated villages is a major concern. Both the tourism and oil industries are taking a major hit and many businesses are operating at minimal capacity. However, with all that being said, if you're fortunate enough to be here and have the resources to weather the pandemic and the recession, it's an opportunity to see a bit of what Alaska was like 30 or 40 years ago.



**Masks are a good way to stay warm on springtime jogs**

Don Beard

Juneau, Alaska

## Weather Patterns Affect Construction Progress in Missouri

By Barbara Li, P.E.

The past two years in Missouri have been particularly wet ones. The Missouri Department of Conservation currently has two construction projects that began in 2018 but are on hold awaiting low water levels.

The first project is a spring pool renovation at the Roaring River fish hatchery. This popular spring, located in the southwest part of the state, provides cold water for the Department to raise over two million rainbow trout each year. This project was awarded to a contractor who bid nearly \$2 Million to provide the infrastructure updates needed to maintain this important water source and tourist attraction. This work included installing a new traveling screen, precast concrete building and a flow meter. The work also included replacing the existing weir gates, gate valves, piping, handrails and more.

The project that was originally scheduled to finish in June of 2019 now sits at 90% completion while water from the spring now flows at 68 million gallons per day (MGPD), well above the historic average of 20 MGPD. (Last minute update, the spring flow is now down to 28.3 MGPD and the contractor has re-mobilized to the site as of 7/13/2020 and plans to begin de-watering efforts soon.)

The second project is a boat ramp, entry road and parking lot renovation at Headwaters Access on the Castor River Diversion Channel. This channel is just upstream of the Mississippi river in southeast Missouri. The purpose of this project was to enlarge the parking area to accommodate a busy river access location. In addition, changes were needed to make the area and boat ramp more resilient to flooding. The design included replacing the existing asphalt with concrete and angling the boat ramp downstream as opposed to its previous perpendicular orientation to the channel flow. The construction, valued at almost \$700,000, began just after Labor Day and was expected to be complete by the new year. Since that time the access has been underwater on numerous occasions. The reoccurring joke at project status meetings is "Headwaters is underwater." This project too is 90% complete, but final work within the river channel cannot be realized until the water level drops significantly.



## Wyoming Update

The Wyoming Game and Fish Conservation Engineering Branch is weathering the storm like most folks. We've mostly been working from home, but the work hasn't slowed down much. We had 6 pre-bid meetings in March/April, which were a challenge to adhere to state standards for social distancing and overall size of gatherings. We've lost one engineer to another agency and another to the private sector. We are down to myself, one project engineer and one surveyor, so the work load on the three of us has increased. The State of Wyoming is also furloughing employees above a certain pay grade, one day per month for the next 6 months. Plenty of economic anxiety and uncertainty in Wyoming.

The severe hit to the overall State budget from the COVID madness will be a problem, but full effects are yet to be determined.

The projects we are working on for the 2020 construction season include: Design oversight for a new regional office in Cody, WY; stream restoration projects on

Sunlight Creek in NW Wyoming and Flat Creek just south of Jackson, WY; five fish passage projects throughout the state; a new hay shed structure at an elk feed ground in western Wyoming, three new houses (2 at fish hatcheries, one game warden station); A new pipeline and two new octo-form circular concrete tanks at our Auburn Fish Hatchery; and we are a couple weeks from breaking ground for a flood control project at our Boulder Rearing Station.



Fish barrier to limit brook trout passage in order to restore the yellowstone cutthroat population.

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Fish barrier to limit brook trout passage in order to restore the yellowstone cutthroat population.

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Sunlight Creek-Phase III Stream Restoration

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## West Virginia Update

Like everyone else in the nation, the Planning Engineering and Maintenance (PEM) section of the WV Division of Natural Resources was impacted by the Covid 19 Pandemic. We didn't let that stop us or even slow us down as most of the 10 section members work remotely on a routine basis. During the Pandemic and the State's subsequent "Stay at Home" order, PEM employees were designated as "essential personnel" because the nature of our business is to construct improvements or repairs to the State's facilities. While I held down the office, all other folks continued to manage their projects from home or their remote offices. Conducting site visits and conducting meetings using video-based software and while observing social distance and other health department guidelines has been a challenge, it is one the PEM team took in stride.

We are currently administering contracts with approximately 24 various consultants on over 90 different contracts for design and construction totaling approximately \$38,000,000 worth of State Park Improvements. These improvements include the renovation of 4 lodges, replacement of numerous aging water and sewer infrastructure components, campground improvements, and replacement of recreation facilities across the State, as well as a mix of other deferred maintenance issues. By the Fall of 2021, this work plus about \$8,000,000 more must be completed to keep on track with the requirements of the tax-free status of recent bond sales.

In addition to this work for the State Park System, PEM also oversees work for the Wildlife Section of the agency. We are currently administering \$3.75 million worth of construction in Wildlife Management Area Headquarters Buildings, \$10 million in hatchery renovations, and \$4.5 million for a new District Office building with laboratory and storage space along with a host of smaller projects scattered around the State.

You can see that our small section is bustling, and while the Pandemic has slowed life as we knew it down, PEM has not allowed it to stop our progress.

All of these projects are long overdue, and it is exciting to see them finally happen. On top of all of this, and what we are most excited about is a project that is just now getting started as we slowly emerge from "lockdown" is the Claudia L. Workman Wildlife Education Center. The photo below is the beginning of a \$4 million contract to construct our State's first Wildlife Education Center near Charleston, WV, at the Forks of Coal State Natural Area.

This project has been four years in the making. The Education Center will house 6,500 square feet of exhibit and meeting space along with 3,000 square feet of basement storage for future and past exhibitions. Shows will range from terrariums housing live critters and a 1,500-gallon fish display to interactive displays showcasing the State's flora and fauna. The following mockups have been posted on Kiosks on the site since the Forks of Coal River Foundation began fundraising to provide the exhibits and have generated a lot of interest in the project. Ultimately, the primary funding source for the displays is a \$950,000 Abandoned Mine Lands Grant that was recently awarded to the Forks of Coal Foundation.



The WVDNR will construct and oversee this facility, and the Foundation will help operate it. This facility will tell the Division of Natural Resources story of Conservation and Preservation of our Wildlife Resources while showcasing all the State has to offer.

So, while the world has been on “Corona-cation,” the PEM section of the WVDNR has been full steam ahead. It will take more than a Pandemic to slow us down!

# The Claudia L. Workman Wildlife Education Center

**COMING SOON!**



## **ARCHITECT'S FRONT VIEW**

LAND FOR THIS BUILDING WAS GIVEN TO THE STATE OF WEST VIRGINIA BY THE LATE JACK L. WORKMAN TO HONOR THE MEMORY OF HIS WIFE CLAUDIA AND TO BUILD THIS CENTER TO PROMOTE CONSERVATION AND WILDLIFE EDUCATION.

[www.forksofcoalfoundation.org](http://www.forksofcoalfoundation.org) or visit us on Facebook



# The Claudia L. Workman Wildlife Education Center



ARCHITECT'S IMAGES OF INTERIOR. EXHIBITS WILL INCLUDE NATIVE FISH, LIVE REPTILES, NATIVE WILDLIFE (REPLICA OR TAXIDERMY), STREAM ECOLOGY, OTTER, WILD TURKEY, DEER, BIRDS, ELK RESTORATION, BEAVER AND MUCH MORE

Forks of Coal Foundation on Facebook or [www.forksofcoalfoundation.org](http://www.forksofcoalfoundation.org)

## **Online Membership Applications & Renewals Now Available**

*Been awhile since you've been to a conference? Need to renew your membership? To make sure you continue to receive our newsletter? Never joined but want to become an ACE member? Or perhaps you have recently moved or changed your email address and need to update your membership info?*

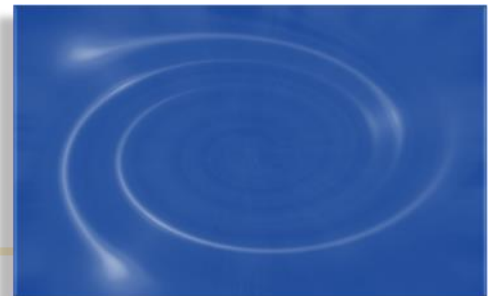
### **All of these options are now available on-line!**

Through an agreement with Meetings Northwest, ACE is now offering membership application, renewals and updates to membership information through the internet.

Simply visit our webpage at [conservationengineers.org](https://conservationengineers.org) or follow the link here: <https://conservationengineers.org/membership/> and complete your application, renewal or update.

Please contact [admin@meetingsnorthwest.com](mailto:admin@meetingsnorthwest.com) if you have questions or if you have trouble registering.

We look forward to hearing from you.





## Purpose

The purpose of the Carl Anderson Conservation Engineering Project Awards competition is to give recognition to those members, consultants and/or their departments whose work, as judged by their peers and associates, best exhibits the goals and objectives of The Association of Conservation Engineers.

## Categories

### Project Category A - STUDIES / RESEARCH PROGRAMS

Non-design services including, but not limited to: Pilot/experimental projects; bioengineering; electrical heating; new products and materials; basic research on new technology; fuels and water; properties and uses of fuels; research in natural resources; hazardous waste studies; resource recovery; environmental impact studies; soils and other subsurface geotechnical investigation and evaluation; damage correction; computer services; technical papers. All of the entries in Category A are involved with non-construction document design services.

### Project Category B - CONSERVATION / ENVIRONMENTAL

Dams (water supply, irrigation, flood control, recreational) Fisheries management, Parks and Wildlife facilities, Energy generation, transmission, distribution, conversion, conservation and storage-mitigation, Drainage systems, Incineration, Mine Reclamation, Resource recovery, Waste treatment facilities, Water resources and supply, Wetlands treatment.

### Project Category C - SPECIAL PROJECTS

Any project that does not fit into other categories including, but not limited to: Erosion protection and control Recreational theme parks, zoos, marinas, aquariums, Site development, Structure of buildings, Historical restoration, and Construction projects resulting from unique studies or research of the type in Category A.

## Eligibility

### Entrant:

Any governmental agency or department, or its selected consultant, engaged in the fields of recreation, wildlife preservation, tourism and/or conservation of the natural environment that is a member of or has made application for membership in the ACE is eligible for participation in this awards program.

### Project:

1. The project entered must be the completed work of the governmental agency or department making the submission.
2. Up to two project entries may be submitted by each participant.
3. The project must have been completed within the **24 months** preceding its submittal.
4. The project must have written permission from the owner for entry into the competition and future publication.



## Entry

Making your submittal for the ACE Conservation Project Engineering Award is a simple two-step process:

**FIRST:** Prepare your **Entry packet**. Entries must be emailed no later than, Sunday, **September 13, 2020**.

**The entry Packet shall include the following:**

**The entry Packet shall include the following:**

1. A copy of the ACE Declaration of Intent form
2. Letter from the agency or owner giving written permission allowing for publication of any feature or innovation found to be of interest to the members of the Association.
3. ACE Data Sheet 1 (attached).
4. ACE Data Sheet 2 (attached).
5. Drawings; up to a maximum of 4 sheets as needed to delineate project.
6. Colored photographs (a maximum of six) may be utilized to complement the written description.

**Note:** *If submittal is larger than 10 MB, then the entry can be submitted on a CD to the Committee Chair.*

**Winners will be notified to prepare a digital Project Panel to bring for display and presentation at the ACE 59<sup>th</sup> Annual Online Webinar Conference in, October 21-22, 2020 or at a successive conference.**

### Winner Project Panel

To be completed before the 2020 Conference or successive Conference.

A project presentation is required of those winning entries receiving an Award of Excellence or an Award of Merit, and is requested, but optional, from the winner of the Award of Honor.

Submit to:

ACE Committee Chairman—Linda Logan, PE

[Linda.Logan@mdc.mo.gov](mailto:Linda.Logan@mdc.mo.gov)



## Judging

The judging panel shall consist of not less than three nor more than five judges. All judges will be qualified design professionals such as engineers, architects, biologists, botanists or others involved in the conservation or environmental field. At least two of the judges will be a member of ACE. The judges will be selected by the Awards Committee and may reside in the state hosting the conference. The judges will meet soon after the submission deadline to evaluate and select the projects to receive awards. The judges' decision shall be final.

## Definitions of Ratings Guidelines

### **Originality / Innovation / New Application of**

#### **Existing Techniques:**

Does the entry represent any new branch of conservation engineering or some type of breakthrough in general knowledge of our environment?  
Does the entry represent a unique mix of different techniques, materials or equipment?

#### **Technical value to the Conservation Engineering Profession:**

Does the entry advance the state of the conservation engineers' art?

#### **Complexity:**

Does the entry involve very complex criteria or types of problems to be addressed?  
Were extraordinary problems of site, location, hazardous conditions, project requirements, or similar elements present?  
Does the entry require out-of-the-ordinary technology and ingenuity for achievement?

## Awards

The jury shall make awards to three meritorious entries. At the discretion of the jury, the number of awards may be limited or expanded. The following awards will be issued:

Award of Excellence.....Special Award  
Award of Merit.....Plaque  
Award of Honor.....Plaque

#### **Meeting and Exceeding Owner's Needs:**

Is it an economical and cost-effective solution?  
How did final cost relate to original budget estimate?  
How closely does the entrant's solution meet the total goals of the owner?  
Does the entry meet and justify its original concept?  
Did the entrant meet the owner's time schedule?

#### **Natural Resources and Environmental**

##### **Considerations:**

Does the entrant's solution bring into play an improved program, i.e., are additional benefits realized as a spin-off?  
Does the entrant's role provide society with any useful advancement in the area of conservation and environmental sciences?  
Is the public health, safety, or welfare enhanced as a result of the entrant's role in the project.

A certificate of participation may be presented to all other qualified entries. From time to time a letter of recognition or certificate may be awarded to other entries as the judges may recommend.

**Awards will be mailed to winners.**



# ASSOCIATION OF CONSERVATION ENGINEERS

## 27<sup>th</sup> Annual Carl V. Anderson Engineering Project Awards

### Competition Announcement and Rules



*For use of award chairperson only*



PROJECT REG. NO. \_\_\_\_\_

Received \_\_\_\_\_

## DECLARATION OF INTENT TO SUBMIT FOR ACE CONSERVATION PROJECT ENGINEERING AWARDS

*(This page is due by email by Sunday, September 13, 2020)*

Date submitted: \_\_\_\_\_

*Note: Please furnish all information requested below for each entry. If additional forms are required, copy this format.*

I intend to submit an entry to the Association of Conservation Engineers Design Awards Program in the following category and division designated.

**Category** *(Check One)*

A. Studies/Research Program \_\_\_\_\_

B. Conservation/Environmental \_\_\_\_\_

C. Special Projects \_\_\_\_\_

Budget Cost of Project: \_\_\_\_\_ Scheduled Completion: \_\_\_\_\_

Actual Cost of Project: \_\_\_\_\_ Actual Completion: \_\_\_\_\_

Name of Submitting Entity: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone No: (\_\_\_\_\_) \_\_\_\_\_

E-mail: \_\_\_\_\_ Fax No: (\_\_\_\_\_) \_\_\_\_\_

Name of Project: \_\_\_\_\_

Location: \_\_\_\_\_

Owner's Name: \_\_\_\_\_

*Note: Remember to get Owner's approval for use of project award nomination*

Name of Consultant(s): \_\_\_\_\_

*(if applicable) May be the same as submitting entity*

**Note: The submitting entity or the owner of the project must be a member of the ACE organization or must have**



For use of award chairperson only



PROJECT REG. NO. \_\_\_\_\_

Received \_\_\_\_\_

# ACE 2020 DESIGN AWARDS DATA SHEET #1

*(This page is due by email by Sunday, September 13, 2020)*

PROJECT NAME: \_\_\_\_\_

1. Agency / Firm Making Submittal: \_\_\_\_\_

2. Address: \_\_\_\_\_

3. Contact Name: \_\_\_\_\_ Contact Phone No: \_\_\_\_\_

E-mail: \_\_\_\_\_ Fax No: \_\_\_\_\_

4. Project Location: \_\_\_\_\_

5. Project Category: \_\_\_\_\_

6. Outside Consultant (s): \_\_\_\_\_

7. If a winning entry, please give exact Project Information as it should appear on the plaque or certificate:

Name of Project: \_\_\_\_\_

Project Owner &/or Consultants: \_\_\_\_\_

Project Location: \_\_\_\_\_



# ASSOCIATION OF CONSERVATION ENGINEERS

27<sup>th</sup> Annual Carl V. Anderson Engineering Project Awards

Competition Announcement and Rules



*For use of award chairperson only*



PROJECT REG. NO. \_\_\_\_\_

Received \_\_\_\_\_

## ACE 2020 DESIGN AWARDS DATA SHEET #2

*(This page is due by email by Sunday, September 13, 2020)*

PROJECT NAME: \_\_\_\_\_

In approximately 500 words (total), write a short summary of the project features and solutions that best answer the following rating guidelines:

**Note:** *The unnecessary use of names of agencies, departments, consultants or individuals should be avoided. The name of the submitter(s) is removed prior to project review, so that the panel of judges may consider projects based on solely on merit.*

- |   |             |
|---|-------------|
| 1. Complexity of Program:   | 15%         |
| 2. Technical Value to Conservation Engineer’s Profession:         | 15%         |
| 3. Originality/Innovation/New Application of Existing Techniques: | 20%         |
| 4. Meeting and Exceeding Owner’s Needs:                           | 25%         |
| 5. Natural Resources & Environmental Considerations:              | <u>25%</u>  |
| <b>Total:</b>   | <b>100%</b> |



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# James (Jim) Schalk Memorial

## Association of Conservation Engineers Scholarship

### *Application Requirements*

- 1) The purpose of this program is to promote the Association of Conservation Engineers (ACE) and the continued study and learning required for the conservation of our natural and renewable resources in the areas of preservation and recreation. The Association of Conservation Engineers (ACE) is an international organization of engineers and allied personnel employed by conservation and natural resource agencies and consultants with specialized interests in the area of fish, wildlife, parks, forests and related conservation/recreation fields. Additional information about ACE can be found on our website a <https://conservationengineers.org/awards/> .
  
- 2) The selection of scholarship nominees shall be according to the following eligibility guidelines:
  
- 3) The selection shall be restricted to junior and senior students of the undergraduate study program and students of the graduate study program, enrolled in an accredited course of college, directed toward a BS or MS degree in engineering, any of the natural sciences, ecology, or agriculture.
  - b.** Students shall carry a full program and be enrolled as a full time student.
  
  - c.** The student shall submit a minimum of a 15 minute computer presentation in Power-point or comparable format on a topic related to ACE's Four Objectives.  
(See below or at <https://conservationengineers.org/about/>)
  
  - d.** A recommendation letter, on university letterhead, from one of the student's instructors shall accompany the submitted technical paper stating the student's qualifications for this scholarship.
  
- 4) The monetary value of this scholarship shall be \$500 to \$1,000 paid directly to the recipient. Presentation of the award shall be mailed to the recipient after the ACE annual conference. It is the discretion of the recipient on how the award shall be used.

# James (Jim) Schalk Memorial Association of Conservation Engineers Scholarship

*2020 Application Form*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Major: \_\_\_\_\_

Class (circle one): Junior / Senior of undergraduate study and graduate study

Anticipated Graduation Date: \_\_\_\_\_

Name of School: \_\_\_\_\_

Address of School: \_\_\_\_\_

**Send completed Application Form, instructor's letter of recommendation, and written essay to:**

**Mattheuw Prenger**

**Email to: [Mattheuw.Prenger@mdc.mo.gov](mailto:Mattheuw.Prenger@mdc.mo.gov)**

**Applications must be received no later than September 13, 2020**

Winner will be notified by September 28, 2020.

# Association of Conservation Engineers

## ACE Objectives

- 1) To encourage and broaden the educational, social and economic interests of engineering practices.*
- 2) To promote the recognition of the importance of sound engineering practices in fish, wildlife and recreation development.*
- 3) To enable each member to utilize the experiences of other members.*
- 4) To generally take all such proper action that may be necessary to further the cause of fish,*

The Association of Conservation Engineers (ACE) works with the natural environment to promote the application of sound engineering practices in the field of natural resource protection and recreation development.

