

Alaska Capital Engineers

A branch of the American Society of Civil Engineers

April 2023 Newsletter

April Presentation:

Welding Engineering 101 & Practical Considerations

Leslie Daugherty, PE & Duane Davis, PE



MEETING LOCATION:
University of Alaska, Auke Bay Campus
Egan Building Room 109
See Attached Map

Date: April 12th
Time: 12:00 PM

Cost: \$20 (includes lunch)



Everyone knows a little about welding, and some of you may even be welders, but do you know the science behind welding? Welding Engineering is the culmination of many other engineering disciplines: electrical, structural, mechanical, and chemical/metallurgical. The first part of this presentation will introduce how each of those engineering disciplines relate to welding and how they are applied in the AWS D1.1 Structural Welding Code. The second part will provide examples of practical considerations when specifying welding or overseeing field welding performed in accordance with the AWS D1.1 Structural Welding Code.

Leslie Daugherty, PE, SE is the Chief Bridge Engineer for the Alaska Department of Transportation & Public Facilities. She earned a bachelor's degree in civil engineering and a master's degree in welding engineering from the Ohio State University. She is a member of the AASHTO T-17 metals fabrication technical committee and the Transportation Research Board ACK70 Fabrication and Inspection of Metal Structures Committee. She is also a director-at-large for the Alaska Section of the American Welding Society.

Duane Davis, PE is a Bridge Engineer for the Alaska Department of Transportation & Public Facilities. He earned a bachelor's degree in mechanical engineering and a master's degree in civil engineering from the University of Alaska, Fairbanks. Prior to becoming an Engineer, he was an American Society for Non- Destructive Testing Level III with an endorsement in Ultrasonic Testing and an American Welding Society Certified Welding Inspector.

Visit our website at <https://branches.asce.org/juneau/> for the following:

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STEAM Volunteer Opportunities

AISES Science Fair - Help judge projects from Juneau, Kake, Wrangell, Sitka, and Angoon April 6, 9-11am.

No experience necessary. Please sign up using the form below.

Thank you for helping our American Indian Science and Engineering Society (AISES) chapter students!

<https://forms.gle/F9pyLphirhVhbZJn8>

Sea Week - April 17 - May 23

Sea Week is fast approaching and we are in need of volunteers to help out with the aquarium and touch tank exhibits and activities at the Ted Stevens Marine Research Institute. Please contact Stori Oates (stori.oates@noaa.gov) for more information and to sign up. No experience required, but knowledge of intertidal organisms is a bonus!

Earth Day - at Night - April 20

Lead or assist with hands-on STEAM activities, at Sayéik Gastineau (~3 hours). Please contact Susan Moore. (susan.moore@juneauschools.org) for more information and to sign up.

STEAM Day - May 4

Lead hands-on STEAM activities during the school day, at Sayéik Gastineau (~3 hours). Please contact Catherine Schleck (catherine.schleck@juneauschools.org) for more information and to sign up.

State of STE(A)M Summit - 5:30-7:30, May 8

Bring your questions and ideas, learn what's going on with STEAM in Juneau, at JDHS. RSVP to juneastemcoalition@gmail.com or just show up.

What's Going on in This Graph - 3-4 hours anytime

Have Alaska-specific data visualizations and time to edit accompanying text for students/educators?

Email juneastemcoalition@gmail.com

Adult Science Night at a pub - tbd.

Interested in helping to plan or lead an activity? Email juneastemcoalition@gmail.com

2023 ASCE Juneau Branch Scholarship Application

The 2023 ASCE Juneau Branch Scholarship application is available on the Juneau Branch website.

<https://branches.asce.org/juneau/>. Applications can also be picked up in the Career Center at Juneau-Douglas or Thunder Mountain High Schools.

All applications are due by April 30th, 2023, don't wait!

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Opening the Box: STEAM (science, technology, engineering, art and math)

The Sealaska Heritage Institute works with public school teachers through its STEAM program, which teaches math skills to middle-school students through Northwest Coast art. Teams of teachers, artists, and SHI staff are producing, field testing, and disseminating a series of supplemental math resources that incorporate Tlingit culture and language geared for beginning algebra and geometry courses. SHI is building the model for use in Southeast Alaska by adapting nationally recognized, successful math programs developed by other organizations outside the region. The institute also collaborates and provides support to teachers through its high school STEAM program, establishing a regional traditional knowledge community of practice that includes STEAM educators and cultural specialists to design and offer culturally relevant STEAM curriculum for Alaska Native students transitioning into high school. SHI supplements traditional knowledge curriculum with opportunities outside of school to build student identity as STEAM professionals that is aligned with cultural values. These include a STEAM network of professionals to provide mentorship, coaching, role modeling, and internship/job shadowing opportunities for Alaska Native students. For more information on events and volunteer opportunities visit <https://www.sealaskaheritage.org/institute/education/programs#STEAM>

Current Job Postings

(Visit <https://branches.asce.org/juneau/> for more information)

RESPEC - Senior Civil Engineer - Juneau, AK
RESPEC - Senior Structural Engineer - Juneau, AK
AK DOT&PF - Technical Engineer I - Juneau, AK
AK DOT&PF - Engineering Assistant 1/2/3 - Juneau, AK
DOWL - Transportation Engineering Intern - Juneau, AK
DOWL - Aviation Project Engineer (Mid to Senior level) - Fairbanks, AK & Juneau, AK
DOWL - Aviation Designer 1 (Engineer 1) - Fairbanks, AK & Juneau, AK
DOWL - Structural Design Engineer - Juneau, AK

PND Engineers, Inc - Structural Engineer - Juneau, AK
PND Engineers, Inc - Marketing and Technical Writer - Juneau, AK
proHNS LLC - Civil Engineer - Juneau, AK
proHNS LLC - Resident Civil Engineer - Haines, AK
DOWL - Transportation Design Engineer (Engineer 3) - Juneau, AK
DOWL - Transportation Designer - Juneau, AK
DOWL - Project Manager - Transportation Engineering - Juneau, AK
DOWL - Transportation Designer - Entry Level Engineer - Juneau, AK

Local Branch Officers:

We are currently recruiting for the ASCE Juneau Branch Secretary position. If you are interested, please reach out to Micki Minsch at micki.minsch@respec.com

2022-2023 ALASKA CAPITAL ENGINEERS OFFICERS	
ASCE President – Micki Minsch, EIT Vice President – Sean Kelly, EIT Treasurer – Chris Bydlon, PE Secretary – Eva Melancon, PE Past President – Janice Wells, PE Emeritus – Mark Sams, PE, SE Special Committees School Outreach/STEM Coordinator - Please Volunteer Dream Big Coordinator - Please Volunteer	ASPE - Alaska Society Contacts Past President – Craig Bledsoe, PE President – Jeanne Bowie, PE President Elect – Frank Wuttig, PE Secretary – Leora Houtary, PE Treasurer – Iain McPherson, PE NSPE House of Delegates – Craig Bledsoe, PE Anchorage Chapter Director – Brian Lamson, PE Fairbanks Chapter Director – Vacant Juneau Chapter Director - Darrell Wetherall, PE

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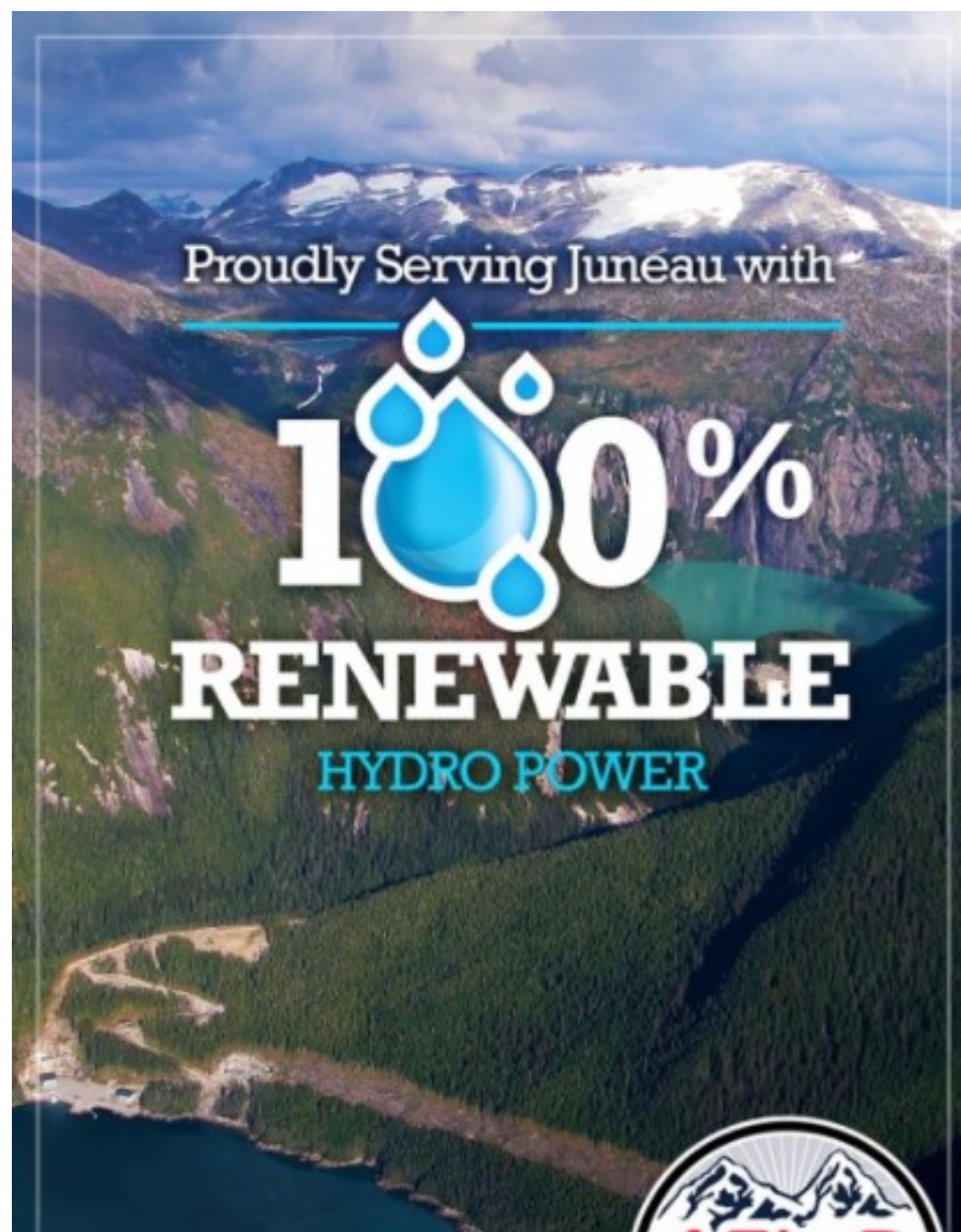
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