



WESTERN CHAPTER

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International Erosion Control Association

Serving Erosion Control Professionals in Arizona, California, Nevada and Hawaii

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PRESIDENT'S MESSAGE

Dear Western Chapter Members,

I hope this newsletter finds you, your families, and colleagues safe and healthy. What a year 2020 has been in our lives professionally and personally. We are currently faced with many ongoing challenges as they relate to our businesses and the way we deliver our products and services. Learning new ways to communicate with others via web-based platforms and new standard operating procedures that must be met in the field to comply with safety protocols associated with the COVID-19 pandemic, have been

challenging experiences for us all. We have also seen the worst fire season on record this year and we are still in a high-risk situation as we enter the month of December. That being said, collectively, I think our industry continues to show strength and resilience in the face of adversity.

To support our members, the Western Chapter successfully collaborated with Region 1 to provide the largest viewed virtual training webinars this year for our "Wildfire Planning and Remediation in the Western US." Thank you to all who participated. If you have not had a chance to view the webinars, here is a link to the on-demand training courses: <https://ehub.ieca.org/products/live-ieca-western-virtual-connection-wildfire-planning-and-remediation-in-the-western-us>.

As a chapter, we will continue to provide our members with timely educational opportunities pertaining to our industry as we strive to be a conduit for our members to learn and grow. If interested, there are many ways to get involved on a planning committee or host training, and/or networking event in your area. Please reach out to the chapter to learn more.

Wishing you all Happy Holidays!

Sincerely,

Danny Reynaga, CPESC, QSD
President – Western Chapter IECA



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MAINSTEM MARTIS RESTORATION PROJECT¹

Kym Kelley, Claudia Chambers, Kelley Erosion Control²
Julie Etra, Western Botanical Services, Inc.³

Introduction

Over the decades, Martis Creek in Martis Valley has undergone incision and separation from its floodplain, with loss of floodplain function and conversion from wetland to upland plant communities (Photo 1). In 2010, the Truckee River Watershed Council (TRWC), a non-profit organization in Truckee, California, began planning restoration of aquatic and upland habitats across Martis Valley. In 2015, TRWC selected Balance Hydrologics and their subconsultant Western Botanical Services, Inc. (WBS) to conduct feasibility studies and preliminary meadow restoration design to a) increase the frequency of meadow flooding, b) reduce bank erosion and fine sediment production, c) recharge shallow groundwater, and d) restore floodplain and meadow vegetation and habitat. With multiple stakeholders, TRWC selected a complex restoration alternative targeting 70 acres of meadow and two miles of channel. The selected alternative emphasized biotechnical solutions and included grading and excavation of inset floodplains, breakout secondary channels, bioengineered grade control structures, and beaver dam analogs. Materials included logs, open weave coir netting, coir mat with wetland plug plantings, propagated coir mat, coir logs with willow stakes, wetland sod and willow salvage, willow poles and fascines, seed, and native mulch.



Claudia Chambers
Kym Kelley
Kelley Erosion Control
775-322-7755



Photo 1: Incised creek preproject.



Photo 2: Project restoration complete - maintenance and watering.

Contract Award and Construction

The project was constructed in 2019 based on '90%' design documents, with final design during implementation, not a typical design/build contract and bid as lump sum; no quantities were provided. Lack of take-off and units made it difficult to bid and the contractors had to estimate materials and labor to complete the restoration work, increasing its cost to offset the risk of uncertainty.

¹ This article reflects solely the opinion of the authors and not necessarily those of the project proponent or lead design firm.

² 2395 Tampa St # B, Reno, NV 8951

³ 5859 Mt. Rose Highway, Reno, NV 89511

MAINSTEM MARTIS RESTORATION PROJECT CONTINUED¹

This approach also presented unique challenges associated with culturally sensitive tribal lands, a short construction season, limited access, and public recreation during construction. The field-design approach did allow flexibility to accommodate changes in site conditions and avoid impacts from beaver activity contributing to floodplain recovery but posed some problems for the contractors, as detail was lacking for some of the floodplain treatments.

Kelley Erosion Control, Inc. (KEC), the revegetation contractor, teamed with Triangle Properties (Triangle, a subsidiary of Teichert Construction) for the construction of this project. Atypical of a public works job where low bid gets the job, a proposal, prequalifications, and an interview were required in addition to the bid. KEC, with Triangle and Dyer Excavating, was selected on both merit and price and awarded the project. KEC was responsible for seeding, coir log placement with willow stakes, coir mat installation, and wetland plug plantings. The project included 2 years of plant establishment work originally to be completed in the fall of 2021.



Photo 3 & 4: Coir log placement with willow stakes, coir mat installation, and wetland plug plantings.

One of the biggest problems for KEC was lack of access for the maintenance irrigation to ensure successful establishment and growth of the wetland plugs as KEC was originally not allowed to draw water from Martis Creek for watering the plants. This issue was finally resolved, with water being pumped from the creek.

Another issue was that the proponent acted as the supplier for the wetland plants and propagated mat and had 12,000 wetland plugs contract grown; however, the nursery did not have enough time to produce healthy, well-rooted plants, pushing the project to a spring 2020 planting for the wetland plugs and a premature installation of the mat. The length of the warranty period had to be extended for the wetland plugs, but no warranty was required for the mat. All vegetative installations should have been completed no later than August 1.

Results 2020

Runoff during the winter of 2019-2020 was not sufficient to result in any overbank flows, therefore the effectiveness of the coir mats for erosion control and scour prevention was not tested.

Spring 2020 planting conditions were initially ideal for the wetland plugs but a late spring snow and cold snap resulted in appearance of red shoots, a sign of stress, particularly in the Baltic rush (*Juncus arcticus*). However, by late summer survival of the plugs was 100% and plants were well established and spreading, particularly in the coir 400. The coir mat appeared to inhibit growth and rapid spread, although the plugs

MAINSTEM MARTIS RESTORATION PROJECT¹

Kym Kelley, Claudia Chambers, Kelley Erosion Control²
Julie Etra, Western Botanical Services, Inc.³

were only planted in the seams. Survival of the willow poles was more than 80%, and about 50% for the willow stakes installed into the coir logs, meeting the Performance Standards for the project. The only location showing poor pole survival was on the north side of the project, where beaver activity resulted in inundation.

Recommendations

This project would have been more efficiently built if a 100% design set were bid, or if this were bid as design/build; another option could have been CMAR (Construction Manager at Risk).

Pre-design investigations, which for the most part were not conducted, would have revealed dense soil lenses that were difficult to penetrate with willow poles and other treatment types.

A finish grade elevation that accounted for replacement of salvaged topsoil over the excavated floodplain should specifically have been called out on the plans and staked in the field. Although the specifications called for replacement of this essential native growth media, this did not take place, and plantings were conducted into alluvial subsoil. Invaluable wetland topsoil was off hauled.

Neither WBS nor KEC inspected the propagated mat at the two installation locations but were told performance was poor. We would not recommend this methodology unless there is adequate time for propagation and in-place growth. The grower needs at least four months to achieve vigorous, well-developed roots.

Although there may have been a savings to the project with the proponent acquiring specific materials, both KEC and WBS agree that it would have been beneficial to have these materials under the contractor's responsibility with materials probably produced in a more acceptable time frame

Conclusions

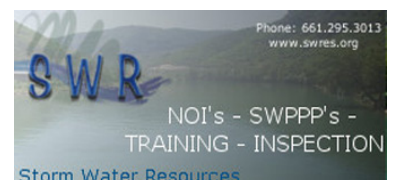
The project has been highly successful. Revegetation and wetland plants have stabilized the newly excavated inset floodplains.

As the 2020 season closed, the wetland plugs, willow stakes and willow fascines were thriving, and plants well established from seed. We anticipate excellent growth next year and a well-vegetated floodplain in another two – three years, with the coir mat eventually decomposing.

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REGIONAL NEWS FROM IECA

Top News

[Plans for US's largest dam demolition advances](#)

California and Oregon have agreed to be equal partners in plans to demolish four aging hydroelectric dams on the Klamath River. The \$475-million project is the largest of its kind in the US, as well as part of the nation's largest salmon restoration effort, though approval is pending from the Federal Energy Regulatory Commission. Full Story: [The Associated Press](#) (11/18)

POLICY & REGULATION

[Draft guidance shows how EPA is interpreting CWA case](#)

The Environmental Protection Agency is working to give industry stakeholders clarity on the Supreme Court's ruling in County of Maui v. Hawaii Wildlife Fund, according to draft guidance obtained by E&E News. The guidance explains under what conditions entities are required to apply for a National Pollutant Discharge Elimination System permit. Full Story: E&E News (free content) (12/3)

[Judge rules CA. salt ponds are protected under CWA](#)

Salt ponds in the vicinity of San Francisco Bay are "waters of the United States" and therefore warrant Clean Water Act protection, US District Judge William Alsup ruled on Monday. The decision will prevent the Environmental Protection Agency from moving forward with plans to dredge and fill the pond acreage. Full Story: [Courthouse News Service](#) (10/5), [The Associated Press](#) (10/6)

STORMWATER MANAGEMENT

[DHS develops low-cost flood sensor networks](#)

Since 2016, the Department of Homeland Security Science and Technology Directorate has been working alongside scientists, equipment manufacturers, and stormwater utilities from around the US to develop deployable, scalable, and low-cost [flood-sensor networks](#). Designed for long-term deployment in flood-prone areas, DHS' wireless sensors automatically detect rising water levels and send early flood warnings to officials and citizens. Full Story: [The Stormwater Report \(Water Environment Federation\)](#) (11/13)

WETLANDS & COASTAL RESTORATION

[Hawaii nature preserve benefits from 9-month closure](#)

Hawaii's Hanauma Bay Nature Preserve has reopened after a nine-month closure and it "looks exactly as it did 30 to 40 years ago," says Michele Nekota, director of Honolulu's Department of Parks and Recreation. Conservation group Friends of Hanauma Bay says the water is 64% clearer due to the lack of activity, and the reopening will permit a daily limit of 720 visitors. Full Story: [The Associated Press](#) (12/4)




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REGIONAL NEWS FROM IECA

EROSION/SEDIMENT CONTROL

CA. pulling back highway from eroding coast

A stretch of Highway 1 near Bodega Bay in northern California is being moved 350 feet inland, part of a plan to move infrastructure as erosion continues to eat away at the coast. State agencies are preparing for at least 3 1/2 feet of rising sea levels by 2050, which could threaten at least \$8 billion worth of property and an additional \$10 billion worth during high tides. **Full Story:** [Los Angeles Times \(tiered subscription model\)](#) (11/27)

Sediment contributes to CA. lake's drastic shrinkage

Jewel Lake in Tilden, CA., has dwindled from a good-sized pond teeming with wildlife to little more than a muddy puddle, according to visitors. The shrinkage is attributed in part to an unusually dry summer for Wildcat Creek, which feeds the lake, but also to sediment buildup and the accelerated growth of wetland plants. **Full Story:** [Berkeleyside \(Berkeley, CA.\)](#) (10/26)

Restoration after AZ. wildfires could take decades

Crews managed to limit the area of Arizona's Pusch Ridge Wilderness that was severely damaged in last summer's Bighorn Fire, which should help plant and animal life rebound more quickly. However, revival may take decades for the worst-hit areas, including the upper Sabino Canyon watershed, even though such fires are part of a natural cycle. **Full Story:** [Arizona Public Media](#) (10/8)

Rains after CA. wildfire could harm lake water quality

Winter rains could impair water quality in California's Lake Oroville as water rushes through parts of the lake's watershed that were scarred by the North Complex Fire. Effects may last for many years, although little is known of how the sediment may change the water.

Full Story: [KHSL-TV/KNVN-TV \(Chico, CA.\)](#) (10/12)

IECA Education

Enhance Your Knowledge

IECA has two certification partners [EnviroCert International, Inc.](#) (CPESC, CESSWI, CPSWQ, CPSM, CPISM) and [CISEC, Inc.](#) (CISEC).

IECA offers the professional development credit required to apply, re-certify and keep up to date with your industry certifications.



IECA Virtual Annual Conference and Expo

scheduled for **February 22-25, 2021** will feature education that is comprised of pre-recorded [on-demand sessions](#), [field tours](#) featuring site videos of tour locations, [poster sessions](#) and [featured presentations](#). Additionally, [pre-conference workshops](#), [live-streaming](#) and [roundtable sessions](#) are scheduled for more interactive education opportunities.

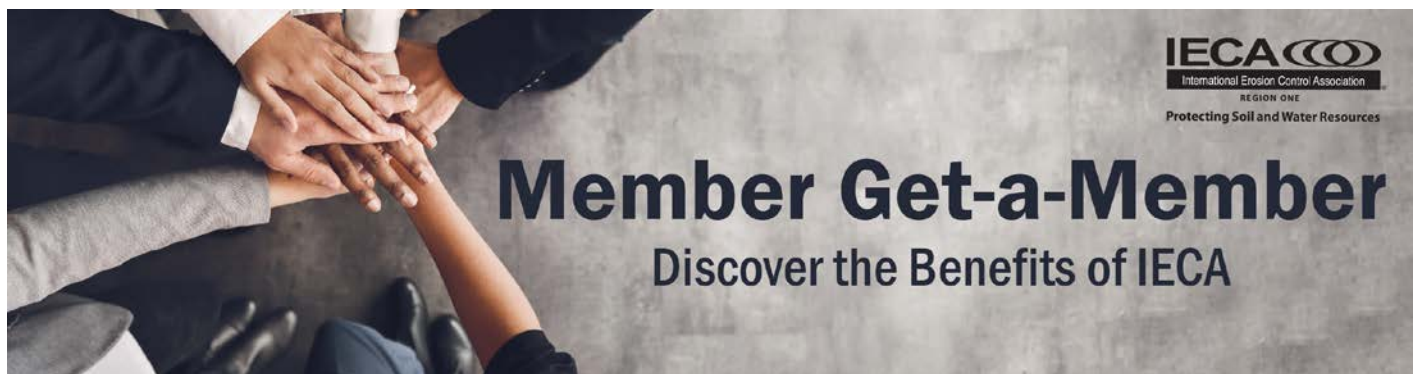
UPCOMING IECA WEBINAR SERIES

A Performance-Based Design and Installation Standard for Silt Fence Sediment Barriers

Join Michael Perez, Ph.D. and Blake Whitman, PhD, PE, CPESC to learn about silt fence sediment barrier design and installation standards developed through a comprehensive literature review of current state agency guidance and performance-based research. [Register now!](#)



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MEMBER GET A MEMBER PROGRAM WITH IECA ENDS DEC. 31ST

Campaign Overview

No one knows how beneficial IECA membership is to stormwater, erosion, and sediment control industry professionals better than IECA members. Word of mouth referrals are one of the most effective membership recruitment channels for associations. As such, we have developed this program to provide chapters with the tools needed to help build their chapter and the overall association.

Campaign Benefits

Each new member recruited will receive a \$10 IECA eHub credit. And, for each new member you recruit, you are provided with a \$10 credit in the IECA eHub too. In addition, all the referrers will be entered into a drawing for a \$100 Amazon Gift Card or IECA Virtual Annual Conference Full Conference Pass.

How to Recruit?

See the toolkit [here](#) – items include an overview, application, benefit flyer, call and email scripts, invitation letter, and header graphic.

Questions

Call 303-640-7554 or email membership@ieca.org and speak with a membership representative.

Be All You Can Be - Help out your colleagues, chapter, and association!

SEEDING WILDFIRE AREAS IN CALIFORNIA



David Gilpin
Co-Founder
Pacific Coast Seed

During this fire recovery season, Pacific Coast Seed continues to provide regionally and locally adapted native seed, soil enhancement materials, and erosion control products to a number of fire recovery efforts. PCS is working to ensure that we offer the most appropriate seed for each job be it short term stabilization to long term site specific restoration. Provided [here](#) is a Northern California regional native erosion control mix, many variations of which have been for use on critical burn area restoration projects such as the Camp Fire, Butte and numerous other locations. For

more specific projects, we are designing seed mixes that utilize the most appropriate commercially available local ecotypes to help ensure the seed used is best adapted to your site-specific conditions. If local ecotype types exist for a given area they can often be included in the mix. In addition, PCS can also provide an abundance of other native grass, forb, and shrub species, as well as, cover crop such as native *Festuca microstachys* or hybrid cover crop such as Regreen- Elymus X *Triticum* or Quickguard *Triticaule* for more immediate vegetation establishment and erosion protection.

If considering a specific site planting please review the “Fire Recovery Guide”, a 2019 publication by the California Native Plant Society (CNPS). On [page 26](#) of the fire guide, CNPS suggests that “The use of local native seed species can be effective in reducing post-fire erosion from severely disturbed soils and can speed up restoration when using appropriate or desirable native plant species”. CNPS identifies fire lines, roads, helicopter landing pads, compacted soil areas, and home sites as possible candidate projects for native seed application. The potential positive effects of seeding are discussed on [page 35](#) of the CNPS Fire Recovery Guide. The entire [Fire Recovery Guide](#) can be found online.

Pacific Coast Seed is currently providing regionally local native seed, soil enhancement products and erosion control materials for State Hwy and other projects in numerous counties. In past years PCS has provided tens of thousands of pounds of seed to stabilize charred/remnant home sites on countless past fires in California. **We believe that seeding and mulching with native plants is the single most cost effective and environmentally sound permanent best management practice to control erosion from disturbed sites.** We have additional information regarding plant cover and soil erosion rates on both the Carr Fire and Butte Fire. If interested, let us know and we will send that information to you. davidg@pcseed.com, 925-373-4417, www.pcseed.com.

THANK YOU TO OUR VIRTUAL CONNECTION SPEAKERS!



Michael Harding -
Environmental Scientist

Todd Thalhamer, PE -
CalRecycle

Radley Ott, P.E. M.S. -
Assistant Director, Butte
County Department of Public
Works

Pete Cafferata - Watershed
Protection Program Manager,
California Department of
Forestry and Fire Protection

Logan Moore - Landscape
Architect, DOT District 2

**Brandon Coppedge and Jay
Selby** - Selby's Soil | SSEC
APEX



PROFESSIONAL LISTINGS

Dirttime.tv is an affiliated brand of **Salix Applied Earthcare LLC**, formed in 1996 by John McCullah. John has been involved in Watershed Management for 30 years, becoming a certified erosion specialist in 1986. The firm's work involves consulting, training, design/build of stream restoration, bioengineering, education, and awareness. Salix published design guidance manuals, books, popular and technical articles, and informative case studies. Dirttime.tv has produced over 40 Dirt Time videos. Selecting and watching the clips of your choice then taking tests online is a popular way to earn CEUs. Visit www.dirttime.tv regularly for 'how to' info, tips, and blogs.

Earthsavers Erosion Control Products is the home of the "Original Rice Straw Wattle". Our certified weed free wattles have been tested for sediment retention at San Diego State University and proven in field studies by Caltrans and numerous other agencies. Earthsavers wattles are available in 3 diameters, photodegradable netting, or 100% biodegradable burlap. Additionally, **Earthsavers** is a master distributor for a full line of erosion & sediment control products, geosynthetics and more. Our network of distributors provide local access to premium BMPs and Earthsaver's experienced staff can provide superior technical support to our distributors and their customers and specifiers.

Kelley Erosion Control, Inc. established in 1983 is recognized throughout Nevada and California as a leader in the industry. KEC has an excellent reputation known for quality, competency, solutions, innovative ideas, cutting edge technology, excellence, and client satisfaction. Services include: Hydroseeding, site preparation, dust control applications, BMP's, revegetation and project maintenance, site winterization, wetland mitigation, stream channel stabilization, planting and irrigation, mining reclamation, soil stabilizer applications, biotechnical applications, and fire restoration/rehabilitation. Phone (775) 322-7755 Fax (775) 322-6606 Contact – Claudia Chambers CPESC, CISEC, QSP Claudia@kelleyerosioncontrol.com. Visit us at www.kelleyerosioncontrol.com.

Linwood Supply, Inc. distributes the tools you need for Erosion Control and Storm Water Management including Erosion Control Blankets, TRM and HP-TRM, HydroFiber™, Coir products, organic fertilizers, native and grass seed, plus, for oil spill remediation, Rubberizer booms, mats and filters. Other services include written pesticide recommendations and soil testing. We will always provide you with the level of service and professionalism you deserve. Linwood Supply, Inc. is a certified small business based in California. ***If Your Storm Water is as Clear as Mud™*** – Please call us at 707 678-5087 or visit us at www.linwoodsupply.com.

LSC Environmental Products exists to solve some of the industry's most persistent environmental challenges...such as erosion, revegetation, odor, dust, and waste cover through the application of our spray-applied coatings. You probably know LSC as the "ADC guys", who we have been for the past 26 years, but we are more than that. With the acquisition of Terra Novo, Inc., who are best known for their EarthGuard® products; and have served the erosion and sediment control industry for almost 20 years. We are excited to offer new solutions, including soil amendment, site winterization, intermediate cover, and special waste that we believe can benefit virtually any site.

Nedia Enterprises manufactures a complete line of erosion control, sediment control, and bioengineering products made primarily from natural fibers. Committed to the conservation of the environment, we are constantly striving to develop products that contribute to its enhancement and protection. Our products are subject to stringent quality control measures that meet or exceed industry standards. **Nedia** offers sound technical advice on product selection and installation with a thorough understanding of the benefits and limitations of the products. A large inventory of products in several distribution centers across the country facilitates cost-effective and timely delivery of our products. Contact 888-725-6999 or email info@nedia.com.

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For more information check out this link <https://www.wcieca.org/products-services/advertise-with-wcieca/>

PROFESSIONAL LISTINGS CONTINUED

Pacific Coast Seed is Northern California's premier supplier of CA native grasses and wildflowers, turf grass seed, and other erosion control materials such as fertilizers, mulches, and soil amendments. We provide seed and other materials for diverse applications including restoration, reclamation, revegetation, ornamental landscaping, and erosion control. We offer specialty seed collection from site-specific sources. For more information check out our website www.pcseed.com or contact us at 925-373-4417 or info@pcseed.com.

Quattro Environmental, Inc. offers reclamation design and implementation services in a "best value" team approach to re-establishing native plant growth on drastically disturbed soils. "**Do It Once, Do It Right**" has been the mantra for over 22 years of success on tough sites located throughout the U.S. western States. "**Hold soil**" with **BIND | ATLAS SUPERDUTY** – world's #1 heavy-duty soil binder. "**Grow soil**" for effective native plant establishment with **Quattro's Living Soil Membrane™** technology. Phone (619) 204-1372 Contact – Peter McRae, past-President WC-IECA pmcrae@quattroenvironmental.com. Visit us at www.GrowingSoil.com.

Reno Tahoe Geo Associates, Inc. – Formerly Marvin E. Davis & Associates focuses on the challenging issues of the Tahoe Basin and Northern Nevada/California terrain. Our professionals provide a diverse and solid background in geotechnical engineering; specialized engineering design; erosion control services; construction and forensic inspection services and materials testing; and, regulatory and compliance issues to enable project approval. Phone 775-853-9100 or visit us at <http://www.rtgeo.com/>.

Sustane Natural Fertilizer — For over 30 years of continuous operation, **Sustane Natural Fertilizer, Inc.** has produced the highest quality natural based and organic fertilizers and soil amendments distributed in the U.S. and exported to 50 countries worldwide. Sustane Natural Fertilizer maintains and operates its U.S.E.P.A. permitted compost site, manufacturing facility and corporate offices from Cannon Falls, MN. Sustane fertilizers and soil amendments provide readily available, balanced nutrition with beneficial microbiology to provide the basic soil components for exceptional plant establishment and long term sustainability. Call 800-352-9245 to speak with a Sustane Regional Specialist or with our International Team Leader.

Western Green, and its associated erosion control brands North American Green and Western Excelsior, is the industry leader for manufactured erosion and sediment control products and holds the industry's most complete product line ranging from short term ECBs to permanent HPTRM Anchored Systems. Whether your site needs short-term protection or permanent vegetation reinforcement, trust Western Green's quality brand products to handle any erosion issue you may face.

NEW! Financial Services Member Benefit!

IECA members are now eligible to join Signature Federal Credit Union and take advantage of the IECA VISA Platinum card, high-yield checking accounts, mortgage financing, business accounts and access to 5,000+ shared branching locations and ATMs! Signature Federal Credit Union is a full service, nationwide credit union, offering a wide range of services including: no fee checking, personal loans, up to 97% financing on mortgages and auto loans nationwide.

[EXPLORE BENEFITS NOW](#)

HEADS UP! 2022 IECA Annual Conference – Minneapolis, MN

2023 – Pacific Northwest