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WELCOME TO HULL RAISER, a magazine that showcases the craftsmanship of students in our wooden boatbuilding and marine systems programs.

Students here learn by doing—whether it’s spiling and installing a plank or designing and installing an electrical system. I am inspired daily as I watch students build skills, boats, and lifelong friendships.

In this issue, we go behind the scenes to see how students in the Marine Systems program progress from wiring circuit boards to installing and troubleshooting systems on a variety of boats.

On the boatbuilding side, you’ll see a range of new builds from a 24’ troller that’s as Pacific Northwest as you can get to a 30’ Maine lobster boat. What the two boats have in common is the integration of traditional and composite materials and building methods. “That’s what boats are these days, so students need experience with all of it,” says Boatbuilding Lead Instructor Sean Koomen.

We are committed to preparing the next generation of boatbuilders and marine systems technicians and honored to be recognized as a 2024 Center of Excellence for Domestic Maritime Workforce Training and Education designee by the U.S. Department of Transportation, Maritime Administration. To make the list, schools have to be fully accredited, demonstrate the relevance of their curriculum, demonstrate the quality of instruction, and show success of graduates in finding employment in their field of study. Thanks to everyone who helped us earn this designation!

We look forward to seeing you soon on campus or online!



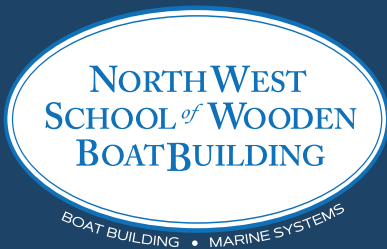
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The Northwest School of Wooden Boatbuilding is a private not-for-profit 501(c)3 educational institution. Our mission is to teach and preserve boatbuilding and marine systems skills while developing the individual as a craftsperson.

www.nswsb.edu

This issue of Hull Raiser was produced by Executive Director Betsy Davis, Managing Editor Christa Ayer, Writer Molly Tyson, Editorial Assistant Kristin Potter, and Photo Editor Eric Trevino.

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On the cover: This newly launched Nordic folkboat, Fern, is poised for rigging and sea trials. It’s based on Carol Hasse’s 1959 Nordic folkboat, Lorraine, one of the most detailed and well thought out folkboats in the world. Photo © Elizabeth Becker.



Prothero Interns Prepare for a Career in the Trades

The Prothero Internship, named for Boat School co-founder Bob Prothero, is a paid position that allows one or two Boat School graduates each year to spend additional time at the school, honing their skills in an environment that offers increasingly more challenging work, at a faster pace, and with more independence. NWSWB instructors chose Pearl Farley and Jeff Matthews to serve as this year's Prothero Interns.

TO SEE PEARL FARLEY putting the finishing touches on the cockpit sole of a 26' traditional Nordic folkboat, you'd never guess that she came into the Boatbuilding program (class of 2023) with no woodworking experience.

"Pearl did a ton of interior work on the Nordic folkboat," says Boatbuilding Instructor Tucker Piontek, "and all her work was super high-quality. She would bring options to me and we would discuss them as co-workers. She came to the school with no woodworking experience and now she's ready to be in the yard."

Pearl discovered the Boat School almost by accident after a disappointing stint as an undergraduate at a small liberal arts college and bartending work to support herself until she found her calling. "I felt kind of stuck," she recalls. "I didn't want to work in jobs where I had to put on a happy face.

"Up to that point, education was something other people expected me to do. I had never felt excited about what I was being taught. Boat School was completely different. All day, every day, you're learning how to do things. You're problem solving, using your

continued on page 6

Photo above: Prothero Interns work on increasingly complex projects with guidance from instructors. In the photo above, Boatbuilding Instructor Emeritus Ray Speck and Prothero Intern Pearl Farley review the plans for an 8' Alaskan yellow cedar oar. Photo © Elizabeth Becker.



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“Up to that point ... I had never felt excited about what I was being taught. Boat School was completely different. All day, every day, you're learning how to do things. You're problem solving, using your hands to figure things out.”

—Pearl Farley



hands to figure things out. From the get-go it was a really good fit.

“The whole Boatbuilding program was a lesson in being patient and gentle with myself. At first I was so nervous about making a mistake that it was paralyzing. Now I'm able to see mistakes as part of the learning process. That's been the most valuable learning experience from Boat School, and it can be applied to every aspect of life.”

As a Prothero Intern, Pearl was challenged to work more and more independently. “Before I start something, my inclination is to ask someone how they think I should do it. I had to catch

myself and say, ‘How can I use what I've learned to make informed decisions?’ That's been the most wonderful part of the internship: Being forced to tap into the knowledge and experience I've acquired over the course of the last year makes me realize how much I know.”

“Pearl's work on the troller included traditionally built windows with laminated glass and bridle joints,” says Boatbuilding Instructor Leland Gibson. “It's how a fish boat would have been built in the 1920s-1940s. It's complicated, visually important work that involves a lot of fine joinery. Her dedicated effort, decision-making, and quality of woodworking have been exemplary. Through this opportunity as an intern she's been able to grow in other parts of the craft.”

In addition to her finish work on the troller and folkboat, Pearl has spent part of her

internship speaking to high school students who are exploring trade school as an alternative to four-year college. “I had no idea what I wanted to do at that age. I just knew that what I was doing was not it. Now I have a path that is really exciting to me. That's just a huge thing and I want as many people to have that feeling as possible.”

“Pearl began with little to no woodworking experience and graduated at the top of her class,” says Lead Instructor Sean Koomen. “She brings a confidence and positive attitude to any task—whether it's sanding, prep, or finish work. That made her an ideal candidate for this year's boatbuilding Prothero Internship.” ■

JEFF MATTHEWS GREW UP in Olympia, Washington kayaking, hiking, and exploring the Puget Sound. His childhood interest in creating things—whether out of wood, paint, or food—led to work as a prep and line cook at a few restaurants before his mother suggested Boat School as a next step in his career path, something she'd always wanted to do. Thanks, Mom!

As a boatbuilding student in the class of 2020, Jeff worked on *Clean Bay*, a zero-emissions pump-out boat that gave students experience with laminating, strip-planking, and cold-molded construction; vacuum infusion; foam core construction; working with CNC production; millwork; and joinery. Jeff built on this experience as a private contractor for Devlin Design and Boatbuilding for two and a half years.

As a student in the Marine Systems program, class of 2023, he worked on a zero-emissions pump-out module commissioned by the Port of Port Townsend that allows them to use an existing workboat as a black water pump-out boat. The autonomous unit includes a 250-gallon waste tank, high-capacity pump, hoses, batteries, and solar and AC charging equipment that can be put on the deck of any workboat. “I'm so proud of the impact these projects have had on the environment—not just locally but as prototypes for zero-emissions workboats and autonomous units that can be fitted onto existing boats to extend their utility.”

As Prothero Intern, Jeff's first project was to work with marine

systems instructors Kevin Ritz and Tyler Johnson to finish the wiring, tune the plumbing for the pump, install the solar panel, and test the pump. He was also responsible for planning and installing systems aboard *Diana Lee*, a 24' custom troller constructed of a purpleheart backbone, oak frames, and red cedar planking that will remain local, just to the south of the school in Jeff's home town of Olympia.

His work on the troller included alignment and installation of the engine and its propulsion (shaft, stuffing box, and propeller); installation of the fuel tank and plumbing to the engine through the fuel filter; installation of the exhaust system; and thru-hulls for various systems, including raw water for the engine, bilge pump, and galley sink drain. He also worked on the layout of the electrical system and battery bank sizing to appropriately accommodate all the components going into the boat, finished the wiring, tuned and tested the plumbing for the pump, and installed the solar panel.

“On the troller project, I watched Jeff go from a student to a project leader—pulling a cohesive product together,” says Boatbuilding Instructor Leland Gibson. “Because he had gone through both the Boatbuilding and Marine Systems programs, he knows how to shape a backing block for a thru-hull and how to use the tools. We spoke the same language—boat vocabulary. The Prothero Internship was a continuation of his Boat School training—not just the mechanics, but sizing and sourcing the

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Photo © Elizabeth Becker

“My biggest learning experience as an intern was the product management and the sourcing side of things as we planned and developed marine systems for the pump-out module and the troller—that and learning to trust my knowledge, developing the self confidence that comes with experience.”

—Jeff Matthews

drive train—shaft, propeller, and double-checking the rudder. He also did all the ordering.”

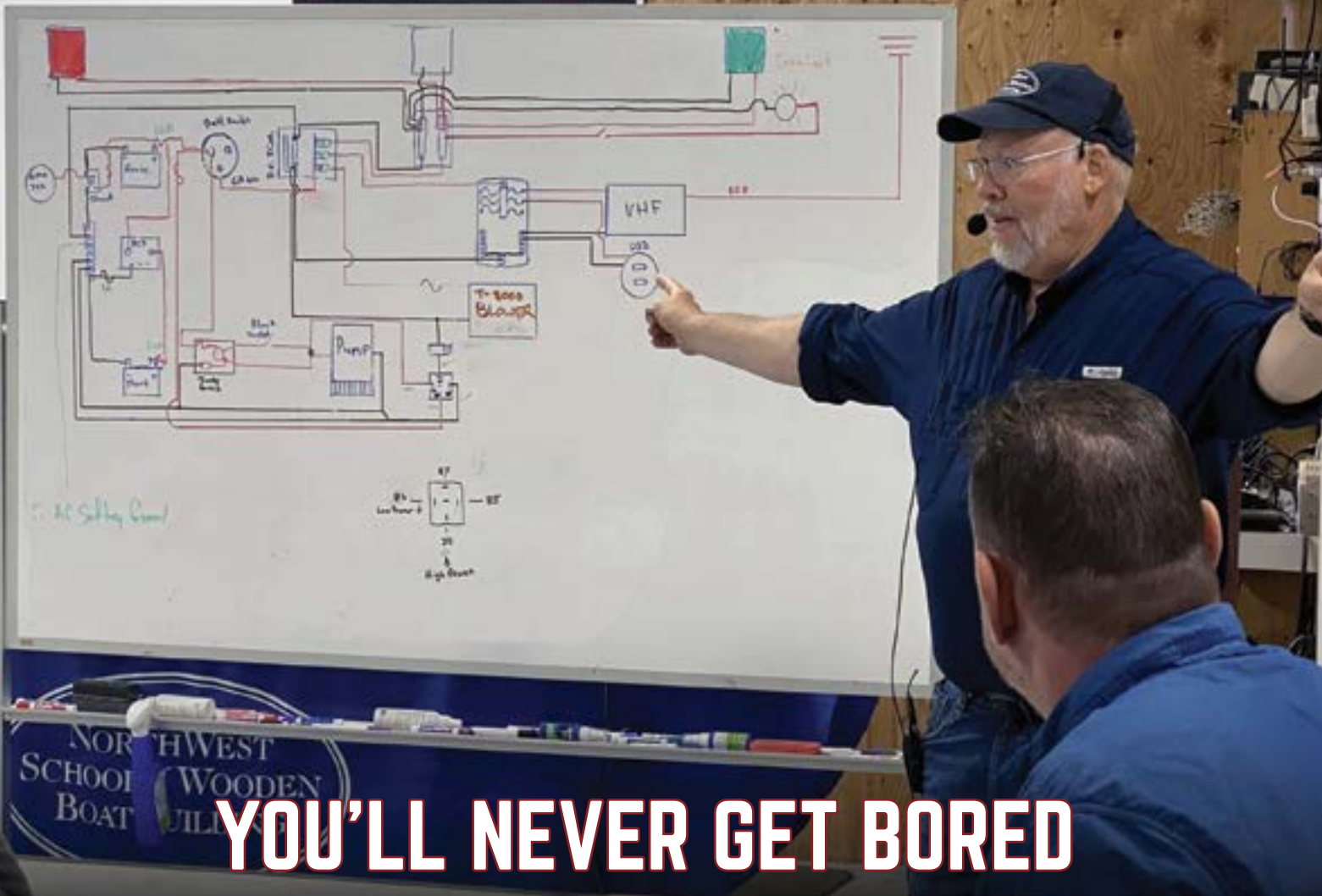
His work on the Nordic folkboat included installing the bilge systems; all wiring and installation of the electrical system, including up the mast; and wiring and installation of the Torquedo electric engine.

“Jeff’s work on the folkboat has been phenomenal,” says Boatbuilding Instructor Tucker Piontek. “He communicates really well. It’s been a total collaborative effort—discussions about finish, complexity, what the client would want. He presents options and we discuss them. He integrates his skills with wood work and systems with each task. For example, instead of leaving

the bilge system he was installing exposed bare on the side of the teak/mahogany in the cockpit, he came up with a wood cabinet and built it.”

“My biggest learning experience as an intern,” says Jeff, “was the product management and the sourcing side of things as we planned and developed marine systems for the pump-out module and the troller—that and learning to trust my knowledge, developing the self confidence that comes with experience.

“I really look forward to getting back out there with a bigger bag of tools and the ability to solve even more of the fun problems you come across as a shipwright. This profession tests you daily, but it’s awesome to be able to work on boats for a living.” ■



YOU'LL NEVER GET BORED

Geeking Out on Marine Systems

Kevin Ritz, program director of Marine Systems at NWSWB, explains how the program prepares students for the range of equipment and challenges they'll face in the work environment.

"I'M A GEEK," Kevin admits. "I like technology that takes things we've done forever and makes them better. One of the things I love about boat technology is that you'll never stop learning. You'll never get bored. We don't try to teach it all in the Marine Systems program, but we teach all the fundamentals, how to approach different problems, how to become a good problem solver, how to do things with your hands, and how to turn out a product that has turnkey reliability."

Marine Systems students learn to install and maintain systems on different types of vessels by progressing through a range of disciplines and skills: marine electrical and electronics; outboards, diesel engines; propulsion (including electric) and running gear, steering and controls; plumbing; HVAC; and corrosion. For each module there's a conceptual overview and hands-on practice in the shop. Students become familiar with hand tools and specialty

tools associated with each discipline. The curriculum has been designed to support multiple learning styles.

"Our expectation is that graduates of the program will continue to learn throughout their career. Our job is to give them a solid foundation to build on." Students demonstrate their competency by taking three industry-recognized American Boat and Yacht Council (ABYC) certification exams. The school has a strong feedback loop with employers and is constantly evolving the program to prepare students for the work environment.

Graduates are the best measure of the program's success, demonstrating the variety of paths leading to and from the Marine Systems program. Visit nwswb.edu/alumni to see how Boat School prepares graduates for fulfilling work in a variety of maritime careers.

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Photo above: Marine Systems Program Director Kevin Ritz walks students through a diagram of a basic DC system for a boat.



Marine Systems: What You'll Learn

1. Marine Electrical

The school's unique approach to teaching marine electrical emphasizes practical and real-world learning, and places heavy emphasis on standards and safety. "We spend the most time on marine electrical, because if you look at any system on a boat today—whether you're flushing the toilet, navigating, starting the engine, pumping water, turning on a propane stove—all of these things involve marine electrical," Kevin explains. "Marine electrical is different from land-based electrical, so you have to be proficient in the standards surrounding this platform—especially when you consider that we're sitting on water, which is a conductive and corrosive medium."

2. High-Powered Battery Technology

"Battery technology is evolving rapidly with the advent of lithium iron phosphate (LiFePO₄) batteries," says Kevin. "We are adding this topic to our curriculum so students will know how to deploy the technology safely. LiFePO₄ batteries—which are installed on two of our most recent commissions (the folkboat and troller)—deliver higher current density in a smaller footprint, recharge 10 times faster than lithium-ion batteries, and last for at least 4,000 duty cycles (compared with 700 duty cycles on a golf cart battery). ABYC standards aren't completely written yet for this technology, but we are already working with Nigel Calder, Charlie Johnson, and Al Thomason from WakeSpeed, and other leaders in the field, as we incorporate this technology into our curriculum."

3. Marine Diesel

"Each student has a Beta diesel to work on at their own pace. The focus is maintenance, up to and including the 100-hour service. Servicing engines starts with what we call RTFM—read the frickin' manual," Kevin explains. "You quickly realize the manual is your friend. We also have engines you can disassemble, if you are so inclined, but we require that you put them back together and hopefully there are no left-over parts."

4. Outboard Engines

"If you know how to work on outboard engines, you can take that skill with you and work anywhere in the world," Kevin explains. "We have a Suzuki outboard for each student to work on, and the focus is service. That includes the impellers, adjusting the valves and the carburetors, if you're servicing a small one, fuel injection as we move up into larger ones. If you have an aptitude and interest in outboard engines, Boat School graduates are pre-qualified for Suzuki University."

5. Marine Corrosion

"Marine corrosion is a huge issue in salt-water environments," Kevin explains. "We spend a couple of weeks doing corrosion surveys on vessels of all hull types—aluminum, steel, wood, and fiber glass—using specialized tools and equipment."

6. Marine Propulsion Systems

"Propellers, shafts, outdrives, struts—these are all part of the marine technician's domain," Kevin explains. "Students have the opportunity to swap out a diesel engine for an electric propulsion system in a Poulsbo boat we keep on-hand for that purpose and take the boat out on the Bay to get a sense of the differences."

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7. Heating and Refrigeration

“Heating and refrigeration is something the boating public demands—especially those who live aboard, as I do,” Kevin explains. “Each student practices installing a diesel-fired heater. Students also learn about hydronic heating systems and refrigeration.”

8. Steering and Controls

“I don’t know how many of you have been on a boat that loses steering, but it’s not a good day,” says Kevin. “This module covers hydraulic and cable steering systems for both inboards and outboards, rudder maintenance, and bow thrusters and windlasses.

9. Plumbing

“Plumbing isn’t the most glamorous system on a boat, but when you need it, you want it to work perfectly,” says Kevin. “Each student builds a functional plumbing system including potable water, black water and accumulator tanks, water heaters, faucets, thru-hulls, sea cocks, vented loops, sinks, water pumps, and toilets. Bottom line is to keep the water out from where we don’t want it, keep it in where we want it in, and move it when we want to.”

10. ABYC Certification

“When you graduate from the Marine Systems program, you won’t know everything there is to know about marine systems—no one does,” says Kevin. “But you will have a strong foundation to build on. Students take three ABYC certification exams, one each on Marine Electrical, Marine Diesel Engines, and Marine Systems. Exam fees are included in the tuition and the tests are conducted at the Boat School campus.”

You'll Never Get Bored

Living with Marine Systems

“My wife and I live aboard a Monk 38,” says Kevin. “Shore power comes in with a 30 amp shore power cord that goes immediately to a double pole breaker to an isolation transformer to an inverter and then off to the AC distribution panel. The inverter is hooked up through a CERBO, which is basically a networking hub that collects data (like frequency, voltage, amperage, and wattage used) and sends it out to the internet. The CERBO also incorporates information from the 600-watt solar panels via the solar controller. The inverter connects to a SmartShunt (BMV 712) that measures amp hours in and amp hours out. The SmartShunt is basically an all-in-one battery monitor that uses your smart phone as your display. All this data is stored on the web. I can download it and geek out on it at any time. The most recent addition to the boat is lithium iron phosphate batteries with a battery management system (BMS) that provides 1300 amp hours of energy storage on the boat.” (The Marine Systems program covers how to work with all these technologies.)



Free Access to BoatHowTo Complements Hands-On Instruction

Marine Systems students now have free access to BoatHowTo marine electrical courses and resources developed by Nigel Calder and Dr. Jan Athenstadt. Nigel Calder is a long-time member of the American Boat and Yacht Council (ABYC) electrical Project Technical Committee (PTC) which writes the standards for recreational boat systems in the USA, and has also been involved in European standards development. Jan runs *KlabauterKiste*, the German online magazine for boat owners; *Klabauter-Shop*, an online shop for boat electrics; as well as *BootsBastler.org*, a German online community for people who love “messing about in boats.” Their BoatHowTo courses on marine electrical systems complement the hands-on instruction students receive in the Marine Systems program at NWSWB in a format available to students anytime and anywhere they have access to a laptop or smart phone. ■

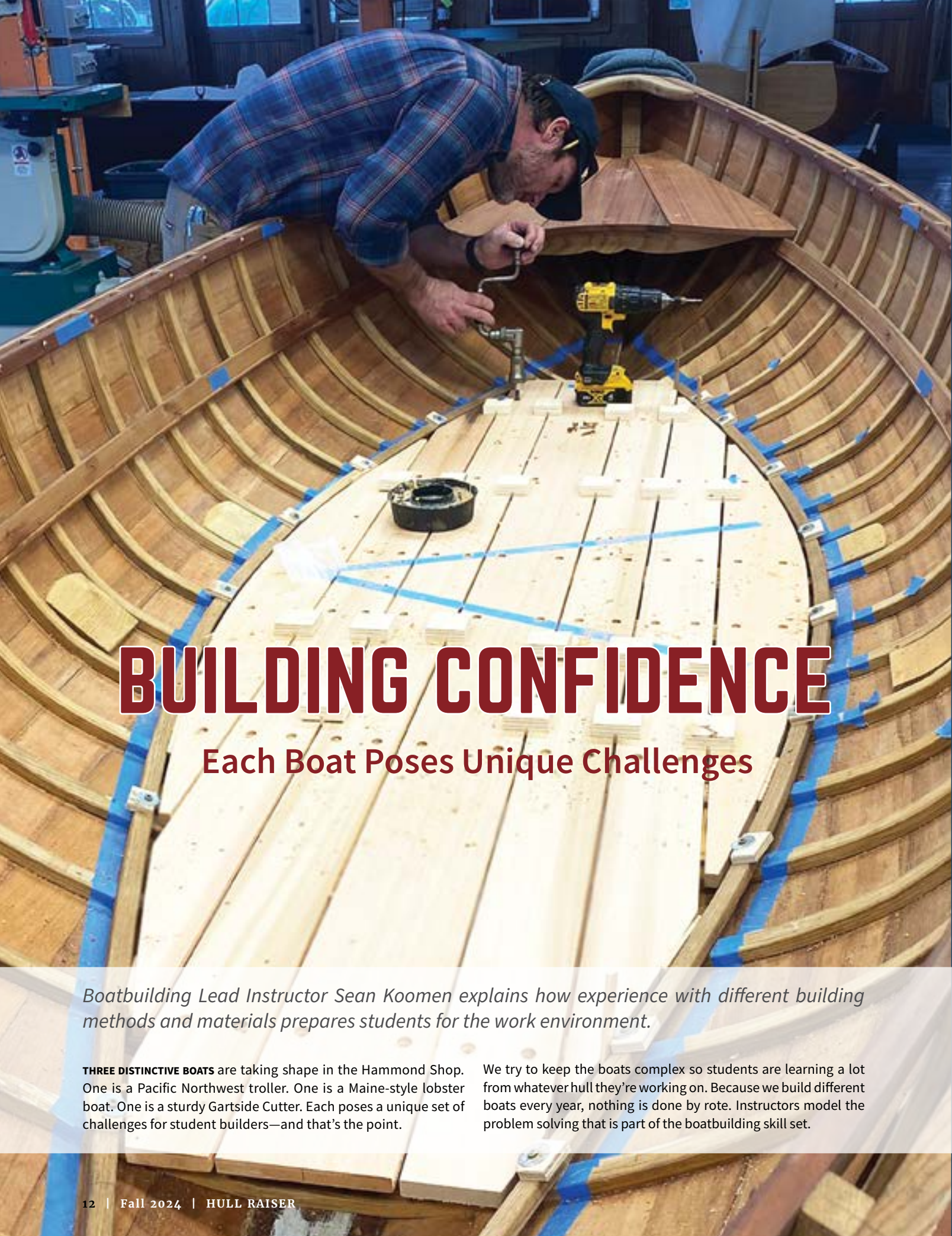
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BUILDING CONFIDENCE

Each Boat Poses Unique Challenges

Boatbuilding Lead Instructor Sean Koomen explains how experience with different building methods and materials prepares students for the work environment.

THREE DISTINCTIVE BOATS are taking shape in the Hammond Shop. One is a Pacific Northwest troller. One is a Maine-style lobster boat. One is a sturdy Gartside Cutter. Each poses a unique set of challenges for student builders—and that's the point.

We try to keep the boats complex so students are learning a lot from whatever hull they're working on. Because we build different boats every year, nothing is done by rote. Instructors model the problem solving that is part of the boatbuilding skill set.

Photo left: Students get hands-on experience working on multiple boats in different shops. Here, student Orrin Webb puts the finishing touches on the floorboards for a newly built Maine peapod.



1. The Boatbuilding program prioritizes commissions that best fit our curriculum. The 24' troller project has offered just that—a multi-year project that begins with lofting and includes every part of the boatbuilding and marine systems curriculum. 2. This 30' lobster boat is a modified version of D'Anna, a Doug Hyland design. Similar to the troller project, this type of commission offers the students a complete learning experience: a traditional, plank-on-frame hull, plywood and fiberglass deck, cockpit and deck superstructure, and a complete marine systems package. 3. This 18' Paul Gartside designed cutter provides an immense amount of challenge for both students and boatbuilding instructors. And that's the way we like it—complex problem solving! This year, the project offered most of the boatbuilding students the opportunity to learn and practice complex carvel planking. 4. One of the best things about Boat School is being a part of the launch when a project is completed. Here, the community came out for the launch of *Fern*, a newly built Nordic folkboat.

Pacific Northwest Troller

The troller we're building is a custom design by Madison Boatworks for a local client. (See *Launching Careers* on page 16 for an interview with the owners.) It's a 24' Pacific Northwest fishery-style pocket cruiser. This is a typical larger boat for us—with a complex hull shape and complex pilot house and cabin up top. It's got a purpleheart stern post, keel, and stem and red cedar on white oak frames. The bulwark up front came out

beautifully, steam-bent fir capped off with sapele. The cabin house is wrapped mahogany over a plywood core.

This combination of materials and building methods is becoming typical of the program. We used to have a strictly traditional boatbuilding program and a composite boatbuilding program, but we brought them together, because that's what boats are these days—a little bit of everything. It just makes sense. In this case, you've got a traditional hull, which is great for teaching

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Boatbuilding student Jordan McIntosh fitting the engine beds for the lobster boat's 110hp Yanmar engine.

skills such as patterning and spiling and hanging planks. For the house, you've got the option of steam bending or forming solid timber or using plywood with veneers on top.

Maine-Style Lobster Boat

On the other side of the shop, we've got a 30' lobster boat based off a Doug Hyland design. The hull shape is dramatically different from the troller. Everything below the waterline is as it

was designed by Doug, but we plumbed the stem and added a bit of beam up forward of the house to give it a little more shape. This one has red cedar planking on oak frames as well, a black locust backbone, and a laminated Doug fir deck structure. A fun fact is that we used some cedar and fir veneers from trees on my property in Port Townsend. As with the troller, it's wrapping together boatbuilding as it is today—some composite work, some laminated work, and some traditional plank-on-frame.

Gartside Cutter

A boat like this 18' cutter gives each student a chance to practice every part of the curriculum. It's the bread-and-butter of what we do—instilling in students the efficiency of building to the inside of everything: with molds inside longitudinals, then frames, lining off planking patterning, and putting planks on the boat. One of the fundamental things we teach students is that, whether you're bending a batten or bending a spline, you always try to bend around the outside of a curve. It's just easier to fair that way. It's really subtle, but we teach students to taper the longitudinals. So, these ribbands taper to about half their thickness from midship up forward. That's all part of the lofting. ■

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Twin Build

Students get a chance to compare and contrast construction techniques on two simultaneous builds happening in the Hammond Shop next year.

In January of 2025, our boatbuilding program will begin the construction of two 26' sailboats built side by side. Though “twins” in size and general appearance, the James Cutter (below left) will give students experience with traditional plank-on-frame construction. The Prothero Sloop (below right), will give the same group of students experience with cold molding. The James Cutter was designed by Jim Franken of Port Townsend and the Prothero Sloop was designed by Will Sturdy at the Brooklin Boat Yard to support this unique learning experience.

“Learning the traditional skills next to modern wood composite boatbuilding and modern craft is all you can hope to find in one place. It is all that you need to run with.”

—Eric Blake
VP, Brooklin Boat Yard

What’s Similar About the Builds?

They’ll both be built out of wood! Both hulls will be lofted and set up in similar styles. Each boat will be built upside down while the decks of both hulls are built simultaneously—right alongside each project. Below the waterline, the hulls will be very distinct from one another, but above the sheer line they will have very similar cabin house and cockpit assemblies.

What’s Different About the Builds?

The traditionally built James Cutter hull will consist of plank-on-frame construction. Essentially all the individual members of the hull will be held together by joinery and bronze fasteners.

The Prothero Sloop wood composite hull will use a much lighter construction technique called cold molding and will be built in the spirit of tradition style: a traditional looking topsides with



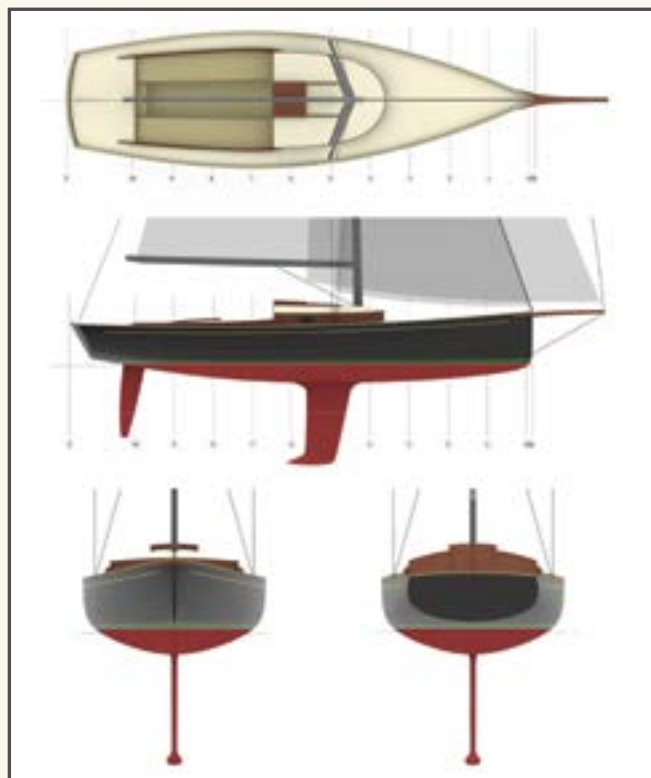
a more modern fin keel/spade rudder under water, yielding a higher performance sailboat matched with a higher performance rig.

What’s Valuable to Employers?

Everything! The project will challenge students to demonstrate competency in all these skill areas and the qualities most prized by future employers—a commitment to full participation in every phase of the project from heavy lifting and repetitive tasks to fine joinery, creative problem solving, and online research—whatever it takes for the team and project to be successful. When I worked at the Brooklin Boat Yard (after graduating from Boat School in 2004) I remember building different components of a boat in any little nook and cranny of space we could find, so this will be real-world experience. Students will see what the trade is like. It’s really good exposure for students to experience the properties of different materials—from solid chunks of wood to metals to bronze down to G10 and composites and two different rigs—spruce on one and carbon on the other. It’s super valuable, because that’s what students will see out in the work environment.

Lasting Impact on Curriculum

The build will take place in the 6,300-square-foot Hammond Shop, named for Boat School Chief Instructor Emeritus Jeff Hammond, who served as Chief Instructor for 35 years. A video recording of the twin build will capture the experience for a wider audience and future teaching purposes.



The James Cutter, left, and the Prothero Sloop, right, will offer next year’s boatbuilding students a rare opportunity to build two 26’ sailboats side-by-side while learning a wide range of construction techniques.



LAUNCHING CAREERS

The Beauty of a Boat School Commission

An interview with Chuck and Diana Hancock, owners of Diana Lee, a 24' troller designed by Jonathan Madison and built by students in the Boatbuilding and Marine Systems programs at the Northwest School of Wooden Building.

What is your background in the maritime community?

Chuck: I'm a lifelong, albeit intermittent, boater. I was a liveaboard on my own boat years ago. Professionally, I spent several years as the pattern-maker at Port Townsend Foundry and have continued earning my living working on boats, either for repair or modification, in the years since.

Diana: I married Chuck!

What inspired you to have this particular boat designed and built?

Chuck: The designer of the boat is Jonathan Madison. He posted a profile drawing of this boat on the discussion forum website hosted by *Wooden Boat Magazine*. This was at a time when Diana and I were researching the marketplace for a boat to buy. When I saw his drawing, I immediately thought, "That's it!" I showed it to Diana and she agreed. I reached out to Jonathan and expressed my interest. It turns out that he had already worked up a full set of construction plans. The rest is history.

What led to your decision to have it built at NWSWB?

Chuck: I became aware of the school during my time living in Port Townsend. The beautiful cutter *Bryony* was in port at the time and I learned that she was a product of the school. During my tenure at PT Foundry, we moved into the former Boat School location on

Otto Street. There were two boats still on the property, a chunky but beautiful lapstrake sailboat, and an exquisite little Bluenose-style sloop, both of which I greatly admired. The school would bring classes through the foundry to see the manufacturing process, and I made several trips to the school to see what it was all about. So, when it came time to have this boat built, there was no question—I wanted to have the school build it. I am extremely committed to the advocacy and advancement of the skilled manual trades of all kinds.

Diana: Having seen the various NWSWB boats around town, each being a work of art, and knowing how we both feel about the teaching aspect of this experience, it was a done deal!

To what extent have you been involved in the build?

Chuck: As a pattern-maker specializing in marine hardware, I opted to contribute such necessary bits to the project, so I supplied much of the significant bronze on the boat. Other than that, I let the school handle the build. After all, the learning experience is what it's all about. I did discuss and approve the materials for the boat with the project leads, relying mainly on their collective expertise and experience, although I did spec the odd thing here and there. The highlight for me has been seeing the care and quality of the build. It shows me how knowledgeable

continued on page 18

Photo: The Diana Lee provided a wide range of projects for students as they learned boatbuilding techniques.



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Top: The Diana Lee's cabin house is wrapped mahogany over a plywood core.

Bottom: A highlight of the build for owners Chuck and Diana Hancock has been seeing the quality of work produced by student builders under the guidance of Boat School instructors. Here, Instructor Leland Gibson and student Chip Gutsch batten out the guards for the Diana Lee.

and capable the instructors are and how effectively they elicit quality work from the students. It's a marvelous thing to see.

Diana: We don't live too far away and each time we come up to "visit" the boat, it's just so amazing to watch it come together! I've loved getting to meet the students and instructors, who've been doing such a great job. We feel so fortunate.

What woods are used for different parts of the boat?

Chuck: The boat has a purpleheart backbone and floor timbers,

steam-bent oak frames, and western red cedar planking. The decks and most structures above the sheer are plywood sheathed with glass and resin. The deck beams, knees, hatch frames, cap rails, and most other visible hardwoods are either sapele or similar mahogany substitute. The spars are, I believe, spruce or Doug fir.

What systems will be installed on the boat?

Chuck: Small and simple is my motto. To that end, we tried to keep things as streamlined as practical. Propulsion is a 30hp Beta Marine inboard diesel. Steering is hydraulic. Fresh water is fed to a small galley sink located just aft of the helm via a manual pump. The head is a composting unit by Airhead. Electronics consist of a VHF radio, a chartplotter unit with depth and speed via a hull-mounted transducer, and LED lighting for both interior and navigation. The battery bank—one house, one start—is lithium iron phosphate. For heat, as well as other aesthetic and practical uses, we have a wood burning stove from Navigator Stove Works.

Diana: So ... no shower, refrigerator, microwave, dishwasher, washing machine, or dryer ... LOL!

What do you like best about the boat?

Chuck: So far, what I like best is the fact that it seems to be fulfilling all of my requirements. A close second might be that, to my eyes, it's as beautiful as it looked on paper, if not more so.

Diana: It's going to take us on so many adventures ... I can't wait!

What is the significance of the boat's name?

Chuck: "Diana Lee" is my wife's name. Lovely and traditional.

Diana: 😊

What are your plans for the boat when the build is complete?

Chuck: Since we live in the heart of one of the world's great cruising grounds, our plans are to start local and work our way further afield as time allows. There are so many places we want to visit that are right in our back yard, so to speak. I've been a sailor most of my life and this is my first power boat, so I'm looking forward to the new experience.

Diana: It's going to be so hard to choose where to go first!

What advice do you have for others who are considering having a boat built at NWSWB?

Chuck: My advice would be—do it. You'll not just be gaining a great vessel, you'll be giving people a chance to gain experience and skills that are unfortunately rare in our world today.

Diana: And, in addition to gaining a beautiful new boat, you'll have met some incredible folks along the way! ■

BOATS FOR SALE

COLD-MOLDED SAILING GRANDY "SPORT"

Length: 13' 7" Beam: 4' 3"

Type: Row or Sail

Construction: Western red cedar planking on khaya veneer
Shown on the left in both photos.

TRADITIONAL ROWING & SAILING GRANDY

Length: 13' 7" Beam: 4' 3"

Type: Row or Sail

Construction: Western red cedar on oak frames
Shown on the right in both photos.

Background: The Grandy Boat Company was formerly located on Lake Union in Seattle and made many hundreds of boats both large and small during a long tenure there from the early 1920s to 1967. These two fine examples of Grandy design were built in tandem to give students the opportunity to learn two construction techniques simultaneously. For the "Sport" cold-molded composite version, students built a red cedar strip planked hull with khaya veneer, creating a versatile, light, and strong recreational craft. The traditional lapstrake skiff was built from Western red cedar planks and oak frames—a thing of beauty.



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The advertisement features a background image of a wooden building with a thatched roof and a red boat on a dock. Three small inset photos show a boat on the water, people in a boat, and a sailboat on the water.

What's New on Water Street



Illustration painted by student C. Maria Melitto, Class of 2015

1 REDUCING BAY POLLUTION

To better buffer Port Townsend Bay from dirty stormwater flowing down through the campus from the Hadlock business district during heavy rains, the school has turned a hole in the ground where water gathers into a bioretention swale (like a raingarden). Thanks to expertise and financial support from W.S.U. Extension and the Jefferson Conservation District, invasive plants have been removed, the top foot of soil replaced with bioretention soil, and we'll soon be planting native plants (donated by the Conservation District). Project results? Cleaner water entering the Bay, recovery of native habitat that will attract native species, and reduced maintenance for school staff.

2 SEWER

The Boat School has been managing three different proprietary septic systems and five separate drain fields on our Port Hadlock campus. But county help is on the way! In August of 2024, the new Port Hadlock sewer line was installed throughout the Boat School campus. By August of 2025, all hookups are scheduled to be finalized and the system will be up and running. Jefferson County has been managing the project carefully—keeping things on schedule and on budget, and even picking up the tab for organizations like the Boat School involved in the first phase of implementation.

3 SOLAR

In 2022, the Boat School installed 164 solar panels on the Hammond and Marine Systems buildings, resulting in dramatic cost savings (\$9,000 per year in power cost, with a total savings of \$200,000 over the lifetime of the system) and environmental benefits (the equivalent of planting 18,532 trees or driving 71,558 fewer miles). The school is now installing solar panels on our two waterfront buildings. The installation of 81 Silfab SIL-500HM 500-watt solar modules and 8 Tesla Powerwall 3 Battery/Inverter units is expected to generate additional savings each year.

4 EV CHARGING STATIONS

To support the growing number of students, staff, and visitors who drive electric vehicles—and thanks to a grant from the Department of Commerce—the school will be installing a number of electrical vehicle charging stations on the campus. Operations Manager Jim Argites is collaborating with others in Jefferson County to figure out the best way to move forward with this evolving technology.

5 ON-CAMPUS STUDENT HOUSING

The seven cottages we recently acquired for student housing are now fully occupied by students. The Boat School continues to make repairs and improvements. The first cabin to be named is the Blanchard Cottage. The donor wants students to recognize the significance of the Blanchard Boatyard—one of Seattle's leading boatyards for over 60 years—and imagine its role in the unfolding story of Northwest boatbuilding. Naming rights are still available for a few of the cottages to offset acquisition costs. Contact Betsy Davis (betsy@nswsb.edu) for more information.

What Will Your Legacy Be?

“There comes a time in life when you start to think, ‘What will my legacy be?’ says Peter Riess. “I have certainly reached that point, and have started giving it much thought. In beginning the process, I look back at my life and think, ‘What was my biggest passion?’ For anyone who knows me, the answer is simple: wooden boats. Restoration, operation, and the joy of sharing them has been my biggest passion. Having grown up on wooden boats and owning them myself for the last 35 years, I have seen the wonderment in people’s eyes when they step aboard and see the warmth of a wooden vessel that you don’t see in any other boats. I constantly hear that old saw, ‘They don’t build them like this anymore.’ While it’s true that building and maintaining wooden boats is thought of as a forgotten art, that is simply not true. Places like NWSWB are committed to the education of men and women who have the desire to keep this important trade flourishing. Helping those fine folks continue in their passion to build and maintain boats is my chosen legacy. I would encourage others with the same passion as mine to consider this type of endowment as their way of continuing their legacy. This can be done in your name, someone else’s name who you wish to honor, or anonymously, whichever you are most comfortable with. Making a Legacy Gift brings a peace of mind that your wishes will be carried out just as you wanted so that others can share in your passion.”



Support for Military Veterans

The Boat School is committed to providing a supportive environment for military veterans on campus and in the community. We are grateful to Scott Clifton (photo left), a graduate of the 2023 Marine Systems program and a student in the 2024 Boatbuilding program, for serving as this year’s VetCorps member. “NWSWB is a fantastic place for veterans who are seeking or transitioning to a new career. It’s been a pleasure to support our veteran-connected students, staff, and members of the community.”

Save the Dates!

SEATTLE SHINDIG
March 20, 2025



ADMIT ONE
and bring a friend!

Seattle Shindig
March 20, 2025 (Thursday)
Seattle Yacht Club
\$\$ for scholarships

**HULL RAISER
BOAT SCHOOL BASH**
May 10, 2025



ADMIT ONE
and bring a friend!

**Hull Raiser
Boat School Bash**
May 10, 2025 (Saturday)
Boat School Campus
\$\$ helps keep tuition costs down

Alumni Spotlight



Recent graduate Laura Chapman is already the number-one mechanic at a marine service shop in Seattle. “What is most interesting about the job,” says Laura, “is that every day is different. Even if it’s the third annual engine service in a week, it’s still a different engine, a different boat, and it has its own challenges. If you want to do this kind of work, the Boat School will get you ready. You’re not going to know everything when you graduate, but you’ll know what you need to get started and the right questions to ask. The work I do now is hard, but I’m proud of myself when I get better at it, and I do every day because there’s always more to learn.”

Laura Chapman • Marine Systems Class of 2023 • Mechanic • Monkey Fist Marine

Josh was hired at Haven Boatworks right out of Boat School as an entry-level carpenter/shipwright. “The work varies from boat to boat,” he says, “but includes general repair and restoration on anything wooden.” Most recently, he was part of a small team installing teak overlay planking on the 66’ cold-molded Italian sailing yacht *Pegasus*. “I love solving problems, and every boat comes with a different set of problems to solve. Being very new to this profession, I like to ask the more seasoned shipwrights how they would approach certain projects and how long they think it might take them to complete it so I can challenge myself to be as good or better over time.”



Josh Tipton • Boatbuilding Class of 2023 • Carpenter/Shipwright • Haven Boatworks



Pete has been around boats his entire life. He started as a teenager at a local marina in New Jersey where he learned finishing work. This planted the seed to attend NWSWB at age 18. “I can’t explain how valuable this experience was and I recommend it to any young person who wants to get into the field,” he says. He later spent 16 years working at a third-generation family-owned boatyard, where he refined his skills in all areas of boatbuilding. “Some of the guys had worked there for 50 plus years. Learning from people with that much experience is super valuable, you learn the right way and the fast way, because if you can’t do it fast you can’t run a successful business.” In 2013 he started Schell Custom Boat Works, which works on all phases of wooden boatbuilding and restoration, along with rigging, spar building, fiberglass work, and much more.

Pete Schell • Boatbuilding Class of 1995 • Owner • Schell Custom Boat Works

Inspired by Greg Kaolin, an avid sailor, passionate boat enthusiast, and Boat School alum, fellow classmates from the 1997 NWSWB class set up a boatbuilding scholarship in Greg’s name for an aspiring student who is intent on pursuing a career in the marine trades, yet needs a helping hand with expenses. Despite facing the challenges of multiple sclerosis, Greg wholeheartedly supports this scholarship initiative. Huge thanks to the co-conspirators from his NWSWB class for recognizing Greg’s kindness, talent, and courage with a scholarship that will provide a boatbuilding student with a transformational hands-on education.



Greg Kaolin • Class of 1997 • Classmate, friend, and scholarship inspiration

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