

The Newsletter of the Port of Pittsburgh Commission

2023 Vol 2 (issue #13)

EXECUTIVE DIRECTOR'S MESSAGE



It's Springtime, and that means we are heading into boating season once again. We always encourage everyone to be safe on the water and to educate themselves about boating safety through free safe boating courses that are available through the PA Fish & Boat Commission or by attending meetings of the Pittsburgh Safe Boating Council (details about joining are in the newsletter).

The PPC has been busy this quarter. Please check out our articles on the USCG Pittsburgh's Industry Day, the Inland Waterways User Board meeting which was held in Pittsburgh, and our 3 Rivers / 3 Questions interview with PA Fish & Boat Commission's executive director Tim Schaeffer. Lastly, the PPC's Small Grants Program is now open, and check out our latest cybersecurity update.

Stay safe, enjoy the Spring, and our rivers!

Mary Ann Bucci Executive Director, Port of Pittsburgh Commission

Pittsburgh Proud To Host IWUB Meeting

The Inland Waterways Users Board (IWUB) held their 99th meeting on Thursday, April 13 at the Heinz History Center in Pittsburgh, PA. The US-ACE Pittsburgh District's Col. Adam Czekanski and his staff served as hosts for the event. Also in attendance were local representatives of various waterways industries, as well as the Port of Pittsburgh Commission staff. Featured participants included Michael Connor, Assistant Secretary of the Army-Civil Works, Major General Butch Graham, Deputy Commanding General for Civil and Emergency Operations, and Mark Pointon, designated federal officer for the IWUB, who delivered the keynote address on the Financial Report for the Inland Waterways Trust Fund.



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3 RIVERS, 3 QUESTIONS

with *Tim Schaeffer*

PA Fish and Boat Commission



Tim Schaeffer is the Executive Director of the PA Fish & Boat Commission.

1. Spring is obviously a busy time for the PA Fish and Boat Commission. Would you give an overview of what this time of year involves for your agency and officers?

The transition from winter to spring can be dramatic in Pennsylvania, and as the warmer weather arrives, anglers and boaters flock to the water. Our trout season, which began on April 1, is enjoyed by several hundred thousand people, especially during April and May, and we work hard year-round to deliver the world-class stocked trout fishing that anglers have come to expect on hundreds of streams and lakes. As the water begins to warm up, our Walleye, catfish, and Musky fisheries become very active, and attract a whole new group of anglers and boaters. All of this participation requires education and law enforcement efforts to protect our natural resources and keep anglers and boaters safe. We really emphasize boater safety during National Safe Boating Week from May 20-26.

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IWUB continued

The meeting followed a tour of the Charleroi Locks and Dam project for IWUB members the day prior. Attendees learned about the overall Lower Monongahela River navigation project and the new river chamber construction at Charleroi, which is in its final phase after nearly twenty years of construction. Members also listened to a briefing about the overall Upper Ohio navigation project and its first major construction contract for the new Montgomery lock. It is important to note that cost increases which require additional funding continue to be issues at Charleroi and for the Upper Ohio projects.



The IWUB is an industry/federal advisory committee representing all fuel-taxed inland waterway systems within the United States. The navigation industry contributes to the Inland Waterways Trust Fund through fuel taxes paid by carriers who transport bulk commodities on the inland waterway system. The board makes recommendations to Congress and the Assistant Secretary of the Army for Civil Works on how best to invest federal and trust fund dollars to keep the most cost-effective, most environmentally-friendly, and safest form of transportation for bulk commodities resilient and reliable. ☺



US Coast Guard Industry Day

The USCG Marine Safety Unit Pittsburgh hosted an “Industry Day” on March 1st, at the Allegheny County Emergency Services Building in Coraopolis. Pittsburgh MSU Commander Eric Velez and his staff facilitated the event where various leaders, experts, and operators in the marine transportation and security industry met to discuss policies and issues impacting the field. Amongst the topics covered included; cybersecurity and assessment, Port Security Grant Program, HAZMAT Emergency Response, and TWIC/mariner credentialing. Nearly 100 stakeholders were in attendance for the day’s activities. The Port of Pittsburgh Commission was proud to help sponsor this event.

In addition, the commander of the Eighth Coast Guard District, Rear Admiral Richard Timme, paid a visit to recognize members for their devotion to duty and hard work,



discuss changes and issues facing the workforce, and listen to members concerns and questions.



3 Rivers, 3 Questions with Tim Schaeffer continued

2. The Pennsylvania Fish and Boat Commission’s mission is “to protect, conserve and enhance the Commonwealth’s aquatic resources and provide fishing and boating opportunities.” Tell about a few of your plans or goals that will help fulfill that mission?

Each of these goals is equally important within our mission, and we are working constantly to improve the scope and quality of our work. I mentioned our stocked trout program as a great recreational fishing opportunity, but we also have thousands of miles of wild trout streams across Pennsylvania that receive special protection. Through our Unassessed Waters program, we have surveyed thousands of waters to determine where wild trout are thriving, and we enact special regulations that conserve those treasured resources while still allowing anglers to enjoy fishing for wild trout in a sustainable way. In the Three Rivers, we have a historic project happening right now, with the reintroduction of Blue Catfish, which began last fall. These fish are native to the Ohio River system but were eradicated due to poor water quality. We’re really optimistic that this effort will result in one of Pennsylvania’s premier destination sport fisheries. We also work with partners statewide to enhance fish habitat in lakes and streams and create more public fishing and boating access to the water through our Boating Facility and Erie Access Improvement grant programs.

3. May is National Safe Boating Month, and the busy recreational boating season is about to begin. What advice do you have for safe boating and navigating our waterways?

The number one thing any boater can do is to always wear your life jacket. The statistics, both statewide and nationally, prove that life jackets save lives. Every year, 80% of victims who died while boating were not wearing a life jacket. For the past decade in Pennsylvania, we’ve had a mandatory life jacket requirement in place for most small boats including all canoes and kayaks, from November through April, when the water is very frigid, and we’re proud to say that action has helped cut the number of fatalities in half during the cold weather months. Boaters should also have a float plan to let someone know where and when they’ll be boating, become familiar with the waters where they’ll be boating in advance and especially be aware of any dams along their water trail, check the weather forecast for storms and high-water conditions, and never operate a boat while impaired. Boaters on the Three Rivers and statewide should be aware of our Operation Dry Water enhanced Boating Under the Influence patrols from July 1-3, during Independence Day weekend.



Black Lotus Malware: The Latest Cybersecurity Threat by Nate Turer

Happy springtime to all our friends in the Port of Pittsburgh community. This time of year brings us sunshine, robins, and a new generation malware. The newest on the block is known as Black Lotus, and has grabbed the attention of the cybersecurity and cybercriminal world. Black Lotus is different from most forms of malware your organization may face and is incredibly technical in nature. Links will be included at the end for your organization's IT or security staff to find more information, and this article will provide an overview to help keep all of our friends here in the Port of Pittsburgh in the loop of the world of cybersecurity.

What is Black Lotus, and how does it work?

Black Lotus is what is known as a "bootkit." A bootkit attacks the part of your system that connects the firmware of your physical hardware to the software of the operating system. It infects the master boot record or other parts of your machine responsible for "booting up," or starting the computer. This allows the malware to escape detection by being outside the range of the Windows' file system and affords it total access to the machine and its files. Black Lotus attacks even newer Windows systems, bypassing their secure boot protections. The malware attacks and lives in a part of your computer memory that users and the operating system (OS) do not usually have access to. Before Black Lotus there has been no "in the wild" malware capable of bypassing fully updated secure boot functionality, making this malware notable and a real threat. This malware can circumvent the following security features and software once it has infected a machine: Microsoft Defender, Bitlocker, and Hypervisor Protected Code Integrity. The malware also contains the ability to communicate with a command-and-control server, allowing attackers to download further malware to an affected machine.

How is Black Lotus spread?

Black Lotus is distributed like most other malware of its type. It requires an installer be placed on your machine. This may be done via a trojan, phishing, or a scam on the internet to convince a victim to download it. It will attempt to exploit vulnerabilities in the Windows OS to grant itself administrator access to install itself. Once installed, if the system is restarted it will "cement" itself within the computer and become active.

Detection and Removal of Black Lotus

Detection of Black Lotus infection may require the manual investigation and review of system files by an administrator or security staff. This will require the mounting of the EFI file partition, which is a part of your system's memory that

contains critical files used for starting the computer's operating system. This file set is usually unavailable for access. Once the EFT file partition is mounted, the security team should inspect the Windows registry for modification of Hypervisor controlled software integrity, and attempt to disable Black Lotus via setting its enabled value to 0. The team should also check the Windows event log for the disabling of Windows Defender, categorized as event ID 7023. There are other methods provided by the manufacturer and security researchers including monitoring for outbound communications traffic as it tries to communicate with its command-and-control server on port 80. Cybersecurity and digital forensics tools are required for some of these detection methods. Updated Windows Defender security software may be able to detect components of Black Lotus, or post infection activity. It may alert you to the existence of an EFI bootloader. Windows Defender for Endpoint will attempt to block connections to known indicators associated with Black Lotus.

Removal of Black Lotus is difficult. Microsoft advises infected machines should be removed from your organization's network and reformatted, then given a clean installation of Windows, including a clean UFI partition.

Steps to take

While this all may sound doom and gloom in the computer world, all is not bad! Good cyber hygiene practices can protect you and your organization from infection. You should avoid the use of domain-wide, admin services accounts, as well as take steps to restrict local administrative privileges. The malware requires either physical access to your machine, or remote administrative privileges. Defense strategies to mitigate these may be effective in preventing infection. Ensure your antivirus software is up to date. If you have automatic updates enabled, this is taken care of for you. Enterprise-level networks should be sure to have detection build 383.1029.0 or later selected. If you believe your system is infected, speak to security staff immediately.

For the more technical-minded folks, Microsoft has the most in-depth information:

Removal of Microsoft 3rd party UEFI CA from a system's secure boot config should prevent Black Lotus from functioning. This does not eliminate the vulnerability. **Make sure it's not needed for your computer to boot first.**

Detailed technical information can be found at <https://github.com/hfire0x/UACME/issues/111>



FAY S&B USA CONSTRUCTION

Fay has worked on lock and dam projects on the Monongahela & Ohio Rivers for over 25 years.

Pittsburgh's Source for Safe and Innovative Inland Waterway Solutions



Montgomery Locks and Dam

Fay is currently replacing two lift gates and control systems at the **Montgomery Locks & Dam**.



Emsworth Locks and Dam

At the **Emsworth Locks & Dam**, Fay replaced seven vertical lift gates and placed underwater grout bags in front of the dam that will be utilized for scour protection.



Elizabeth Dam

Fay stabilized the **Elizabeth Dam** by installing steel sheet piling, placing stone protection downstream, filling the gap between the sheets and the dam with tremie concrete, and performing multiple repairs to the structure.

PITTSBURGH



Braddock Locks and Dam

At the **Braddock Locks and Dam**, Fay replaced the old system for lock chamber dewatering with a steel sill bulkhead.



Fay Facility in Brownsville

Fay has a 12-acre facility to moor and maintain its marine fleet on the Monongahela River in **Brownsville, PA**.



Charleoi Locks and Dam

Over the past two decades at the **Charleoi Locks & Dam**, Fay isolated, stabilized and demolished the river chamber. A new upstream protection cell was installed and the upper guard and river walls were then demolished. Six monoliths for the installation of the middle wall were then constructed. Fay also installed a new abutment protection wall along with placing underwater grout bags to protect the dam from scour.

Boating Safety by Nate Turer

April showers may bring May flowers, but it also brings the opening of the recreational boating season. We here at the Port of Pittsburgh Commission would love only one thing more than people enjoying the wonderful rivers we have in this city we call home, which is for them to enjoy them safely. The first step to safety on the rivers is to properly use a wearable personal flotation device, otherwise known as a life jacket! Choosing the perfect one for your next day on the river is important. Your life vest's functionality is diminished when it's improperly worn, so we know it looks cool but be sure to keep it always buckled up!

The first thing you should look for in any life vest is whether it is Coast Guard certified. This should be stamped on the interior of the vest, often on the portion that will be touching your back. If a life vest is not certified its effectiveness is not guaranteed and should be discarded in favor of one that is. Next, examine your vest. Check for punctures, tears, or other signs it may be damaged. As with an uncertified vest, a damaged one should be discarded. Ensure that your vest is rated for your size, height, and weight. If you are going to be enjoying the river in an unpowered vessel such as a kayak or canoe, a helmet should be worn which will protect you in the event your boat rolls over.

Infants and small children you are boating with should have life vests purpose-designed for them. Many may have a "pillow" as well as extra straps. These will help keep your child's face out of the water should they fall in, to prevent drowning. Be sure to follow the proper instructions from the manufacturer on how to use them.

Boating on our rivers is a fun, safe activity that is great for the whole family, but there are risks anytime you are near a body of water. Exercise caution whenever weather conditions are not ideal. If a person does fall overboard, and it occurs while the vessel is in motion, immediately shout "man overboard" as loud as you can. Reach out your arm and point at the person in the water, never taking your eyes or fingers off of them. Looking away can cause you to lose track of their exact location in the water. The operator of the boat should slow down and turn. If your boat is equipped with a maritime GPS unit, there should be a "man overboard" button. Press this, and it will mark on your GPS location at the spot where you pressed the button, assisting in your search should it be needed. Manuever the boat closely, but try not to accelerate with the bow directly pointed at the person in the water. When close, toss them a buoyant object. This may be a life ring, unused life jacket, or another device. Take care when helping them back into the boat that they do not pull you in. Render aid as needed. In the event of a drowning emergency, the following steps should be followed immediately. First recognize that a person is drowning--it is often not like movies may show. It may be silent without much splashing. If a person appears to be



struggling to keep their mouth above water, does not respond when called to, or is slow and lethargic in the water, act immediately. They should be removed from the water in a way that does not endanger you. A drowning person may panic and struggle if assisted by a swimmer, endangering them in the process.

Do not attempt a direct water rescue unless you are trained or specifically equipped to do so. Throw them a floatation device, such as a life ring or unused life vest. Or offer them a rope, ladder, or other object to drag them to your vessel. If they are not moving, assistance may be needed to get them aboard. Call emergency services, 911 on your cell phone, and if your vessel is equipped with a marine radio VHF frequency 16 can be used to call for aid. Give CPR to the victim and begin rescue breathing, using an AED if possible. Return to shore and follow emergency service's instructions.

None of this should discourage you from enjoying our region's natural features. Countless people enjoy boating and enjoy the rivers in safety every year. With suitable precautions a day on the water is a safe, fun event. And we hope to see you out there soon!



PortPitt accepting applications for the 2023 Sen. James Ferlo Memorial Small Grants Program

The Port of Pittsburgh Commission's Small Grants Award Program has returned for a second year. The 2023 Senator James Ferlo Memorial Small Grants Program officially opened in Spring 2023, which has been named in honor of the late senator who instituted the program and served as its chairperson as a PPC commissioner.



The application period opened on Friday, April 28th, and will close on Friday, May 26th at 5pm. Individual applicants can apply for a maximum grant amount of \$10,000.

Eligible projects will seek to enhance the utilization of our waterways for the betterment of our communities. This will include: water stewardship, advocacy, outreach and education, safety and/or environmental measures, and increase awareness of our rivers and their impacts, and the use of new concepts and ideas.

Private and non-profit entities are eligible to apply. Projects which demonstrate additional resources, such as match-funding will receive further consideration.

The application is available on the PPC website: www.portpitt.com. For additional information, please contact Matt Pavlosky, Public Relations Manager: matt@portpitt.com or at (412) 480-0388.





PortPitt Staff Scott Harshman & Matt Pavlosky completed the PA Fish & Boat Commission's Boating Safety Education Certificate Course on Saturday, March 11 at the Carnegie Science Center.

If you would like to take the course online, go to:
<https://www.boat-ed.com/pennsylvania/>



A student spins the Port of Pittsburgh Commission's Prize Wheel at the Carnegie Science Center's H2Oh! River and Earth Day Celebration on April 22, 2023.



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NATIONAL SAFE BOATING WEEK

MAY 20-26, 2023

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SAFE BOATING COUNCIL!

To inquire about joining, contact
Scott: scott@portpitt.com



OUR PORTPITT TEAM

MARY ANN BUCCI
Executive
Director



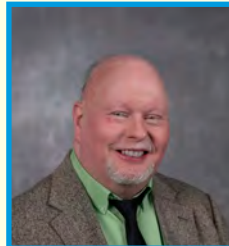
SCOTT HARSHMAN
Marketing &
Program Manager



MATT PAVLOSKY
Public Relations
Manager



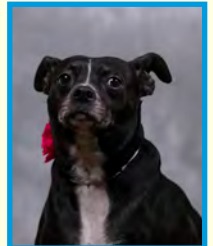
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Logistics &
Cybersecurity



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GOOD THINGS FLOW FROM HERE

