

2021 COMBINED CHLORINATED AND BIOREMEDIATION CONFERENCE CALL FOR ABSTRACTS

NEW and updated abstracts due August 31, 2020

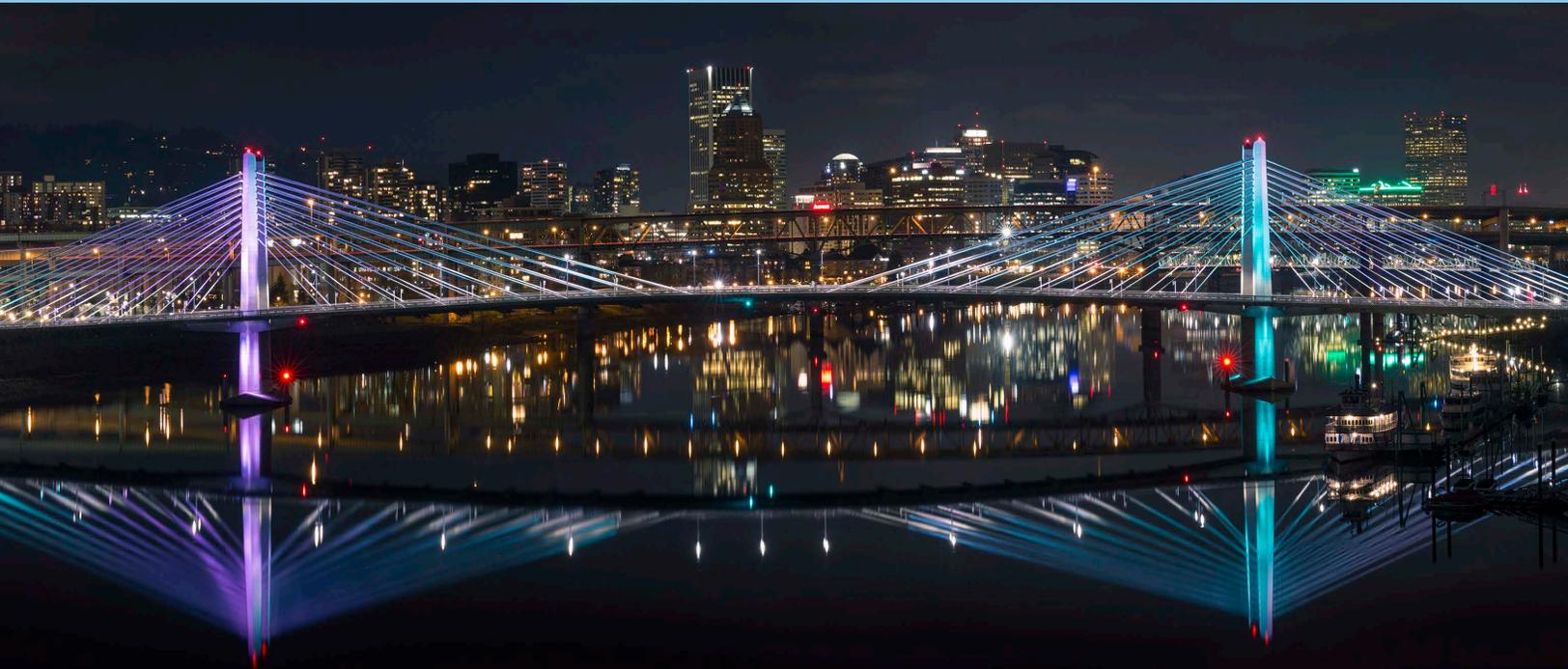


battelle.org/chlorcon | #2021ChlorBio

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The global COVID-19 pandemic resulted in the postponement of the *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, originally scheduled for May 31-June 4, 2020, in Portland, Oregon. The rescheduled event will be combined with the *International Symposium on Bioremediation and Sustainable Environmental Technologies*, originally scheduled for May 17-20, 2021, in Miami, Florida.

The 2021 Combined Chlorinated and Bioremediation Conference will be held June 27-July 1, 2021, in Portland Oregon.



The 2021 combined Conference will be another outstanding opportunity for the environmental remediation community to meet, learn, and network. Conference participants include representatives from academia, state and federal government agencies, consulting firms, research organizations, and industries from around the world.

The technical scope of the combined Conference will provide a comprehensive update on recent developments and innovations to assess, remediate, and manage contaminated sites using a wide range of biological, chemical, and physical tools and technologies.

The technical program will be conducted Monday–Thursday, June 28–July 1. Short courses will be conducted on Sunday, June 27, and Tuesday afternoon, June 29. The breadth and depth of the technical program, combined with daily opportunities to meet and engage with other environmental professionals at meals and receptions, will make participation in the Conference a valuable investment for you and your organization.

The Preliminary Program brochure will be available on the **Conference website** in February 2021.

CONFERENCE SPONSORS

Battelle gratefully acknowledges the financial commitment and support of the following organizations. Information about Conference Sponsorship can be found on the Conference website on the **Sponsors & Exhibitors** page.

The Conference is organized and presented by Battelle.

Battelle's environmental engineers, scientists and professionals offer focused expertise to government and industrial clients in the U.S. and abroad. Combining sound science and engineering solutions with creative management strategies, Battelle works with clients to develop innovative, sustainable and cost-effective solutions to complex problems in site characterization, assessment, monitoring, remediation, restoration, and management.

Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio, since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries.

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TECHNICAL PROGRAM SCOPE

Examples of anticipated presentation topics are listed below; use the numerical codes to reference topics you believe are the best match for your proposed presentation. **This is neither a final nor comprehensive list. Abstracts are welcome on all relevant topics.**

Remediation Technology Innovations

- 1a. Abiotic and In Situ Biogeochemical Processes
- 1b. Advances in Amendment Formulations
- 1c. Application of Zero Valent Iron: Case Studies and Lessons Learned
- 1d. Best Practices and Lessons Learned for Permeable Reactive Barriers
- 1e. Combined Remedies and Treatment Trains
- 1f. Electroenhanced Technologies
- 1g. Emerging Remediation Technologies
- 1h. Heat-Enhanced Remediation
- 1i. Horizontal Wells
- 1j. In Situ Chemical Oxidation
- 1k. Injectable Activated Carbon Amendments: Lessons Learned and Best Practices
- 1l. Innovations in ZVI Amendment Formulations and Applications
- 1m. Innovative and Optimized Amendment Delivery and Monitoring Methods
- 1n. Lessons Learned with In Situ Technologies
- 1o. Monitored Natural Attenuation
- 1p. Monitoring and Assessment During and After Thermal Treatment
- 1q. New Developments, Formulations, and Innovations in Microorganisms and Electron Donors for Biodegradation
- 1r. Permeability Enhancements for In Situ Technologies
- 1s. Thermal Remediation Design & Best Practices
- 1t. Thermal Remediation: Case Studies and Lessons Learned

Assessing Remediation Effectiveness

- 2a. Advances in Monitoring and Optimization Techniques
- 2b. Advances in Monitoring Injection Effectiveness (e.g., Radius of Influence)
- 2c. Applications of Mass Flux and Mass Discharge for Remedial Design/Optimization
- 2d. Assessing Performance and Cost of Remedies
- 2e. Assessing Remediation Effectiveness: Performance Assessment of In Situ Activated Carbon-Based Amendments
- 2f. Big Data, Data Mining, and Portfolio Optimization
- 2g. Compound-Specific Isotope Analysis
- 2h. Estimating Cleanup Timeframes and Modeling to Support Site Closure
- 2i. Modeling and Monitoring Approaches to Improve Remedy Design and Implementation
- 2j. Optimizing Remedial Systems
- 2k. Setting Cleanup Goal End Points: When Are We Done?

Green and Sustainable Remediation

- 3a. GSR Best Practices and Case Studies
- 3b. GSR Metrics and Sustainable Remediation Assessment Tools
- 3c. Impact of Climate Change and Sea Level Rise on Remediation Sites
- 3d. Incorporating Sustainability Considerations into Remediation Projects

Addressing Challenging Site Conditions

- 4a. Adaptive Site Management
- 4b. Landfill Assessment and Remediation

- 4c. Large, Dilute and Commingled Plume Case Studies
- 4d. Lessons Learned in DNAPL Source Zone Remediation
- 4e. Low-Permeability Zone Challenges and Case Studies
- 4f. Surface Water/Groundwater Interactions

Fractured Rock and Complex Geology

- 5a. Challenges and Considerations to Evaluate Technical Impracticability at Fractured Rock Sites
- 5b. Depositional Environments and Stratigraphic Considerations for Remediation
- 5c. Managing Remediation in Fractured Rock and Karst Aquifers
- 5d. Process-Based Conceptual Site Models (CSMs) for Informing Remediation
- 5e. Remediation Geology: Geology-Focused Approach to Remediation Site Management

Petroleum and Heavy Hydrocarbon Site Strategies

- 6a. Biodegradation and Remediation of Crude Oil and Petroleum Hydrocarbons in Cold Regions
- 6b. Characterization and Remediation of Heavy Hydrocarbons
- 6c. In Situ Remediation of Petroleum Hydrocarbons
- 6d. LNAPL Recovery/Remediation Technology Transitions
- 6e. Manufactured Gas Plants
- 6f. Natural Source Zone Depletion
- 6g. Surfactant-Enhanced Remediation
- 6h. TPH Risk Assessment and Metabolites
- 6i. Understanding and Managing Risks at LNAPL Sites

Per- and Polyfluorinated Alkyl Substances (PFAS)

- 7a. Advances in the Analysis of PFAS
- 7b. Ex Situ PFAS Treatment Approaches
- 7c. In Situ PFAS Treatment Approaches
- 7d. PFAS and Bugs: The Search Continues
- 7e. PFAS Fate and Transport
- 7f. PFAS Program Management in a Rapidly Changing Regulatory Environment
- 7g. PFAS Risk Assessment and Toxicity
- 7h. PFAS Site Characterization
- 7i. PFAS Source and Forensic Considerations
- 7j. PFAS: Water Treatment Case Studies
- 7k. Pump and Treat for PFAS Remediation

Metals

- 8a. Chemical, Physical and Biological Remediation of Metals
- 8b. Managing Chromium-Contaminated Sites
- 8c. Mining and Uranium Site Restoration
- 8d. Precipitation and Stabilization of Metals

Vapor Intrusion

- 9a. Advances in Vapor Intrusion Investigations
- 9b. Chlorinated Compound Vapor Intrusion
- 9c. Vapor Intrusion Mitigation and Effectiveness
- 9d. Vapor Intrusion Preferential Pathways
- 9e. Vapor Intrusion Risk Assessment and Site Management

Characterization, Fate, and Transport

- 10a. Advanced Investigation Tools and Techniques
- 10b. Conceptual Site Models
- 10c. Groundwater Modeling Advancements
- 10d. High-Resolution Site Characterization (HRSC)
- 10e. Improvements in Site Data Collection, Data Management, and Data Visualization
- 10f. Incremental Sampling for Characterization
- 10g. Risk Assessment Practices and Applications

Advanced Diagnostic Tools

- 11a. Environmental Forensics
- 11b. In Situ Chemical Reduction
- 11c. Unmanned Systems for Remote Monitoring and Site Assessments
- 11d. Use of Advanced Molecular Tools for Site Assessment or Remedy Performance
- 11e. Using Omic Approaches to Optimize Site Remediation

Technology Transfer and Stakeholder Communications

- 12a. Innovative Strategies and Approaches to Expedite Site Closure
- 12b. Practice of Risk Communication and Stakeholder Engagement
- 12c. Technology Transfer and Decision Analysis Tools for Environmental Restoration Applications

International Environmental Remediation Markets

- 13a. International Regulatory Issues and Challenges

Innovations and Applications of Bioremediation Technologies

- 14a. Advances in Understanding Bioremediation: Processes and Novel Assessment Methods
- 14b. Aerobic and Anaerobic Biodegradation of Contaminants
- 14c. Best Practices for Enhanced Bioremediation: Case Studies and Lessons Learned
- 14d. Biobarriers, Applications and Lessons Learned
- 14e. Biodegradation in Complex Geological Settings
- 14f. Enhanced Methods for Biodegradation of Organic and Inorganic Contaminants
- 14g. Impacts of Mixed Contaminants on Biodegradation
- 14h. Phytoremediation/Mycoremediation
- 14i. Strategies for Application and Optimization of Bioremediation Technologies

Emerging Contaminants

- 15a. 1,4-Dioxane Remediation Challenges
- 15b. Advances in 1,4-Dioxane Biological Treatment Technologies
- 15c. Explosives, Perchlorate
- 15d. Other Emerging Contaminants
- 15e. Micro- and Nanoplastics: Characterization, Degradation, and Impacts

PROGRAM COMMITTEE

Conference Chairs

Steve Rosansky, PE (Battelle)
Rick Wice, PG (Battelle)

Technical Steering Committee

David Becker, PG (USACE)
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Kate Kucharzyk, Ph.D. (Battelle)
Michael Meyer, MS, RG, LEG, LHG (Battelle)
Charles Newell, Ph.D., PE (GSI Environmental)
Patty Reyes (ITRC)
John Simon (Nathan Associates)

ABSTRACT PREPARATION AND SUBMITTAL

NEW and Updated abstracts due August 31, 2020.

The program will be developed through an intense, multilevel review by the Program Committee and the session chairs.

To ensure full opportunity for placement in the program, abstracts should be submitted by August 31, 2020. The updated Technical Scope seen on page 4 incorporates topic areas from the Bioremediation Symposium. Please note that topic codes and session names have changed.

Previously Accepted Platform and Poster Presenters.

The technical program will be re-evaluated, **all previously accepted abstracts are not guaranteed placement** in the updated program. Please review the notification you received from the Conference Office on May 12, 2020, with instructions on your required response for your previously accepted abstract.

Format/Content/Required Subheadings. Format requirements and an example abstract are available on the Conference website on the **Abstract Specifications and Submittal** page. Abstracts must be organized under the following required subheadings—**Background/Objectives, Approach/ Activities, and Results/ Lessons Learned.**

Submittal. Abstracts are to be submitted only online via the link on the **Abstract Specifications and Submittal** page. Abstracts submitted by email will not be accepted for review.

Session placement and format preference (platform or poster) may be entered on the submittal form but are not guaranteed. Final decisions on session placement and format will be based on the best overall design of the Conference program.

Notification of Acceptance/Placement. In late December 2020, the corresponding/presenting author of each abstract will be notified by email of the placement decision.

Inquiries. Questions about abstract preparation and submittal should be addressed to chlorcon@battelle.org.

LEARNING LAB PROPOSALS

NEW and Updated Learning Lab Proposals due October 16, 2020.

Generate exposure, demonstrate use, or solicit feedback for a technology, software, prototype, or tool in a 25-minute, hands-on demonstration, or user experience, in the Learning Lab, located in the Exhibit Hall.

Previously Accepted Learning Lab Demonstrations.

The technical program will be re-evaluated, **all previously accepted Learning Lab demonstrations are not guaranteed placement** in the updated program. Points-of-Contact will be contacted by the Conference Office to update descriptions, if desired.

The link to the online **Learning Lab Proposal Form** can be found on the Conference website on the **Learning Lab** page.

Learning Lab Sponsors. We appreciate the participation of **Burns & McDonnell** and **Ramboll**, whose contributions will be applied toward the overall cost of the Learning Lab experience.



burnsmcd.com



ramboll.com

SHORT COURSE PROPOSALS

NEW and Updated Short Course Proposals due October 16, 2020.

Courses on topics within the general scope of the Conference will be offered on Sunday, June 27, and Tuesday afternoon, June 29.

Proposals will be evaluated, and instructors will be notified of the results in mid-November 2020. If your course is selected, you will receive information about scheduling and how course registrations will be handled.

Previously Accepted Short Courses. The technical program will be re-evaluated, **all previously accepted Short Courses are not guaranteed placement** in the updated program. Points-of-Contact will be contacted by the Conference Office to update descriptions, if desired.

The link to the online **Short Course Proposal Form** can be found on the Conference website on the **Short Courses** page.

Education Sponsor. We appreciate the participation of **ITRC** and their commitment to education for the benefit of the remediation community as a whole.



itrcweb.org

STUDENT PARTICIPATION

Students are encouraged to attend the Conference and will find participation valuable to their career development. In addition to the technical information gained by attending presentations and visiting exhibits, students can meet and talk with environmental professionals representing a wide range of work experience and employers.

Student Paper Competition. Congratulations to the Student Paper winners seen to the right.

The primary author of each winning paper will receive a complimentary, nontransferable registration and a cash award, which will provide substantial assistance with travel and hotel costs.

Student Paper Winners

Nicholas W. Johnson (University of California/USA)
Improved Adsorbent Performance for the Treatment of 1,4-Dioxane-impacted Water by Bioaugmentation and Bioregeneration

Hao Wang (Clemson University/USA)
Naturally and Biologically-Mediated Abiotic Transformation of TCE in Low Permeability Formations

Congratulations!

Reduced Registration Rate. The student registration rate provides full access to technical sessions, exhibits, and meals. Full-time students are eligible; documentation of current enrollment is required.

Student Events. In addition to the Student Paper Competition, special events to enhance students' and young professionals' career development and networking opportunities will be conducted. Additional details will be announced as they become available.

Student Events Sponsors. We appreciate the participation of **Aspect Consulting**, **Haley & Aldrich**, **Odin Construction Solutions**, and **Tetra Tech, Inc.**, whose contributions will be applied toward the overall cost of the Student Events.



Play is vital to creativity, learning readiness, team work and problem solving--all 21st century skills needed to solve the world's pressing challenges of the future. Yet play is disappearing at home, in schools and in communities, disproportionately affecting children living in poverty.

GOAL: \$124,620 | Still Needed: \$85,710

KABOOM! (kaboom.org) is the national non-profit that works to ensure every kid and all communities have equitable access to quality, imaginative playspaces, no matter the color of their skin, or zip code.

Our goal is to raise funds to build a playground in the Portland area as part of the 2021 Combined Conference. Individual and corporate donations of any amount are welcome. The playground will be built by a team of volunteers made up of Conference attendees in just a few hours. Battelle is proud to support the mission of KaBOOM! and has donated 25% of the goal amount. We encourage you to join us!

Donations are tax-deductible, within the guidelines of U.S. law. Please consider checking the appropriate box on the donation page to cover the online transaction fee so 100% of your donation goes to KaBOOM! Any funds collected in excess of the total financial goal amount will be retained by KaBOOM! in support of the organization's mission.



[Donate Now](#)

EXHIBITS

All Exhibits will be displayed in the Oregon Convention Center (777 NE Martin Luther King Jr., Blvd., Portland, OR 97232).

Organizations that provide environmental assessment, remediation, and management services and products are invited to exhibit. Daily continental breakfasts, morning and afternoon beverage breaks, lunch seating, evening receptions, poster displays and presentations, and the Learning Lab, will be in the Exhibit Hall.

Additional booth spaces have been added to accommodate Bioremediation Symposium exhibitors.

Booth Selection. Exhibits opened for general sale July 24, 2019. Links to the Exhibit Hall floor plan, Exhibitor terms and conditions, and online application booth application form are available on the Conference website on the **Sponsors & Exhibitors** page. Booths can be reserved only online, and space is assigned on a first-come/first-served basis, according to receipt of completed application and payment.

Booth Fees.

Booth Size	Paid by Oct. 28, 2020	Paid after Oct. 28, 2020
NEW! Gov./Non-Profit* 10'x10'	\$1,000	\$1,300
Standard Inline 10'x10'	\$3,695	\$3,995
Standard Inline 10'x20' (Endcaps not permitted)	\$6,995	\$7,295
20'x 20' Island	\$12,995	\$13,295

*LIMITED QUANTITY AVAILABLE at the Govt./Non-Profit Rate (5 booth spaces; first-come, first-served)
Only one 10'x10' booth per gov./non-profit organization can be purchased at this rate. Additional booths will be charged the standard inline 10'x10' rate and premium fees as seen below apply to applicable booth spaces as indicated on the Exhibit Hall floor plan. Booth space will not be held or reserved specifically for this rate and booth space may sell out at the regular rates prior to 5 spaces being purchased at this rate.

Premium/Corner Booths. Booths located in premium (high traffic) areas and corner booths are subject to the additional fees:

(1) Corner=\$100, (2) Premium=\$200, (3) Premium + Corner=\$300.

Exhibit Inquiries. Contact Susie Warner at 301-670-4990 or send an email to chlorinated2020@scgcorp.com.

Closing Reception Sponsors. We appreciate the participation of **Ivey International, Inc.**, **Landau Associates**, and **Yellow Jacket Drilling Services**, whose contributions will be applied toward the Closing Reception.



iveyinternational.com



landauinc.com



yellowjacketdrilling.com

CONFERENCE REGISTRATION

A link to online technical program registration is available on the Conference website on the **Registration** page. Short course registration will be added to the website in December 2020.

The following technical program registration fees cover admission to all platform and poster sessions, exhibits, group lunches, receptions, daily continental breakfasts, and refreshment breaks.

	Paid by March 30, 2021	Paid after March 30, 2021
Industry	\$955	\$1025
Gov./Univ.*	\$730	\$830
Student**	\$440	\$490

*The university fee applies to full-time faculty and other teaching and research staff, including post-doctoral students. **The student fee is reserved for full-time students through Ph.D. candidates whose fees will be paid by their universities or who will not be reimbursed for out-of-pocket payment. Documentation of current enrollment is required.

Registration Terms & Conditions. The full list of registration terms and conditions can be found on the Conference website on the **Registration** page. Registration terms and conditions are subject to change without notice and are applicable to all levels of registration, including booth staff and Sponsor/Exhibitor waived and discounted registrants. No one under 18 years of age will be admitted to any Conference event unless registered as a student, valid student ID required at check-in.

Presenter Registration Requirement. Financial assistance is not available to support registration or other costs of attending the Conference. All presenting authors (platform and poster), session chairs, and panel participants are expected to register and pay the standard technical-program registration fees. Registration fees are the major source of funding for the Conference and a significant percentage of registrants will make presentations or chair sessions.

Payment. Payment is required to confirm registration and registration discounts apply only to payments received by the specified dates. Checks will be accepted for registrations made through March 30, 2021. Beginning April 1, 2021, payment can be made only by major credit card. Purchase orders will not be accepted at any time. Fees are not transferable to other Battelle Conferences. Conference information meant for attendees only (e.g., links to mobile apps, abstracts, and registration lists) will only be sent to individuals that have paid in full.

Cancellations & Refunds. Registration cancellations and refund requests must be received in writing on or before the "cancellation requested date" below to qualify. By registering for the Conference, you agree to the following registration cancellation refund policy, (1) cancellation requested on or before May 30, 2020=100% refund; (2) cancellation requested after May 30, 2020 to March 12, 2021=75% of the registration fee (less a \$50 service fee); (3) cancellation requested after March 12, 2021 to May 7, 2021=50% of the registration fee (less a \$50 service fee); (4) cancellation requested after May 7, 2021=no refunds.

CONFERENCE VENUE AND HOTELS

The Conference technical program will be conducted at the Oregon Convention Center (OCC) and room blocks will be available at the adjacent Hyatt Regency Portland and nearby Hotel Eastlund. Links to online reservations for both hotels will be added to the Conference website on the **Venue & Hotels** page in September 2020.

The OCC is a Leadership in Energy and Environmental Design (LEED®) Platinum certified facility and has held a long-standing leadership role in green building and environmental responsible business practices. It is the only convention center in the United States to earn a Level 4 APEX/ASTM certification, standards specifically created for green meetings and events. The OCC focuses on energy reduction, diverting materials away from landfills, watershed stewardship, indoor air quality, sustainable purchasing, and expanding community engagement.



Oregon Convention Center

The Conference only has group rate agreements with the Hyatt Regency Portland and Hotel Eastlund. We have not partnered with any travel agency or third-party for travel/hotel discounts. If you receive a call or an email offering assistance in making or changing hotel reservations, we advise caution.

The Conference has no agreement with any organization to contact participants and offer reservation assistance, nor have we provided contact information to anyone for this purpose. Please use only the reservation links provided on the **Venue & Hotels** page on the Conference website (available in September 2020) to make hotel reservations.

	Hyatt Regency Portland	Hotel Eastlund
Address	375 NE Holladay St., Portland, OR 97232 <i>(steps away from the Convention Center)</i>	1021 NE Grand Ave., Portland, OR 97232 <i>(across from the Convention Center)</i>
Group Rate	\$222/night + taxes/fees single/double	\$199/night + taxes/fees single/double
	<i>A percentage of rooms will be available at the prevailing U.S. Government per diem rate (plus tax) for U.S. federal, state, and local government employees, not applicable to government contractors. Government ID will be required at check-in.</i>	
Group Rate Expiration	June 4, 2021, unless the block sells out before that date	June 4, 2021, unless the block sells out before that date
Phone Reservations	Available in September 2020	Available in September 2020

Subject to availability of rooms at the time reservations are made, the Conference rate can be used for check in as early as June 24, 2021, and check out as late as July 4, 2021. Be sure to obtain a registration confirmation number and to inquire about the hotel's cancellation and early check-out policies.

PORTLAND AND SURROUNDINGS

Within easy walking distance of the Convention Center, you will find restaurants, shops, and attractions in Portland's Lloyd District, home to the Moda Center, where sporting events, concerts, and other major gatherings take place. Catch a hockey game at Veteran's Memorial Coliseum or make a stop by the Lloyd Center Ice Rink for a spin on the ice in your free time. Unique sports bars and microbreweries populate this section of the city.

Hop on the city's public transportation system, TriMet, to visit any one of Portland's unique neighborhood districts to fit your interests. Stay busy shopping and browsing in the Alberta Arts District, full of galleries and shops, or Old Town Chinatown, Portland's original downtown, now home to unique shops, eateries, and gardens.

If a slower pace is more your style, visit the St. John's District and picnic in Cathedral Park or stroll through the Nob Hill District to view the Victorian homes or take a hike in the adjoining Forest Park.

With more than 200 parks within the city limits, be sure to find a tranquil spot to relax. Stop and smell the roses at the International Rose Test Garden in Washington Park where more than 10,000 rose bushes in hundreds of varieties can be seen or stop by Hoyt Arboretum, the largest in the country, where you can see 1,000+ species of trees and shrubs. With no shortage of indoor and outdoor activities, you are sure to find something to enjoy while visiting Portland. **Travelportland.com**