

# Pacific Northwest **BRIDGE MAINTENANCE** Conference



Spanning the Gap: Efficient Bridge Maintenance

**October 19-21, 2010**

Seaside Civic & Convention Center  
Seaside, Oregon

**Hosted by:**

Federal Highway Administration, Washington State Department of Transportation, Oregon Department of Transportation, Alaska Department of Transportation and Public Facilities, California Department of Transportation, and Idaho Transportation Department.

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CONFERENCE MANAGEMENT

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## TUESDAY

## 1:00 P.M. WELCOME AND INTRODUCTIONS

**Moderator:** Glenn Scroggins, WSDOT

**Welcome:**

Archie Allen, Region Bridge Maintenance—WSDOT

Gary Bowling, Bridge Operations Engineer—ODOT

Tim Rogers, Division Bridge Engineer—FHWA Oregon

**Keynote Speaker: Best Practices in Bridge Maintenance Decision Making—Overview of a Domestic Scan**  
Pete Weykamp, New York State Department of Transportation

## 2:00 P.M. SESSION 1: URGENT REPAIRS

**Moderator:** Glenn Scroggins, WSDOT

**Emergency Scour Repairs**  
William Yarbrough, WSDOT

**Filling in Gap Pier and Abutment Protection**

C Bryan Graves, Butte County California Dept. of Public Works

## 3:00 P.M. BREAK (VISIT EXHIBITS)

## 3:30 P.M. SESSION 2: SCOUR REPAIRS

**Moderator:** Jeff Swanstrom, ODOT

**Scour Repair on the 8th Street Bridge / Bridge Rail Repair**

Tad Blanton, City of Medford, Oregon

**Emergency Scour Repair on Deep Creek**  
Josh Mitchell / Darrel Burnum  
Clackamas County, Oregon

**Roughened Rock Toes—An Alternative to Rip Rap Revetments**  
Janet Oatney, Washington County, Oregon

5:00 P.M. ADJOURN FOR THE DAY  
ICE BREAKER GATHERING

## WEDNESDAY

## 8:00 A.M. SESSION 3: SAFETY AND ENVIRONMENTAL AWARENESS

**Moderator:** Craig Yasuda, WSDOT

**Post Earthquake Initial Response Plan**  
David O'Langalgh, City of Portland

**Equipment Safety Features**

Tommy Pratt / Darin Wilkens,  
WSDOT—South Central Region

**Bridging the Migratory Bird Gap for the Northwest**

Diane Winterboer / James Lev,  
USDA-Wildlife Services

**Shorthorn Gulch Fish Enhancement / Culvert and Bridge Replacement**

Jeff Wheaton / Dan Shipley,  
Josephine County Public Works,  
Oregon

## 10:00 A.M. BREAK (VISIT EXHIBITS)

## 10:30 A.M. SESSION 4: DECK MAINTENANCE

**Moderator:** Tim Rogers, FHWA OR

**Silicoflex Bridge Deck Joint Sealing System**

Dan Finley / Darin Wilkens,  
WSDOT—South Central Region

**Modular Deck Joint Repair on I-5**  
Mike Gehring, Milwaukie Bridge Crew—ODOT

**Deck Replacement Project for Bridge Over Johnson Creek at SE 112<sup>nd</sup> Ave**  
Tom Coufield / Cameron Glasgow,  
City of Portland

## 12:00 P.M. LUNCH: PROVIDED

## 1:30 P.M. SESSION 5: DECK PRESERVATION

**Moderator:** Holly Winston, ODOT

**West Monitor Bridge Deck Replacement**

Dan Finley / Dale Blanken, WSDOT—  
South Central Region

**Development of a New Class of Sealers for Bridge Deck Preservation**  
Mike Lenocker, ODOT / Brad  
Nemunaitis, Euclid Chemicals

**Bridge Preservation Tools in Idaho**  
Dan Gorley, ITD

## 3:00 P.M. BREAK (VISIT EXHIBITS)

## 3:30 P.M. SESSION 6: TIMBER REPAIR

**Moderator:** Scott Wilcox, WSDOT

**Timber Repair in King County**  
Richard Hovde, King Co. Road  
Service—Washington

**Steel Encasement of a Timber Bridge Cap**  
Mark Barnes, WSDOT—Olympic Region

**Underwater Timber Pile Repair Using Aquawrap**

Wayne Schumacher, WSDOT—  
Olympic Region

## 5:00 P.M. ADJOURN FOR THE DAY

## THURSDAY

## 8:00 A.M. SESSION 7: STEEL REPAIRS

**Moderator:** Barry Brecto, FHWA WA

**Teanaway River Bridge Steel Repair / Flood Response**

Dale Blanken / Jim Henderson,  
South Central Region—WSDOT

**Steel Floor Stringer Crack Repairs on the Steel and Interstate Bridges**

Marc Gross / Aaron Fisher,  
Interstate Drawbridge Crew—ODOT

**Beebe Bridge Emergency Repair**

Tony Gillis, North Central Region—  
WSDOT / WSDOT HQ

## 9:30 A.M. BREAK (VISIT EXHIBITS)

## 10:00 A.M. SESSION 8: PREVENTATIVE MAINTENANCE / REPAIR

**Moderator:** Gary Bowling, ODOT

**Spot Painting**

Ray Bottenberg, Bridge Preservation—  
ODOT / Scott Shands, ODOT

**Siphon Maintenance**

Dave McGirt, Pendleton Bridge  
Crew—ODOT

## 11:00 A.M. CONFERENCE CLOSING SESSION

**Transportation System Preservation Technical Service Program (TSP2)**

**What IS IT? Why Should I Care?**  
Chris Keegan, WSDOT

**Closing Remarks**

Dave McCormick, NWR Assistant  
Regional Administrator for Maintenance  
& Traffic Operations / Barry Brecto,  
Division Bridge Engineer—FHWA  
Washington

**Selection of Best Presentation**

**Door Prize Drawing**

## 12:00 P.M. CONFERENCE ADJOURNED

# Session Abstracts

Tuesday, October 19th

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## **Keynote Speaker: Best Practices in Bridge Maintenance Decision Making—Overview of a Domestic Scan**

Pete Weykamp, New York State Department of Transportation

Bridge maintenance engineers must employ a decision process to convert performance indicators into a prioritized listing of bridge maintenance and repair needs. The decision process, however, is critical, as bridge preservation requires timely intervention with effective treatments to address minor deficiencies before significant problems develop. In most states, the bridge maintenance engineer does the process manually with little or no formal guidelines. A decision support system to assist in determining the prioritized list of bridge needs using appropriate performance indicators would assist the engineer in the development of an effective work plan.

The 2009 domestic scan focused on identifying and visiting states that were known to have developed an automated decision support system for bridge maintenance programming. The scan team investigated how decisions are being made about routine maintenance and bridge repairs through interviews with staff responsible for developing bridge maintenance programs in leading states. This presentation highlights the team's findings.

## **Emergency Scour Repairs**

William Yarbrough, WSDOT

This presentation is about the Mashel River Bridge on SR 161 near Eatonville, WA. The bridge is a scour critical bridge that had to have emergency scour prevention methods enacted on January 8<sup>th</sup> of 2009. The following September/October we followed up with a permanent rip rap repair to reinforce the bridge. I will discuss the efforts to shore up the rip rap during the event and the subsequent permanent repair. I will also include a little bit about efforts to save the SR a little downstream of the bridge that was affected during the same hydraulic event.

## **Filling in Gap Pier and Abutment Protection**

C Bryan Graves, Butte County California Dept. of Public Works

It is a requirement at times to look at all options for bridge maintenance repair, and come up with unique ideas in order to save time, money and minimize the environmental footprint. The supporting elements for bridges change with time and thus must be maintained to preserve the overall structure integrity and use of the bridge. Butte County has a bridge that needed some additional protection to maintain the pier support structure to prevent severe damage and or collapse. Looking at several options, a fix was found that was acceptable from an environmental, cost saving and time management stand point. It is not always possible to group these three items, but the bridge is functioning today as if it were built yesterday. Gabion baskets were placed and filled with rock in order to provide needed protection and encasement for the pier support elements and the abutment. Rip rap rock was placed to blanket the slope between the baskets, thus filling in the gap.

## **Scour Repair on the 8th Street Bridge/Bridge Rail Repair**

Tad Blanton, City of Medford, Oregon

Bridge scour repair- Pre-work: Permits, investigation, cofferdam system, logistics, equipment, ODFW, water quality, access. Dewatering: cofferdam installation, pumping and filtering, containment, mishaps. Scour repair: materials, forming, and placement. Armoring: materials, placement. Cleanup and Removal.

Bridge-rail repair- MVC damage: evidence- but no perp. Repair design: netting, structural repair, and structural reinforcement. Construction: netting (vandalism), equipment, forming, rebar. Clean-up and Removal.

## **Emergency Scour Repair on Deep Creek**

Josh Mitchell/Darrel Burnum Clackamas County, Oregon

This presentation will provide an overview of our emergency repairs made to Deep Creek Bridge. During the winter of 2009, high flows caused scour under one of the footings to a column possibly making it unstable. Our permit allowed us to work in the water and make repairs in the winter. We placed 200 yards of rock around the footings.

# Session Abstracts

Tuesday, October 19th—Wednesday, October 20th

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## **Roughened Rock Toes — An Alternative to Rip Rap Revetments**

Janet Oatney, Washington County, Oregon

Bridges and culverts have dynamic interactions with the waterways they cross; those interactions can lead to erosion, embankment failure, and scour at critical structural elements of the bridge. Standard practice has been to "hard armor" in stream components to protect the bridge; bio-technical or bio-engineering alternatives have not been considered a practical option as they have been viewed as insufficiently protective of these high risk structures. Roughened rock toes are one of the bio-technical approaches that when combined with plantings provide high level protection of bridge components, as well as habitat value. The presentation will touch briefly on failure modes, site suitability, design & regulatory criteria, the bulk of the presentation will focus on in-water construction techniques and logistics for a recent bridge repair project.

## **- Wednesday, October 20th -**

### **Post Earthquake Initial Response Plan**

David O'Longaigh, City of Portland

Outline of the City of Portland's plan to inspect its inventory of Bridge structures to determine their safe carrying capacity following an earthquake.

### **Equipment Safety Features**

Tommy Pratt/Darin Wilkens, WSDOT — South Central Region

WSDOT South Central Region Bridge Crew has developed some equipment and procedures that have increased employee safety and decreased employee injury exposure. The presentation will demonstrate these methods which include traffic control and debris removal.

### **Bridging the Migratory Bird Gap for the Northwest**

Diane Winterboer/James Lev, USDA - Wildlife Services

The United States Department of Agriculture-Wildlife Services (USDA-WS) has assisted both Oregon and Washington's State transportation department with wildlife issues. WS primarily assists with matters regarding the Migratory Bird Treaty Act (MBTA) yet assists with other wildlife matters as well (e.g., beaver management to prevent road flooding, pigeon management for human health and safety issues, etc.). This presentation highlights both programs, showing the similarities and differences, and the custom made program WS is able to create for the cooperator.

### **Shorthorn Gulch Fish Enhancement/Culvert and Bridge Replacement**

Jeff Wheaton/Dan Shipley, Josephine County Public Works, Oregon

Shorthorn Gulch was a unique project, involving the removal of a deteriorating obsolete structure and replacing it with a "Fish Friendly" 72" x 103" arch pipe. The original structure was a concrete box topped with a half round corrugated metal pipe, which leached, as much water around, as it did through the structure. The outlet was six feet higher than the outlet pond. Coordination included ODFW "shocking" the fish and relocating them into Jump off Joe Creek. Josephine County Public Works removed vegetation and dead trees to construct a bypass road to keep the road open during construction. The stream is seasonal with only 2 – 3 months of dry in the summer. The old structure was removed, and the new flow line established. The new culvert was 2 – 24' beveled ends with 1 – 22" centerpiece. Native material was used for the "Fish Friendly" floor inside the pipe. The new ditches, road, and guardrail were constructed, followed by the removal of the bypass. The road was opened to traffic one week before schedule. Erosion control and re-vegetation completed the job.

# Session Abstracts

Wednesday, October 20th

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## **Silicoflex Bridge Deck Joint Sealing System**

Dan Finley/Darin Wilkens, WSDOT — South Central Region

For the past 6 years The South Central Region WSDOT Crews have been using the Silicoflex Bridge Deck Joint Sealing System which consists of a preformed silicone rubber seal, a single component silicone locking adhesive and a primer. The presentation outlines applications, challenges, and benefits this system offers.

## **Modular Deck Joint Repair on I-5**

Mike Gehring, Milwaukie Bridge Crew — ODOT

This was a Modular Deck Joint Project on I-205. The presentation will show the steps taken to remove and replace a damaged joint.

## **Deck Replacement Project for Bridge Over Johnson Creek at SE 112th Ave**

Tom Caufield/Cameron Glasgow, City of Portland

An inspection of the SE 112th Ave over Johnson Creek Bridge revealed structural deficiencies requiring weight restrictions. Full deck removal was required to eliminate the weight restrictions. In order to replace the deck, full closure of the bridge for several months was necessary. The resulting detour increased the public's travel distance by over a mile.

Several years earlier, the design engineers had salvaged a pedestrian bridge from another site that matched the crossing distance needed for this site. The design engineers proposed using this as a temporary bridge to limit the length of the detour for pedestrians and bicyclists.

Once the temporary bridge was in place, the deck removal project began. With the rail and deck gone, the rebuild began. Over the next couple of months the replacement deck, rail and guardrail approaches were constructed.

Due to safety concerns there was a desire to make the pedestrian bridge permanent. The safety benefits of adding a pedestrian crossing to a narrow bridge at the base of a steep hill made this an attractive option. Regulators indicated that if the bridge was within public right-of-way, many of the construction planning constraints could be eliminated. Further review of the site indicated that the pedestrian bridge could be constructed fully within the public right-of-way. It was decided to make this a permanent facility. Construction of ADA compliant approach ramps became part of the project.

The bridge deck replacement project addressed structural deficiencies of the existing bridge. The pedestrian bridge added the safety benefit of separating pedestrian traffic from high speed vehicular traffic.

## **West Monitor Bridge Deck Replacement**

Dan Finley/Dale Blanken, WSDOT — South Central Region

The West Monitor Bridge is a Chelan County owned steel truss structure that was in need of deck repairs. The bridge is a single lane structure built in 1907 that spans the Wenatchee River west of Wenatchee. Chelan County requested WSDOT's South Central Region for assistance with the decking project. Chelan County Maintenance Crews with the SCR Bridge Crew as project coordinator and lead replaced wooden stringers, decking, and placed riprap.

## **Development of a New Class of Sealers for Bridge Deck Preservation**

Mike Lenocker, ODOT/Brad Nemunaitis, Euclid Chemicals

This presentation will provide details on the development of a new low modulus, ultra low viscosity sealer (LMUVS) for preservation of concrete bridge decks. The presentation will highlight the macromolecular development utilized, performance properties and physical characteristics of this new class of sealer.

Mike Lenocker (ODOT) will provide case history of LMUVS used on multiple bridges in the state of Oregon. Their examples will highlight the benefits of this material provided such as advantages crack tolerant, deep penetration, improvement of wear resistance and safe to handle.

# Session Abstracts

Wednesday, October 20th—Thursday, October 21st

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## **Bridge Preservation Tools in Idaho**

Dan Gorley, ITD

Idaho is utilizing a variety of tools or approaches to bridge preservation. This presentation will focus on Idaho's recent experiences with thin bonded epoxy overlays, deck healer/sealers and silane treatments. The healer sealers include projects performed by both state forces and contractors. Differences in specifications and types of products will be discussed. Thin bonded epoxy overlays also include SAFE-LANE.

The presentation will touch on some past and present projects. This will include our innovative bidding process of fixed cost variable quantity bidding.

## **Timber Repair in King County**

Richard Hovde, King Co. Road Service — Washington

This presentation will be on various timber repairs recently completed in King County. The Berrydale OX Bridge repair showcases a cheap way to repair rotten timber column bases while maintaining traffic flow during construction. The Baring Bridge repair will show the highlights of a complicated timber column repair of the only vehicular timber suspension bridge in Washington State.

## **Steel Encasement of a Timber Bridge Cap**

Mark Barnes, WSDOT — Olympic Region

For the 2010 Pacific NW Bridge Maintenance Conference I will give a presentation on the steel encasement of a wood bridge cap. I will include the fabrication process of the cap and methods of installation (Jack box vs. collars). I will incorporate photos from several of our recent cap builds and encasements as examples, and will discuss the benefits of a steel encasement as opposed to a wood replacement.

## **Underwater Timber Pile Repair Using Aqua Wrap**

Wayne Schumacher, WSDOT — Olympic Region

This presentation will be on the application of the "Aqua Wrap." WSDOT did a job where we used the aqua wrap and I will be explaining the application process, how the product is applied, and what steps we took for installation on a pile in deepwater.

**- Thursday, October 21st -**

## **Teaway River Bridge Steel Repair/Flood Response**

Dale Blanken/Jim Henderson, South Central Region — WSDOT

In January of 2009 the South Central Region was knee deep in water as the region experienced a major flood event. Kittitas County had some of the most significant flood damage with all of the primary routes to the north and west closed for several days due to flooding and flood water damage. Regional Crews responded assisting with road blocks, traffic control, and post event clean up including bridge damage and debris removal.

# Session Abstracts

Thursday, October 21st

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## **Steel Floor Stringer Crack Repairs on the Steel and Interstate Bridges**

Marc Gross/Aaron Fisher, Interstate Drawbridge Crew — ODOT

The interstate bridge crew worked on steel cracks found by a consultant inspection contractor. These operations started in February of 2010, and took several different times to schedule with the Railroad on operations to work on railroad track space. The work was to drill 3 inch holes at floor stringers 2 and 4 at the bottom of the diaphragm area. The crack was found to be "V" up from these locations, requiring 2 holes drilled at each of these areas. Eight cracks were found on 8 separate floor stringers. There were a few other cracks found that were not identified by the inspection report and were repaired at this time. The work consisted of scheduling several days with the Railroad to use their lower deck as the working platform, and having multiple stand-by times to wait for the passing trains. This work was completed in May of 2010.

## **Beebe Bridge Emergency Repair**

Tony Gillin, North Central Region — WSDOT/WSDOT HQ

This is an emergency repair of several damaged truss members resulting from a semi truck and trailer accident on the Beebe Bridge over the Columbia River about 35 miles north of Wenatchee. The major structural damage was to one vertical hanger, a diagonal member, a wind sway, the side walk and steel rail. Our repair involved the temporary repair and stabilization of the bridge so it would support the weight of personnel, materials and equipment to complete the permanent repairs by a contractor. This included fabrication and installation of a temporary vertical hanger and stabilizing the other members. The vertical hanger was then jacked to a specific tension to eliminate the deck deflection and possibility of bridge collapse.

## **Spot Painting**

Ray Bottenberg, Bridge Preservation — ODOT/Scott Shands, ODOT

The Coos Bay Bridge Maintenance Crew used a set of vacuum-shrouded tools, including an abrasive blaster, a roto-peener, a needle gun, and a side grinder to spot prepare the lower portions of the Rinehart Creek Bridge for spot painting. This bridge had a 22-year-old 3-coat urethane paint system with approximately 20% coating failure. Work access was provided by a rented hanging platform. This presentation will share the crew's experience with these tools on the bridge, some challenges the crew faced and solutions they found, and some information about project selection and costs.

## **Siphon Maintenance**

Dave McGirr, Pendleton Bridge Crew — ODOT

This Irrigation Siphon is located under I84 @ M.P.167.5 and is a lifeline for the farmers in the area; we regularly clean the siphon which is quite a project. In the spring of 2005 it developed a leak on the outlet end and collapsed. It was repaired working with a local contractor and ourselves doing the demolition, hauling fill material, and the contractors doing the concrete work with all the time the farmers needing the water. After it was completed in the spring of this year we went back to seal all leaks for all those concerned.

## **Transportation System Preservation Technical Service Program (TSP2) What IS IT? Why Should I Care?**

Chris Keegan, WSDOT

Asset Management is the key to cost effectively extending the life of our transportation assets. AASHTO and FHWA are working together to provide additional tools to those of us in the field tasked with the preservation of these assets. TSP2 will be a one stop shop where you can research what others are doing to preserve their bridges. You will be able to look up presentations on bridge topics that are of interest to you. If you have a bridge preservation related question you will be able to post the question and get answers from experts throughout North America. TSP2 is also sponsoring four regional Bridge Preservation Partnerships, where bridge practitioners from each state will annually get together to share best practices in bridge preservation.

# Presenter Biographies

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## **Archie Allen**

Archie is a Maintenance and Operations Superintendent, Bridge for WSDOT's Northwest Region. He has been with WSDOT for 30 years, with 25 of those years spent in bridge construction and bridge maintenance. His team of 65 skilled professionals operates and maintains an inventory of 1,300 + bridges; including three floating bridges and eight moveable span bridges.

## **Mark Barnes**

Mark has worked for the Olympic Region Bridge Crew since July of 2007. His position with the Bridge Crew allows him opportunities to use many different skills that include welding-steel fabrication, concrete forming-placement, structural timber repair-replacement, equipment operation, bridge joint repair-maintenance, bridge deck repair, bridge cleaning, and other assigned tasks. He is part of an innovative crew that continually searches out ways to do their work better and safer.

## **Dale Blanken**

A Maintenance Lead Tech for the South Central Region Trades Crew for the last 2.5 years, 22 years with WSDOT, 13 years on the South Central Region Trades Crew. He leads crews maintaining, repairing, and reconstructing bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. His duties include facility remodels and improvements.

## **Tad Blanton**

Tad has been a resident of Southern Oregon for over 50 years and has been employed by the City of Medford for 34 years of that time. He graduated with a B.S. in Physical Sciences in 1979. He began working for the City at the Regional Sewage Treatment Plant, as a temporary laborer in 1976, which, as you can imagine, was truly "starting at the bottom"! He was promoted to a Construction Inspector with the Engineering Department shortly after college and worked there for 9 years on everything from sidewalk inspection to a project manager on an 1100' overpass structure over the Southern Pacific tracks in west Medford; and from simple permits to documentation on Federal Aid projects. In 1992 he was promoted to the Streets (later Infrastructure Rehabilitation Team [I.R.T]) Supervisor, and has been there ever since. He has a crew of 13 and an annual budget of approx. \$2.5 million, with which he contracts about \$1 million of pavement rehab and maintenance, and does everything else from mainline paving to sewer main replacements with his in-house crews. During the course of his tenure he has acquired a DEQ Collections Class IV Operators License and is a Master Instructor in Traffic Control through ATSSA.

## **Barry Brecto**

Barry Brecto has over 25 years of experience with the Federal Highway Administration. This experience has been centered on all aspects of highway transportation structures - design, construction, maintenance and inspection. Work assignments in the States of California, Oregon, Colorado, Utah, Illinois, Idaho, Alaska and Washington have given Mr. Brecto an understanding of regional and state capabilities and practices. In his current position, Mr. Brecto provides oversight of the National Bridge Inspection Program working with the Division Offices in the 12 western States. He is also actively involved with delivering National Highway Institute training courses, revising and updating national bridge inspection manuals, and developing a proposed rule for the inspection of tunnels. Mr. Brecto earned a Bachelor of Science in Civil Engineering from Washington State University. He is a registered professional engineer in the State of Oregon.

## **Ray Bottenberg**

Ray Bottenberg, P.E. is the Senior Corrosion Engineer in ODOT's Bridge Preservation Engineering Team. A 1986 mechanical engineering graduate of Oregon State University, Ray joined ODOT in 1999 and moved to the Bridge Preservation Team in 2003.

## **Gary Bowling**

Gary Bowling started working for the Oregon Department of Transportation in 1983 as a construction project inspector, a bridge inspector, a bridge district manager, the bridge maintenance engineer, and currently is the ODOT Bridge Operations Engineer. Prior to ODOT, Gary managed the Baker County Road Department for 8 ½ years. The majority of Gary's experience was focused on bridge inspection, bridge maintenance, and bridge design. As the bridge inspection program manager for the State of Oregon, Gary has published the ODOT Bridge Element Coding Guide, the ODOT Bridge Inspection Manual, and developed the ODOT Bridge Emergency Response Plan. In this capacity, Gary has also been involved with the development of and delivering National Highway Institute Bridge Inspection training courses and participating in the Western States Bridge Preservation Partnership, as well as, leading the steering committee for the Pacific Northwest Bridge Maintenance and Bridge Inspection Conferences. Gary graduated from Portland State University and is licensed in the State of Oregon as a Civil Engineer and Land Surveyor.

# Presenter Biographies

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## **Darrel Burnum**

Darrel began working for Clackamas County Road Department in 1976 as a laborer and became a supervisor in 1985. After completing 30 years in road maintenance, he transferred to the bridge shop and has been the supervisor there for 4 years. His 5 man crew maintains 180 bridges and one ferry boat.

## **Tom Caufield**

Tom Caufield has worked for the City of Portland for 32 years. Tom was a Sewer Maintenance Design Engineer for his first 26 years and in this capacity he became familiar with a variety of methods for repairing or constructing sewers and drainage systems. Part of this experience included trenchless repairs and he was instrumental in creating a cured-in-place specialty group at the Bureau of Maintenance. During the last 6 years he has been a Supervising Engineer at Maintenance Operations. His supervisory assignments have included engineering support of the paving program, pavement markings and traffic signs. He has been the Supervising Engineer for the Structures Section for 3 years. Tom has a bachelor's degree from Oregon State University and is a registered Professional Engineer in Oregon.

## **Dan Finley**

Dan is a Maintenance Mechanic 3 for the South Central Region Trades Crew. He has been with WSDOT on the South Central Region Trades Crew for 9 years. Prior to coming to WSDOT Dan was a self-employed contractor. As a Maintenance Mechanic 3 he maintains, repairs, and reconstructs bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. His duties include facility remodels and improvements.

## **Aaron Fisher**

Is a Transportation Maintenance Specialist 2, for ODOT, part of Region 1, District 2B, with the Interstate Bridge Crew. He started as a Bridge Tender/Operator on the Interstate Drawbridge in February of 2006. He then went into being part of the maintenance portion of the crew conducting repairs and maintenance to movable structures.

## **Mike Gehring**

Mike has been a member of the ODOT District 2A Bridge Crew for the past 8 years. He started as a TMS 2 performing maintenance and repair activities on steel, concrete and wood structures. In 2006 Mike became the Assistant Supervisor and for the past two years has been the crew Supervisor.

## **Tony Gillin**

Tony Gillin has been with the Washington State Department of Transportation for 18 years. The first 10 years he spent as a Maintenance Specialist performing bridge repairs and facilities remodels. The last 8 years Tony has been the Bridge and Facilities Maintenance Supervisor for the North Central Region responsible for repairs and maintenance of about 192 bridges and 115 facilities throughout the region.

## **Cameron Glasgow**

Cameron has worked for the City of Portland for 3 years in the Bridges and Structures Section as a Senior Engineering Associate. He works on a variety of tasks including maintenance design of bridges, wall design, asset management, and project management. Before joining the City of Portland, Cameron spent over 3 years with the Federal Highway Administration as a trainee in Colorado and as a Division Bridge Engineer in Idaho. He has a bachelor's degree in Civil Engineering from Santa Clara University and a master's degree in Civil Engineering from Portland State University. Cameron is a registered Professional Engineer in Oregon.

## **Dan Gorley**

Dan Gorley, a Civil Engineer, has been with the Idaho Transportation Department for 8 years. Gorley received his Civil Engineering degree from Idaho State University. During his 9 years of active duty in the United States Air Force and 3 additional years in the United States Air Force Reserve, Gorley received an Associate degree in Munitions from the Community College of the Air Force. He currently works in the Bridge Section and his involvement with bridges includes design, maintenance, load rating, inspection, & project management. Gorley has also worked in the Materials and Construction Sections of the Idaho Transportation Department.

## **Bryan Graves**

Bryan has over thirteen years experience in storm damage repairs, emergency site surveys, infrastructure design and construction, project management, right of way acquisition, road and bridge maintenance. A California State University Chico graduate in Civil Engineering, he has worked in California for the U.S. Forest Service, Yuba County Public Works and is presently the Superintendent of Maintenance Operations for Butte County Public Works. Bryan Co-chairs 'What Works for Us', a no cost presentation and networking forum for all elements of agency and road maintenance, which has enjoyed success for over 11 years. He proudly served in the United States Marine Corps for 16 years advancing to the rank of Gunnery Sergeant.

# Presenter Biographies

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## **Marc Gross**

An ODOT employee of 16 years, Marc is currently supervising and managing the Interstate and Steel Drawbridge Operations. Prior to that he spent 3 years of conducting Road maintenance, and 4 years of in repair and maintenance of stay structures with the crews at East Portland. The past 9 years have been with Drawbridge Operations for ODOT in Portland.

## **Jim Henderson**

A Maintenance and Operations Superintendent for the South Central Region, Regional Crews for the past 11 years, 32 years with WSDOT. Jim oversees regional striping, signal, electrical, sign installation, and bridge repair operations for the South Central Region of WSDOT.

## **Richard Hovde**

For the past year Richard has served as the King County Senior Engineer managing/designing bridge repairs for King County and many cities located within King County. During off-construction season, he acts as lead inspector and develops bridge statistics/metrics for funding allocations. Previous experience includes 19 years with WSDOT in bridge inspection, hydraulic design of new bridges/scour repairs, a short gig with architecture and environmental and 10 years Federal experience working at Fort Lewis in building repair design/maintenance and for the Corps of Engineers as a dam worker.

## **Chris Keegan**

Chris has 32 years of experience with the Washington Department of Transportation. The first nine years he worked in the bridge office doing bridge inspection and design. For the next three years he worked for Program Management, where he learned where the money comes from and how it is divided up throughout the Department. For the last 20 years he has worked in the Olympic Region of The Department as the Regions Bridge Engineer, as well as managing construction and maintenance offices. He is currently on the AASHTO Subcommittee on Maintenance, Bridge Technical Working Group and is co-chair of the Western Bridge Preservation Partnership.

## **Mike Lenocker**

Mike Lenocker has been employed by ODOT for almost 9 years. That entire time he has been with the Eugene Bridge Crew. He also is a member of the Region 2 Hot Shot Crew and has been since its inception. He has always been quick to volunteer to go and help other crews throughout Region 1 & 2. Mike is never at a loss for words and he enjoys speaking in front of a captive audience. We used to call him Big Mike, but if he keeps losing weight, were going to have to change his nickname too Little Mike.

## **James Lev**

James Lev is a Wildlife Services Specialist with the U.S. Department of Agriculture – Animal and Plant Health Inspection Service. He has worked 15 years with the USDA. He primarily works with DOT bridge and highway projects working with various bird species and nuisance wildlife such as beavers.

## **Dave McCormick**

Dave McCormick is currently the Assistant Regional Administrator for Operations in the Northwest Region of WSDOT. He has nearly 30 years of experience in highway operations and maintenance and is a proud father of three girls.

## **David McGirr**

David McGirr is with the ODOT Bridge crew in Pendleton. He has been with ODOT for 13 years.

## **Josh Mitchell**

Josh began his working career excavating (houses, utilities, ect.). He worked for the Clackamas County Road Department for six years where he completed the APWA Road scholar program. In 2003 Josh transferred to bridge maintenance as part of a five man team and has been with them for seven years.

## **Brad Nemunaitis**

Brad Nemunaitis has over 25 years of experience developing new products for the construction industry while working for The Euclid Chemical Company. B.S. in Chemistry from John Carroll University. He is the chairman for the ACI 548 committee Polymers and Adhesives. Primary focus is development of new guidelines and specifications relating to the construction industry.

# Presenter Biographies

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## **Janet Oatney**

Janet Oatney, Washington County Senior Environmental Resource Specialist, has over a decade of practical experience successfully managing regulatory review and construction compliance of transportation projects. Under her guidance, Washington County has become a leader in innovative maintenance solutions that are protective of the environment, yet feasible in the field. Their cutting edge approach to in water maintenance activities and permits results in substantial cost savings for the county, and added value for its citizens.

## **David O'Longaigh**

David O'Longaigh began his career as a licensed Structural Engineer in Portland in 1990, working for a Consulting firm designing buildings. His specialty at that time was strengthening older and historic buildings for seismic loading. David joined the City of Portland's Building Bureau in 1999, where he helped write the City's Seismic Strengthening Ordinance for existing buildings. In 2004 he moved to the City's Bureau of Transportation as Supervisor of the Bridge & Structures group. His duties include Asset Manager for the City's 157 Bridges.

## **Tommy Pratt**

Tommy Pratt is a Maintenance Mechanic 3 for the South Central Region Trades Crew. Tommy has 3 years with WSDOT on the South Central Region Trades Crew, 13 years with WSDOT, and 10 years with the South Central Region Special Crews. Prior to coming to WSDOT Tommy was self employed. As a Maintenance Mechanic 3 he maintains, repairs, and reconstructs bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. His duties include facility remodels and improvements.

## **Timothy Rogers**

Tim graduated from the University of Washington with a Bachelors and Masters in Civil Engineering. He signed on with the FHWA in 1991 as a Highway Engineer Trainee. Upon graduation from the training program Tim was assigned to the FHWA's Washington State Division Office as an Assistant Bridge Engineer. After 6 years he relocated with FHWA to the Federal Lands Highway Bridge Office in Lakewood, Colorado where he performed the duties of bridge designer and bridge team leader. In 2005, Tim moved to Oregon where he performs the duties of the FHWA Oregon Division Office Bridge Engineer. Tim's current duties include oversight of Oregon's Highway Bridge Rehabilitation and Replacement Program, the National Bridge Inspection Program, bridge construction inspection, PS&E preparation, and performing bridge related program reviews.

## **Wayne Schumacher**

Wayne is employed by WSDOT in the Olympic Region Bridge Crew. His entire 9 ½ year WSDOT career has been working with the Bridge crew. Wayne's current position is Maintenance Lead Technician. His background is in construction. Wayne was a general contractor for 11 years.

## **Glen Scroggins**

Glen is Supervisor in the Bridge Preservation unit of the WSDOT Bridge & Structures Office. He has 8 years experience in two stints with WSDOT sandwiched around 15 years experience with a leading bridge design consulting firm. His primary current roles at WSDOT are supervising the Statewide Bridge Inspection crews and providing guidance for statewide bridge repair recommendations and repair detail development. Mr. Scroggins earned a Bachelor of Science in Civil Engineering from the University of Minnesota and a Master of Science in Civil Engineering from the University of Washington. He is a registered Structural Engineer in the State of Washington.

## **Scott Shands**

Scott Shands is a Transportation Maintenance Specialist 2 with ODOT's Region 3 Bridge Crew located in Coos Bay. Scott has worked for ODOT since 2005, beginning in Roadway Maintenance and moving to Bridge Maintenance in 2007.

## **Dan Shipley**

Dan Shipley has been employed by Josephine County Public Works for 11 years, and has been an Operations Supervisor for the past four (4) years. Dan has been involved with a variety of bridge projects such as; guardrail installations, scour projects, fish passage enhancements, and deck replacements. As lead or supervisor on many bridge projects, Dan has the experience and knowledge to lead a crew and assist where needed.

# Presenter Biographies

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## **Jeff Swanstrom**

Jeff Swanstrom is the Senior Bridge Inspector for the Oregon Department of Transportation's Bridge Operations unit. He has a B.S. in Civil Engineering Technology and an A.E. in Structural Engineering from Oregon Institute of Technology. Jeff is a registered professional engineer in Oregon and has over 19 years of experience performing "in-service" inspections of bridges, tunnels, culverts, and sign structures throughout the state of Oregon. Jeff is married and he and his wife Katie have two children, Erik, 20 and Ella, 15.

## **Jeff Wheaton**

Jeff Wheaton has been employed by Josephine County Public Works for 24 years, and was promoted to Road & Bridge Program Supervisor in March of 2008. Jeff has been involved in many aspects of bridge maintenance and construction projects.

## **Peter Weykamp**

Peter Weykamp is the Bridge Maintenance Program Engineer for the New York State Department of Transportation. His primary duties include development of network level maintenance strategies, operations management, product evaluation, and technical supervision. He has been with NYSDOT for 27 years, holding positions in structural design, research, and construction. Pete chairs the Bridge Task Force on the AASHTO Subcommittee on Maintenance, is a member of the TRB AHD-30 Structures Maintenance Committee, and is currently a panel member for several NCHRP projects related to bridge maintenance/preservation. Pete holds BS degrees in biology and civil engineering and a MS in public administration.

## **Scott Wilcox**

Scott has been WSDOT's South West Region Bridge Maintenance Supervisor for the past 3 ½ years. He began his career on this crew in 1998 before moving to the Facility Maintenance for a year. He then went to Spokane and the Eastern Region as their first bridge crew member and was a key component in the set up and development of that regions crew for the next 5 years. In 2006 he transferred back to Vancouver, as a Lead Tech on his old crew before being promoted to Supervisor in the spring of 2007. His crew repairs and maintains 522 bridges and structures including 10 tunnels, 1 suspension bridge and over 316 sign bridges in South west Washington State.

## **Darin Wilkens**

A Maintenance Specialist 5 for the South Central Region Trades Crew for the past 4 years, 11 years with WSDOT, 9 years on the South Central Region Trades Crew. Darin supervises crews maintaining, repairing, and reconstructing bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. Additionally his duties include coordinating and supervising crews in facility remodels and improvements.

## **Holly Winston**

Holly Started at ODOT eighteen years ago as a graduate engineer. She began her career as a Structural Bridge Designer, and she has fifteen years of practical Bridge Design and Bridge Construction experience with ODOT. She worked on a variety of bridge projects and maintenance fix designs, and moved up the ranks over the years which included interim Structural Managing Engineer. She was the Bridge Seismic Standards Engineer for three years and she is presently Senior Local Bridge Standards Engineer. She is a registered Professional Engineer in the state of Oregon. She holds a Bachelor of Science degree in Civil Engineering from Saint Martin's University in Olympia Washington and Masters in structures from OSU in Corvallis, Oregon

## **Diane Winterboer**

Diane works with USDA-Wildlife Services in Oregon as a liaison for Oregon Department of Transportation. She has worked with WS for ten years.

## **William Yarbrough**

William is currently a WSDOT employee working for Olympic Region Bridge Crew. He has been with WSDOT for nearly three years. He had worked in the building trades as a carpenter, welder and equipment operator. His position with OR Bridge allows him opportunities to use many different skills that include welding-steel fabrication, concrete forming-placement, structural timber repair-replacement, equipment operation, bridge joint repair-maintenance, bridge deck repair, bridge cleaning, and other assigned tasks. William finds his job to be challenging at times and quite rewarding.

## **Craig Yasuda**

For the past 5-1/2 years Craig has managed one of two Statewide Bridge Inspection Teams for the WSDOT Bridge Preservation Office. Prior to this, he spent 8 years as a Bridge Inspector for the WSDOT Bridge Preservation Office. In the middle of his Bridge Preservation career, he spent 6 years working for a WSDOT Project Office (highway design & construction). He currently has a PE in the state of Oregon and Washington and acquired his BSCE from Oregon State University.

# EXHIBITORS

- 1) **URETEK**  
Jim Scott and David White
- 2) **Liquid Concrete**  
Larry Davis, Kendra Hippensteel  
and Tom Hippensteel
- 3) **Barriers Northwest, LLC**  
John Stockman and  
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- 8) **Bridge Access Specialties**  
Jim Bunch and Ken Maddox
- 9) **Peterson Machinery Co.**  
Rick Schott
- 10) **Infrastructure Corp. of America  
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Robert Little and Ritchie Rhodes
- 11) **Birdzoff**  
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- 12) **Coral Sales Company**  
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- 13) **Lakeside Industries**  
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- 14) **Oregon Department of Transportation**  
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- 15) **Power Team, an SPX Brand**  
Rob King and Bart Hays
- 16) **B&B Roadway**  
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- 17) **Paving and Maintenance Supply, Inc.**  
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- 18) **American Concrete Cutting**  
Eric Hill
- 19) **Williams Form Engineering Corp.**  
Tony Kasperek and Mike Bowles
- 20) **Safway Services**  
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- 21) **Unitex**  
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- 22) **Stellar Materials, Inc.**  
Dennis Buckshaw, Brian Mintz and  
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- 23) **McClain & Co, Inc.**  
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- 24) **Extreme Access Inc.**  
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- 25) **GPR Data LLC—Ground Penetrating  
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- 26) **Transpo Industries, Inc.**  
Darryl Anderson
- 27) **Lubrication Engineers (LE)**  
Nick Campos
- 28) **Jaxx LLC**  
Jorn Ingebrigtsen and Scott Smith
- 29) **Four Winds Group, Inc.**  
Tom Hamm & Tom Thompson
- 30) **Galvanizers Company**  
Randall Wells
- 31) **Euclid Chemical**  
David Dillon
- 32) **Hilfiker Retaining Walls**  
Len Mead
- 33) **Kwik Bond Polymers**  
Dan Uldall and Dave Epler
- 34) **Leewens Corporation**  
Patrick Leewens
- 35) **Watson Bowman ACME**  
Debbie Steiger

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## Seaside Convention Center

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*Currently accepting Call for Presentations. Presentation applications are due November 1, 2010. Contact Dana Colwell at: 253-445-4575 or [Dana.Colwell@wsu.edu](mailto:Dana.Colwell@wsu.edu) for more information.*

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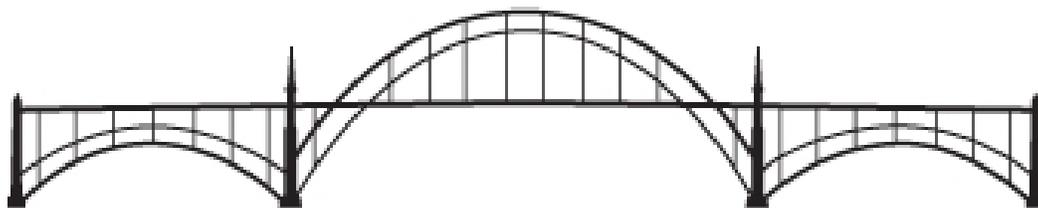
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