

# **PNREC 2019**

53rd Pacific Northwest Regional Economic Conference

May 21–23, 2019 | Seaside, Oregon

# Pacific Northwest Economic Drivers: Changing Tides or Smooth Sailing? Final Event Program

Seaside Civic & Convention Center 415 First Avenue Seaside, Oregon 97138



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### **About the Pacific Northwest Regional Economic Conference**

The Pacific Northwest Regional Economic Conference (PNREC) is a non-profit organization established to promote research and education on the economy of the Northwest states and western Canada. The objectives of the Conference are to:

- Present a program of professional papers, panels, and symposia that relate to regional economics.
- Enable distinguished regional scientists and policy analysts from elsewhere to play a featured role at the conference.
- Provide a forum for those from academia, business, and government to meet and interact professionally.
- Introduce and share current regional economic research with students, business, and community leaders.

The idea of PNREC came to Charles Tiebout, the noted and highly respected Professor of Urban and Regional Economics at the University of Washington, in 1966. He had observed that economic organizations in other parts of the U.S.—the New England Council, for example, and the Southern Economic Association—were undertaking studies that turned the spotlight on their regional economies. These suggested additional reports, possible policy responses, and in any case governmental grants, both to research the problems further and to propose remedies. Professor Tiebout thought that the Pacific Northwest should also initiate an organization, forum, or publication that examined its economy, discovered problem areas, and suggested remedial action.

To this end, Tiebout asked business and government economists and academic colleagues concerned with the regional economy to organize a startup conference at the University of Washington in early May of 1967. The first PNREC was held in 1967 at the Benson Hotel in downtown Portland. The inaugural conference lasted two days and was a great success. The program covered many topics, though it concentrated on the theory and practice of building input-output models that were then under construction in most states of the region. At the end of that first conference, everyone agreed that a second one should be convened a year later.

The plan for PNREC had been to let the annual conferences alternate between Seattle and Portland. In 1968, however, Dr. John Guthrie, Chair of the Department of Agricultural Economics at Washington State University, volunteered to organize the next one at his institution. Since that time, PNREC has been staged at sites throughout the Pacific Northwest and western Canada, including Missoula, Spokane, Olympia, Boise, Bellingham, Tacoma, Richland, Bend, Vancouver, and Victoria B.C.

The 2019 PNREC will be held in Seaside, Oregon. While the conference has experienced highs and lows over the past 52 years, it has survived and will continue to bring the region's economists together each year to share research, maintain connections, and build our understanding of the economic issues facing our region.













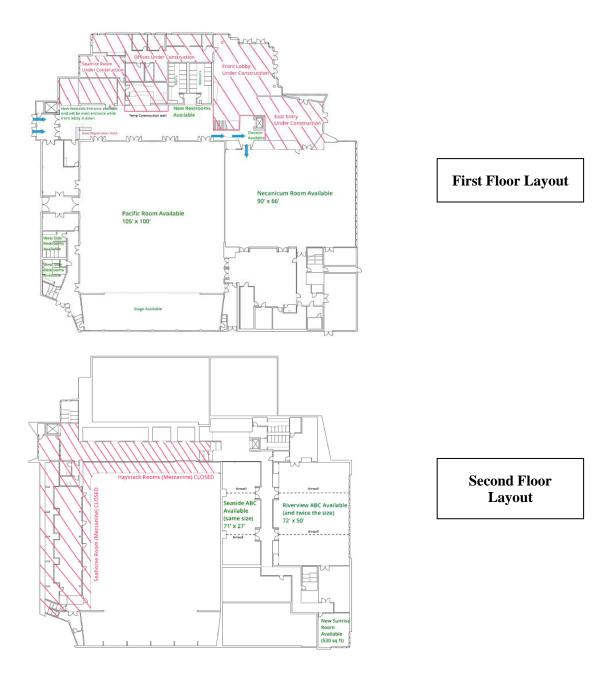
To all our partners, keynote speakers, presenters, chairs, and volunteers:

Thank You!



### **Seaside Civic and Convention Center**

All formal sessions will take place in the Seaside Civic and Convention Center in the Necanicum West, Nacanicum East, Seaside and Riverside B Conference Rooms.





### **PNREC 2019 AGENDA AT A GLANCE**

May 21-23, 2019

Seaside Civic & Convention Center | 415 First Avenue | Seaside, OR 98402

Tuesday, May 21, 2019					
12:00 PM - 8:00 PM	Registration				
12:30 PM – 2:00 PM	Heidi Crawford and Andrew Hait, U.S. Census Bureau, Building Businesses and Understanding Local Economies: Key Census Bureau Programs and Tools				
2:15 PM – 3:45 PM	Cliff Woodruff, U.S. Bureau of Economic Analysis, What You Need to Know to Add Gross Domestic Product (GDP) to Your Economic Toolbox: With a Focus on Regional GDP Data				
4:00 PM – 5:30 PM	Cameron Luther (REMI), Aaron McGregor (AECOM), and Marley Buchman (EcoNW), Modeling a Shifting Economy: REMI Client Applications of the REMI Model to Economic Resiliency and Housing Policy Topics				
6:00 PM - 8:00 PM	Meet and Greet Reception (Appetizers and Drink Ticket), No Host Bar				
Wednesday, May 22, 2019					
	Trounceday, may	22, 2019			
7:00 AM – 7:00 PM	Registration	22, 2019			
7:00 AM - 7:00 PM 7:00 AM - 8:10 AM		22, 2019			
	Registration	Nick Beleiciks, Oregon Employment Department			
7:00 AM – 8:10 AM	Registration Continental Breakfast Welcome from	Nick Beleiciks, Oregon			
7:00 AM - 8:10 AM 8:20 AM - 8:30 AM	Registration Continental Breakfast Welcome from Conference Chair	Nick Beleiciks, Oregon Employment Department Honorable Jay A. Barber			
7:00 AM - 8:10 AM 8:20 AM - 8:30 AM 8:30 AM - 8:50 AM	Registration Continental Breakfast Welcome from Conference Chair Welcome to Seaside  Northern Oregon Coast Historical	Nick Beleiciks, Oregon Employment Department Honorable Jay A. Barber Mayor of Seaside, Oregon McAndrew Burns, Executive Director, Clatsop County Historical Society			



11:30 AM – 11:45 AM	Networking Break
11:45 AM – 1:15 PM	Lunch and National Economic Outlook – Dr. Liz Laderman, Federal Reserve Bank of San Francisco
1:15 PM – 1:30 PM	Networking Break
1:30 PM - 2:45 PM	Session 2 (Panels 5–8)
2:45 PM – 3:15 PM	Networking Break, Beverages and Snacks
3:15 PM - 4:30 PM	Session 3 (Panels 9–11)
5:00 PM – 7:00 PM	Reception (Appetizers and Drink Ticket), No Host Bar and Poster Session

Thursday, May 23, 2019				
7:00 AM – 4:00 PM	Registration			
7:30 AM – 8:30 AM	Breakfast			
7:45 AM – 8:45 AM	Housing Roundtable - Matthew Gardner, Chief Economist, Windermere Real Estate and Holi Urbas, US Department of Housing and Urban Development			
8:45 AM - 9:00 AM	Networking Break			
9:00 AM - 10:15 AM	Session 4 (Panels 12–15)			
10:15 AM – 10:30 AM	Networking Break, Beverages and Snacks			
10:30 AM - 11:45 PM	Session 5 (Panels 16–17)			
11:45 AM – 1:15 PM	Lunch and Tiebout Lecture – Dr. Enrico Moretti, University of California, Berkeley			
1:15 PM - 1:30 PM	Networking Break			
1:30 PM - 2:45 PM	Session 6 (Panels 18–20)			
2:45 PM - 3:00 PM	Networking Break, Beverages and Snacks			
3:00 PM - 4:45 PM	Regional Outlook			
4:45 PM - 5:00 PM	Closing Ceremonies			



### **Logistical Information**

#### **Meeting Location**

Seaside Civic & Convention Center 415 1st Ave Seaside, OR 97138 (503) 738-8585

### **Meeting Facilitation**

Nick Beleiciks Oregon Employment Department Nick.J.BELEICIKS@oregon.gov (503) 947-1267

<sup>\*</sup>Hotels with reserved rooms for PNREC attendees are the Rivertide Suites at 102 N. Holladay Seaside, Oregon 97138 (877-871-8433) and Holiday Inn Express at 34 N. Holladay Seaside, Oregon 97138 (1-888-HOLIDAY).



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4:00 PM – 5:30 PM	Cameron Luther (REMI), Aaron McGregor (AECOM), and Marley Buchman (EcoNW), Modeling a Shifting Economy: REMI Client Applications of the REMI Model to Economic Resiliency and Housing Policy Topics			
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7:00 AM – 7:00 PM	Wednesday, May 2 Registration	2, 2019		
7:00 AM - 7:00 PM 7:30 AM - 8:20 AM		2, 2019		
	Registration	2, 2019  Nick Beleiciks, Oregon Employment Department		
7:30 AM – 8:20 AM	Registration Breakfast Welcome from Conference	Nick Beleiciks, Oregon Employment		
7:30 AM - 8:20 AM 8:20 AM - 8:30 AM	Registration Breakfast Welcome from Conference Chair	Nick Beleiciks, Oregon Employment Department Honorable Jay A. Barber		
7:30 AM - 8:20 AM 8:20 AM - 8:30 AM 8:30 AM - 8:50 AM	Registration Breakfast Welcome from Conference Chair Welcome to Seaside Northern Oregon Coast	Nick Beleiciks, Oregon Employment Department Honorable Jay A. Barber Mayor of Seaside, Oregon McAndrew Burns, Executive Director, Clatsop County Historical Society		



### Panel 1: Housing and Homelessness in the Northwest: Policy Options and Evaluation

Room: Necanicum West

Chair: Michael Wilkerson, EcoNW

Michael Wilkerson, EcoNW, Synthesizing National and Pacific-Northwest Research to the Inform the Current Oregon Housing Market

Madeline Baron, EcoNW, How Oregon's Housing Market Affects Homelessness in the Region

Marley Buchman, EcoNW, How Advanced Data Analytics can Provide Live, Interactive Insights into the Housing Market, Proposed Legislation, and Support Policy Development

### Panel 2: Coastal Workforce Challenges

Room: Necanicum East

Chair: Shawna Sykes, Oregon Employment Department

Tamera Roberts, People's Department Director, Martin North

Erik Thorsen, Chief Executive Officer, Columbia Memorial Hospital

Sheila Murty, Executive Vice President of People and Culture, Tillamook County Creamery Association

Erik Knoder, Regional Economist for the Oregon Employment Department serving NW Oregon, Oregon Employment Department

### **Panel 3: Economic Impact Assessments in the Pacific Northwest**

Room: Seaside Chair: Bill Beyers

William Beyers (University of Washington) and Nicholas Velluzzi (Walla Walla Community College), *Economic Impact of the Walla Walla Wine Industry* 

Bruce Sorte, Oregon State University, Measuring the Economic Impact a Visitor Center has on an Oregon Coast Community

Gail Krumenauer (Oregon Employment Department), Tim Nadreau (Washington State University), and Philip Watson (University of Idaho), 2019 Oregon Forest Sector Analysis and Economic Contributions



### Panel 4: Energy Issues I

Room: Riverside B

Chair: Massoud Jourabchi, Northwest Power and Conservation Council

Jenny H. Liu, Devin Bales & Adam Rovang, Northwest Economic Research Center, Understanding the Market Potential for Deep Direct-Use Geothermal Energy in Portland, Oregon

Sumitrra Ganguli, Pacific Northwest National Laboratory, *Measurement and Quantification of Electricity Affordability from the Perspective of Commercial and Industrial Users: A Cost-Burden Approach* 

Robert Dike, Brian Eaves, and Ashlyn Cenicola, Central Washington University, Washington 100 Percent Clean Electricity

**11:30 AM – 11:45 AM** Networking Break

**11:45 AM – 1:15 PM** Lunch and National Economic Outlook – Dr. Liz Laderman,

Federal Reserve Bank of San Francisco

1:15 PM – 1:30 PM Networking Break

**1:30 PM – 2:45 PM** Concurrent Sessions (Session 2, Panels 5–8)

# Panel 5: Analyzing the Effects of Trade Wars and Housing Policy with Economic Modeling

Room: Necanicum West Chair: Cameron Luther

Cameron Luther, REMI, Analyzing the Effects of Trade Wars and Housing Policy with Economic Modeling

#### Panel 6: Economics of Alcohol and Cannabis

Room: Necanicum East

Chair: Phil Watson, University of Idaho

Philip Watson, University of Idaho, Fiscal Impacts and Cross-Border Effects of a Change in State Liquor Policy

Guy Tauer, Oregon Employment Department, Regional Economic Drivers and Economic Impact of Region's Cannabis Industry

James McCafferty, Western Washington University, Legal Cannabis - A Story of Data and Trends



#### Panel 7: Natural Resource Valuation

Room: Seaside

Chair: Patrick Balducci, Pacific Northwest National Laboratory

Cassie Koefod, Central Washington University, The Economic Value of Rock Climbing in Smith Rock: An Individual Travel Cost Approach

Seth Urbanski, Central Washington University, Evaluating the Economic Impacts of Soil Remediation Efforts at Lead-Arsenate Contaminated Sites in Yakima, Washington (A Hedonic Approach)

Tyler Humphries, Central Washington University, *The Economic Impact of Forest Harvest Practices on Washington State Park Visitation* 

### Panel 8: Federal Data: Using Public "Treasures of the Sea"

Room: Riverside B

Chair: Becky Knudson, Oregon Department of Transportation

Heidi Crawford, US Census: Salem Office, Differential Privacy: Ensuring Privacy While Preserving Access to Data

Andrew Hait, US Census: Washington DC Office, Census API: Tips and Lessons Learned in Census Business Builder

Cliff Woodruff, US Bureau of Economic Analysis, *BEA Data Products: An Overview to What's New in Regional Economic Accounts* 

2:45 PM – 3:15 PM Networking Break, Beverages and Snacks

**3:15 PM – 4:30 PM** Concurrent Sessions (Session 3, Panels 9–11)

# Panel 9: Energy Storage Valuation and Analytics: Lessons, Methods and Models Resulting from Recent Experience at the Pacific Northwest National Laboratory

Room: Necanicum West

Chair: Patrick Balducci, Pacific Northwest National Laboratory

Patrick Balducci, Pacific Northwest National Laboratory, *Pacific Northwest National Laboratory's Industrial Acceptance Program: How the use of analytics can improve the value proposition for energy storage in the United States* 

Kendall Mongird, Pacific Northwest National Laboratory, An Overview of the Washington Clean Energy Fund Energy Storage Projects and the Value they Bring to the Pacific Northwest

Vanshika Fotedar, Pacific Northwest National Laboratory, *Demand Response Tool for Optimizing Use Cases and Revenue from Solar and Battery Storage Resources* 



## Panel 10: Residential and Commercial Buildings: Measuring Financial and Environmental Performance

Room: Necanicum East

Chair: Mark Weimar, Pacific Northwest National Laboratory

Caitlin Thompson, Clemson University, Structure Depreciation and the Hidden Mortgage

Gretchen Garth, Frontier, A LEED Platinum Building Supporting Sustainable Agriculture Can Have Impacts on Climate Change

Mark R. Weimar, Pacific Northwest National Laboratory, *Evaluating the Cost Effectiveness of Health and Wellness in Buildings* 

#### Panel 11: Transportation Issues

Room: Seaside

Chair: Becky Knudson, Oregon Department of Transportation

Becky Knudson, Oregon Department of Transportation, *Estimating Economic Impact of Interstate Closure to Commercial Trucks* 

Satenik (Sata) Torosyan, Oregon Department of Transportation, *The Impact of CAFE Standards on Oregon's Fleet* 

Jenny H. Liu & Emma Willingham, Portland State University, Review of Oregon's Clean Fuels Program – A Low Carbon Transportation Fuel Standard

#### 5:00 PM - 7:00 PM

Reception (Appetizers and Drink Ticket, No Host Bar) and Poster Session

#### **Poster Presenters**

Kendall Mongird, Pacific Northwest National Laboratory, *Market Analysis Results for Shell Energy North America's Small Modular Pumped Storage Hydro Unit* 

Sadie Bender, Pacific Northwest National Laboratory, *The Valuation Methodology for Transactive Energy Systems* 

Heidi R Crawford, U.S. Census Bureau, Census Tools for Emergency Management

Vanshika Fotedar, Pacific Northwest National Laboratory, Techno-economic Benefits Evaluation for the Nantucket Battery Energy Storage System

John Karasev, Sean Bates & Justin Young, Washington State University, Near-Term Energy Forecast



Michelle Niemeyer, Pacific Northwest National Laboratory, Economic Impact of Pacific Northwest National Laboratory on

the State of Washington in Fiscal Year 2018

Alan Cooke, Pacific Northwest National Laboratory, *Energy Storage in Integrated Resource Plans* 

<b>Thursday</b>	, May	23, 2	2019
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7:00 AM – 4:00 PM Registration

**7:30 AM – 8:30 AM** Breakfast

**7:45 AM – 8:45 AM** Housing Roundtable Moderator: Chris Lawless,

Discussion BC Investment Management

Corporation

Panelists: Matthew Gardner,

Chief Economist,

Windermere Real Estate and Holi Urbas, US Department

of Housing and Urban

Development

8:45 AM – 9:00 AM Networking Break

9:00 AM - 10:15 AM Concurrent Sessions (Session 4, Panels 12–15)

### Panel 12: Applied Methodologies in Ecological Economics

Room: Necanicum West

Chair: Jessie Martin, Earth Economics

Jessie Martin, Earth Economics, The Socioeconomic Determinants of Investment

Matt Van Deren, Earth Economics, *The Economic Contribution of Whale Watching in San Juan County* 

Angela Fletcher, Earth Economics, Catalyzing Impact Investment in Sustainable Agricultural Lands and Practices



### Panel 13: Energy Issues II

Room: Necanicum East

Chair: Massoud Jourabchi, Northwest Power and Conservation Council

Massoud Jourabchi, Northwest Power and Conservation Council, *Impact of Climate Change on the Northwest Power System* 

Massoud Jourabchi, Northwest Power and Conservation Council, *Impact of Cryptocurrency Mining on NW Electricity Demand* 

John Fazio, Northwest Power and Conservation Council, Compound Climate Events Transform Electrical Power Shortfall Risk in the Pacific Northwest

### Panel 14: Pacific Northwest Tax Policy Issues

Room: Seaside

Chair: Tom Potiowsky, Northwest Economic Research Center

Peter Hulseman & Adam Rovang, Northwest Economic Research Center, *Portland Land Value Tax* 

Devin Bales and Colin Gibson, Portland State University, Comparing Tax Structures in Washington and Oregon: Tax Incidence Impacts on Grocery Consumption

Tom Potiowsky, Northwest Economic Research Center, Regional Road Financing and Expenditures: Problems with Sharing the Road

# Panel 15: Effects of Change: Evaluating the Impacts of Shifting Trade, Commuting and Teaching Methods on Academic and Economic Performance

Room: Riverside B

Chair: Scott Bailey, Washington Employment Security Department

Peter Maille, Eastern Oregon University, A Case for Negative Returns to Negative Feedback in an Academic Setting

Scott Bailey, Washington Employment Security Department, *Using cross-county commuting data to shed light on the accuracy of county-level employment data.* 

Codrin Nedita, University of Washington, Current Trends in International Trade for the Pacific Northwest States and the Impact of Escalating Tariffs

**10:15 AM – 10:30 AM** Networking Break, Beverages and Snacks

**10:30 AM – 11:45 AM** Concurrent Sessions (Session 5, Panels 16–17)



# Panel 16: Economics of Morality: Impacts of Illicit Crime and Social Responsibility Exhibited in Consumer Behavior

Room: Necanicum West Chair: Chris Lawless

Syed Badruddoza, Washington State University, Long-Term Dynamics of Organic Dairy Premiums in the United States

Modhurima Dey Amin, Washington State University, Corporate Social Responsibility and Product Differentiation under Mixed Competition

Chian Jones Ritten, University of Wyoming, Crime, Money Laundering, and the Seizure of Assets in Illegal Product Markets

### Panel 17: Economic Performance and Income Trends in the Pacific Northwest

Room: Necanicum East

Chair: Gail Krumenauer, Oregon Employment Department

Michael Meyers, Business Oregon, Identifying Industries at Risk in the Next Recession

Damon Runberg, Oregon Employment Department, Why are Wages Growing at a Slower Pace than Expected based on Today's Labor Market Conditions?

Scott Bailey, Washington Employment Security Department, *Tracking Wage Growth Trends in Washington State* 

**11:45 AM – 1:15 PM** Lunch and Tiebout Lecture – Dr. Enrico Moretti, University of

(Pacific) California, Berkeley

1:15 PM – 1:30 PM Networking Break

1:30 PM – 2:45 PM Concurrent Sessions (Session 6, Panels 18–20)

### Panel 18: Economic Opportunity and Poverty in the Pacific Northwest

Room: Necanicum West

Chair: Felicia Bechtoldt, Oregon Employment Department

Christian Kaylor, Oregon Employment Department, *The Effect of the 2009 Recession Across Communities in the Pacific Northwest* 

David Rothwell, Bruce Weber, and Leanne Giordono, Oregon State University, *The Oregon Earned Income Credit's Impact on Child Poverty* 

David Rothwell, Leanne Giordono, and Bruce Weber, Oregon State University, Preliminary Findings from the Oregon Poverty Measure Project



#### Panel 19: Banking and Finance

Room: Necanicum East Chair: Steve Lerch

Thomas Tenerelli, Central Washington University, What to Expect From Stocks and the Macroeconomy

Adam Szymanski, Post Growth Institute, What Might be Holding Back the Development of Comprehensive Businesses Services in Northwest Credit Unions?

Taliesin Tenerelli, Luis Hernandez Talavera, Aleksandr Ptachik, and Darius Saelee, Central Washington University, *Analyzing the Potential Effects of EGRRCPA on a Washington Community Bank* 

### Panel 20: Building and Preserving Rural Economies

Room: Seaside

Chair: Mark McMullen

Jay Raskin, FAIA, 50-year Resilience Strategies for Coastal Communities at Risk for Tsunamis

Nick Nash, Eastern Oregon Business Source, Building Capacity Through the Umatilla County Regional Capacity Building Initiative

Becky Knudson, Oregon Department of Transportation, *Economic Impacts of Road Closure Due to Landslides, OSU/ODOT Research Study* 



2:45 PM – 3:00 PM Networking Break, Beverages and Snacks

3:00 PM – 4:45 PM Regional Outlook

Chair: Patrick Balducci, Pacific Northwest National

Laboratory

Alberta – Felicia Mutheardy, City of Edmonton

British Columbia - Chris Lawless, BC Investment

Management Corporation

Idaho - Phil Watson, University of Idaho

Montana - Pat Barkey, Bureau of Business and Economic

Research, University of Montana

Oregon – Mark McMullen, Office of Economic Analysis, State

of Oregon

Washington - Steve Lerch, Washington State Economic and

Revenue Forecast Council, State of Washington

Wyoming - Roger Coupal, University of Wyoming

4:45 PM – 5:00 PM Closing Ceremonies



### **PNREC Board of Directors**

- Mr. Chris Lawless, PNREC President, BC Investment Management Corporation
- **Dr. Anneliese Vance-Sherman**, Vice President, Washington Employment Security Department
- Mr. Nick Beleiciks, Secretary, Oregon Employment Department
- **Dr. Terry Morlan**, PNREC Treasurer, Northwest Power and Conservation Council (Retired)
- Mr. Scott Bailey, Washington Employment Security Department
- Mr. Patrick Balducci, Pacific Northwest National Laboratory
- Dr. Patrick Barkey, University of Montana
- Dr. C. Scott Benson, Department of Economics, Idaho State University
- Dr. William Beyers, University of Washington
- Dr. Andrew Cassey, School of Economic Sciences, Washington State University
- **Dr. Roger Coupal**, Department of Agricultural and Applied Economics, University of Wyoming
- Ms. Carol Frketich, Canada Mortgage and Housing Corporation
- **Dr. Hart Hodges**, Center for Economic and Business Research, Western Washington University
- Mr. Massoud Jourabchi, Northwest Power and Conservation Council
- **Ms. Becky Knudson**, Oregon Department of Transportation
- **Dr. Steve Lerch,** Washington State Economic and Revenue Forecast Council, State of Washington
- Mr. Mark McMullen, Office of Economic Analysis, State of Oregon
- Dr. Riley Moore, School of Business, Saint Martins University
- Dr. Tom Potiowsky, Department of Economics, Portland State University
- Dr. Gary W. Smith, Pacific Northwest Regional Economic Analysis Project
- Dr. Phil Watson, University of Idaho



A forum to exchange knowledge and expertise between academia, business and government

