



## CONFERENCE PROGRAM

### “The Intersection of Infrastructure and Technology” 22<sup>nd</sup> Annual GIC Conference, October 12-14, 2016

**Embassy Suites Downtown/Convention Center Hotel, 1420 Stout St, Denver, CO 80202**

| Day/Time                     | Breakout #1<br>Silverton 1   | Breakout #2<br>Silverton 2                                |
|------------------------------|--|---|
| <b>Wednesday, October 12</b> |  |   |
| 5:00-7:00 pm                 | Registration at the Embassy Suites   |   |
| 5:30-7:00 pm                 | Opening Reception at the Embassy Suites  |   |
| <b>Thursday, October 13</b>  |  |   |
| 8:00 am-4:00 pm              | Registration at Embassy Suites   |   |
| 6:00 - 8:00 am               | Free Breakfast for Embassy Suites Guests in Hotel Dining Room                                      |   |
| 8:00 - 8:30 am               | Welcome Announcements  |   |
| 8:45 - 10:00 am              | Impact Fee Basics - Keeping it Between the Lines   | Measuring Sustainable Growth: The Report Card             |
| 10:15 - 11:30 am             | Impact Fee Administrators Roundtable   | Alternative Transportation Financing Techniques           |
| 12:00 - 2:00 pm              | Lunch/Plenary Session (The Impact of New Housing Options on Infrastructure Needs, 12:45 - 2:00 pm) |   |
| 2:15 - 3:30 pm               | A Survey of Development Costs  | Funding Transportation: Hillsborough County FL Case Study |
| 3:30 - 3:45 pm               | Refreshments   |   |
| 3:45 - 5:00 pm               | Doing Fiscal Analysis Backwards - The Case of Housing Loss   | Tap Fees, Conservation, & Alt. Water Supplies             |
| 6:00 - 9:00 pm               | Thursday Dinner (Tamayo – modern Mexican cuisine)  |   |
| <b>Friday, October 14</b>    |  |   |
| All Morning                  | Registration at Embassy Suites   |   |
| 6:00 - 8:00 am               | Free Breakfast for Embassy Suites Guests in Hotel Dining Room                                      |   |
| 8:00 - 9:15 am               | 2016 Legal and Legislative Update  | Mobility Plans & Mobility Fees                            |
| 9:30 - 10:45 am              | Get Ahead of the Robotic Vehicle Curve or Get Run Over   |   |
| 11:00 - 12:15 pm             | Navigating Impact Fees; Biennial Audits in Arizona   |   |
| 12:30 - 2:15 pm              | Lunch and Plenary Session (The Convergence of Transportation and Technology, 1:00-2:15 pm)         |   |
| 2:15 - 2:30 pm               | Annual Membership Meeting  |   |
| 3:00 - 5:30 pm               | Downtown Denver Walking Tour (meet in Embassy Suites lobby)  |   |
| 6:00 pm til ?                | Transit Pub Crawl (TBD)  |   |

|                                  |                           |
|----------------------------------|---------------------------|
| Breakout Rooms – Silverton 1 & 2 | Dining Room – Silverton 3 |
|----------------------------------|---------------------------|

## SESSION DESCRIPTIONS

### THURSDAY, OCTOBER 13

Thursday, 8:45 - 10:00 am

#### **Impact Fee Basics – Keeping it between the Lines**

We will review key principles of impact fee practice, but also discuss “non-impact fee” factors that fee administrators face, including prior development agreements, the relationship of other funding sources to the fee program, and emerging trends in light of the political resistance impact fees face in this economy. Tyson Smith will cover the legal issues, discussing fundamental authority issues and legal parameters. He also will review typical challenges to impact fee programs and suggest “Practice Points” for avoiding litigation. Carson Bise will discuss alternative means of calculating impact fees based on the needs of a particular local government, the data available, and local planning and CIP practices. Mr. Bise also will review several case studies to illustrate implementation techniques. John Osborne will, using case studies, discuss the key elements of program implementation and administration including the importance of reporting and identifying key policy issues for elected officials.

*Speakers:* Carson Bise (TischlerBise), Tyson Smith (White & Smith), John Osborne (Manatee County, FL)

#### **Measuring Sustainable Growth: The Report Card**

As cost of providing services increases, sustainable growth is becoming more of a focus area for communities experiencing significant growth. With its emphasis on a method of growth and development that emphasizes compact, infill, mixed-use, high-density development, it is viewed as a more viable option to spread-out, greenfield, and low density suburban development. One particular topic of interest is whether sustainable growth is more fiscally beneficial for a jurisdiction than typical suburban growth. Literature in the field has highlighted the financial benefits of sustainable growth, which was sometimes attributed to the reduced use of resources, such as land and infrastructure, needed to provide utilities and services sustainable development areas. As part of a recent study, Tindale Oliver reviewed fiscal impact models used by up to 30 jurisdictions to evaluate the ability of these models to capture the cost and benefit of various types of developments. This part of the session will discuss the findings of this study and general strengths and weaknesses of these models. In addition, key criteria and community goals that need to be identified and staff members from the government agency who should be involved in the process prior to designing a fiscal impact model will also be reviewed.

In recent years, many local governments throughout the country have embarked on a variety of sustainability planning projects to move beyond the typical land use and comprehensive planning processes they have historically employed. Sustainability planning now “touches” land use, transportation, infrastructure, environment, economic development and how these are planned for and funded. There is a growing body of evidence that demonstrates how and to what degree sustainability planning has influenced our traditional planning processes and projects. This part of the session will discuss the current state of sustainability planning in America, what it has concentrated on, how it is evolving, how effective it has been and what the next evolution will be. The session will provide real life examples of sustainability planning process currently underway,

their success in implementation, how measurable outcomes/metrics are being applied and how communities are considering incorporating sustainability planning into their local growth management programs. Benchmarking of various sustainability plans will also be provided. We will also discuss the role that “public engagement” plays in the development of a successful sustainability plan: using the public engagement process employed in the development of the Bowie Sustainability Plan that the MNCPPC is leading for the City of Bowie to illustrate this vital component.

*Speakers:* Steve Tindale and Nilgun Kamp (Tindale Oliver); Steve Kaii-Ziegler (Charles County, MD); Melissa Lindsjo (MD Natl Capital Park & Planning Commission)

Thursday, 10:15 – 11:30 am

### **Impact Fee Administrators’ Roundtable**

This is an opportunity for impact fee administrators to meet and discuss issues encountered in administering impact fee systems. Moderators will list some common problem areas and facilitate the discussion.

*Moderators:* Carson Bise (TischlerBise); John Osborne (Manatee County, CO)

### **Alternative Transportation Financing Techniques**

This session will explore methods of financing transportation capital and maintenance costs that are alternatives to traditional funding sources (such as gas taxes and property/sales taxes/bonds). The alternatives include (1) impact fees that fund reconstruction and replacement of existing roads, (2) mileage-based user fees (MBUFs), (3) transportation utility fees (TUFs), and (4) transportation impact fees to fund multi-modal capital costs. Clancy Mullen will discuss the development of road impact fees for several Colorado counties whose rural roads are heavily impacted by oil and gas development. Dwayne Guthrie will describe the City of Boulder’s efforts to develop a transportation utility fee, and the role of special districts to manage transportation demand. Jim Charlier will discuss technological progress and practical applications of that technology to develop user fees based on actual road usage, including a pilot program in Oregon.

*Speakers:* Clancy Mullen (Duncan Associates); Dwayne Guthrie (TischlerBise); Jim Charlier (Charlier Associates)

Thursday, 12:45 – 2:00 pm (luncheon plenary session)

### **The Impact of New Housing Options on Growth and Infrastructure**

Three recent developments in new types of housing have already had impacts on patterns of growth and on infrastructure. One is essentially a variant of what already exists: micro-units, single household dwelling units with kitchens and baths but of a very small size, often only 200 to 350 ft. What does this mean in terms of density, traffic, and the need for basic services such as water and sewer? A second type of housing unit recently in the news and causing serious problems for planning and regulation are so-called tiny houses, also very small units, often around 100 ft.<sup>2</sup>, but these are typically homes built in on chassis with wheels and readily moveable. Are these recreational vehicles? Are they taxable? What services do they need? Finally, we have the worldwide phenomenon of the sharing economy in housing, led by Airbnb. Although the impacts have not been fully studied and are not completely understood, there are questions about the impacts on both growth and infrastructure, as well as the loss of community, affordability (for better or worse?), and social equity for hosts, guests, neighbors, and hotel workers displaced.

This session will look at all three new types of housing options and assess their impacts on growth and infrastructure using the Denver and the statewide Colorado experience as illustrations of the issues today and ahead of us.

*Speakers:* Dwight Merriam (Robinson & Cole); Don Elliott (Clarion Associates); Jim Johnson (JNS Design)

Thursday, 2:15 – 3:30 pm

### **How Much does it Cost to Build Here? A Survey of Development Costs**

Recently, the City of Commerce City and the South Adams County Water & Sanitation District engaged Raftelis Financial Consultants, Inc. (RFC) to determine how “competitive” the City and the District are when attracting new development. In order to assess competitiveness, RFC calculated a total cost to develop eight different types of buildings within the City and amongst 10 other Denver Metro communities. The eight different development profiles or types that were analyzed included: a single family residential detached home, a multi-family residential building (36 dwelling units), a commercial retail building (6 units), an industrial warehouse, a city-owned park (irrigation only), a restaurant, a manufacturing building, and a truck wash. This presentation will provide the audience with a detailed view of the underlying costs to construct these types of developments. The unique aspects that arise by having a separate water district, instead of a full service city, were also analyzed. Fees to connect to the water and wastewater systems, which are assessed by the South Adams County Water & Sanitation District, are known as system development fees. Given the limited water resources that are available across the State, these fees can be a significant portion of the overall cost of development. Other one-time fees that are assessed at the city, county, State, and metropolitan district level were also quantified in this study. In addition to looking at the upfront costs the study also compiled recurring or annual cost paid by the owner or tenant, such as mill levies and water and sewer rates. This study found that the City was competitive amongst the survey communities, but that opportunities existed for both the City and the District to improve. The City’s use tax, fee-in-lieu of park dedication requirement, and water acquisition fee are unique when compared to the other communities. The District has the potential to modify its rates for their raw water irrigation system, and establish a set price for a fee-in-lieu of water rights dedication. Over the summer of 2016 the City Council will be evaluating the results of the cost comparison study and, using this information, developing strategies and actions consistent with City growth initiatives while balancing a variety of fiscal considerations. This presentation will highlight the results of the Council’s use of the cost comparison study and resulting changes to City practices, policies, etc. This presentation will provide valuable information regarding one approach or consideration in answering the question of “are we competitive?”.

*Speakers:* Chris Cramer (Commerce City, CO); Rick Giardina (Raftelis)

### **Funding Transportation: Hillsborough County FL Case Study**

Transportation is one of the most expensive capital infrastructure. Along with schools, it makes up about 80% to 95% of all capital infrastructure. Although fuel taxes are dedicated to transportation, revenues generated are insufficient to fund growing needs. Recently, Hillsborough County went through an initiative to identify the multimodal transportation needs and provide funding options that consisted of a combination of fuel and sales taxes and mobility fees. This 3-year initiative led to many changes in the way the County reviews new development. Following legislative changes in Florida since 2009, many local governments are exercising the statutory option to repeal concurrency and rely instead on multimodal capital planning and mobility fees to

meet the transportation demands of new growth. In addition to the mobility fee, Hillsborough County also sought the option of implemented a ½-percent local option sales tax dedicated to transportation projects. This process will be discussed to highlight some of the considerations and practical implications of transportation funding, recent legislative changes in Florida, and varied approaches seen around the state that could be used by other jurisdictions throughout the United States.

*Speakers:* Steve Tindale and Nilgun Kamp (Tindale Oliver); Colorado presenter TBD

Thursday, 3:45 – 5:00 pm

### **Doing Fiscal Analysis Backwards – The Case of Housing Loss**

While a traditional fiscal impact analysis is used to project the impacts of a proposed development being added to a community, this presentation seeks to analyze the fiscal impacts of current development being eliminated from the community through demolition. In essence, a “reverse” fiscal impact analysis is needed. The calculations for municipal costs and revenues are reversed. The costs to the municipality are the revenues lost. These are the property tax revenues that will disappear as a result of the demolition of properties. The revenues to the municipality are the cost savings that might result due to cutbacks in personnel and other expenditures after properties are demolished and some services are no longer required. It is important to focus on this difference all the way through the analysis. Costs to the municipality are the revenues immediately lost; revenues to the municipality are the cost savings that might take place in the shorter or longer run. In addition to the Per Capita Approach, there will be two additional presentations on the Case Study methodologies relating to the loss of housing and fiscal impact analysis.

*Speakers:* Bob Burchell (Rutgers); Carson Bise (TischlerBise); Jim Nicholas (U of FL)

### **Integrated Water & Land Use: Tap Fees, Conservation, & Alternative Water Supplies**

This water-focused session will feature new trends in the water industry, as it relates to land use planning in the West. Specifically, the proposed presentations will focus on strategies for better integrating water and land use planning, the use of alternative water supplies (e.g. recycled water, rainwater, etc.) in new developments to help meet the water needs of a growing population sustainably, and water conservation-oriented connection charges in new construction. The session will feature three speakers, who will present new research, case studies, and practical applications. At the conclusion of the presentations we will open it up for 20 - 30 minutes of Q&A with the presenters.

#### Presentation 1. Water & Land Use Planning in the West

The first presenter, Drew Beckwith from Western Resource Advocates, will frame the discussion by talking about the future of water in the West, especially as it relates to population growth and land use planning. He will present some preliminary results from research currently being conducted by Western Resource Advocates and the Brendle group under the auspices of the Water Research Foundation (Project # 4623) entitled “Integrating Land Use and Water Resources: Planning to Support Water Supply Diversification.” This research identifies the barriers and pathways for better integrating water and land use planning, with a particular focus on alternative water supplies, such as recycled water, greywater, rainwater, conservation and aquifer storage and recovery.

#### Presentation 2. Water Connection Charges in the West

Amelia Nuding, from Western Resource Advocates, will present on how water connection charges (aka “tap fees”) can be used to encourage water-efficient design in new construction. The presentation will highlight recent research from 2015 - which focused on communities in AZ, CO,

UT, NC and SC and culminated in a report - as well as new research from 2016 related to the builder/developer perspective on this topic. The presentation will illustrate how various fee structures have (or have not) resulted in water savings, and provide some discussion on where, how and why these fee structures are an appropriate tool for water conservation.

Presentation 3. Tap Fees in Practice: A Colorado Case Study

The third presentation will be a detailed case study of a conservation-oriented tap fee in one Colorado community. The presenter will be a water utility representative, with experience in both conservation and tap fee administration. The focus will be on benefits, challenges, and lessons learned from their program, with a particular emphasis on the collaboration that took place between the water utility, the municipal land use planning department, and local developers invested in the outcome.

*Speakers:* Drew Beckworth and Amelia Nuding (Western Resource Advocates); Colorado utility representative TBD

**FRIDAY, OCTOBER 14**

Friday, 8:00 – 9:15 am

**2016 Legal and Legislative Update**

Tyson Smith will discuss judicial trends in growth-related infrastructure finance, including cases covered at the 2015 Conference that have been resolved on appeal (Believe it or not Koontz is finally over!). In addition, Mr. Smith will cover recent cases related to impact fees, exactions, adequate public facility programs, and local government authority in general, as it relates to infrastructure finance and regulation. Professor Julian Juergensmeyer will discuss recent and significant discussions of the judicial trends found in leading law reviews and treatises. Clancy Mullen will provide an overview of state legislation governing impact fees, and an update of recent changes to state impact fee statutes.

*Speakers:* Tyson Smith (White & Smith); Julian Juergensmeyer (Georgia State Univ.); Clancy Mullen (Duncan Associates)

**Mobility Plans & Mobility Fees: Planning & Funding 21st Century Mobility**

Recent changes made by the Florida Legislature have taken a carrot and stick approach to transportation concurrency. On one hand, they have provided local governments throughout Florida the opportunity to plan a land use and transportation system in a manner best suited to meet the needs of their community. On the other, they have substantially clamped down on the ability of local government to time, regulate and impose mitigation requirements for new development. Further, in many urban areas, adding roadway capacity is no longer feasible. Thus, local governments throughout Florida are exploring Mobility Plans and Mobility Fees, as alternatives to concurrency and road impact fees, to identify 21st Century ways to provide mobility through means other than adding road capacity and to use Mobility Fees as one funding source to fund those improvements. Learn how driverless vehicles, car and bicycle sharing, golf carts, kayaks, cycle tracks and multi-use trails that accommodate walking, bicycling and new technologies providing electric assisted personal mobility are all 21st Century approaches being explored and Mobility Fee are being designed to assist with funding these alternative approaches to mobility.

*Speakers:* Jonathan Paul (New Urban Concepts)

Friday, 9:30 – 10:45 am

### **Land Development & Water: Quantifying Impacts & Conservation Potential**

This presentation describes an effort to benchmark current residential water consumption patterns in Alachua County and to establish reasonable conservation goals for a proposed Sector Plan scale land development project east of Gainesville. Methods and results will be described and a geospatial visualization tool demonstrated.

*Speakers:* Jerry Murphy and Pierce Jones (U of FL Resilient Communities Initiative)

### **Get Ahead of the Robotic Vehicle Curve or Get Run Over**

Connected autonomous vehicles will overrun America's highways. "Connected" because vehicles will be guided by electronic systems connecting them to highways as well as to each other. "Autonomous" because they will be driverless. We call them simply "robotic vehicles". By 2030, robotic vehicles will allow people to be driven nearly everywhere. Commuters will be able to work, sleep and eat to and from work not to mention enjoying certain libations on the way home. The handicapped will have transformative mobility. "Mobility on demand" will be commonplace as users can hail robotic vehicles anytime, anywhere. Highway capacity will expand many-fold because robotic vehicles can travel closer to each other at high speeds. Simulations of robotic vehicles show that vehicle miles traveled per person may explode. By reducing travel times, increasing safety, and allowing occupants to do anything but drive, urban sprawl of the future may be nothing like the past. This session addresses these questions:

- What are the basic features of robotic vehicles?
- How may robotic vehicles transform development patterns?
- How will the needed infrastructure be financed?
- What are the implications for transportation economics?
- What are the equity implications if only some people can afford robotic vehicles?
- How will robotic vehicles change the nature of regional governance structures?
- What is the most efficient, effective and equitable way in which to manage robotic vehicles to maximize their social benefits at minimum environmental and economic costs?

We will address each of these issues and more in our session. We will end with the proposition that efficient, effective, and equitable management of robotic vehicles is accomplished best through a form of regional or state public utilities, the elements of which we will outline. This will also be an interactive session with the audience. As such, it may require longer than the customary time.

*Speakers:* Chris Nelson (U of AZ); Jim Nicholas (U of FL); Julian Juergensmeyer and J. Travis Marshall (Georgia State University)

Friday, 11:00 – 12:15 pm

### **Impact Fees: Avoiding Potential Pitfalls & Biennial Audits in Arizona**

The first part of this session focuses on impact fee methodology. "A" divided by "B" gets you the fee. This high level explanation may work for getting the point across of how impact fees are calculated, but the reality isn't quite so simple. Depending upon what state you are calculating fees in, the process can be far from that simple. Some state statues are almost as straight-forward as a few lines, simply indicating that impact fees can be assessed, while others may be several pages long and have stringent steps (credits, revenue forecasts, waiting periods) that must be followed. Willdan will share their experiences of what approaches have worked in the past to help

navigate the world of impact fees, in areas such as level of service standards, cash flow analysis and why following more stringent guidelines even when not required isn't always a bad thing. The second part of the session will discuss the process of conducting a biennial certified audit of a municipality's Land Use Assumptions (LUA), Infrastructure Improvements Plan (IIP), and development fees under Arizona's Senate Bill 1525. The revised legislation requires that municipalities either (1) appoint an infrastructure improvements advisory committee to perform specific advisory and monitoring duties as part of the LUA and IIP adoption and ongoing compliance processes, or (2) provide for a biennial certified audit of the municipality's LUA, IIP, and development fees. Most municipalities elected to provide for the certified audit, and the panelists will discuss the process of conducting one of the first audits, including the challenges of interpreting the requirements, assumptions, and scope of the audit. The session will discuss the process of reviewing the progress of the municipality's land use assumptions, IIP, and the collection and expenditures of development fees for each project in the plan to determine how the plan was implemented or if the development fees that were imposed resulted in any inequities. *Speakers:* Kevin Burnett, Jeff McGarvey and James Edison (Willdan Financial Services); Frank Davis and Andrew Rheem (Raftelis)

Friday, 1:00 – 2:15 pm (luncheon plenary session)

### **The Convergence of Transportation and Technology**

Our transportation technologies are converging with digital technologies, including communication, sensing, measuring, computing and controlling systems. This technological transformation is not new but it is accelerating and will fundamentally change the way we plan, fund, build and operate our transportation networks. Autonomous and semi-autonomous vehicles are not coming in the future – they are here today. Our economy is shifting from simple ownership models to complex membership and transaction arrangements, including car- and bike-share and ride-hailing systems. Big data and crowd-sourced data are making old measurement systems obsolete and are enabling monitoring and reporting techniques that until now were either impossible or prohibitively expensive. In a fast-paced and entertaining survey, Jim Charlier will provide an update on the status of these trends and their implications for roadway funding and finance, local transit operations, residential and commercial parking demand, traffic safety and travel demand. It's "Not Your Father's Transportation System!"

*Speaker:* Jim Charlier (Charlier Associates)

Friday, 3:00 – 5:30 pm

### **Downtown Denver Walking Tour**

Walk2Connect will host a 2.5 hour walk in the downtown area that will highlight Denver's multi-modal transportation network and land use/planning and redevelopment policies. Walkers will see protected bike lanes, car sharing, free bus rides, multi-modal scenarios, historic renovation, pedestrian malls, mass transit thoroughfares, transit districts, light rail, and heavy rail. The walk will begin from the Embassy Suites lobby and conclude at Union Station with a briefing by the general manager of the Denver Regional Transportation District about his agency's public/private partnership initiatives. Union Station is quick transit ride back to the hotel and numerous other Denver destinations.

*Moderators:* Chris Englert and Angie Revera-Malpied (Walk2Connect)

## SPEAKERS

### **Drew Beckwith, Water Policy Manger, Western Resource Advocates, Boulder, CO**

Drew is responsible for the Water Program's research, legislative, and policy initiatives that advance water conservation efforts and non-traditional water supplies across the Interior West. His current work includes integrating water efficiency into land use planning, partnering with the performance contracting industry to boost water conservation savings, and enabling rural communities to increase local streamflows through conservation actions. Drew holds a Master of Environmental Science and Management degree from UC Santa Barbara and a Bachelor of Arts degree in Geology from Colorado College.

### **Kevin Burnett, Senior Project Manager, Willdan Financial Services, Aurora, CO**

Kevin Burnett is an analyst with Willdan Financial Services and works in the firm's Aurora, Colorado office. He has experience developing impact fees throughout Colorado, New Mexico and Arizona.

### **Carson Bise, AICP, President, TischlerBise, Bethesda, MD**

Carson Bise has over 20 years of professional experience in fiscal, economic and planning activities, and holds BS degrees in Geography and Political Science and an MBA in Economics. Mr. Bise has completed over 125 impact fees in 11 different states for the following infrastructure categories: parks and recreation, open space, police, fire, schools, water, sewer, roads, municipal power and general government facilities. Recognized as an expert, Mr. Bise sits on the Board of Directors for the Growth & Infrastructure Consortium (formerly National Impact Fee Roundtable) and frequently gives lectures and conducts workshops on impact fees, infrastructure finance and fiscal impact analysis for various groups and organizations including the American Planning Association, the National Association of Homebuilders, Growth & Infrastructure Consortium and the Government Finance Officers Association. Mr. Bise has also authored numerous articles on infrastructure finance and fiscal impact analysis. His most recent publication is a chapter on fiscal impact analysis in the book *Planning and Urban Design Guidelines*, 2006, published by the American Planning Association. Mr. Bise was also the principal author of the fiscal impact analysis component for the Atlanta Regional Commission's Smart Growth Toolkit and is featured in the 2005 AICP CD-ROM Training Package entitled, "The Economics of Density."

### **Jim Charlier, President, Charlier Associates, Boulder, CO**

Jim Charlier is a nationally-prominent transportation planner who has worked at the forefront of public sector transportation planning for over 40 years. Early in his career, Charlier served in senior management at two state DOTs (Iowa and Florida), contributing to the modernization of policy planning systems at both agencies. His Boulder-based firm has pioneered a number of significant innovations in transportation planning practice, including multimodal level of service criteria, network-based transit planning, context-based street design, transect-based pedestrian facility design, concurrency management systems, transit-oriented design and development, and strategic integration of urban land use and transportation plans. In recent years, Jim has provided technical assistance through a variety of public and non-profit entities. He helped develop EPA's original Smart Growth Technical Assistance Program and continues to provide assistance to state and local governments throughout the US through that program and through a grant-funded sister program offered by Smart Growth America. In 2015, he helped develop a non-profit initiative – New Mobility West – which provides training and technical assistance to states and municipalities in the interior west states (Idaho, Wyoming, Montana and Colorado). Last fall, Charlier traveled

to Indonesia on behalf of the US Department of State to provide technical assistance to provinces and cities on the Islands of Java and Sumatra, including Jakarta – the world’s second largest mega-region. Jim serves on the faculty of both the Mayors’ Institute on City Design and the Governors’ Institute on Community Design. He has also taught classes in sustainable urbanism and sustainable transportation for the University of Colorado in Boulder as an adjunct professor.

**Chris Cramer, Director of Community Development, Commerce City, CO**

Mr. Cramer has more than 17 years of experience serving Colorado communities. He started his planning career in 1998 in Wheat Ridge, Colorado, and currently is the Community Development Director for Commerce City. During Chris's tenure, Commerce City has doubled its population and has annexed over six square-miles. Much of his career has focused on rewriting the City’s Zoning Ordinance and updating the Community Comprehensive Plan. He also was the City’s project manager for Victory Crossing project, a 900-acre redevelopment project that was formerly part of the Rocky Mountain Arsenal. In 1999, Chris received his master’s degree in Urban and Regional Planning from the University of Washington in Seattle after a brief foray in the telecommunications industry.

**Frank Davis, Manager, Raftelis Financial Services, Sarasota, FL**

Mr. Davis joined RFC in 1997 and has served as Project Manager on numerous water and wastewater rate studies, cost of service studies, utility valuation studies, financial planning studies, water conservation studies, and development fees studies. Mr. Davis has extensive experience in determining and implementing system development charges under industry accepted approaches and to be in compliance with state legislative requirements. Mr. Davis is a member of the Florida AWWA Rates and Finance Committee and has presented a variety of topics at annual conferences including the AWWA/WEF Joint Management Conference and Growth and Infrastructure Consortium. Mr. Davis authored a chapter entitled, "System Development and Other Capital Recovery Charges," for the Fourth Edition of the industry guidebook, *Water and Wastewater Finance and Pricing: The Changing Landscape*.

**James Edison, Managing Principal, Willdan Financial Services, Oakland, CA**

James Edison is an analyst with Willdan Financial Services and works in the firm's Oakland, California office. He has experience developing impact fees throughout the United States.

**Donald L. Elliott, FAICP, Attorney, Clarion Associates, Denver, CO**

Don is a planner and lawyer, and author of a recent article on tiny houses.

**Chris Englert, Head Motivator, Walk2Connect, Denver, CO**

Chris Englert, the Walking Traveler, believes walking is the platform for life. Volunteered into wanderlusting at age 5, she's since traveled all 50 US states and 50 countries. Chris shares her love of walking while traveling via blogs, books, and presentations. As a Walking Movement Leader for Walk2Connect and a Walking Fellow for America Walks, Chris builds exciting and educational walking programs for groups visiting Denver. Author of Travel Magic Postcards and the blog, EatWalkLearn, you can find her throughout Denver and virtually within social media at @eatwalklearn.

**Rick Giardina, Executive Vice President, Raftelis Financial Consultants, Greenwood Village, CO**

Mr. Giardina has over 36 years of managerial and financial experience that includes more than 300 financial studies serving both the private and public sector. His experience covers technical areas and industries such as municipal fee development, utility cost of service and rate structure studies, litigation support, economic feasibility analyses, privatization and regionalization feasibility and implementation studies, impact fee studies, management and operational audits, reviews of policies and procedures and operating practices, mergers and acquisitions, valuation services, and rate filing and reporting. He was 2005 Impact Fee Roundtable Conference President and a past speaker at several Roundtable conferences. He is also a long-standing member of the American Water Works Association (AWWA) Rates and Charges Committee (currently the Committee Chair), he chaired one group that prepared the first edition of the M54 – Small System Rate Manual and another that re-wrote the Water Utility Capital Financing Manual. He also chaired the re-write of "M1 – Principles of Water Rates, Fees, and Charges" (the Sixth Edition was published in June of 2012).

**Jim Johnson, AIA, NCARB, LEED AP, Founder, Johnson Nathan Strohe, Architects, Denver, CO**

Jim Johnson has been the architect for new micro-unit housing in Denver.

**Julian Juergensmeyer, J.D., Professor of Law, Georgia State University, Atlanta, GA**

Professor Juergensmeyer invented the legal defense for the dual rational nexus test and asserts that impact fees fashioned consistent with his theories are per se constitutional. With Professors Nicholas and Nelson, he is co-author of A Practitioners' Guide to Impact Fees; Impact Fees – Principles of Proportionate-Share Facility Financing; and A Guide to Impact Fees and Housing Affordability. Professor Juergensmeyer has also provided the legal rationale for adopting hundreds of impact fees nationally including serving as an expert witness for many. Julian is Professor of Law and Ben F. Johnson Jr. Chair in Law, Georgia State University, College of Law. He is also Adjunct Professor of City and Regional Planning, Georgia Institute of Technology, and Emeritus Affiliate Professor of Urban and Regional Planning, University of Florida. He has his law degree from Duke University.

**Steve Kaii-Ziegler AICP, Planner, Charlotte County, MD**

Steve Kaii-Ziegler has more than 25 years of professional experience applying local and regional land use planning, project management and special studies expertise to county and municipal governments in Maryland, Virginia and North Carolina. Mr. Kaii-Ziegler holds a Bachelor's Degree in Land Use Analysis /Political Science from Eastern Michigan University and a Master's Degree in Human Resource Management, a separate Master's Degree in Public Administration from Wilmington University and is a member of the American Institute of Certified Planners (AICP). He has presented at various conferences and seminars including the National APA Conference and a previous Impact Fee Roundtable annual conference.

**Nilgun Kamp, AICP, Associate Principal, Tindale Oliver, Tampa, FL**

**Melissa Lindsjo, Senior Planner, Maryland National Capital Park and Planning Commission, MD**

Melissa Lindsjo has approximately five years of progressive experience in planning related activities with a special emphasis on Sustainability Planning. She served as an AmeriCorps VISTA team member and team leader for three years. Ms. Lindsjo holds a Bachelor's degree from Wittenberg University in Geography and Master's degrees in City and Regional Planning from the Knowlton School of Architecture as well as Public Policy and Management from the John Glenn School of Public Affairs. She has presented at various conferences and seminars including the National APA Conference. She was a principal author of a Sustainability Plan for the City of Hilliard, Ohio and is the project manager for the preparation of a Sustainability Plan for the City of Bowie, Maryland.

**Jeff McGarvey, Analyst, Willdan Financial Services, Orlando, FL**

Jeff McGarvey is an analyst in the Orlando office of Willdan Financial Services. He has experience with impact fees throughout the United States.

**John Travis Marshall, Assistant Professor of Law, Georgia State University, Atlanta, GA**

John joined GSU from Yale Law School where he served as a Clinical Lecturer and the Ludwig Community Development Fellow. From 2007 to 2011, he was a counsel and project manager with the New Orleans Redevelopment Authority (NORA). In that role, he advised NORA on post-Hurricane Katrina implementation of the Authority's urban revitalization efforts. Prior to New Orleans, he was a partner with Holland & Knight LLP, specializing in land use and zoning matters as well as real estate litigation.

**Angela Malpiede, Executive Director, Northeast Transportation Connection, Denver, CO**

Angelina Rivera-Malpiede is a dedicated, lifelong community advocate who has worked tirelessly to build bridges in the community and has always recognized the power transportation has to connect and advance people. Her approach is informed by her personal biography, growing up in a family with eight kids, seven surviving and two parents that never spoke English who were transit dependent for many years. She knows that no matter where someone is in our community, they have a wise, informed and valuable opinion on issues that directly affect them and that together we can achieve solutions to our collective problems. She is currently the Vice President of the Stapleton Foundation and the Executive Director of Northeast Transportation Connections. As the local Transportation Management Association (TMA), Northeast Connections works with the public and private sectors to improve mobility, reduce single occupant vehicle travel and to establish sustainable transportation throughout the northeast Denver area by creating, supporting and promoting an array of transportation options for commuters, residents, students and visitors. She has served the community through a number of professional and volunteer positions, including serving on the FasTracks Citizen Advisory Committee, as RTD Board member for District C and being selected for the national American Public Transportation Association (APTA) Board. She currently sits on the Board for the Denver Victims Crime Center after having worked as their Public Relations and Fundraising Director in the past. In addition, she has worked as the Marketing and Public Relations Director for Mi Casa Resource Center for Women, the Rocky Mountain News and spent twenty years developing programs to serve high-risk girls that serve as national models.

**Dwight Merriam, FAICP, Partner, Robinson + Cole, Hartford, CT**

Dwight Merriam founded Robinson+Cole's Land Use Group in 1978. He represents land owners, developers, governments, and individuals in land use matters. Mr. Merriam is a Fellow and past president of the American Institute of Certified Planners, a former director of the American Planning Association (APA), a former chair of the APA's Planning and Law Division, past chair of the American Bar Association's Section of State and Local Government Law, and a Fellow of the Royal Institution of Chartered Surveyors. He teaches land use law at the University of Connecticut School of Law and at the Quinnipiac School of Law and has published over 200 articles and nine books.

**Clancy Mullen, Principal, Duncan Associates, Austin, TX**

Clancy has been the primary author of most of the firm's impact fee studies since joining Duncan Associates in 1989. In addition to over 300 studies for cities and counties from coast to coast, he has also prepared studies for the Florida Department of Community Affairs, the Hawaii Department of Education, the Louisiana Department of Transportation, the Maryland-National Capitol Park and Planning Commission, and the Minnesota Department of Agriculture. Prior to joining Duncan Associates, Clancy served as a zoning planner for the City of Austin, Texas. He is a contributing author to two American Planning Association publications, *Impact Fees: Principles and Practice of Proportionate-Share Development Fees*, 2009 and *Growth Management Principles and Practices*, 1995, as well as the Island Press book *A Guide to Impact Fees and Housing Affordability*, 2008. Clancy is a frequent conference speaker on impact fees, and is a founding and current member of the Board of Directors of the Growth & Infrastructure Consortium (formerly National Impact Fee Roundtable). He was a National Merit Scholar at Rice University and has a master's degree in community and regional planning from the University of Texas at Austin.

**Jerry Murphy, JD, AICP, CFM, Associate Research Professor, U. of FL, Gainesville, FL**

Jerry is Project Coordinator of the Resilient Communities Initiative of the Dean's Office and Associate Professor in the College of Design, Construction, and Planning at the University of Florida. From 2004-2008, he was Director of the Department of Community Development for the Town of Fort Myers Beach, Florida, one of the earliest Florida municipalities incorporated (1995) under a "government lite" approach to municipal governance. He is currently the Chair of the Board of Directors of Growth and Infrastructure Consortium, Inc., the national non-profit educational organization supporting innovative approaches to capital infrastructure funding concepts and mechanisms. His practical and research focus includes community-based planning, 21st Century code and regulation drafting, public consensus-building, sea-level rise, and resilient floodplain management.

**Arthur C. Nelson, Ph.D., FAICP, Professor, University of Arizona, Tucson, AZ**

Chris Nelson is Professor of Urban Planning and Real Estate Development, University of Arizona, and Presidential Professor Emeritus, University of Utah. Professor Nelson has conducted pioneering research in public finance, development policy, smart growth, economic development, and metropolitan development patterns. He has written more than 20 books, 100 refereed articles, and 300 other works. Prior to academia, Dr. Nelson managed his own West Coast consultancy in planning and management. In 2000, his professional planning, education, and research accomplishments were recognized with election to the College of Fellows of the American Institute of Certified Planners. Dr. Nelson's current work focuses on how demographic economic

forces along with shifts in housing preference will reshape America's metropolitan areas for the rest of this century.

**James Nicholas, Professor Emeritus, University of Florida, Gainesville, FL**

Professor Nicholas is an international expert in natural resource and land use management, Florida growth management legislation, urban land economics, urban and regional planning and environmental and urban problems. Jim is Professor Emeritus of Urban & Regional Planning and Affiliate Professor of Law, University of Florida, Gainesville, Florida, 1985 to 2012. He was Associate Director, Environmental and Land Use Law Program, College of Law, 1999 to 2006; Co-Director of Growth Management Studies, College of Law, University of Florida, 1985 – 1992; Professor of Economics, Florida Atlantic University, Boca Raton, Florida, and Associate and Acting Director, Joint Center for Environmental and Urban Problems of Florida Atlantic and Florida International Universities, 1969 - 1985. He has a Ph.D. in Economics from University of Illinois.

**Amelia Nuding, Senior Water Resources Analyst, Western Resource Advocates, Boulder, CO**

Amelia works with utilities, municipalities, and state agencies to align water and energy efficiency programs, and to improve the integration of water and land use planning. She conducts technical, spatial, and policy analysis to advance these goals. She has a Masters in Water Resources Management from the Bren School at UCSB, and a Bachelors in Physics from Vassar College.

**John Osborne, Planning and Zoning Official, Manatee County, FL**

**Jonathan B. Paul, AICP, Principal, NUE Urban Concepts, LLC, Gainesville, FL**

Mr. Paul holds an undergraduate degree from Florida State University and a Masters in Urban Planning from the University of Florida and a Master's in Public Administration from the University of South Florida. Jonathan worked as a principal planner with Hillsborough County focusing on transportation, concurrency and impact fees. He worked for several years as the Concurrency and Impact Fee Manager for Alachua County. He was a co-principal author along with Jeff Hays on Alachua County's award winning Mobility Plan. In 2011, Mr. Paul started NUE Urban Concepts working with local and state governments and private developments on developing innovative and creative solutions for addressing mobility. Jonathan is the lead planner for the Celebration Pointe TOD. He has just recently completed a Mobility Fee for the City of Altamonte Springs, Florida and Osceola County, Florida. He is currently working on development of a Mobility Plan and Mobility Fee for the City of Maitland, Florida and Sarasota County, Florida. Mr. Paul has served on numerous land use and transportation statewide technical review committees and advisory boards. Jonathan has started work recently on preliminary planning for several additional mixed-use developments through Florida.

**Andrew Rheem, Manager, Raftelis Financial Services, Denver, CO**

Andrew Rheem is a Manager at Raftelis Financial Consultants and member of the JTAC committee. Andrew has provided municipal utility financial, rate and impact fee and non-utility impact fee consulting services for 13 years to municipalities throughout the southwestern United States. Over the past three years alone, Andrew has led or is completing projects for Denver, Boulder, Greeley, Longmont, Pueblo, Salida, Steamboat Springs, Colorado, Salt Lake City Utah, El Paso Water Utilities Texas and Surprise and Prescott, Arizona. Andrew holds a BBA in Finance and Accounting from the University of Michigan.

**Steven A. Tindale, P.E., AICP, CEO, Tindale Oliver, Tampa, FL**

Steve Tindale has 40 years of experience in planning, designing, and managing public infrastructure studies and public facility projects. His extensive background in city government includes serving as Director of Public Works for the City of Tampa, where he was responsible for all planning engineering projects and the overall administration of the department. His areas of expertise include infrastructure planning, comprehensive plans, traffic engineering, public finance studies, parking studies, safety analyses, and crash data management systems. Steve's experience enables him to provide guidance and quality control to the finance, engineering, and planning projects in which Tindale Oliver specializes for public agencies.