

Blueprint Task Force Meeting #13

8.24.17

MEETING SUMMARY

On August 24, 2017, the thirteenth meeting of the Blueprint Denver Task Force was convened in the Independence Pass Conference Room at the Denver Regional Council of Governments (DRCOG) building. The purpose of the thirteenth Task Force meeting was to discuss the focused topic areas of water and climate change through presentations from area experts and discussion sessions.

To begin the meeting, Joel Noble welcomed the Task Force members and provided a brief introduction for the guest speakers. Following this introduction, four guest speakers presented on the topics of water and climate change from a regional and local perspective each followed by a short discussion period. Following all four guest speaker presentations and discussion sessions, a facilitated discussion was led by both Task Force co-chairs: Kimball Crangle and Joel Noble.

The full agenda for the meeting is included on pages 14-15 of this summary and the meeting presentations are posted online at: <http://www.denvergov.org/content/denvergov/en/denverright>.

Guest Speaker #1: Rob Pressly:

Rob Pressly is a Resiliency Program Coordinator through the State of Colorado Resiliency and Recovery Office. Rob set the stage for climate change and water at the state level by defining the problem through Colorado's history of large-impact floods and wildfires. He highlighted the importance of adaptability and resiliency in planning for climate change. Adaptability is a key component to climate change resiliency – policies and programs should be in place to address adaptability to climate conditions. One of the main reasons communities should plan for resiliency is the increased population growth throughout the state. This growth is not uniform throughout the state, but situated along the I-25 corridor. As a result, there is pressure on infrastructure, housing, and water. Finally, the changing conditions in climate is increasing temperature and impacting our communities.

Rob emphasized thinking holistically about how climate impacts will affect our communities. Rob provided detailed information about the increased average temperature and the outlook of Denver if we were to stay on this trajectory by 2050. The snow melt is now two-to-three weeks earlier and there is a decreased annual snow pack. There are longer and more frequent heat waves and wildfires are more frequent. Resulting vulnerabilities from this ever-growing list of impacts from climate change include air quality, water quality, health issues, and many others.

Rob also spoke about a variety of resources that are available on the state and local level to address climate change. Specifically, on the state level, HB 13-1293. This Bill passed in 2013 and the Colorado conservation water board is the lead agency addressing climate change and water at this level. Another suggested resource is the 2015 Colorado Climate Plan which was a collaborated effort by state agencies, was built on past efforts

and includes mitigation and adaptation strategies. The Climate Change in Colorado report is a synthesis to support water resources management and adaptation and includes scientific data to address the work that is being done around this issue at the state level. The Climate Change Vulnerability Study is a report to assess key climate change vulnerabilities affecting Colorado climate and addresses a wide array of community components. Finally, the 2015 Colorado Water Plan is a good resource for planning for water in our state and addresses strategies such as increasing reservoir and aquifer space by 2025 and increase water-use savings.

Rob closed by emphasizing the importance for Blueprint Denver to include policy to ensure there is enough water for our growing population as well as address climate change adaptation and resiliency.

Discussion:

What could we address in a land use and transportation plan?

- The Plan should anticipate the impacts of climate change. Early anticipation will ensure better-prepared communities.

What are some specific recommendations for the urban environment and dense urban areas?

- Depends on the community profile. Larger, denser areas will benefit more from green infrastructure and water conservation. There is no silver bullet that will work for everybody.

On a state-wide level, buildings were required to be LEED- Gold. NREL did a lot of work on capturing and quantifying pounds per sq. ft. of carbon offset – limited to 8 lbs. per sq. ft. Are these efforts paying off? Is it effective or are we beyond that?

- Not sure – don't know if this is something that has been measured.
- Jerrod, Environmental Health: Even if they eliminated 100%, there would not be significant changes on global trends. Greenhouse gases stay in the atmosphere for hundreds of years. We need to focus on not making the problem worse.
 - Need to be working with other states. We need to be doing the hard mitigation work, but should not say that we will reverse climate change, but rather prevent the worst effects of climate change. Cannot turn back the clock now. GHG will stay in the atmosphere for many years, so we need to focus on stopping these contributions.

Population increase by migration (not high birth rates). Do you ever have a conversation with the state demographer about factoring these risks into their calculation of projected growth rates? I would assume they are included.

- Yes. Based on the strength of the local economy – everyone is experiencing these issues, so the state and regional economy are still expected to be greater than the natural. There is also a natural increase, not just migration. We are also living longer and that is a part of that population growth.

Is there a city in the world that is working on resiliency that is facing similar challenges that is leading the charge and secondly, given the unique aspects of water, is there any lead city taking this on?

- There are a number of cities here in the US and worldwide. There is the 100 resilient cities program from the Rockefeller Foundation – they have worked with cities to develop a resiliency office at the state level and funded at the state level and will bring that onboard as a permanent position. Boulder is one. New Orleans. Charlottesville, VA. Regarding water, Charlotte, NC has done a good job integrating flood/mitigation effort in their land use and comprehensive plan and aligning with their hazard profile.
- This is so new and there are very few people working on these issues. There is a lot of information in those reports that you mentioned. They have very specific recommendations. I recommend, as advisors to this effort, to review these plans to come with recommendations that very specifically recommend efforts to address these vulnerabilities.
- Mexico City has similar challenges to Denver. A good example. Doesn't give us answers, but the report really opens our minds to what we should be thinking about.
- 3.5 years ago, Denver was one of the first cities to address these issues through a Climate Change Adaptation Plan. There are a lot of tradeoffs but also a lot of efforts that build off one another. It provides resilience and reduces some emissions when looking at making a building more efficient, for instance.

Guest Speaker #2: Tom Herrod

Tom Herrod represents the Denver Department of Environmental Health. The focus of his presentation was on some of the work Denver is doing to address climate change. Denver joined a climate pack to reduce our climate impacts. Denver is one of the leaders in measuring greenhouse gas (GHG) emissions. The goal is to reduce our emissions by 80% by the year 2050 (80 by 50 Plan).

Rob indicated that cities only account for 3% of global land mass but account for 70% of emissions impacts globally. Because of this, Denver must focus on climate mitigation and adaptation strategies. To do this, Denver wrote its first climate mitigation plan in 2007. Climate mitigation refers to the reduction or prevention of greenhouse gas emissions through strategies such as energy efficiency; lowering emissions and kWh of electricity; increased public transportation; enhanced greenspace for walking, biking, and carbon sequestration; among others.

Climate adaptation refers to preparing for and adjusting to current and future impacts of climate change. Tom spoke about the problem of planning for climate change resiliency in saying that, “you don't know how resilient you are until you are not”. We must recognize climate change impacts on building design (more cooling required on increased setbacks near waterways, etc.); availability of cooling, either natural (trees, parks) or man-made (cooling centers, pools); and upgrade stormwater and transportation infrastructure to withstand changes in precipitation and heat. We have a positive going for us in that we do cool off at night.

Tom spoke about the importance of metrics and measuring climate change mitigation and adaptation strategies. He indicated that you can't manage what you don't measure. In the last ten years, we have decreased our emissions about 3.5%. By and large, the emission sources have stayed about the same over the years. Indirect sources significantly contribute. Additionally, we can only measure methane associated with waste. There is a lot of evidence out there that indicates that waste is actually a larger percentage outside of

just methane. In the electricity sector, if we can decrease energy use we will have a significant impact. We can offset emissions throughout a variety of direct implementation strategies.

Embodied energy: energy it took to produce something – cut down a tree, process it, ship it, etc.

Tom discussed state temperatures versus local, Denver temperatures. A few years ago, we began work with what does 2 degrees Celsius mean – we wanted to localize this. Looking at previous weather and amplifying it with a 2 degrees Celsius rise means a significant increase of days over 100 degrees F. With our current trajectory and our national policies, the extreme predictions are more likely. There is a way out of this if we act collectively and globally. Precipitation is difficult. Denver does not see an increase or decrease in the amount, but we will continue to see a lot more intense events.

Tom summed up his presentations with some important considerations:

- Resilience – how do we both mitigate and adapt?
- Development – compact and dense will be more efficient, but there is also the flip side – people get out and walk more when there are green spaces and trees
- Transportation – are we building transportation for only SOVs or for bike lanes, etc.?
- Life cycle and cost of carbon – if you can assign carbon to the work that we do (programs and carbon) and how much is embodied in the work, then you can mitigate it. Evaluate this based on carbon to help mitigate.

Discussion:

Climate will impact us in ways that we don't think about. Do we think about what it will do for affordable housing (energy bills that they cannot afford to pay?). Transportation costs rising? Indirect affect we don't think about?

- We have had a lot of discussion about our streets. Even with the best streets, what happens if you have an increase in extreme weather events – what will that do to that infrastructure and how do we plan for that? We get caught up with direct affects without thinking about all the potential affects in a systemic way. Think deep about these impacts.

Denver could see a lot of migration due to climate. Coastal cities may move inward. Water issues. Etc. Health is a focus lately. Ongoing about health equity related to climate.

Storm water detention on our development sites: Today when we are planning, we look backward to see historic trends and are not looking forward. Sizing detention systems: think about sizing for what is coming. Development trends are based historically, but not future. This conflicts with density due to space. Quality of life is an issue. If we have green spaces that can serve two things – give more green space and address detention. Can address this in green infrastructure.

In order to achieve some of the bold goals that the city has already set, should we be addressing some of these within our buildings? To get your building permit, you must show a certain number of points, for instance.

- Absolutely – when buildings can become more efficient, it is a no-brainer. It helps their bottom line. It helps the city be more resilient. It helps renewables be more cost-effective. Energy efficiency is one of the easiest, best first steps to move forward.

Is there someone in Denver thinking about power and grid-level storage from a resilience perspective and a way to make more use of renewables sensitive to time of day, wind, etc.?

- Xcel is still a big organization that addresses these issues. Has a pilot project doing that with commercial scale and residential scale battery storage. Hopefully we can promote more storage. One of the issues with solar now is that even if you have solar now and the power goes out, your power still goes out. Battery allows for at least some sort of backup.
- There may be a parallel with where we are with RTD in that “that’s not our department, best of luck...”. Here we are saying we are going to work in partnership and lead rather than defer – I would hope with power we could do something similar.

Building efficient buildings is not just a reduction in GHG emissions, it is a hedge against greater usage of energy in the future. Needs to offset some of these extreme heat event will mean we will be using more energy. Also makes the home more affordable. There is an education component that should be a part of it. Some sort of education component to the plan should be included. Address existing buildings and the buildings of tomorrow.

For our plan, what are some components we should be thinking about and incorporating into the Blueprint Denver moving forward?

- When you can tie carbon and GHG emissions and assign a carbon load, you can help inform your decision. Find ways to lessen carbon as a choice, even if it is not the least carbon-emission choice. There is considerable expertise within the City and externally that can help put numbers to that.

Do you have any solutions for older buildings or affordable housing – does that decrease affordability as it is passed to the consumer? Is there a compromise to keep housing affordable while meeting these goals?

- Some changes may have costs out front but will make it more affordable overall. Income-qualified homes can qualify for entire upgrades. Focus on making that step as easy as possible to have long-term benefits.
- Transparency cost is important. Some things are absorbed by occupant – these costs should be transparent to the occupant. No one understands the true cost of occupying a residence – stakeholders don’t want you to know this. You can have a choice of whether to mandate policies or make builders be accountable for high-efficiency costs and be transparent to the occupant.
- On affordable rental properties – CHFAA does mandate enterprise green communities to use all the mandatory guidelines. It is an expectation for affordable housing in the State of Colorado to build green because it will save the tenants on the back end to paying energy bills.

We should look at other ways to decentralize the need to rely on one company for power, for instance. Xcel has a great dependence on carbon and dirty sources, so we are taking what is served and not looking at how we want to ensure the grid is cleaner.

- I work for Xcel: We just built a 60W wind farm looking to increase our renewable sources. Part of the problem that we face with resiliency is that the infrastructure needed to build that is often resisted by the community where we want to build them. Screening, for instance, is required and then it increases cost. Support things like substations and would make it easier to deliver that clean energy into the grid. A management entity will be needed to maintain this system. That's where Xcel comes in.

There are noted reductions over the years of coal usage.

Should we be more specific about how to address climate mitigation?

- Denver water is working a lot on these issues that we could highlight and promote that would go along with these goals.

Guest Speaker #3: Sarah Anderson: Water, Green Infrastructure, and Climate Change

Sarah Anderson represents the Denver Public Works in addressing water quality. The focus of this presentation was water, green infrastructure, and climate change.

Colorado is a headwater state – We take for granted how clean our water is. We are the third worst for the urban heat island effect. Because of this, there is significant vegetation stress and vegetation die off. Precipitation – projections related to precipitation is difficult to predict – due to geography, hydrology, and short history of available data. There continues to be an increased variability in precipitation.

Building in flood plains and piping streams, and current obsession with covering natural areas and permeable services with impermeable services are leading to real water quality and quantity challenges. Impervious areas are critical to a healthy city. There are changes we are seeing to impervious area in Denver. We are at 47% impervious in 2014 and are projected to 57% by 2020 – based on number and projected numbers in 2002 Blueprint Denver. Sarah indicated that her group is not so sure these numbers are high enough based on current development patterns and trends. They are currently working with CU Boulder to determine the true costs of impervious surface projections to inform future decision making.

The Water Quality team is currently examining blocks that are experiencing a great deal of change. Example from a block of single family homes alone: Not adding homes or units, in fact lost houses, yet increased impervious surfaces by 22%. (between 2004-2016). A number of basins are actually doubling in impervious surfaces.

What can we do? Add green infrastructure! Green infrastructure is natural or built systems that use vegetation and soils to manage stormwater runoff. There are a number of benefits of green infrastructure and a number of scales green infrastructure may apply. Green infrastructure may apply to sub-regional scale projects and site-scale projects. It may be designed to treat stormwater at the source for smaller-scale projects.

The Water Quality team recently released engineering criteria and BMPs for ultra-urban green infrastructure guidelines. Brighton Blvd will be Denver's first true green corridor.

Currently the team is conducting a data-driven analysis known as the Scorecard. The Scorecard is an implementation strategy that meets multiple city goals. It looks at priority basins and a number of secondary criteria to form the Green Infrastructure Implementation Strategy. The Green Infrastructure Implementation Strategy focuses primarily on city-owned land and larger corridor opportunities such as Colfax and any special opportunities within the city. The team has finished the strategy for priority basins, but is working on orange (medium) basins as we speak. There are a number of projects under construction based on this methodology targeting the priority projects in general. Asbury and Tejon is a park in a park-poor basin with significant economic struggles. Concrete trickle structure makes the park unusable for residents. Poor walkability scores. Etc. All of these problems can be reduced with green infrastructure – goes well beyond stormwater treatment.

21st and Broadway – Air quality monitoring station. Unsafe connection for bikes and pedestrians. Closing a part of the ROW and installing a new bike-light and create safer connections in these urban environments.

Sarah summarized that we have challenges based on historical development patterns. We have problems with current development patterns, in particular, the increase to the permeable surfaces and changes can be addressed in this land use and transportation plan.

Discussion:

A lot of our city is built out, the question is, how do we set standards moving forward and how do we retrofit green infrastructure into existing buildings and ROW? What are the most effective strategies for retrofitting given our limitations in funding and resources?

- That is one of the most important catalyst behind the ultra-urban strategy – designed for limited space, utility constraints, etc. There are opportunities for retrofits in dense urban areas. Overlay performance, landscape-based standards. We have tried to address these issues given the resources.

In the Arapahoe square rezoning, we were coming up with DS&Gs, within your private property what can you do? Also, the public realm – trees, landscape buffers, etc.? The caution we were given at the time was that zoning does not regulate the public side, just the private side. We have no way to compel people to build out the sidewalk area to any particular stand except for some pretty low standards. So, sounds like we need a regulatory change and that might need a legal interpretation change. Can we partner from a BP Denver side and your side to break through that log jam to prioritize these standards for the kind of public realm we want?

- That is a great idea! Our next step is to create a public realms guide that lays green infrastructure over a certain context that is given within BP Denver; what does green infrastructure look like there? There are legal challenges that are not unsurmountable. One of the goals of our program is to treat street runoff. So, there is a way to provide standards and tradeoffs for people to make changes to the street ROW, as long as they treat street runoff.

As we think about higher density along transit corridors and other areas with less dense areas – is there an offset to maintain densities at certain areas and increase density in other to offset the issues?

- This is something we are trying to address in our mapping of the city.

When you look at neighborhoods, specifically in low-income communities, is there instances where infrastructure is less effective in handling these issues than others? Are there communities that are more vulnerable to extreme weather events?

- Absolutely. Curb and gutter helps stormwater. Neighborhoods with lower infrastructure were built because of this infrastructure gaps. There is an equity issue with this as well.
- There is a range of tools in the toolbox, but you will also have areas where it just doesn't make sense in built out areas for a variety of reasons. But there is much that can be done to make these communities more livable in the long-run.

What does a green corridor look like?

- Example Brighton Blvd. There will be about 40 street side stormwater planters in phase I. Could only get to 50% with limited ROW. Through third and fourth phases will get 100% treatment along Brighton Blvd. From a green stormwater perspective it is the best we've done mixed with bike infrastructure and street improvements.

Green rooftops – what are your thoughts? Do these help? If we are looking at these tools, are green rooftops something to be pursued in comparison to these other tools?

- Green roofs are certainly a tool. They are more effective at peak-flow reduction. We don't have a good example here in the city. Our solar radiation component is difficult but not unmanageable. There are many good resources out there to establish eco-roof options. Currently looking at ways to make green roof applications better.

Surface parking lots are second to roads in the water quality problem. Do surface parking lots in our cities currently have an obligation to address stormwater issues?

- Only if they redevelop over an acre. We could focus on these surface parking lots as a land use. We impose parking minimums on every piece of property. Our policy is to contribute to the problem – we need to start making people accountable to these contributions.
- We should be able to identify how much impermeable surfaces are surface parking lots after the study with CU Boulder, as well as other contributors and that should give a better perspective. Policy will be recommended related to each of these uses.
- Water rights can be a huge hang up.

We are talking a lot about fundamentally economic issues as well as a need to assign costs to externalities – extremely hard to do on a local level. Trying to think of economic tools available on the local level to help us tip the scale to creating fewer barriers to mitigating these various risks is important. We have economic tools, regulatory tools, etc.

We are making decisions about increased density and we agree that we need to accommodate density, but how will we integrate green infrastructure into some of the multifamily development that is going up throughout the city?

- We will make recommendations on a tiered approach. We do not know how restrictive we will be but we will outline the problems based on the uses, the impacts, etc. Timing: hoping to have the numbers

of impervious surfaces by the end of the year and then policy recommendations and such by next spring.

How do you promote density and increase pervious surfaces?

- Space-constraint BMPs come into play. Dispersing BMPs into land areas is not that difficult. There must be a way to promote density while not covering a site completely.

Guest Speaker #4: Austin Krcmarik:

Austin represents Denver Water as a Conservation Specialist. Austin began by addressing the organization's Conservation Plan update. This update addresses impacts of climate change to our water resources and notes the synergies between Denverright and Denver Water planning efforts.

Twenty-five percent of the state's population is served by 2% of the state's water.

Where the water comes from? Infrastructure throughout the state of Colorado – The state's biggest asset is Lake Dillon. Half is used for single family residential; 23% is business and industry; and 20% for multifamily.

At Denver Water, conservation has merged with the recycled water division. We are trying to meet future demands through conservation, reuse, and develop new supply. It is only permissible to detain water for 72 hours before releasing rainwater.

Conservation Plan Update: Use less to water and increase efficiency. What does efficient water use look like for each customer type? In the past, we just had overall reduction goals. We started in 2007 and are just wrapping up. The new plan is to want all customers to reduce use and for water landscape they must scale the use to those areas. Water savings will come from who is currently efficient and moving those who are inefficient to more efficient.

Conservation programs offered: Watering rules May 1st through October 31st – Three days to water. High bill audits to identify leaks. Indoor self-audit. Rebates. Landscape change – garden in a box and xeriscape plans. Rebates have been biggest savings over the years. Rebate for high-efficiency sprinkler heads. Customers have done a decent job of responding to changing conditions.

The city can work very well with Denver water to better plan areas that will see increased growth to determine whether the infrastructure can support the growth based on different models that can be run.

Discussion:

Do you have programs to assist homeowners in harvesting rainwater themselves to reduce the need?

- If you actively manage your rain barrel you can save the neighborhood 2,000 to 4,000 gallons. Hard sell for return on investment for Denver Water because we would see very little reduction of water for money spent.

There is work being done on tap sizes. How does that play into demand and efficiency?

- There are programs to get adjustments to charges based on use and have to agree to lowering gallons per sq. ft. We have not done a comprehensive analysis if everybody doing this in an area whether we'd have to change a 6" main to an 8" main.

Denver water needs to know where Denver plans increased density. Does Denver need to know from Denver water where we shouldn't be putting increased density?

- At some point, we will have constraints. If you build out another downtown on our periphery, but a lot of the infrastructure here has been upsized so that we can continue to put in larger density throughout the city. The areas of infill that truly do not have any infrastructure, Union Pacific, for instance, are areas of opportunity and challenge for Denver Water.

Seasonal consumers of water are building cooling – how is a lot of water used for building cooling?

- For 250,000 sq. ft. or larger, cooling towers become normal technology and take the evaporative effect to chill water and chill throughout the building. Convention Center has three cooling towers, for example.

As we look at some other options like accessory dwelling units, does that require a new tap and does the customer have to purchase a new tap?

- At this time, they do not. Most residential is going to be on a 5/8" or 3/4" tap that will provide for this density.

Are there challenges with serving the DEN?

- Yes. It is the end of the line customer and we run into water quality challenges to ensure it is safe drinking water. At certain times of the year we have had to flush pipes and dump water. At one point, they partnered with wildlife refuge to use some of that dumped water to fill ponds and help habitat there. Also on the meter-reading side it takes a long time to get to the airport because of security access.

Deep Rock – as an example of large water consumers of municipal water, would there be any reason to incentivize them to be on the far edges of the system to consume the waters on the end. Is there a way to do that?

- There would be benefits to move them out to airport city. Where they are located, they are looking for cheap infrastructure and making sure they have the pressure to run their system. So, they could probably be just about anywhere.

-Are there other entities outside of service areas that you sell water to that are conditional? Can that be terminated in the future if that is needed?

- We have many different water consumers, and we have total services. We maintain pipe but there is another agency somehow involved. Fixed contracts as well. There are southern neighborhoods on wells that could be a fairly large risk in the future.

Facilitated Discussion:

How do we want to use this information presented today to influence Blueprint Denver?

Should some of the things that drive development scenarios be driven by the availability of infrastructure?

Shouldn't we be overlapping 80 by 50 goals? How should we give a metric and how should we actually accomplish that?

- We are hoping to have more of a roadmap for that. We will do continued outreach to add an additional level. Grid will need to be cleaner. Natural gas should not be relied upon. Transportation will need to be decarbonized. Mathematically speaking, you can't just focus on one aspect. Development plays a role in that. When indoor plumbing became popular, you didn't put it in after you built the house. Wherever we can begin to incorporate these things into development, it really lessens the cost than throwing it in after the fact.
- Spark looks at the confluence of equity, health, and climate change resilience. We are trying to come up with an inventory of impacts. Then working backwards to determine what policies need to be in place to reduce those impacts and thus become more resilient. Timing is an issue here. So what kind of flexibility will we have to take the outcomes of other efforts and plug them into BP Denver and Denverright initiatives?

-I think we are still missing an equity piece of this conversation. We need to think about the implications of the climate changes from an equity lens.

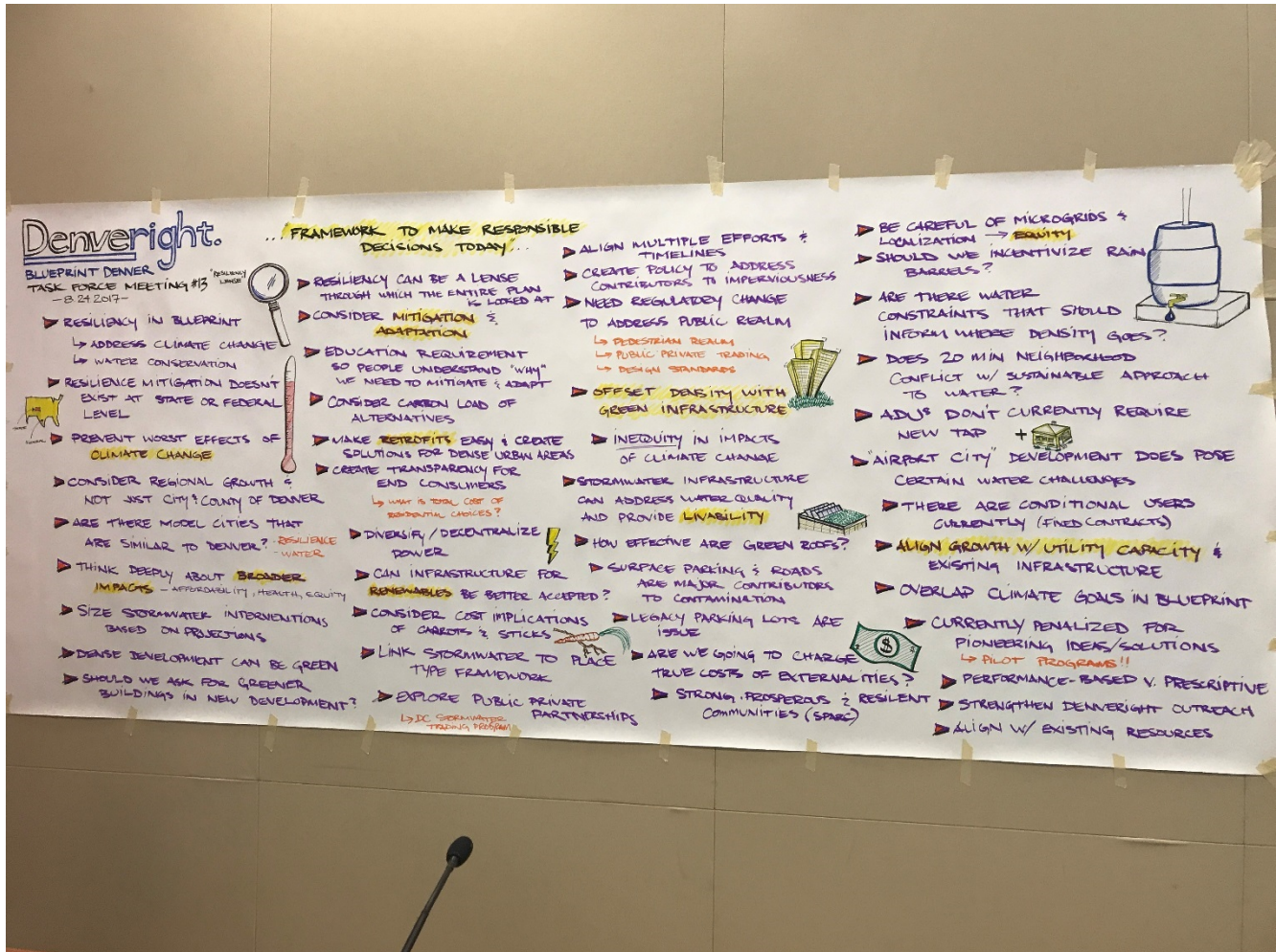
-Climate change does have disproportionate impacts, but some of the solutions have the potential to do the same. Be sensitive to that as we start making recommendations.

-Always penalized for pilot projects and implementing some of the new development projects – how can we reduce these barriers? Develop policy and guidance around these new ideas. Not a lot of room to try these things out and practice these out. How do we make space for pilot programs to reduce barriers and fears we have in the built environment? Because this is a cost (residential or commercial).

- DHA has been a leader as it relates to stormwater quality and treatment – we detailed specific practices due to lack of criteria. If we begin to determine more criteria and clearer criteria, these will reduce some of these barriers. We shouldn't be as prescriptive – be more accepting of something that is performance-based. How do we implement pilots? Is there the space in Denver to start moving from prescriptive to flexible, performance-based? Maybe that is a part of blueprint.

-Permitting process can be difficult to navigate. Stop penalizing organizations for doing the right thing.

-Stakeholder engagement – I see a lot of reinventing the wheel – resiliency isn't a new concept. There is a lot of coherence between the two in existing policies. Do not create your own metrics but rather align with existing metrics and then you can more easily integrate best practices to not have to risk pilot projects. Push for a more integrated outreach program in the Denverright process.



NEXT STEPS

To conclude the meeting, a scheduling update was given for the following meetings:

- Task Force Meeting #14 on September 28th
 - Preferred Scenario and Land Use
 - Modal Prioritization and Emerging Street Typologies
- September Community Workshops:
 - Wednesday, September 13th, 5:30pm – 8:00pm – Maxwell Elementary School, 14390 Bolling Dr.
 - Thursday, September 14th, 5:30pm – 8:00pm – University of Denver: Anderson Academic Commons, 2150 E Evans Ave.
 - Tuesday, September 19th, 5:30pm – 7:30pm – Doull Elementary, 2520 S Utica St.
 - Wednesday, September 20th, 5:30pm – 8:00pm – Scheitler Rec Center, 5031 W 46th Ave.
 - Thursday, September 21st, 5:30pm – 7:30pm – East High School, 1600 City Park Esplanade

TASK FORCE MEETING #13 ATTENDEES:

Task Force: Joel Noble, Co-Chair, Kimball Crangle, Co-Chair, Andrew Abrams, Brianna Borin, Caitlin Quander, Chris Crosby, Gabriel Guillaume, Jeff Walker, Jerry Tinianow, John Hayden, Mizraim Cordero, Norma Brambila, Parry Burnap, Paul Aldretti, & Trinidad Rodriguez.

Guest Speakers: Rob Pressly, Tom Herrod, Sarah Anderson, & Austin Krcmarik

Other: Peter Laeuri, Dan Craig, Gosia Kung, Cyris Crosby, & Valerie Kerns

Staff/Consultants: David Gaspers, Sarah Showalter, Sara White, Courtney Livingston, Mallory Bettag, Jay Renkens, Riley LeMie, Andy Rutz, & Caryn Champine

Date: 08/24/2017	Time: 1:00pm – 4:00pm	Location: 1290 Broadway – DRCOG Independence Pass Conference Room
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Item	Topic	Time
1.	Welcome & Review Agenda <ul style="list-style-type: none"> • Purpose of Focused Topic Meeting: Water & Climate Change 	1:00pm – 1:05pm
2.	Guest Speaker <ul style="list-style-type: none"> • Climate Change & Water Conservation <ul style="list-style-type: none"> ○ Rob Pressly, Resiliency Program Coordinator, Colorado Resiliency & Recovery Office 	1:05pm-1:20pm
3.	Discussion	1:20pm-1:40pm
4.	Guest Speaker <ul style="list-style-type: none"> • Denver’s Sustainability Goals <ul style="list-style-type: none"> ○ Tom Herrod, Climate & Policy Analyst, Denver Department of Environmental Health, Environmental Quality Division 	1:40pm-1:55pm
5.	Discussion	1:55pm-2:15pm
6.	Guest Speaker <ul style="list-style-type: none"> • Water Quality & Green Infrastructure <ul style="list-style-type: none"> ○ Sarah Anderson, Water Quality Project Manager, Denver Office of Public Works 	2:15pm-2:30pm
7.	Discussion	2:30pm-2:50pm
8.	Guest Speaker <ul style="list-style-type: none"> • Water Conservation <ul style="list-style-type: none"> ○ Austin Krcmarik, Water Conservation Specialist, Denver Water 	2:50pm-3:05pm
9.	Discussion	3:05pm-3:25pm
10.	Facilitated Discussion: <ul style="list-style-type: none"> • <i>How do we use this information about water and climate change to influence Blueprint Denver?</i> 	3:25pm-3:50pm

11.	<p>Next Steps</p> <ul style="list-style-type: none"> • September Community Engagement Window <ul style="list-style-type: none"> ○ Community Workshops: September 13,14,19,20,21 ○ On-line map review • Task Force Meeting #14 on September 28th <ul style="list-style-type: none"> ○ Preferred Scenario and Land Use ○ Modal Prioritization and Emerging Street Typologies 	3:50pm-4:00pm
12.	Meeting Close	4:00pm

