

**Boulder City Council
STUDY SESSION**

(Televised)

**Tuesday
February 9, 2016
6-9 PM**

**6-7:30 PM
Neighborhood Parking Permit Program**

**7:30-9 PM
Resilience Boulder
Review Resilience Strategy and Pilot of Community
Engagement Method**

**Council Chambers
Municipal Building
1777 Broadway**

Submit Written Comments to City Council, ATTN: Lynnette Beck, City Clerk, 1777 Broadway, P.O. Box 791, Boulder, CO 80306 or Fax to 303-441-4478 or E-mail: council@bouldercolorado.gov

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Study Session Memo

TO: Mayor and Members of City Council

FROM: Jane S. Brautigam, City Manager
Mary Ann Weideman, Assistant City Manager
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Michael Sweeney, Director, Public Works, Transportation
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Donna Jobert, Financial Manager, Department of Community Vitality
Sandra Llanes, Senior Assistant City Attorney
Amanda Nagl, Neighborhood Liaison, City Manager's Office
Lisa Smith, Communications Specialist, Department of Community Vitality

DATE: February 2, 2016

SUBJECT: Neighborhood Parking Permit Program

EXECUTIVE SUMMARY

The purpose of this study session is to:

- Provide background, context and information on the Neighborhood Parking Permit program (NPP)
- Present issues associated with the NPP raised by council members, residents and staff and seek feedback on next steps
- Provide status of 2016 related work plan items and seek feedback on staff's work plan:
 - Chautauqua Access Management Plan (CAMP); feedback from Council on options
 - Parking pricing recommendations for residential and business permits as part of the Access Management and Parking Strategy (AMPS)

A number of these issues are currently in the staff work program; namely increased enforcement, the CAMP process, and consideration of permit pricing increases, including visitor

permits. Some issues such as reduction of zone hours could be integrated into staff's existing work plan. However, a major review, analysis and overhaul of the NPP such as changes to how zones are created, i.e. the spillover issues, and revision of the regulations to allow for new tailored zones would require a larger work effort and are not currently within the scope of the existing work plan. Several Community Vitality staff positions will be filled by the third quarter and could be assigned to the work effort with consultant assistance. Based on input from Council, staff could develop a revised work plan and return to Council for their recommendation.

QUESTIONS FOR COUNCIL

Does Council have any feedback on the issues for which staff currently intends to proceed with the current approach and within the existing work program? (VRBO, permit pricing and issuance, process for reducing unrestricted hours, etc.)

1. What is Council's feedback on issues related to additional NPP resident requests, such as review of NPP regulations to consider a wider range of tools for residential parking issues; changes to zone creation procedures, etc.?
2. Does Council have any further questions regarding the NPP intent and program or have additional issues for review and consideration?
3. Does Council have any feedback on staff's operating assumptions concerning the development of the CAMP and which option would Council prefer for development of the CAMP as it pertains to the historic parking data and the recent Chautauqua visitation numbers?
4. Should staff cease processing NPP applications if council desires a review of the Neighborhood Parking Permit program?

LEGAL FRAMEWORK

Boulder's local laws reflect and value a common legal concept known as the public trust doctrine. This doctrine supports the idea that public highways and streets are acquired and held by the state (or cities) in trust for everyone's use. Streets primarily are for the use of the people as a whole, and cannot be diverted for merely local, or private use, nor can the rights of the public in them be unreasonably curtailed or abridged.

This doctrine is reflected in the city's charter section 115 "Revocable Permits" which reads as follows:

The council may grant a permit at any time, in or upon any street, alley, or public place, provided such permit is revocable by the council at its pleasure at any time, whether such right to revoke be expressly reserved in every permit or not.

The doctrine can also be found in Boulder Revised Code Chapter 23, Section 2-2-15(a) "Neighborhood Parking Zone Permits" which describes the legislative intent of Neighborhood Permit Program (NPP) permits and recognizes that there may be health, safety, and public welfare reasons to regulate the use of public rights of way. The challenge is to fairly and equitably balance those varied uses. The section reads as follows:

Restricting parking on streets in certain areas zoned for residential uses primarily to persons residing within such areas will reduce hazardous traffic conditions, promote traffic safety and preserve the safety of children and other pedestrians in those areas; protect those areas from polluted air, excessive noise, trash and refuse; protect residents of those areas from unreasonable burdens in gaining access to their residences; preserve the character of those areas as residential; promote efficiency in the maintenance of those streets in a clean and safe condition; preserve the value of the property in those areas; and protect the peace, good order, comfort, convenience and welfare of the inhabitants of the city. The city council also finds that, in some cases, residential streets serve an important parking function for nonresidents in the public and commercial life of the city. Some accommodation for parking by others may be appropriate in these cases.

There are certain portions of our code that are very definitive as to what can and cannot be permitted. For example, BRC 2-2-15(b) prohibits NPP parking restrictions on Sundays or holidays. Boulder Revised Code 2-2-15(e) also provides authority for the manager to create by regulation additional standards and criteria for the implementation and administration of NPP permits that are consistent with the intent of the code. The existing regulations for NPP standards were created in 1997: [LINK Neighborhood Permit Parking Zone Regulations](#) and [LINK NPP Procedures](#).

NPP BACKGROUND

In 1986, the Boulder City Council adopted the Residential Permit Parking (RPP) program as a mechanism to relieve spillover parking in residential areas adjacent to the downtown commercial district, University of Colorado or high schools. The RPP program was designed to give preference in the use of on-street parking spaces in the public right of way to residents or businesses located within a designated zone, by restricting long and short-term nonresident parking on neighborhood streets. The program was first implemented in 1993 when RPP zones were established in the Mapleton Hill and University Hill neighborhoods. The RPP program restricted nonresident parking on neighborhood streets to two hours, Monday to Friday, 9 a.m. to 5 p.m. Concerns about the impacts associated with RPP implementation led city council to request an evaluation of the RPP program before proceeding with further zone implementation.

The Neighborhood Permit Parking (NPP) program in its current format was adopted by council in May 1997 as an improved version of the RPP program. The NPP was designed to improve the balance between preserving neighborhood character and providing public access to community facilities. The new program provided for greater flexibility and new features not available under the RPP program, including:

- The availability of commuter permits within permit parking zones;
- The ability to tailor the time and duration of restrictions to meet the needs of the neighborhood;
- The one time only, per day, short-term parking component; and,
- Providing [LINK annual updates](#) on the program.

NPP parking restrictions limit on-street parking for vehicles without a parking permit. Vehicles without an NPP permit may park one time only, per day, per zone for the posted time limit and may not re-park in that zone again on the same day. Vehicles with a valid permit are exempt

from these posted parking restrictions. The baseline restriction on parking without a permit in an NPP zone is no less than two hours without moving the vehicle from 9 a.m. to 5 p.m., Monday through Friday, except holidays. Actual neighborhood zone restrictions may vary from this baseline.

Currently there are 10 zones in the City of Boulder: Whittier, Mapleton, University Hill, East Ridge, Columbine, Fairview, Goss Grove, Sunset, University Heights, and West Pearl ([LINK map](#)). This represents 330 block faces. The new Aurora zone and expansions in West Pearl, Whittier and Mapleton are in the process of implementation which is scheduled to be completed in February 2015. In 2015, 2,469 resident permits, 32 business permits and 349 commuter permits were sold across the ten zones.

Permit Types

Residents who live within an NPP zone may purchase up to two **resident** permits and receive up to two **visitor** passes per residence per year. Visitor permits are to be used by visitors to residents while they are on the premises, are to be used within a one block radius and shall not exceed use of 24 hours. There is no additional fee for visitor passes. Businesses located within a zone may purchase up to three **business** permits for use by employees and may apply for additional employee parking permits if necessary. [LINK Resident](#) permits are \$17 per year; [LINK business](#) permits are \$75 per year.

The NPP ordinance stipulated that up to four **commuter** permits may be issued per block face within an NPP zone to nonresidents with a sunset on Dec. 31, 2002. Commuter permits are issued on block faces where the average daily percentage of unoccupied parking spaces (“white space”) exceeds 25 percent (15 percent in Goss/Grove). In December of 2002, Council reauthorized the commuter permit program until Dec. 31, 2007. In 2007, the sunset to review commuter permit policy was lifted by Council and commuter permits became a permanent part of the program. The current fee for commuter permits is \$90 per quarter. Not all blocks within NPPs have commuter permits issued. For example, 22 block faces in the Whittier zone do not have commuter permits. Staff responds to requests to monitor blocks that may not have enough “white space” to justify commuter permits, and removes commuter permits if necessary; and when a zone is created it is first monitored to see if there is enough “white space” to issue commuter permits.

Zone Creation Process

The [LINK code and regulations](#) (section 2-2-15 and regulation 2-2-15J (97) adopted May 9, 1997) lay out a very specific process for zone expansion and creation. There are two ways to initiate the creation of an NPP zone: (1) by neighborhood residents through a petition or (2) by the City Manager. Upon receipt of a request for an NPP zone, staff conducts studies to determine whether an NPP zone shall be established in that neighborhood and what its boundaries should be.

Secondly, the City Manager may initiate this process without any request if the City Manager finds that it is in the public interest to do so. There are a variety of factors that the City Manager may consider in evaluating whether initiation is in the public interest, including without limitation, the extent to which parking spaces are occupied during working or other hours, the extent to which parked vehicles are registered to persons not apparently residing within the

neighborhood, and the impact that businesses and facilities located within or without the neighborhood have upon neighborhood parking within the neighborhood. Moreover, according to code section 2-2-15 (e), “The manager may by regulation prescribe additional standards, not inconsistent with those set out in this section, which must be met before the manager designates a neighborhood permit parking zone, or adds or deletes territory from an established zone.”

The zone proposal process includes sending out a mailing requesting feedback to all addresses both within the proposed area as well as those within a block. Public meetings are held to gather public input and a public hearing at the Transportation Advisory Board (TAB) is required. TAB will either recommend to the manager that the zone be established, that it be established with certain modifications, or that it not be established. The manager shall communicate to council the manager’s final plan; if council does not call up this plan within thirty days, the manager may establish the zone by proceeding with a notice of proposed regulation.

All existing NPPs, including new and expanded zones, have been initiated by resident request.

Staff has received requests for NPP zones from residents in the Steelyards neighborhood and in the University Hill area near Chautauqua. However, these requests do not fit into the existing NPP regulations. This is addressed in more detail below. Also, residents from the Columbine, Goose Creek and Aurora neighborhoods have contacted staff about the potential for either expanding existing zones or creating a new zone.

Enforcement

With staffing of 12 parking services officers, up to seven officers a day are assigned (if fully staffed) to the task of NPP enforcement. Remaining officers are assigned to meter districts and to a “calls car” which responds to parking issues throughout the city. In many cases enforcement is covered by doubling up adjoining NPP districts for efficiency. NPP enforcement is in place daily from 8 a.m. to 5 p.m., but not necessarily in every NPP. The Whittier nighttime zone is enforced every weekend, alternately Friday and Saturday. Generally, the level of enforcement is influenced by the level of compliance.

Resident Surveys

Staff has conducted two NPP resident surveys, one in [LINK 2000](#) and another in [LINK 2010](#). In general the majority of respondents to the 2000 survey felt the conditions in their neighborhood as a result of the NPP program either stayed the same or improved and that the ease of finding a parking space for oneself or a visitor had increased. The follow up survey in 2010 was consistent with the results of the previous survey: 75% found either that the NPP improved parking availability (29%) or that availability remained the same (46%), while 8% felt it had worsened. Staff will be conducting public outreach as part of the permit pricing discussion and an updated survey could be a part of the communication to understand the current satisfaction levels with the program and any other associated issues.

NPP ISSUES

A number of issues have been raised by Council members, community residents and staff regarding the NPP. The issues fall into two categories: **operational** and **policy-related** and are

described below. This section provides background on the issues and staff recommendation on next steps. A summary chart is provided below.

OPERATIONAL ISSUES

Impact of VRBOs

With the rise in vacation rental by owner properties in residential areas with NPPs, staff has received numerous requests from owners of these properties for resident parking permits. In order to qualify for an NPP resident permit, proof of residency is required. This can come in the form of a current (within 90 days) utility bill, lease, bank statement, cable/phone bill or voter registration. The permits are not issued to the property owner since they may not reside at the address. This is consistent with the procedures of issuing permits to residents in rental properties. The purpose of the NPP program is to provide resident permits for those living at the property.

Proposed next steps: Staff plans to continue this policy and will not be issuing permits without proof of residency unless council requests a policy change.

Misuse of Permits

A city council member and some residents raised the issue of misuse of NPP resident and visitor permits.

Resident Permits:

Staff recently audited resident permits issued in two of the largest NPPs (Whittier and University Hill) and found that staff was issuing the appropriate number of resident permits. Addresses with multiple apartments were the only ones with more than the three to four allowable permits. Based on the review, staff believes the resident permits are being issued according to the regulations.

Visitor Permits:

Two visitor permits are issued per residence or unit. As noted above visitor permits are to be used by visitors to residents while they are on the premises; are to be used within a one block radius; and shall not exceed 24 hours. Staff has received several complaints regarding the alleged misuse of visitor permits; either the visitor permits are being used by residents for their own vehicles or they could be used by other parkers such as commuters. The visitor permits are included within the price of the resident permit. It is difficult for staff to enforce the provision of visitor permit users being on the premises. One option to consider is to change how the visitor permits are issued: i.e., continue to offer one visitor permit with the resident permit and charge an additional fee for the second visitor permit.

Proposed next steps: Staff seeks Council feedback on potential changes to visitor permit issuance. This could be considered within the AMPS permit pricing analysis.

Commuter Permits

Residents within the Whittier NPP have raised an issue regarding the issuance of commuter permits. As the program is designed, up to four commuter permits can be issued per block face if there is sufficient “white space” or unoccupied parking spaces. When a new or expanded zone

is created, staff monitors to see if there is sufficient unoccupied space to allocate for commuter permits. Once a zone is established and commuter permits are issued, staff is responsive to citizen complaints and monitors the block face for compliance. Staff believes the current procedures fulfill the intent of the shared street approach.

There are 36 total blocks or 72 block faces in the Whittier NPP. Please see table below for data on commuter permits issued in the zone:

Maximum commuter permits allowed per block face in Whittier	Number of blocks with maximum commuter permits allowed
0 commuters allowed	22 block faces
1 commuter allowed	11 block faces
2 commuters allowed	7 block faces
3 commuters allowed	8 block faces
4 commuters allowed	26 block faces

Proposed next steps: Staff will proceed with the existing practice unless otherwise directed by Council to modify the process for issuing commuter permits.

Enforcement Levels

Residents have expressed desire for increased parking enforcement within their NPP zones. In the last quarter of 2015, the staffing level of the parking enforcement officers was increased from ten to 12 officers. Currently, there are 11 officers and one position is posted to be filled. This has allowed increased enforcement focus in the NPP zones.

Proposed next steps: Staff levels are increased and staff will continue to analyze the data and trends to ensure enforcement resources are allocated appropriately.

Reducing number of Non-permit parking hours

Residents in the Whittier and Mapleton NNP zones have submitted a petition to reduce the duration of the unrestricted parking hours from three to two hours. This type of zone change is permitted in the current regulations. The reduction of hours of unrestricted parking would impact all parkers; those visiting the downtown as well as those visiting residents.

Proposed next steps: Staff will proceed with an outreach process to all residents within the zones to seek their feedback on the proposed change. The unrestricted time limit could be changed if a majority agrees. If the change is approved, there will be a minimal cost to the city to modify the signage.

Status of NPP Requests in 2016

In addition to the Chautauqua and Steelyards neighborhood requests which are addressed below, within the last several months, staff has received inquiries from residents in the Columbine,

Aurora and Goose Creek area neighborhoods regarding the potential for NPP zone expansion and creation. Staff has scheduled meetings with the residents about the program criteria and public process.

Proposed next steps: Staff seeks guidance from council regarding whether to proceed with the NPP analysis and public process for these requests as outlined in the existing regulations or to issue a moratorium on processing any requests until there is an opportunity to conduct a program assessment, which would take up to six months to complete.

POLICY ISSUES

Process for Zone Formation and Expansion: Dealing with Spillover

City Council members and others have raised the issue of how zones are formed and expanded. This has often been called “spillover:” once a zone is formed the parking impacts spread to adjacent areas without parking regulations. The concern is the unpredictable nature of how the NPP zones are formed and the lack of a comprehensive, proactive approach rather than the current resident initiated incremental aspect of the program.

In the past, staff has raised the issue of spillover with residents in designing the boundaries of a zone. It is staff’s experience that it is difficult to convince residents in the surrounding area to join the NPP since they are not yet experiencing a parking problem. Also, it is difficult to predict where the parking issues will go, or which blocks will be affected. The incremental approach ensures that the solution addresses the specific problem area. In some areas, such as the University Hill NPP, staff believes that stasis has been reached; i.e. that the zone has reached the appropriate boundaries to address the issue of parking impacts from the university. Staff believes the current approach balances the intent of the code and provides ample opportunity for public input.

Proposed next steps: If council wishes to consider major changes to the NPP formation process, staff will scope the work effort. Community Vitality will be filling vacant positions by the end of the second quarter who would be devoted to this project and a consultant could be brought on to assist.

Potential NPP Regulation Changes

The NPP ordinance and regulations were created in the mid-1990s to primarily address specific impacts to residential areas: the impacts from downtown employees, high school students and CU. The parking impacts addressed are during the work and academic week: generally Monday through Friday, 9 a.m. to 5 p.m. In the last several years, residents have approached staff regarding parking issues within their neighborhoods that were not envisioned in the original program inception (e.g. the mixed use zone of Steelyards) or parking impacts to residential areas near parks and open space that have escalated (e.g. the University Hill area north of Baseline). The current NPP regulations do not solve these types of residential parking issues.

Zoning of Areas Inconsistent with NPP Regulations

The regulations limit the NPP to specific areas primarily zoned for lower density residential uses: RH, RM and RL. During the last 20 years, Boulder has developed new zoning categories such as the mixed use zone in the Steelyards neighborhood. The traditional NPP focuses on the

horizontal relationship of different uses such as the relationship of downtown or CU adjacent to the Whittier or University Hill neighborhoods. In an area such as Steelyards the mix of uses – commercial and residential – has a **vertical** relationship and share the public street immediately in front of both uses. Hence the design of the existing traditional NPP does not meet the needs of this mixed use neighborhood. For example, the current NPP regulations regarding business permits do not address the situation in Steelyards.

The residents of Steelyards have approached staff to find more tailored solutions to their parking challenges particularly with the opening of the Depot Square RTD station and potential spillover impacts of the developing Boulder Junction Area.

Exclusive Use/Day of the Week/Proximity to Open Space and Parks

The current code and regulations support a shared street approach and do not contemplate exclusive use by neighborhood residents; prohibit parking restrictions on Sundays and holidays; and with regard to neighborhoods adjacent to parks and open space, do not allow night time and weekend restrictions.

These are the types of requests and inquiries staff has received from community members that are not allowed by the current regulations. As an example, residents adjacent to Chautauqua initially requested a zone in which only residents with permits (and their guests and business invitees) would be allowed to park in that zone. This request does not meet the intent and rules of Neighborhood Permit Parking Zones found in Boulder Revised Code 2-2-15 and Regulation 2-2-15J(97). As mentioned in the legal framework section of this memo, the legislative intent of the code supports the concept of shared streets, emphasizing the need for non-resident parking as an additional consideration and priority.

In addition, the neighborhood group states that residential parking and associated nuisance issues are most extreme on weekends and holidays. However under our current code, a NPP cannot restrict parking on Sundays and holidays. (Boulder Revised Code 2-2-15(b))

Lastly, the group states that their neighborhood “has become a public parking lot for the crowds who use Chautauqua for climbing, hiking, dining and attending cultural events.” However pursuant to regulation 2-2-15J(97), nighttime and weekend restrictions are prohibited for areas adjacent to parks and open space and specifically for Chautauqua.

Additional Neighborhood Impacts and Correlation to NPP Requests

Parking-related and other nuisance issues have been identified in the neighborhood near Chautauqua: parking too close to or in front of driveways, stop signs, and hydrants; litter and dog waste; speeding and u-turns; general disrespect and noise; overuse of resource/environmental impacts and parking enforcement. Staff and residents have worked both independently and together in an effort to identify potential solutions. A group of residents north of Chautauqua, called Sustainable Chautauqua, have been proactive and have suggested some solutions to the parking issues which staff is considering. Some solutions have already been implemented – such as trash receptacles and enhanced enforcement in the area; others are still being considered and others could become part of CAMP.

Proposed next steps: Scoping changes to the NPP regulations or the development of new tools, policies, regulations and programs to address neighborhood parking issues are currently not within staff’s work plan and would require a moderately high work effort. As mentioned above, vacant Community Vitality staff positions will be filled by the end of the second quarter, and this staff could be dedicated to this effort along with consultant assistance. The Chautauqua related issues will be addressed during the CAMP process, as well as ongoing discussions with Sustainable Chautauqua and other residents. Staff requests Council’s direction and feedback.

Pricing of the NPP Permits

As part of the AMPS project, short term parking pricing, overtime at meter fines and the NPP residential and business permits will be reviewed. The commuter permit rates were increased from \$82 to \$90 per quarter in the 2016 budget. The AMPS consultant, Kimley Horn, will be conducting research on permit rate comparisons with Boulder’s peer communities.

Proposed next steps: Staff is planning to include the analysis and review of the NPP resident and business permits in the AMPS parking pricing work effort. Review of visitor permit pricing could also be included.

“Revenue Neutrality” of NPP Program Costs

When the NPP program was evaluated during the mid-1990s, a concern raised by zone residents was that the resident permit rates be kept low and the pricing of the permits be kept “revenue neutral”(i.e. that the revenues brought in by permit sales cover the cost of the administration of the program). There was concern that the city would view the NPP program as a way to increase its revenue. While this is not codified in the ordinance or in the regulations, staff has monitored the program’s revenues versus expenses to maintain an overall cost recovery approach. Since expenses vary each year depending on the number of new zones or expansions, the expenses versus revenues have been monitored over multiple years. The residential permit rate was increased once in 2006 from \$12 per year to \$17 per year. The primary source of NPP program revenues has been from the commuter permits, ranging from 54% to currently 72% of total NPP program revenues. As NPP zones have increased along with the regular rate increases of the commuter permits, the revenues from the program are currently exceeding the cost of the administration.

It is important to note that the cost of enforcement is not included in the program administration expenses. The revenues from tickets written for NPP violations do not cover the cost of the time the enforcement officers spend in the zones.

Proposed Next Steps: Staff would like Council feedback on the appropriate approach for pricing of all the permits in the NPP zones, including program “revenue neutrality” as a factor. Currently there are a number of factors that influence parking pricing which will be analyzed as part of the AMPS parking pricing project.

Chautauqua Access Management Plan

The [LINK lease](#) between the City of Boulder and the Colorado Chautauqua Association (CCA) was renegotiated in 2015. New language in the “Access and Parking Management” section of the lease stipulates the development of a Chautauqua Access Management Plan (CAMP). The

CAMP is intended to be a tailored access management strategy to balance the access of the variety of users and modes while also maintaining the natural, built and historic environments.

In 2012 the City and the CCA partnered to evaluate parking and access issues in the leasehold area. As a part of this project, the partnership collected [LINK parking utilization and parking duration data](#) on all available parking within the leasehold area and in the neighborhood to the north of Chautauqua on three separate days. The [LINK results](#) of that data collection showed some areas of high parking utilization within the leasehold area, but very few areas of high parking utilization in the neighborhood north of Chautauqua.

Using the data and analyses from this study, a series of pilot programs for the leasehold area were advanced by staff for City Council's consideration but none of these pilots were adopted for implementation. Council members' biggest concerns at that time seemed to be the concept of restricting parking on streets near open space and park property. Following the council meeting it was determined by the partnership that this issue should be addressed through the upcoming lease renegotiation rather than through a pilot program at that time.

The parking utilization and duration data and corresponding analyses could form the foundation of the development of the 2016 CAMP. However, recent data from [LINK an Open Space and Mountain Parks Chautauqua Study Area Visitation Monitoring Report](#) suggest that visitation to Chautauqua has increased substantially since 2005. Whether this increase occurred since the 2012 CAMP study is unclear; however, the substantial increase over time suggests that parking utilization within the leasehold and in the surrounding neighborhood potentially could be higher than previously studied. Consequently, some decisions will have to be made about how the city proceeds with the development of the 2016 CAMP.

Staff has made some operating assumptions concerning the development of the CAMP. These are as follows:

- Options for the development of the CAMP could include some degree of managed parking within the Chautauqua leasehold area; and possibly in the surrounding neighborhood as well. This could include parking restrictions similar to those provided by the NPP Program.
- Options for the development of the CAMP could include some degree of paid parking, possibly in the Ranger lot, on the loop surrounding the park and/or on Baseline Road.
- Options for the development of the CAMP could consider enhancements to other modes of transportation including but not limited to restoration of transit service to the Chautauqua area.

Staff is interested in Council's feedback on these operating assumptions.

Concerning the process for development, one option would be to move forward with developing a CAMP for implementation in the summer of 2016, recognizing that it would be developed using historic parking utilization and duration data that may be different today because of increased visitation to Chautauqua. This would have the advantage of providing mitigation this summer, but would have the disadvantage of being based on data that may be out of date and

may be questionable to use as baseline data for future comparison. Another option would be to collect new data in the summer of 2016, and then using that data to develop the CAMP later this year with the goal of implementing and studying the effects of the CAMP in the summer of 2017. This option would provide the best data and analyses of effectiveness but would also delay mitigation until 2017. Staff recommends the second option which would have us collecting new data this summer, followed by the development of a CAMP for implementation in 2017. Staff is interested in Council's feedback on these CAMP development options.

Proposed next steps: Staff would like council feedback on the appropriate approach to developing the CAMP. Currently, staff is planning to begin a process with the public in the Chautauqua area concerning the CAMP but we wanted to obtain Council's initial feedback on the options for development and operating assumptions before beginning that process.

Communication and Outreach

City staff is already engaged in communication and outreach with stakeholders interested in the NPP process. Tools already in use include email and newsletters coupled with email lists organized by individual neighborhoods and in the aggregate; these lists are made up of property owners, renters, local businesses, landlords and other community members. In addition, a communication plan based on past outreach efforts, including open houses, car flyers and press releases coupled with social media and new media tools is under development. Communication Department staff are coordinating across work groups and working with the city's Neighborhood Liaison to reach stakeholders.

Staff recognizes that parking and particularly neighborhood parking is of consistent interest and concern to our community, and will continue to work to provide robust communication and opportunities for engagement on this topic.

Summary of NPP Issues

ISSUE	SOURCE	OPTIONS	NEXT STEPS
OPERATIONAL			
VRBOs	Staff & Residents	<ul style="list-style-type: none"> Maintain current approach Change regulations 	Proceed with current approach unless otherwise directed
Permit Mis-Use: Residents	Council & Residents	<ul style="list-style-type: none"> Maintain current approach & increase monitoring Change regulations 	Maintain current regulations
Permit Mis-use: Visitors	Council & Residents	<ul style="list-style-type: none"> Maintain current approach Reduce number &/or increase cost 	Include within the AMPS pricing analysis
Commuter Permits	Council & Residents	<ul style="list-style-type: none"> Maintain current approach Change the regulations 	Proceed with current approach unless otherwise directed
Enforcement	Residents	<ul style="list-style-type: none"> Additional parking officers hired 	Increase NPP enforcement
Reduction of Unrestricted Hours	Residents - Whittier/Mapleton	<ul style="list-style-type: none"> Incorporate into the staff work plan. Proceed with public outreach as per regulations Hold off on response to consider broader NPP review 	Proceed with public process unless otherwise directed
Status of New Resident initiated NPP Requests	Staff & Residents	<ul style="list-style-type: none"> Proceed with discussions with residents as per current policy Institute a moratorium until broader policy discussion 	Council feedback and direction requested
POLICY			
Spillover Impacts/Zone Creation	Council	<ul style="list-style-type: none"> Maintain current citizen-initiated approach Scope work plan to conduct analysis of NPP and return with recommendations 	Council feedback and direction requested
Not Addressed in Regulations: <i>Zoning - Steelyards</i>	Residents & Staff	<ul style="list-style-type: none"> Maintain current regulations Scope work plan, conduct analysis and return with recommendations; includes resident outreach 	Council feedback and direction requested
Not addressed in Regulations: <i>Exclusivity, Proximity to Open Space, etc.</i>	Residents & Staff	<ul style="list-style-type: none"> Maintain current regulations Scope work plan, conduct analysis and return with recommendation; includes resident outreach 	Council feedback and direction requested
Permit Pricing: Residents/Visitors	Council, TAB and Staff	<ul style="list-style-type: none"> Consider within AMPS 	Include in AMPS Parking pricing analysis
Program Revenue Neutrality	Staff	<ul style="list-style-type: none"> Maintain current approach Consider within AMPS 	Include in AMPS parking pricing analysis
CAMP	Required by lease	<ul style="list-style-type: none"> Implement in 2016 with past data Collect data in 2016 & implement in 2017 	Council feedback and direction requested

Note: Staff is seeking council feedback on items highlighted in light blue.

STAFF RECOMMENDATION

Staff will proceed with the existing 2016 work plan items (CAMP, NPP permit pricing including visitor permits and revenue neutrality through AMPS), the current approach to implementation of VRBOs, resident and commuter permit issuance, enforcement, and proceed with the request for reduction of unrestricted hours.

Based on Council feedback on the other policy issues (i.e. zone creation/spillover, changes to the code and/or regulations), staff can scope the work effort and develop a revised work plan to incorporate these additional items. Key vacant Community Vitality staff positions will be filled by the beginning of the third quarter. Those staff can be dedicated to this effort along with consultant assistance. Regarding CAMP, staff recommends the second option which would have us collecting new data this summer, followed by the development of a CAMP for implementation in 2017.

QUESTIONS FOR COUNCIL

1. Does Council have any feedback on the issues for which staff currently intends to proceed with the current approach and within the existing work program? (VRBO, permit pricing and issuance, process for reducing unrestricted hours, etc.)
2. What is Council’s feedback on issues related to additional NPP resident requests, such as review of NPP regulations to consider a wider range of tools for residential parking issues; changes to zone creation procedures, etc.?
3. Does Council have any further questions regarding the NPP intent and program or have additional issues for review and consideration?
4. Does Council have any feedback on staff’s operating assumptions concerning the development of the CAMP and which option would Council prefer for development of the CAMP as it pertains to the historic parking data and the recent Chautauqua visitation numbers?
5. Should staff cease processing NPP applications if council desires a review of the Neighborhood Parking Permit program?



Study Session
MEMORANDUM

To: Mayor and Members of Council

From: Jane S. Brautigam, City Manager
Mary Ann Weideman, Assistant City Manager
Greg Guibert, Chief Resilience Officer
Eitan Kantor, City Management Intern

Date: February 9, 2016

Subject: Update on Resilient Boulder: Review the City Resilience Strategy outline and pilot a community engagement method.

Study Session Purpose

Provide an update to City Council on the outline of the City Resilience Strategy and receive Council feedback on a proposed method for engaging the community around risk and resilience topics.

Questions for City Council

1. Does City Council have any questions or input regarding the Resilience Strategy outline?
2. Does City Council have any feedback on the proposed community engagement method?

Executive Summary

100 Resilient Cities (100RC) is a global network pioneered by the Rockefeller Foundation to help cities around the world become more resilient to the physical, social, and economic challenges of the 21st century. Boulder joined the network as part of the initiative's first wave in 2013 and through its participation is committed to demonstrating leadership in resilience as well as leveraging the resources and opportunities it presents.

The strategy development process is divided into two phases: Phase I establishes the foundation for the resilience strategy. Phase II encompasses strategy development, culminating in its adoption. This memo summarizes the progress of several of the Phase II projects and provides an overview of the outline for the draft Resilience Strategy document. Finally, it also introduces an exploratory community engagement method as part of the broader effort to develop a scenarios-based approach to "planning for uncertainty" in both the city organization and the broader community.

Background

100RC supports the adoption and incorporation of a view of resilience that includes not just the shocks – floods, wildfires, violence, and other acute events – but also the stresses that weaken the fabric of a community on a day to day or cyclical basis, such as economic hardship or social inequality. By addressing both the shocks and the stresses in a holistic manner, a city becomes more able to respond to adverse events, and is better able to deliver basic functions in both good times and bad to all populations.

The 100RC program supports resilience building activities at the city level along four pathways:

- Financial support for the creation of a new position in the government who will lead the effort, the Chief Resilience Officer (CRO)
- Technical and logistical support for the development of a resilience strategy that will serve as the city's roadmap to resilience activities and priorities
- Access to tools and specialized partnerships to help develop a sophisticated understanding of the city's risks, assets, weaknesses, and opportunities and how they interlink in unanticipated ways
- Inclusion into a network of 99 other cities from which best practices, innovation, and peer-to-peer learning can advance the practice of resilience globally.

Resilience Work Plan and Schedule

100RC has outlined a general approach and methodology for developing resilience strategies that the city has used to customize a process according to community goals and capacity and in coordination with other city projects. Generally, the phases of work are as follows:

1. **Phase I (through May 2015): Preliminary Resilience Assessment.** The Preliminary Resilience Assessment (PRA) is a synthesis of the outputs and findings from diagnostic activities of Phase I. The PRA helps identify which activities are priorities for future analysis in Phase II. The findings of the PRA were provided to council at its study session on May 12, 2015. The memo for that study session can be found [here](#).
2. **Phase II (through early 2016): Strategy Development.** Activities in the second phase lay the foundation for the resilience strategy and were provided to council at its study session on September 17, 2015. The memo for that study session can be found [here](#). An update on Phase II activities is provided below. Development and acceptance of the Resilience Strategy document later this year will culminate Phase II.
3. **Phase III (in 2016): Early Implementation.** 2016 will be dedicated to early implementation activities and ensuring financial sustainability of resilience beyond the initial 100RC investment.

Phase II Project Updates

The cross-departmental city resilience team has identified seven activities for Phase II of the 100RC strategy development process. Phase II activities correlate directly to resilience strengths and weaknesses, specific shocks and/or stresses, and/or cross-cutting issues. The projects were selected among many potential alternatives based on criteria that included the potential for resource alignment, timeline and work product considerations, the ability to add specific value to existing city priority activity, and the depth of the resilience knowledge or capacity gap surfaced during the assessment process of Phase I.

Phase II tasks are a combination of technical assessment, targeted strategic planning for new or experimental initiatives, and alignment of existing city efforts with resilience principles and activities. The direct contribution of each Phase II project to the Resilience Strategy is slightly different and is summarized in this table:

Phase 2 Project	Strategy Input
Using Climate Information	A program for systematizing the use of climate change projections across city departments and a staff capacity building initiative to support their use.
Community Capacity and Preparedness	An imperative for action, program goals, initial level of staffing for program design via Resilience Americorps
BVCP and Integrated Framework	An integrated framework for community action. A methodology for analyzing resilience in the comprehensive plan and a roadmap for action in the 2015 BVCP update
Community 'Safe Haven' Network	Refined concept for future planning and analysis, initial alignment of resources and partners
Supporting Economic Resilience	Refined scope of work and articulation of economic challenges, priority areas for further analysis or action
Big Data to Support Healthy and Socially Thriving Community	Refined scope of work for future action, resource and partner alignment
Ecological Transformation (Urban Canopy Project)	Baseline data, new staff and technology capacity, successful partnership and process example

Specific updates for three of the major Phase II initiatives that have reached important milestones are provided below:

Resilience Integration in the Boulder Valley Comprehensive Plan

The consulting firm HR&A, Resilient Boulder’s Strategy Partner through the 100RC program, is assisting staff with developing recommendations on how to build resilience capacity within the city by integrating the concepts and themes of resilience into the Boulder Valley Comprehensive Plan (BVCP). Aspects of this integration strategy will be implemented as part of the current five-year update. The specific objectives of this integration effort are as follows:

- Assess the Boulder Valley Comprehensive Plan through the lens of resilience
- Affirm what resilience means to Boulder and within the context of the BVCP
- Create a plan to integrate resilience content and processes into the BVCP
- Recommend an approach to integrate resilience into Boulder’s Sustainability Framework
- Develop recommendations for resilient programs, policies, and initiatives

The BVCP team and CRO have convened a staff working group to help guide the development of the resilience integration recommendations. The working group is comprised of a subset of staff who are already involved in the BVCP Interdepartmental Team and the Resilience Team. As of Jan. 20, the working group is now meeting regularly to help guide HR&A’s work by reviewing case studies and identifying best practices, helping to establish the BVCP resilience vision and goals, contributing

technical and field-based knowledge on key issues, and assisting with analysis and the development of recommendations.

Over the next few months, HR&A is leading the working group through a four-step process consisting of the following activities:

- 1) **Identify Topic Areas** (*Jan./Feb.*)- Review Boulder’s resilience goals from the Phase I Preliminary Resilience Assessment (PRA) outputs and survey results. Also review the BVCP vision, goals, and survey results and compare them to Boulder’s Risk Assessment (analysis of shocks, stresses, and associated levels of risk). Use the results of this review to identify key issues and topic areas for discovery and hypothesis testing.
- 2) **Conduct CRF Diagnostic** (*Feb.*)- Use 100RC’s City Resilience Framework (CRF) to evaluate and understand Topic Area connections and alignment to resilience drivers.
- 3) **Topic Area Systems Analysis** (*Mar.*)- Conduct detailed systems-based analysis to create a crosswalk between Topic Areas and identify strategic opportunities.
- 4) **Recommendations** (*Mar/Apr.*)- Suggest BVCP and Sustainability Framework structure, programs and policies.

The end result of these efforts will be an integration and implementation strategy that identifies a proposed approach for integrating resilience content into the BVCP over the near, medium, and long-term. The final work product will identify the complexity, timeframe, and approach associated with specific recommendations for resilience integration, including additional analysis or public engagement that might be necessary as part of the process.

Using Climate Information

Creating a common platform of climate change projections --In August of 2014, CU Institute of Climate and Civil Systems engineering professor Paul Chinowsky gave a presentation to City Council on the potential impacts of climate change on the operations of two city buildings by 2050. This analysis was based on an approach to “downscaling” global climate models to local areas intended to take into consideration local climatic patterns and geographic factors. The analysis also attempted to project what the potential range of temperature increases would be for every month of the year as part of evaluating the suitability of existing building heating and cooling infrastructure.

The results of the analysis surprised both staff and Council. While most climate change projections are expressed as an annual average temperature increase that typically ranges between 3-6 degrees on a Celsius scale, Chinowsky’s team’s analysis showed projected temperature increases in some months ranging from 8-12 degrees warmer based on the Fahrenheit scale. This significant difference in the potential scale of temperature increase, compounded by the differences caused by using the Fahrenheit scale, prompted Council to ask staff to investigate the differences in climate modeling and determine what methods were deemed most credible and most suitable for the city to use in its own planning efforts.

Over the past 18 months, an interdepartmental staff team has met with city departments actively engaged in climate change projections—primarily water resources—and a number of leading experts on climate modeling and local climate projections. Based on these meetings, staff have developed a proposed climate modeling approach to be used as the shared platform of climate change projections for all city planning activities. This projection approach is based on the University of Colorado-based Western Water Assessment and their 2014 *Colorado Climate Change* report. This approach is also consistent with the climate change projection approach being utilized by both the city’s water resources group and the State Water Resources planning agencies. This model projects a 2-6 degree Fahrenheit temperature increase between now and 2050. It should be noted that average temperatures for this area have already increased by over 1.5 deg F from the historical baseline.

Evaluating the potential impact of climate change extremes -- It is important to note that the science and practice of climate projections is also in a state of evolution. Most climate modeling has been focused on global scale, long-term timeframes (multi-decadal) looking primarily at average annual temperature increases. Recently there has been a growing field of research on methodologies for projecting seasonal temperature variations localized to smaller scales. This is reflected in the original work that Dr. Chinowsky presented in 2014. As part of the next stages of city efforts in climate change planning, staff are now working with a group of leading climate scientists to develop an approach to projecting these more seasonal impacts and scenarios for potential extremes. This work will be integrated into a series of staff exercises to test city preparedness for different scenarios of climate change based on these more detailed and localized projections. The city's Executive Team has directed a multi-departmental staff team to develop and implement an organization-wide staff training and assessment process during 2016 to begin the process of integrating these climate projections and their potential impacts into both climate mitigation (emissions reduction) and climate adaptation (climate stress and disruption preparation) planning across all city departments.

Urban Forest Canopy Analysis

Boulder's urban forest faces unique challenges due both to the higher stresses already caused by geographic conditions (Boulder has only one native tree species in part due to these more extreme conditions) and the onset of diseases and exotic pests such as the recently arrived Emerald Ash Borer (EAB), which is projected to lead to the mortality of all Green Ash—approximately 20% of the local urban forest canopy. Given these factors and the need to develop a more robust set of urban forest management tools, the city of Boulder is partnering with Trimble to map the city's urban tree canopy.

In August of 2015, the city provided Trimble with 3" aerial photography and high resolution Light Detection and Ranging data (LiDAR) that was collected in the spring of 2013 as part of a Public Works and Open Space & Mountain Parks project. In return, Trimble provided the city with licenses to their eCognition software for 1 year at no cost, created the workflow necessary to map both the urban tree canopy and changes overtime, and provided free training to city staff on the use of their tool.

Trimble held an initial multi-departmental training with city staff on September 16, 2015 to introduce staff to their eCognition image analysis software. Representatives from Open Space & Mountain Parks, Parks and Recreation, and Public Works were present. Staff learned of the software's capabilities, and brainstormed additional uses of the software outside of the urban tree canopy mapping project including. Potential uses include land use change mapping and updated city impervious data.

A second training was held on November 24, 2015 attended by staff from Public Works, and Parks & Recreation. Trimble presented an initial citywide urban tree canopy analysis and the associated eCognition workflow. Based on preliminary results, the city had approximately 2,119 acres of urban tree canopy or 13% of land cover inside of city limits in 2013. This provides a baseline to measure the loss of urban tree canopy due to the EAB infestation.

Trimble and city Parks and Recreation staff met for a third time in mid January to review the eCognition workflow, investigate the possibility of adding species information to the tree canopy data, and determine future data requirements. Trimble is looking to expand this analysis to other municipalities based on the work done in Boulder.

Trimble and city Parks and Recreation staff met for a third time in mid January to review the eCognition workflow, investigate the possibility of adding species information to the tree canopy data, and determine future data requirements.

The results of the urban tree canopy analysis will be published to the city's [Open Data Catalog](#).

Resilience Strategy Update

In addition to the Phase II activities outlined in the previous section of this memo, the Boulder team is working to develop a strategy that carries this project-by-project approach into an ethos that permeates the process of governance as well as social, economic, and cultural activities across the community.

Resilience is as much a philosophy or way of being as it is a set of specific programmatic or project outcomes. The objective of Boulder's Resilience Strategy is to provide a roadmap for building resilience in the city organization and community through targeted and strategic changes in how the city conducts business and makes decision. The strategy will identify core areas where the city's work has helped advance resilience principles already and established a strong foundation for future action; detail specific actions for further embedding resilience principles and concepts into city operations; and define an approach for developing an ethos of preparedness and vigilance in the community. The strategy outline was informed both by the substance of the Phase II focus area projects and the planning process successes and challenges that were encountered.

Boulder's Resilience Strategy document will be presented in 3 sections: context setting (items 1-7 on the attached outline); goals, strategies and actions (items 8-10); and, resilience building processes (item 11). Each section is summarized below:

Context Setting. The context setting section introduces the reader to the city's long, progressive history of resilience and situates the current effort within that trajectory. Resilience definitions, system characteristics, and 100RC program elements will be detailed to help frame Boulder's resilience goals, strategies, and actions. Finally, the context section will articulate a community wide vision for resilience, which will be an embodiment of the values that underpin the activities being proposed, and an articulation of the city's chief resilience challenges as a rationale for action.

The content of this section will include:

- Letter from City Council
- Executive Summary
- Our Resilience Challenge
- Boulder in Context
 - Geography
 - Demographics
 - Economy
 - Agents of Change
 - Regional, State, National linkages
- A Legacy of Resilience
- The Approach to Resilience
 - Definitions
 - 100RC program and network
 - Profile – Growing Up Boulder Youth Engagement
- Boulder's Vision

Goals, Strategies and Actions. The second section will present specific goals, strategies, and actions that are mutually supporting and work in concert to deepen the overall resilience of the community. The scope of the actions being proposed is not comprehensive to all resilience challenges or needs but is intended to be responsive to existing city priorities, have current resource alignment and opportunity, be achievable within a near term timeframe, and add high value to the larger resilience building initiative. Future actions, as well as reprioritization of these actions and strategies, will be surfaced through the resilience building processes outlined in the third and final section.

The content of this section will include:

Goal 1: Prepare all segments of the community for uncertainty and disruption

- a. **Strategy:** Develop plans and programs to encourage community preparedness, particularly among the most vulnerable.
 - i. **Action:** Develop a volunteer preparedness and response training program for neighborhood-level civilian corps
- b. **Strategy:** Create a culture of risk awareness and preparedness within the business community
 - i. **Action:** Conduct an analysis of Boulder's future economic competitiveness
 - ii. **Action:** Provide business continuity planning resources to local businesses and incentivize their use
 - iii. **Action:** Develop rapid post-disaster impact assessment capacity in partnership with the local business community
- c. **Strategy:** Explore novel/new methodologies of risk and resilience communication
 - i. **Action:** Channel the creative potential of art to convey complex risk and resilience themes
- d. **Strategy:** Create new strategic partnerships to address community resilience challenges
 - i. **Action:** Develop a partnership mechanism that facilitates the matching of city challenges with local research and technical resources and expertise
 - ii. **Action:** Encourage and foster private sector innovation in community resilience challenge areas

Goal 2: Integrate resilience into city operations and systems

- e. **Strategy:** Identify critical policy and organization management leverage points to maximize integration
 - i. **Action:** Integrate resilience principles into the city's Sustainability Framework
 - ii. **Action:** Assess the BVCP's treatment of resilience themes/principles and develop a roadmap for integration in 2015 update
 - iii. **Action:** Use climate impact analysis as a guiding consideration in city operations and Capital Improvement Program project prioritization and assessment
 - iv. **Action:** Institutionalize the Chief Resilience Officer position
- f. **Strategy:** Transform city systems to address vulnerabilities
 - i. **Action:** Design a community-wide network of safe havens based on the consideration of core infrastructure service assurance and social capacity
 - ii. **Action:** Use resilient design principles (distributed, flexible, redundant, etc) as a foundation for ensuring energy security in the transition to a carbon free energy system
 - iii. **Action:** Human services data project
 - iv. **Action:** Draft an integrated urban ecosystems master plan

Goal 3: Inform decisions with data and knowledge

- g. **Strategy:** Generate new data and knowledge to understand and address emerging resilience challenges
 - i. **Action:** Develop integrated social, ecological, and system observation networks and data architectures
 - ii. **Action:** Create a citizen science program and distributed observational data collection system
 - iii. **Action:** Design and conduct a local food security assessment
- h. **Strategy:** Make data and information easily accessible to a wide range of stakeholders

- i. **Action:** Establish an initiative to drive the presentation of data in ways that are aesthetically compelling and provide rich information/narrative to a broad range of recipients
- ii. **Action:** Encourage the creative and novel use of city and community data through data and technology challenges tied to resilience challenges

Processes. The final section proposes a series of process elements that will form the core of a constant and iterative program of resilience building activity. The processes work in concert to provide evaluation of activity towards resilience and programmatic goals, valuation of the city's resilience investment, robust tools for conducting future assessments as part of the routine operation of the city, and methods for prioritizing newly surfaced resilience actions.

The content of this section will include:

Activating Resilience

- a. Assessing Community Resilience – a toolkit and recommended process
- b. Scenario-based Planning – a method for surfacing risks and vulnerabilities and a community engagement tool
- c. Field of Opportunity – a method for surfacing potential solutions to the identified gaps and challenges
- d. Prioritizing Resilience Action – criteria for prioritizing solutions
- e. Measuring Achievement – a method for developing metrics and indicators to evaluate progress towards greater community resilience
- f. Valuing Resilience Activity – a method for understanding the value of resilience activity and associated measurement towards the 100RC 10% pledge

The final strategy will appear in a limited print run and online at the [Resilient Boulder](#) website. Additional details about the next steps are included at the end of this memo.

Scenario-based Planning and Community Engagement

A central characteristic of Boulder's resilience challenge, and indeed at the core of all community resilience efforts, is being prepared to cope with future uncertainty. Some of Boulder's top climatic risks, such as wildfire or flash flooding, are highly unpredictable, rapid onset events that require a constant state of planning and preparedness across not only the city organization but the community at large in order to be resilient to their disruptive potential. In cases where the future incidence of crises is largely unknowable, preparedness means having adaptive and flexible systems (infrastructure, governance, social, and economic) that can adjust to a wide range of possible conditions.

As part of the Resilient Boulder effort, city staff has begun developing policies and programs to respond to the uncertainty associated with future climate change impacts. Some of that progress is noted above. Those efforts will support a broader initiative to use scenarios of plausible disruptions spanning social, economic, and environmental conditions. These scenarios of disruptive change will be used to test assumptions around preparedness, challenge the performance of conventional systems, and seek to surface new solutions that are integrated and inclusive.

It is envisioned that the scenario-based planning effort will follow two parallel and complementary paths. Using the same underlying foundation of research, trend identification, and assumptions about future conditions, one pathway will be designed as an internal staff decision-support and planning methodology. The second path will be a community engagement mechanism, which will serve as an interactive and dynamic method for discussing risk and resilience, while also providing substantive contributions to the staff preparedness effort by providing a regular source of highly localized risk and vulnerability

“assessment”. Note that this process, which is still under development, is a part of the “Processes” section of the Resilience Strategy.

Piloting *The Big Sort Exercise*

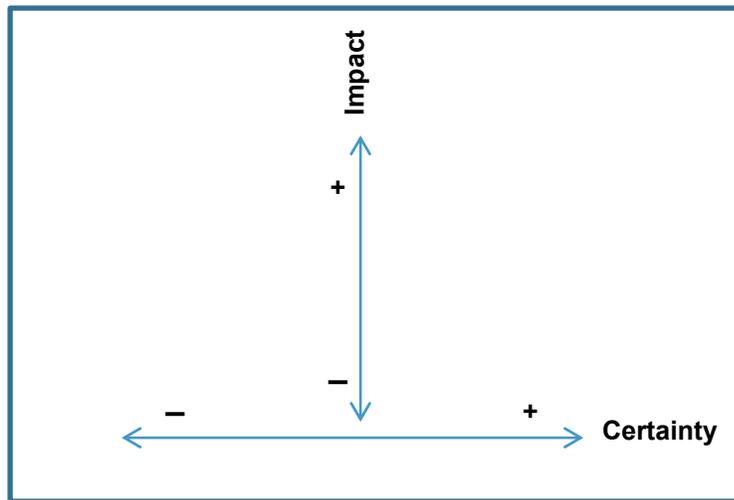
City Council is being asked to test a potential community engagement methodology and provide feedback on the experience. The exercise is a slightly modified version of a tool featured in the premium version of the Alliance for Innovation’s “The Next Big Things” report called “The Big Sort.” The Alliance for Innovation is an organization which conducts research, provides educational resources, and runs classes and events focused on local government innovation. “The Next Big Things” report is a result of a process in which the Alliance for Innovation “worked with experienced and emerging professionals, a global panel of subject matter experts, and all the data available to [them]” to “imagine what our cities and counties might look like one generation from now” (Alliance for Innovation 2015, p.5). According to the Alliance for Innovation, “The Next Big Things” highlights 44 trends in four categories - Resources, Technology, Demographics, and Governance - that could impact how local government operates in the next generation” (http://transformgov.org/en/research/the_next_big_things). “The Big Sort” exercise involves sorting the 44 trends from the “The Next Big Things” report on a graph with impact as the x axis and uncertainty as the y axis.

Staff has made several modifications to the exercise to contextualize the issues emerging from the broader scope of resilience work and to explore its utility as a wider community engagement device. Important changes to note are:

- Staff picked 16 trends that could impact Boulder over the next twenty years, only some of which are featured in “The Next Big Things”. The 16 trends are divided up into four dimensions of the City Resilience Framework: Leadership & Strategy, Health & Wellbeing, Infrastructure & Environment, and Economy & Society.
- Staff included trend definitions on the back of each trend card. These definitions can also be found below.
- Staff decided to use ‘certainty’ as the x axis label and ‘impact’ as the y axis variable. ‘Impact’ is also defined in terms of relative magnitude rather than as having inherently positive or negative implications.

Impact is defined as: How much could this trend affect the Boulder community over the next 20 years?

Certainty is defined as: How certain are you that this will be a trend over the next 20 years?



Instructions for the Exercise

A deck of trends has been printed for each council member. Council will be given ten minutes to read the trends and trend definitions, decide where each trend belongs on the graphs, and place the cards on the graphs. There are 4 graphs around the room that correspond to the resilience dimensions. Once the cards have been placed, Heather Bergman will facilitate a discussion about the exercise. The discussion will focus on the following questions:

- In cases where participants did not come to agreement about where a trend card should go on a particular graph, what was the source of the disagreement?
- In cases where participants placed trend cards in far corners of the graph, why did the participants decide to place the trend cards there?
- What trends were missing from the deck of trend cards that should have been included?

These questions are explicitly part of the exercise and should be evaluated for their utility in eliciting meaningful and substantive insights as an integral part of a potential community engagement methodology. Following this discussion, Council will be asked to provide feedback on their experience with this modified “Big Sort” exercise in its totality.

Trends and Definitions

Below are the trends and their definitions that will be included as part of the card deck - they are provided in no particular order:

Leadership & Strategy

- **Community and Identity Politics:** The Boulder community becomes less unified, and divisions between social and economic groups are more prevalent.
- **Reign of Corporate and Special Interest Influence:** All levels of government in the US experience increases in the influence of corporations and special interest groups

- **Immigration into Colorado:** The rate of immigration into Colorado exceeds all predictions
- **Distrust in Local Government:** Confidence in Boulder’s local government declines

Health & Wellbeing

- **Food Insecurity:** Climate variability disrupts local, national, and world food systems
- **Homeless Population:** The number of chronically homeless individuals in Boulder increases
- **Aging Population:** Boulder’s average age continues to rise
- **Energy Grid Disruption:** Rolling blackouts and other reliability issues become much more prevalent for Boulder

Economy & Society

- **Transportation Automation:** Self-driving cars and automated, high-speed mass transit replace traditional driver-operated vehicles in Boulder
- **Sharing Economy:** Shared ownership, shared consumption, and contractor-based services become the norm in Boulder
- **Nomadic Workforce:** The American workforce feels less geographically attached, and technology reduces the importance of working in an office
- **Data Revolution:** Data about everything continues to become more available to governments and to the public, and tools for using this data for decision-making become more robust

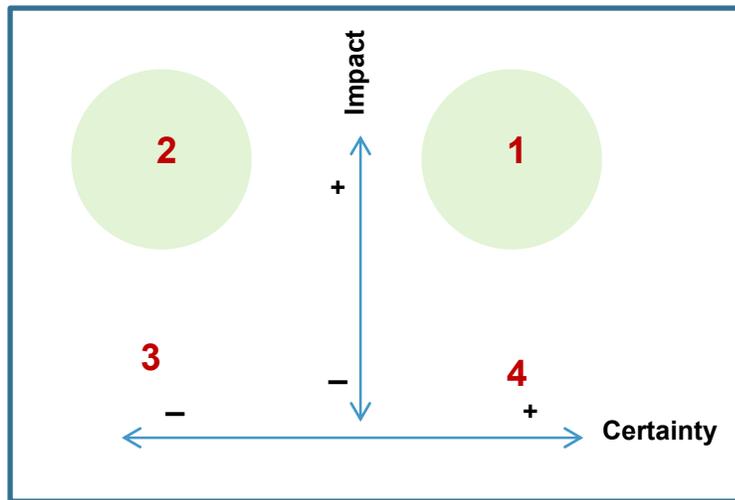
Infrastructure & Environment

- **Water Shortage:** New water stresses challenge even the most progressive water management regimes in the West
- **Energy Transformation:** The energy system becomes de-carbonized and de-centralized
- **Infrastructure Decline:** Maintenance of America’s roads, railways, water and sewer pipes and bridges decline
- **Climate Change:** The most extreme, rapid climate predictions come true for Colorado

Outputs and Analysis

As a community engagement tool, this version of the Big Sort is intended to be thought provoking and interesting to a wide range of potential community participants. When widely deployed, it should help to raise awareness of shared and personal risks. This exercise is intended to fit into a larger preparedness messaging and capacity building program that will provide the opportunity for the community to actualize their own resilience.

The analytical outputs of the exercise itself are also intended to identify two main areas of interest: 1) trends that are highly certain with high potential impact and 2) trends that are highly uncertain but should they come to pass, would be highly disruptive. In the first instance, identification of those trends should signal to city staff the need for existing robust and proactive analysis and strategies to address and shape a desired outcome. If those policies and plans do not exist, or are deemed insufficient, then there is clear need to develop them within a reasonable timeframe. In the second instance, uncertain but highly impactful trends, these trends indicate the need for directed research and exploration, as well as the potential development of sufficiently flexible and adaptive systems to cope with the disruptive potential. In the context of a resilience planning process, these trends form the potential foundation for future strategies and actions.



Next Steps

Following input from Council on February 9, feedback on the Resilience Strategy will be incorporated into the outline for the draft document. A full draft will be completed by the end of March. In April – exact date To Be Determined - Resilient Boulder will host an open house for all of the city’s boards and commissions in order to solicit input and feedback. Concurrently, the draft will be made available through the city’s website for public comment. City Council will be presented with a final version that incorporates consideration of these inputs during a study session in May (date TBD).

Council feedback on the Big Sort exercise will inform future refinements of the methodology and help determine its utility as a broad scale community engagement device. Additionally, the substantive outputs from the exercise may help inform the development of the first set of potential disruption trends for inclusion in the larger scenario creation effort. Research on scenario-based planning best practices related to resilience and the creation of potential scenario narratives to test methodologies with city staff is on-going and expected to be completed by May 2016.