



Land Use

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BOULDER COUNTY PLANNING COMMISSION AGENDA ITEM # 4

**June 15, 2016
Hearing Room, Third Floor
Boulder County Courthouse**

STUDY SESSION

Docket BVCP-15-0001: Boulder Valley Comprehensive Plan 2015 Major Five Year Update – Summary and Process

STAFF PLANNERS: County Staff Planners: Pete Fogg / Nicole Wobus
City Staff Planner: Lesli Ellis

Staff will provide an update to Planning Commission on the Boulder Valley Comprehensive Plan Major Five Year Update – Phase 3 activities and next steps. Staff will address the full range of topics presented to city decision makers at a recent City Council-Planning Board Study Session, and will seek feedback on topics of greatest relevance to the county. Topics for discussion will include activities of focus for Phase 3 of the update (i.e., policy integration and land use map changes) as well as broader areas of focus for the update (i.e., vision and core values; climate, energy and resilience; future jobs: housing balance; affordable and diverse housing; planning areas; and CU South land use designation analysis process). Staff presentation and discussion only; no public comment or decision will be taken.

STUDY SESSION PURPOSE

The purpose of the study session is to provide an update to Planning Commission on the Boulder Valley Comprehensive Plan (BVCP) Major Update – Phase 3 (i.e., key choices, scenarios, analysis, policy integration, and updates to land use) and to receive feedback on these subjects and topics for focus for the major plan update. Planning Commission’s feedback will be used to further shape and refine the development of scenarios, land use and other policies of the plan, and core values.

QUESTIONS FOR PLANNING COMMISSION

Does Planning Commission have questions or feedback on the following topics?

1. Refined draft core values (see **Attachment B**)
2. Draft choices for scenarios and potential tradeoffs (see **Attachment B**)
 - a. Related to design, housing, jobs/housing balance and evaluation measures
 - b. Related to climate, energy, and resilience policies
3. Draft plan organization and policy integration as presented in the annotated outline? (see **Attachment C**)

Staff can also address questions on the schedule, public land use request process, community engagement, and next steps.



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Phase 3 Update

Staff Packet for June 15, 2016
Planning Commission Meeting



**Study Session
MEMORANDUM**

To: Members of Boulder County Planning Commission

From: Dale Case, Director, Boulder County Land Use
David Driskell, Executive Director of Planning, Housing & Sustainability (PH&S)
Susan Richstone, Deputy Director of PH&S
Lesli Ellis, Comprehensive Planning Manager, PH&S
Jean Gatzka, Senior Planner, PH&S
Jeff Hirt, Planner II, PH&S
Caitlin Zacharias, Planner I, PH&S
Nicole Wobus, Long Range Planning and Policy Manager, Boulder County Land Use
Pete Fogg, Senior Planner, Boulder County Land Use
Steven Giang, Planner I, Boulder County Land Use

Date: June 8, 2016

Subject: Update on Boulder Valley Comprehensive Plan - Phase 3 Shaping Choices

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BACKGROUND

The BVCP is the community's plan for the future. Its policies are intended to guide decisions about growth management, development, preservation, environmental protection, economic development, affordable housing, culture and the arts, urban design, neighborhood character and transportation. The Land Use and Area I, II, III Maps define the desired land-use pattern and location, type, and intensity of development. Despite its 15 year horizon, the BVCP is updated every five years to respond to changed circumstances or evolving community needs and priorities.

With the community, the city and county are two-thirds of the way through a major five year update of the 2010 plan. As changes to the plan are proposed, it is important to ensure it remains useful and relevant while addressing issues of community concern.

Project Timeline

The BVCP update has four phases, each with extensive community dialogue and engagement. The webpage for the project is: www.bouldervalleycompplan.net, which also includes a link to the 2010 plan and maps. **Attachment A** includes the project timeline.

Phase 1—Foundations and Community Engagement Plan (completed)

Phase 2—Issues Scoping with Community (completed)

➔ **Phase 3—Analyze and Update Plan Policies and Maps** (summer-fall 2016)

Phase 4—Prepare Draft Plan for Adoption, Extend IGA (fall 2016/early 2017)

Currently, Phase 3—Plan Analysis and Updates to Policies and Maps is in progress. As with the first two phases, Phase 3 entails multiple opportunities for community engagement, described more below. To update the plan, the planning team and consultants will:

- address policy refinements and additions to better align the plan with other master plans and adopted city and county policies,
- develop choices and analysis, advancing the 3D modeling and visualization tools to help convey options and tradeoffs,
- do further research and analysis to support a community conversation,
- identify metrics to measure plan outcomes, refine metrics and measurements, and
- update the Land Use Plan and Area maps, reflecting input and analysis from the public request process as well as the scenario analysis.

For public engagement, an open house event on May 11 provided a chance for the community to get more information and help shape choices. Later, a series of Board and Commission discussions will occur, as well as additional localized (subcommunity) public events, pop up meetings, and a possible second survey in the fall.

Next is Phase 4—Draft Plan and IGA (Fall 2016). Phase 4 will synthesize all the previous phase deliverables into a draft plan for consideration/adoption, again with opportunities for public review and engagement. Additionally, the “Comprehensive Development Plan Intergovernmental Agreement” (IGA) between the city and county (valid through Dec. 31, 2017) will need to be updated.

CITY AND COUNTY FEEDBACK

Previous City and County Input on BVCP

- **On May 24, 2016**, staff presented a status update, fielded questions and gathered feedback from city decision makers at a joint Planning Board – City Council study session. A staff update at a May 12 Planning Board meeting preceded that session.
- **On Mar. 29, 2016**, City Council provided feedback on the housing-related scenario choices as part of the City’s Middle Income Housing Strategy. Links are here: [The Mar. 29, 2016 memo](#); [Feb. 23 memo on housing](#), and [Mar. 29 Study session summary](#) (approved May 3, 2016).
- **On Feb. 29, 2016**, City Council reviewed and decided on initial screening of public requests, after the joint public hearing with the Planning Board held on Feb. 2, 2016. Links are here: [Feb. 2, 2016 memo](#); the [Feb. 29 memo](#).
- **On Jan. 26, 2016**, Planning Commission and Board of County Commissioners held a joint public hearing on initial screening of public requests. Planning Commission decision-making took place on the 26th, and BOCC decisions took place on January 27.
- **On Dec. 15, 2015**, City Council reviewed the first round of public land use requests within the city and had an update on the BVCP survey results, and public engagement from Phases 1 and 2 of the project. A link is here: [Dec. 15, 2015 memo](#).
- Prior to these meetings, city and county decision makers reviewed updated information and provided feedback on the foundations work; the draft BVCP survey; the public change request process; CU South process; and community engagement in fall 2015.

COMMUNITY ENGAGEMENT

Working with the BVCP Process Subcommittee, staff prepared a [Community Engagement Plan](#) for Phases 1 and 2 and recently updated it for Phase 3. Community engagement in the first phases aimed at informing people about the plan and its legacy, sharing foundations information, and inviting people to identify issues and topics for the update. Engagement during this third phase leverages previous input and will help narrow and refine scenarios/key choices (e.g., jobs/housing balance, resilience) and add and refine policies toward completion of the plan update.

Phases 1 and 2 Outreach Efforts designed to capture general input around issues included:

- **50,000 postcards sent to all households in the Boulder Valley**
- **Kick off Events on line and at Chautauqua**
- **Meetings with multiple city Boards and Commissions**
- **Six listening sessions**
- **13 Pop-Up events**
- **Culturally Sensitive Engagement / Partnering with Intercambio**
- **Outreach with Civic, Business, and Community Groups**
- **The BVCP Survey (937 random sample responses and 459 responses to an open link survey; [link here](#))**
- **5,000+ weekly city email newsletter recipients (Planning, Housing and Sustainability’s email)**
- **Youth Engagement**
- **BVCP Videos**

Phase 3: May 11 Event regarding Shaping Choices

Approximately 60-70 people attended the **May 11, 2016 “What if” Choices** event at the Boulder Library,

and provided feedback about a range of topics and the BVCP update and other city projects. The meeting was televised on Channel 8 (live stream), and members of the public were able to record pitches with their “what if...” ideas for the future. **Missed the Meeting? Check it out online.** An online questionnaire and virtual meeting set of materials were available for the public until June 5, 2016 at www.bouldervalleycompplan.net. A summary of the event is available on bouldervalleycompplan.net.

FOUNDATIONS WORK

Completed background and technical work in support of the current phase and scenario key choice development includes:

- **Trends Report.** [Link here for the Trends Report.](#)
- **2040 Projections.** [Link here for current projections and methodology.](#)
- **Subcommunity and Regional Fact Sheets** - The 10 fact sheets include inserts featuring the future land use map and category descriptions from the adopted (2010) BVCP and history. [Link here for current Fact Sheets.](#)
- **Interactive Mapping and 3D Modeling.** [Link here for story board maps.](#)

BVCP PHASE 3 – APPROACH AND TRACKS

Phase 3 includes the following tracks:

- Track 1: Areas of Focus**
- Track 2: Plan Policy Integration and Reorganization**
- Track 3: Public Map, Policy, and Text Request Analysis**

Track 1: Areas of Focus

The areas of focus related to design, housing, and jobs and housing balance may lead to land use or policy changes in the plan, as well as policies related to climate and resilience. They are further described in **Attachment B** and below.

Draft Renewal of Core Values

In the BVCP Survey, most people supported the core values (sixty-six percent of respondents did not identify any need for clarification or modification). However, some

AREAS OF FOCUS

MAY 11, 2016



During each 5-year update, the planning team identifies “Areas of Focus” to respond to changed circumstances, community needs, and pressing issues. These topics were identified through the analysis of trends from the foundations work that kicked off the plan update, a great deal of community input, and direction from the decision-making bodies. Addressing the Areas of Focus will guide policy and potential land use changes during this plan update.

HOUSING AFFORDABILITY AND DIVERSITY

Explore land use options to better achieve affordable and diverse housing as appropriate in different parts of Boulder.



CLIMATE CHANGE, ENERGY, AND RESILIENCE

Strengthen policies to reflect city’s climate commitment and resilience strategy.



BALANCE OF FUTURE JOBS AND HOUSING

Explore land use options to improve the balance of future housing and jobs and consider important trade-offs.



URBAN DESIGN AND COMMUNITY BENEFITS

Improve the plan’s direction on design, activity centers, height, mixed use, development requirements and the public realm.



TARGETED ASSESSMENT AND PLANNING

for CU South and the Boulder Community Project: Alpine-Balsam



ADDRESSING LOCAL NEEDS

Share information about unique local qualities in subcommunities and identify future needs for planning at the subcommunity or area level.



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respondents suggested updating the core values in the plan to reflect current community ideas, such as safety, resilience, climate, and diversity. **Attachment B** notes these ideas and contains the initial draft updating the values that reorganizes them to reflect the sustainability principles, with the idea being that the plan may be organized to reflect the seven categories and address cross-cutting policies.

Choices related to Design, Housing, and Jobs/Housing Balance

Attachment B contains a white paper on initial choices and tradeoffs related to design and the built environment, jobs/housing balance, affordability and diversity of housing and indicators to measure choices. Council has discussed many of these ideas previously; the range should reflect previous feedback. The next step will be to develop scenarios and key choices using three-dimensional modeling tools from CityEngine and story maps to show development potential and constraints (e.g., high hazard floodplains, height limits, and floor area ratio (FAR) maximums). Then, staff and consultants will evaluate the choices using a set of measures that assess the degree of alignment with the city’s sustainability framework and values and recommend updates to policies.

Choices to refine Built Environment section and mixed use policies.

The survey results generally showed support for the mixed use concepts and locations in the plan. The white paper and poster shows them as “opportunity areas” and requests further feedback about what is appropriate (or not) in different locations. It also presents ideas to update the “Built Environment” chapter of the plan to reflect input from the community survey, boards and commissions, and other sources.

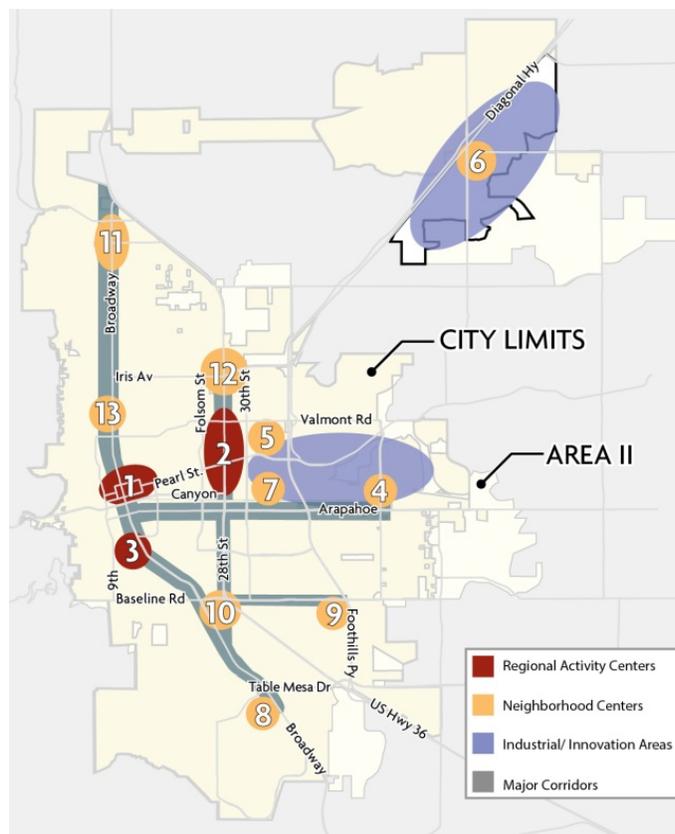
Choices to address future jobs:housing balance.

Choices to improve the future balance of housing and jobs and considerations and tradeoffs are identified in the white paper, including whether the city should:

- A. Convert some existing employment areas from industrial to housing designation;
- B. Find opportunities for new, walkable (15-minute) neighborhoods in locations near transit and where people work; and/or
- C. Moderate the pace or change of overall potential future commercial and industrial uses through growth management tools?

Choices to address diversity and affordability of housing.

Survey responses showed that greater diversity of housing types and price range is the highest priority issue. Based on the *Housing Boulder Action Plan for 2015/2016* and community input, and *The Middle Income Housing Study*, the white paper presents a range of choices and discussion of considerations and tradeoffs.



Questions include:

- A. Should the land use plan and policies be adjusted to allow diverse housing within existing industrial and mixed areas in the city?
- B. Should plans and policies expand the range of possible housing types by ultimately amending the Land Use Code?
- C. In exchange for community benefits, should the city allow more intensity than what is currently allowed in certain locations?
- D. Should the city establish new residential transitional requirements for different contexts?
- E. Should the city encourage “gentle infill” in neighborhoods?

The BDCP includes a core value of achieving a "diversity of housing types and price ranges." Additionally, the survey and focus group results from September, 2015 revealed that "a diversity of housing types and price ranges" was the community's #1 priority.

This exercise seeks to find out what housing prototypes the community feels are currently lacking and where they would be most appropriate.

Which housing prototypes are currently lacking in Boulder?

ACTIVITY INSTRUCTIONS:
Place a **GREEN DOT** where you think a particular housing prototype is lacking and should be encouraged.
Place a **RED DOT** where you think a particular housing prototype does not belong.

NOTE: Refer to the general goals and future development of the Areas of Opportunity and specific locations, housing requirements, etc. and identify Areas of Opportunity for any area you reasonably envision for some housing alternatives.

AREAS OF OPPORTUNITY

AREAS OF OPPORTUNITY	SMALL LOT SINGLE FAMILY	ACCESSORY DWELLING	COTTAGE COURT	TINY HOUSE
INDUSTRIAL/ACTIVITY CORRIDORS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEIGHBORHOOD ACTIVITY CENTERS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAJOR CORRIDORS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INDUSTRIAL/INNOVATION AREAS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEIGHBORHOODS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OUR STRATEGY
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At the May 11 public event, the planning team also asked for feedback on different housing prototypes and whether they are appropriate or not in different types of locations. A summary of the event is available on bouldervalleycompplan.net, and further information regarding input from the questionnaire will be added after June 5.

Add Climate, Energy, and Resilience

The plan will be updated to reflect the community's work to achieve deep reductions in local greenhouse gas emissions, transform its energy system, and increase community resilience and response to emergencies such as floods. The white paper in **Attachment B** outlines potential policy changes to add the city's Climate Commitment goals discussed by City Council at a May 10 study session, presented in the city's draft Climate Commitment document (and in the outline in **Attachment C**) and principles of resilience identified through the HR&A Report, "Recommendations for Resilience Integration" (Draft May 9, 2016). **Attachment D** contains a draft Resilience Assessment Report by HR&A consultants.

Add Subcommunity Sections

Staff proposes to include subcommunity plan sections and policies in the plan update to address local issues and character, using feedback from listening sessions and the survey to help define unique characteristics and needs. Subcommunity sections of the plan can address land use and other topics such as neighborhood character (e.g., areas of stability), unique assets, land use compatibility, and other needs and also identify future priorities for detailed subcommunity planning.

Alpine-Balsam and CU South

In addition to the above areas of focus, the planning team is coordinating two site specific planning processes toward possible land use changes and policy updates. Each will have distinct community engagement, technical work, and analysis.

Alpine-Balsam: A Community Project (Boulder Community Hospital) Planning Process.

Planning for redevelopment of the site is being coordinated with the BVCP update. Pieces relevant to the BVCP will include developing an Urban Design Framework that puts the area in context with its Central Boulder surroundings; preparing guiding principles to help guide programming and further planning; and preparing policy suggestions for the area in support for the future area planning.

A consultant will assist city staff with this work. Public engagement may be coordinated with BVCP events, especially Central Area meetings. However, separate and focused collaboration and partnering with specific groups in the area will be necessary for the community project. See project webpage: <https://bouldercolorado.gov/planning/alpinebalsam>.

CU South Land Use Designation Analysis Process.

The update will include analysis of possible changes to the BVCP land use designations for the CU South site. This work would be in advance of annexation or zoning. It is being done parallel with South Boulder Creek flood mitigation berm engineering. The first step is a site suitability study that will address developable and undevelopable parts of the site. Consultants (Biohabitats and Fox Tuttle) are assisting the city. Initial findings will be ready for public for review in summer 2016. The second part of the study will address land uses, utilities, and urban services. It is also likely that prior to annexation, the city and CU would need to develop an agreement describing conditions for annexation. Following the analysis, a land use change recommendation for the BVCP would be put forward by staff. See project webpage: <https://bouldercolorado.gov/bvcp/cu-south>.

Tracks 2 and 3: Plan Policy Integration and Plan Organization

The plan would benefit from some reorganization and formatting improvements (e.g., contents, headings/footings, headers, graphics, maps, etc.) to improve navigability and make it more compelling. Ultimately, the plan can be interactive and digital, but it should start with a well organized traditional document that is easy to use and meshes well with master plans, Capital Improvements Program, budgeting, and other city/county plans. Therefore, a proposed outline is presented in **Attachment C**. Staff would appreciate feedback from the decision bodies on the proposed reorganization of the plan.

Secondly, the interdepartmental city/county planning team has been working across city and county departments to ensure the updated BVCP policies in Sections 2 through 9 align better with plans, and to identify emerging areas of work. An annotated outline of initial proposed policy updates is included in **Attachment C**. The outline notes changes that will bring recently adopted master plans or other policies, such as the city's Community Cultural Plan, Transportation Master Plan, and Parks and Recreation Master Plan, as well as the county's Boulder County Comprehensive Plan Environmental Resources Element and Cropland Policy into the BVCP in a more comprehensive and integrated way. The outline is a work-in-progress. City and county departments that have seen the greatest amount of change in their master plans and programs since the 2010 BVCP (i.e., departments focused on transportation and open space) are holding discussions to review potential policy revisions and identify areas of alignment. Once staff has a clearer understanding of the types of policy changes that make sense at this time more detailed revision to policy language will get underway.

Further input from city and county staff, leadership, and public, and other suggestions from the Resilience Assessment (HR&A consultants) will also help staff finalize a full outline of proposed changes to the BVCP plan.

Later in the summer, the planning team will carry forward the updated land Use Map Descriptions with formatting, images, introductory explanatory text, and other enhancements and will provide suggestions to reorganize and clarify the amendment procedures and Urban Services Criteria and Standards chapters.

Track 4: Public Land Use and Map Change Requests

In late 2015 through March 2016, the four applicable bodies decided to advance ten of the original 38 requests for further study, plus three policies. Of the ten land use and map requests, two have withdrawn leaving eight. Four requests do not involve land in county jurisdiction and therefore only require two body review (Planning Board and City Council). The remaining four involve land within county jurisdiction. Therefore, they require four body review (two city bodies plus Board of County Commissioners and Planning Commission).

Two Body Review

- **#1 Naropa - 2130 Arapahoe Ave.:** High Density Residential (HR) to Public (PUB); 6287 Arapahoe Ave.: Community Industrial (CI) to Community Business (CB)
- **#3 – 385 Broadway:** Transitional Business (TB) to Low Density Residential (LR)
- **#12 - 0, 693, 695 Broadway (Table Mesa Shopping Center):** Medium Density Residential (MR) to Community Business (CB)
- **#13 - 3485 Stanford Court:** Low Density Residential (LR) to Medium Density Residential (MR)

Four Body Review

- **#25 - 3261 3rd Street:** Area III to Area II to enable future annexation request
- **#29 -2801 Jay:** Public (PUB) to Medium Density Residential (MR) or Mixed Density Residential (MXR)
- **#35 and 36 - 6655 and 6500 Twin Lakes, 0 Kalua Road:** 35 - Low Density Residential (LR) and Public (PUB) to Mixed Density Residential (MXR), and 36 - Low Density Residential (LR) and Public (PUB) to Open Space (OS) with Natural Ecosystems or Environmental Preservation designation

Staff is currently analyzing the requests. Community engagement will happen during the summer months with hearings about the requests likely to be in September and October. A facilitated process for the Twin Lakes requests (#35 and 36) is ongoing. Additionally, the three policy requests which advanced through initial screening will be addressed as part of the policy updates (noted above and in Attachment C).

NEXT STEPS

Attachment B contains more information about what happens next with the scenarios/key choices. Much of the summer engagement will be focused around that work, as well as some meeting(s) and events about CU South and specific public land use and map requests.

Dates include:

- (TBD)** Board of County Commissioners check in regarding scenarios/key choices and policies
- Jun – Aug.** **Summer community engagement**
- ✓ Meeting(s)/open houses for the public land use and map change requests

- ✓ Local events to review and provide feedback on proposed scenarios within subcommunities
- ✓ CU South meetings and updates regarding suitability analysis
- ✓ Pop ups and meetings with organizations – by request
- ✓ Survey #2 possible

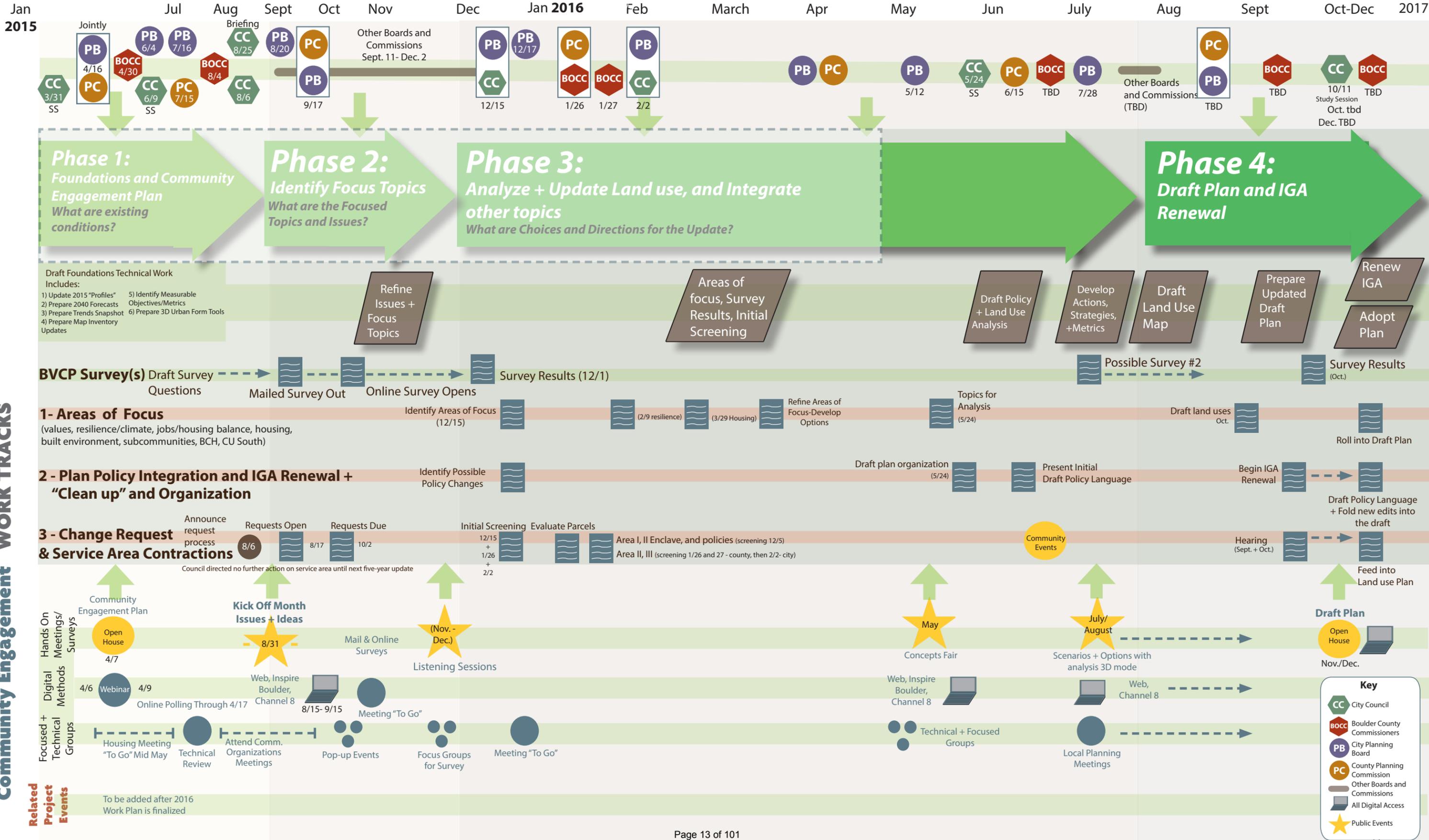
Aug./Sept. Board and commission check ins and decision-making on public land use change requests

Oct. 11 (tent.) Council Study Session to discuss scenarios/choices and analysis and preferred directions, land uses, and policy direction

ATTACHMENT(S)

- A. Updated Work Plan for 2016**
- B. Key choices as presented at May 11, 2016 public meeting (white papers and posters)**
 - 1. Renewed Core values
 - 2. Choices for design, land use, housing, and jobs/housing balance and posters
 - 3. Climate, energy and resilience
- C. Draft BVCP outline and policies**
 - 1. Plan outline
 - 2. Policy Integration - Annotated Outline
- D. HR&A Resilience Assessment Report draft**

Work Plan for 2016



Community Engagement WORK TRACKS

VISION AND CORE VALUES

The comprehensive plan has a solid foundation that has been widely supported by the community since the 1970s. Its core values cover long-standing community values and are updated periodically to introduce newer values. In addition, this plan update is an opportunity to present the plan's vision in more compelling (graphic, storytelling) ways to convey Boulder Valley's planning history and future community aspirations.

The values articulate the community's commitment to sustainability and meeting its environmental, economic, and social goals as noted below.

- Sustainability as a unifying framework to meet environmental, economic, and social goals
- A welcoming and inclusive community
- Culture of creativity and innovation
- Strong city and county cooperation
- A unique community identity and sense of place
- Compact, contiguous development and infill that supports evolution to a more sustainable urban form
- Open space preservation
- Great neighborhoods and public spaces
- Environmental stewardship and climate action
- A vibrant economy based on Boulder's quality of life and economic strengths
- A diversity of housing types and price ranges
- An all-mode transportation system to make getting around without a car easy and accessible to everyone
- Physical health and well-being

What have people suggested to update the core values?

The BVCP survey conducted in the fall of 2015 (further information available at: www.bouldercolorado.gov/bvcp/bvcp-survey) asked several questions about the core values of the plan. Respondents generally agreed that the plan's values are consistent with community values. One commenter wrote, **"If we can accomplish (them all)... that would be truly amazing. Let's try."**

People also suggested adding or clarifying the following values:

- Diverse and inclusive community (age, incomes, ethnicities, etc.)
- Representative and responsive government - "good governance" concept
- Resilient, prepared community
- Safety, as basic community value
- Well-maintained infrastructure (and assets)
- University community, progressively leading
- Managed and/or limited growth

- Arts and culture
- Cohabitation of people and wildlife
- Strong partnerships (e.g., city and county with University of Colorado, Naropa, Boulder Valley School District, RTD, Boulder Community Health, business community, neighborhoods)

Most frequently mentioned values in need of clarification include:

- A diversity of housing types and price ranges,
- “Compact” community (i.e., is there a better description?)
- “All mode transportation system”
- Climate action (i.e., add goals from Climate Commitment and clarify city’s role).

Initial Draft of Core Values Update

Better Alignment with the Sustainability Framework

The community’s core values are based on long-standing policies and concepts of the comprehensive plan. They reflect strengths and challenges of the Boulder Valley.

Proposed revisions to the values reflect input heard from the community, create greater alignment with the city’s Sustainability Framework, and add resilience principles. The sustainability framework consists of seven categories that address environment, economy, and social equity goals together across the city organization in decision-making.

The revised values are intended to enhance the current values and are a guiding philosophy for planning, development, and budget decisions moving forward. They are the precursor for policies later in the plan.



Other Recommendations to update the Vision and Introductory Chapter

A creative more compelling approach to the Boulder Valley Vision might include elements of the past, present, and desired future in a series of “big idea” statements, including graphics and illustrations to fully convey the desired future vision. Additional suggestions include:

- Add more historic references – more of a story with pictures, not just a list of milestones
- Add graphics, photos, and quotes
- Highlight the long-standing unique aspects of the community’s character, shape, and environmental, social, and economic goals.

The Boulder Valley community honors its history and legacy of planning while striving together to achieve a truly great, sustainable, resilient community – better and more beautiful for future generations.

BVCP Refined Core Values

The core values are reorganized below to reflect the sustainability principles, with the idea being that the plan may be reorganized to reflect the seven categories and address cross-cutting policies and goals.

(Note: Bullets in black are current core values, red are suggested additions.)

The Boulder Valley values...

A Safe Community

- Continued safety (a basic community value) and a climate of safety and social inclusiveness
- Resilience and preparedness

A Healthy and Socially Thriving Community

- A welcoming, diverse, and inclusive community that leads by example
- Health and well-being, and
- A thriving arts and culture

A Livable Community

- Its unique identity and sense of place
- Managed growth through compact contiguous development, and infill that supports evolution to a more sustainable urban form
- Great neighborhoods and public spaces
- A diversity of housing types and price ranges
- Well-maintained infrastructure, facilities, and assets

An Accessible and Connected Community

- An all-mode transportation system to make getting around without a car easy and accessible to everyone
- Maintain a connected infrastructure network

An Environmentally Sustainable Community

- Environmental stewardship and open space preservation
- Climate action, adaptation, and resilience

An Economically Vital Community

- A healthy, resilient economy with high levels of services and amenities
- A culture of creativity and innovation

Good Governance

- Strong city and county cooperation
- A tradition of representative and responsive government
- Engaging the community in all civic matters
- Strong partnerships between public, private entities, and the community

Question: How would you refine and prioritize ideas related to climate and resilience for the plan update?



Choices for DESIGN, HOUSING, AND JOBS

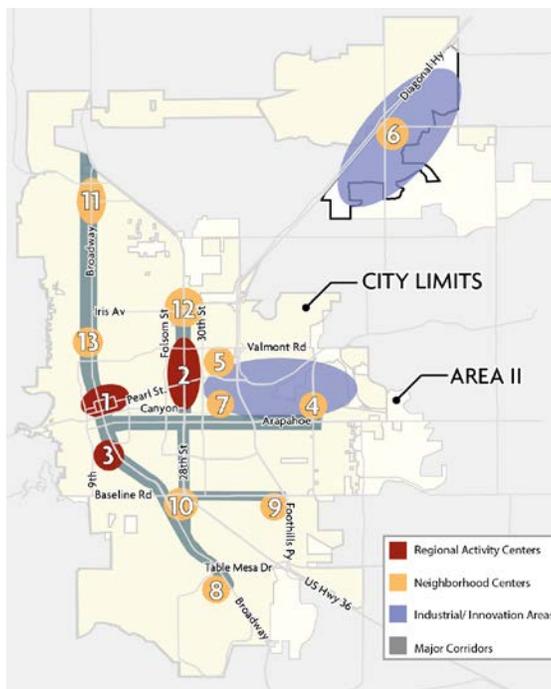
Why are **key choices** being presented?

The packet that follows includes choices for land use and policy changes that could be made during the BVCP update to address design, jobs:housing balance, and affordable and diverse housing. The planning team is seeking feedback from the community to refine the choices that will become scenarios to be further evaluated. Changes should be made in keeping with the plan's overall intent and values.

The Boulder Valley's sense of place, beauty, and permanent surrounding open space has not happened by accident. It has taken creative public policies and pragmatic planning decisions over many years to produce and preserve its unique character and physical beauty. Boulder is defined by its natural setting, the mountain backdrop, and surrounding greenbelt.



Within the valley and the city, distinctive characteristics and qualities of individual areas draw on unique history, development pattern, land uses, amenities and other factors. The community has distinct places with more concentrated activity: Regional Activity Centers, Neighborhood Centers, and Industrial/Innovation Areas. These places tend to be connected by Major Corridors with access to high frequency transit. Neighborhoods are the building blocks of the city and cover most of the city.



Key

Regional Centers:

- 1 – Downtown
- 2 – 29th Street
- 3 – University Hill commercial area

Neighborhood Centers:

- 4 – 55th and Arapahoe
- 5 – Boulder Junction (30th and Pearl)
- 6 – Gunbarrel Town Center
- 7 – North of Arapahoe (30th-38th St.)
- 8 – Table Mesa Center
- 9 – Meadows Community Center
- 10 – Basemar (near Baseline and Broadway)
- 11 – North Boulder/North Broadway
- 12 – Diagonal Plaza
- 13 – Alpine/Balsam (hospital)

Figure: Opportunity Areas

Note: The map above is a blend of the "activity center" map in the plan combined with areas with potential for new jobs and housing and the transit corridor map.



Boulder's Neighborhoods are varied, ranging from historic and pre-World War II housing organized around a street grid pattern in and near downtown; Post World War II neighborhoods with a curvilinear street and cul de sac pattern; and Neo-traditional, New Urbanist neighborhoods that contain a mix of housing types and more compact street design.

What is proposed for the **urban design** and **land use sections** of the plan?

The planning team will work with the community to identify how to update the "Built Environment/Livability" chapter of the plan to reflect input from the community survey, boards and commissions, and other sources regarding design of the city to accomplish the following:

1. Better convey concepts in the plan through 3D maps, diagrams, and definitions the elements that define Boulder's city structure and character (e.g., "centers" and "neighborhoods"),
2. Add transit corridors from the Transportation Master Plan,
3. Clarify guidance on neighborhoods, such as transitions to protect the character and mix of complementary land uses,
4. Better describe and illustrate principles of quality mixed use and higher density development,
5. Convey other principles of design quality (such as sensitive infill and redevelopment), and
6. Add priorities from the Community Cultural Plan regarding the expression of culture and creativity in the public realm and amplification of the vibrancy of Boulder's cultural destinations.



Additionally, the *land use descriptions* in the plan may be updated to add new categories or refine definitions to accomplish community goals. Changes will be discussed at upcoming events and meetings in the summer.

Question: What suggestions do you have to improve and clarify urban design policies and principles of the plan?

What happens next with the **key choices currently** being presented?

1. Develop Options for Opportunity Areas. Based on initial community feedback, develop a series of options for each of the Opportunity Areas that incorporates missing housing types and identifies key choices and trade-offs for each of the following considerations:
 - Adjustments to mix of uses
 - Allow increased density/intensity tied to certain community benefits
 - Requirements for a broader mix of housing types/price points
 - Transitions in use or intensity where Opportunity Areas abut single-family neighborhoods, open space, or other lower intensity uses.
 - Enhancing vitality (creating "new" neighborhoods)

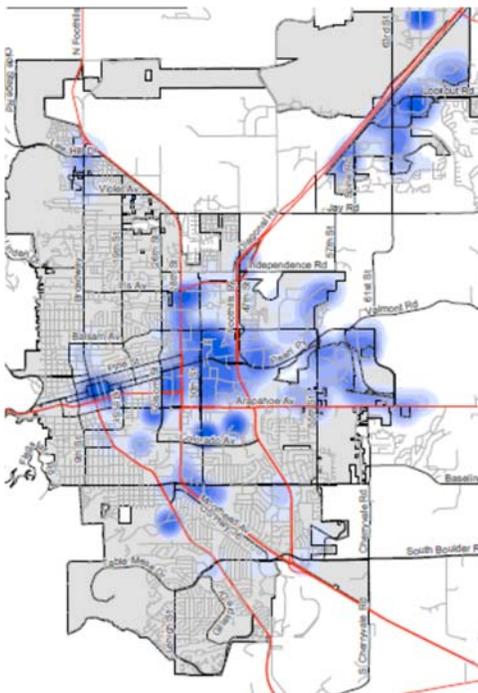
2. Evaluate Choices. Work with the community to evaluate key choices for each type of Opportunity Area based on their alignment with the city's sustainability framework and comprehensive plan, and to identify the types of community benefits that would be most meaningful to residents in different contexts.
3. Recommend updates to Policies. Recommend updates to housing and neighborhood policies to support preferred outcomes for each type of Opportunity Areas. Determine how the city may partner with other organizations or the private sector to accomplish goals.
4. Consider at Subcommunity Level. Further identify considerations and issues at the subcommunity planning level or for area planning as appropriate.

Choices for BOULDER'S JOBS: HOUSING BALANCE

Is it time to adjust the land use plan to encourage new housing near where people work, encourage transit-oriented development in appropriate locations, preserve service commercial uses, and convert non-residential uses to residential in appropriate locations?

What is the Issue? What does the **current plan policy** say?

Boulder is a **regional employment center** with more jobs than housing for people who work here. Periodically, the city seeks opportunities to improve the balance of jobs and housing while maintaining a healthy economy. This is accomplished by encouraging new housing and mixed use neighborhoods in areas close to jobs, encouraging transit-oriented development in appropriate locations, converting industrial development in appropriate locations, improving regional transportation alternatives, and mitigating traffic. Recent survey results suggest that this issue needs to be addressed as part of this BVCP major update.



Growth management policies also address tools to manage the **pace and rate** of growth. The city currently uses a number of tools to control the scale, location, type, intensity and timing of new development and ensure that development provides **benefits and achieves** community goals. Such tools include development standards and the Land Use Code and development fees (including new commercial linkages fees). The Residential Growth Management System aims to manage the average annual rate of housing growth, which in the City of Boulder (from year-end 2009 to 2014) was approximately 0.8 percent per year. The city does not regulate the pace of growth on non residential units.

What are the **2040 Projections**?

In 2015, Boulder had **45,700 housing units, 104,800 residents, and 98,500 jobs** (a balance of 0.46 housing to jobs).

By 2040, Boulder may expect to see **6,300 new housing units, 18,200 new residents and 18,500 new jobs** (0.44 balance). *(in Area I, city limits)*

Combined potential housings and jobs. See Projections report available on bouldervalleycompplan.net.

May 13, 2016

What do people have to say about jobs: housing mix/balance?

- Survey responses indicate general alignment with current policies and approaches to maintain or improve the balance of jobs and housing.
- Respondents thought Boulder should maintain (57 percent) or increase (25 percent) the current potential for additional jobs. 11 percent would like to reduce potential for commercial.
- Respondents thought Boulder should increase (43 percent) or maintain (39 percent) the current potential for additional housing. 12 percent would like to reduce the potential for additional housing.
- Open-ended comments showed nuanced thinking about the future mix of housing and jobs. Quality, design, family-friendly design, and public spaces and views are important factors in how the community thinks about the issue.
- Respondents conveyed that the city should continue to manage an average rate of growth for housing and not add a new growth management rate tool for jobs.

What are some land use and policy choices to explore?

The following choices will be explored as part of the BVCP update:

- A. Should the city convert some existing employment areas from an industrial to a housing designation on the BVCP Land Use Map and encourage addition of affordable and diverse housing types? Options include:
 1. Incentivize the affordable housing integrated into existing industrial areas while keeping employment uses intact (e.g., infilling underutilized lands or existing surface lots to housing in appropriate locations).
 2. Encourage redevelopment of existing single use industrial/office buildings in exchange for new, vertically mixed development that includes a mix of employment, housing, and other complementary uses.

Considerations and Tradeoffs:

The change could...

- Create additional housing for people who work in Boulder, reducing in-commuters.
- Help create additional amenities (including housing), uses, and services in existing industrial/innovation areas, especially those home primarily to primary employers (such as in East Boulder and Gunbarrel).

However it could...

- May reduce potential for additional jobs, which is contrary to most community member's preference in BVCP survey.
- Be limited without exploring what types of jobs may occur in different areas (and how transforming older employment areas to meet the future needs of our employers).
- Displace or price out existing service commercial uses/employment uses or limit potential for certain industrial uses within the city.

- B. Should the city better balance local jobs and housing by finding opportunities for new, walkable (15-minute) neighborhoods in locations near transit and where people work?

Considerations and Tradeoffs:

The change could...

- Be consistent with the Transportation Master Plan goal to improve walkability throughout Boulder's neighborhoods and also increase the mix of nearby services and facilities.
- Increase intensity and mix of uses and also amenities, uses, and local services for employers and nearby neighborhoods.

However it could...

- May reduce potential for additional jobs.
- If not carefully planned, create undesired mix of uses near some existing neighborhoods.

- C. Should the city moderate the pace of change or overall potential future commercial and industrial uses?

Considerations and Tradeoffs:

The change could...

- Improve balance of jobs and housing by lowering job potential.
- Reduce overall emissions in community.
- Require a change to policies in the plan, as it currently is not consistent with the plan's policy of being a major employment center and maintaining a healthy economy.
- Reduce overall potential growth which may lessen traffic and some other impacts.

However it could...

- Be inconsistent with the plan's policy of being a major employment center and maintaining a healthy economy, and be inconsistent with survey results and the concern about impacting economic vitality.
- Displace emissions to other communities with lower building standards.
- Potentially lead to reduced sales tax and revenues.

Question: How would you suggest refining or adding to these key choices to address jobs:housing balance?

WHERE ARE POSSIBLE OPPORTUNITIES FOR FUTURE JOBS AND HOUSING?

Future opportunities are largely focused in four types of places: Major Corridors, Regional Activity Centers, Neighborhood Activity Centers, and Industrial/Innovation Centers. Some limited new housing will continue to occur in neighborhoods. The generalized location and distinct characteristics of each of these types of places are defined below.

Major Corridors

- Varied in use. May be transitioning to mixed-use
- Served by high frequency transit and connecting the centers
- Fairly walkable/bikeable in most locations
- Abutting established neighborhoods
- Examples: 28th Street, Broadway, Arapahoe



Activity Centers

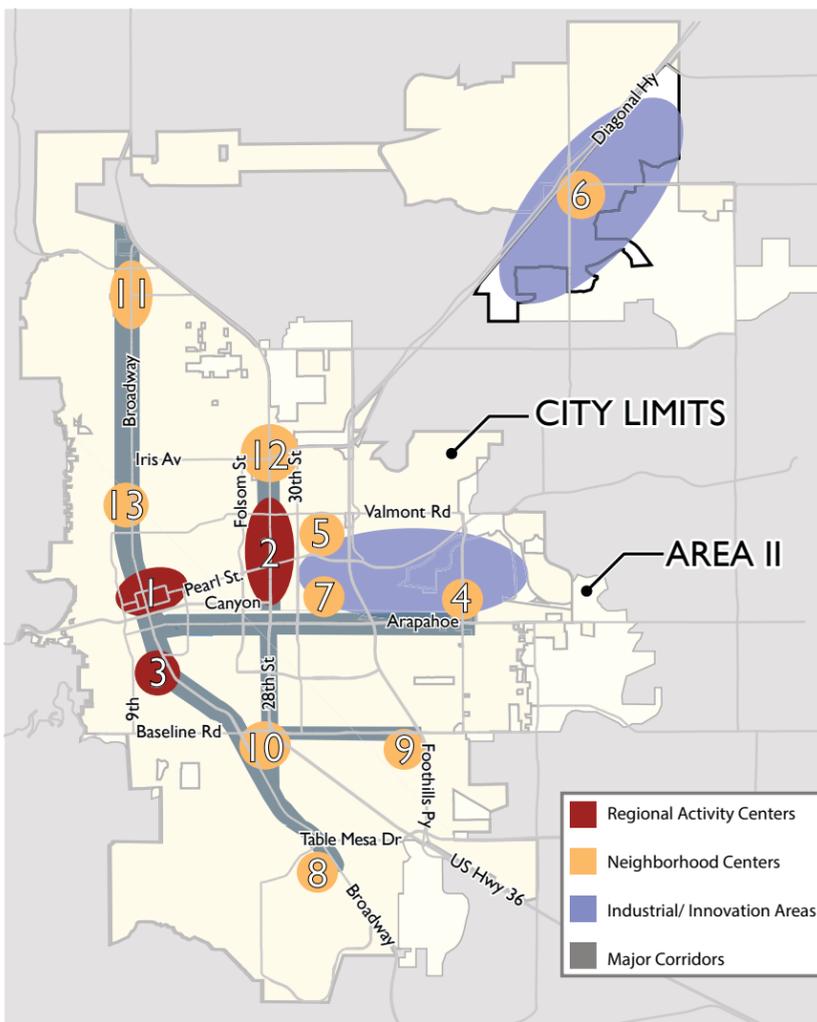
Regional Activity Centers

- Regional destinations
- Highest level of intensity
- Each has a distinct function, character, and mix of uses
- Walkable/bikeable
- Very accessible to local and regional transit connections
- Examples: Downtown, Boulder Valley Regional Center, University of Colorado/University Hill business district



Neighborhood Activity Centers

- Places that serve as neighborhood gathering spaces and provide goods and services to meet the day-to-day needs of nearby residents, workers, and students
- Easily accessible from surrounding areas by foot, bike, and transit
- Infill, redevelopment, and/or adaptive reuse opportunities exist in many locations
- Emerging identities
- Adjacent to established neighborhoods
- Smaller scale uses (1-2 story) typical today
- Examples: Table Mesa Center, North Boulder/North Broadway, 55th and Arapahoe, and Gunbarrel Town Center.



Map Key

1. Downtown
2. 29th Street
3. University Hill commercial area
4. 55th and Arapahoe
5. Boulder Junction (30th and Pearl)
6. Gunbarrel Town Center
7. North of Arapahoe (30th-38th St.)
8. Table Mesa Center
9. Meadows Community Center
10. Basemar (near Baseline and Broadway)
11. North Boulder/North Broadway
12. Diagonal Plaza
13. Alpine/Balsam (hospital)

Which **opportunity areas** are appropriate (or not) for changes to land use?

Industrial/Innovation Areas

- Business and job rich areas (service commercial, light industrial, etc.)
- Aging buildings and infrastructure in some locations, transitioning to updated buildings and infrastructure in some areas
- Less walkable/bikeable than other locations within the city due to disconnected street grid; however, most locations are accessible by bicycle via greenway connections
- Usually not connected to or adjacent to, but near existing neighborhoods
- Constrained by floodplain in some locations
- Examples: Flatiron Business Park, Goose Creek/Pearl Pkwy



Neighborhoods

- Places where people live and with most of the community's housing
- May contain some services, public spaces, parks, other community facilities
- Heart of the community- varied and distinctive, ranging from:
- Historic and pre-World War II housing organized around a street grid pattern in and near downtown,
- Post World War II neighborhoods with a curvilinear street and cul de sac pattern, and
- Neo-traditional, New Urbanist neighborhoods that contain a mix of housing types and more compact street design.



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OUR FUTURE.**

Boulder Valley Comprehensive Plan

What **outreach** is happening **next**?

More opportunities to weigh in on local topics will be coming to your neighborhood this summer. Stay tuned on www.BoulderValleyCompPlan.net for updates!

HOW SHOULD THE CITY AND COUNTY EVALUATE CHOICES FOR THE FUTURE?

As the BVCP update process continues, the community will be asked to weigh in on a series of key choices related to potential locations for future jobs and housing. Each of these choices will come with tradeoffs. Your input will be used to help shape key choices for further consideration later this summer. This initial set of indicators or metrics relates to the sustainability framework and are based on feedback heard so far regarding important aspects to evaluate when considering land use changes.

Goals/Indicators	Which of these is <u>MOST</u> important to you? (Select your top three)
HEALTHY & SOCIALLY THRIVING COMMUNITY	
Increase Access to Nature Increase access to publicly accessible open space.	
Provide Access to Health Care Facilities Ensure access to and opportunity for medical and health facilities	
LIVABLE	
Better Balance Jobs and Housing Better link the area's housing options with what people working in the area can afford.	
Improve Housing Choices Provide a mix of housing unit types and prices that supports the city's missing middle goals (e.g., micro units, walk-ups/flats, townhomes, accessory units, triplexes, townhomes).	
Provide Housing in 15-Minute Neighborhoods Increase the share of residents in walkable 15 minute neighborhoods - toward the TMP goal of 80%.	
ACCESSIBLE & CONNECTED	
Increase Street Connectivity Improve the connectivity of local streets for more travel options.	
Enhance Travel Options Increase the proportion of non single occupancy vehicle commuters.	
Manage Traffic Congestion Reduce vehicle miles traveled consistent with Transportation Master Plan goals.	
Transportation Demand Management and Managed Parking Achieve the optimal supply and demand balance of parking relative to costs.	
ENVIRONMENTALLY SUSTAINABLE	
Reduce Greenhouse Gas Emissions Reduce building and transportation related greenhouse gas emissions consistent with the city's Climate Commitment goals.	
Reduce Building Energy Use Reduce per capita building energy use.	
Expand Renewable Energy Generation Provide opportunities for on-site or district-based energy generation.	
Protect Ecologic Diversity and Open Space Protect and enhance natural ecosystems and open space.	
Avoid Floodplain and Wetland Areas Avoid physical improvements in floodplain hazardous areas and wetlands.	
ECONOMICALLY VITAL	
Maintain Employment Diversity Preserve land designated for employment uses to maintain current jobs to housing ratio.	
Minimize Fiscal Impacts Achieve an optimal city return on investment between revenues and infrastructure and service costs.	
Maintain Commercial and Industrial Affordability Keep commercial and industrial rents and purchase prices at or below current trends.	
SAFE	
Maintain Emergency Response Times Maintain urban fire protection, emergency medical care, and urban police response times consistent with city goals.	
Reduce Bicycle and Pedestrian Conflict Points Establish progress towards "Vision Zero" serious and fatal bicycle and pedestrian accidents.	

Are there other goals/indicators that should be considered when evaluating key choices?
(Use the sticky notes provided to note your suggestions below)

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BOULDER VALLEY COMPREHENSIVE PLAN

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Choices for AFFORDABLE AND DIVERSE HOUSING

How should the plan's policies and/or land use plan be adjusted to better achieve housing goals and encourage diverse housing types appropriate to different parts of Boulder?

What do the **current plan and programs** support?

- A “diversity of housing types and price ranges” is a core value of the plan (p. 9).
- The Built Environment section includes policies about character areas, neighborhood preservation, compatibility, and mix of complementary uses (p. 28).
- The Housing section (p. 49) includes goals and policies supporting affordable (low and moderate) housing, partnerships, choices, diversity, growth and community housing goals.
- the Housing program has a goal to create 450 permanently affordable middle-income housing units (107 are currently built) and to create 10% of all housing units to serve low and moderate income households (currently 7.3%).
- The Land Use designation map identifies desired locations, densities and types of housing planned for Boulder.



Inclusionary Housing Requirements

- The Land Use Code requires at least 20 percent of the units in any development containing five or more dwelling units be required as permanently affordable for very low to moderate incomes.
- The primary objective is to achieve on site affordable housing when development occurs.
- Rental developments do not have a minimum onsite requirement, and many projects in recent years have provided affordable housing off site. There is alternative compliance.
- Annexations require roughly half of all residential units to be affordable to low, moderate and middle income households.

What can the **current plan** accommodate?

The city's 2040 housing projections suggest that the current land use and capacity trends combined with continuing increase in housing prices will lead to continued loss of affordable middle income housing options in Boulder. Remaining available capacity for housing is generally located along corridors, downtown, and in mixed use areas. Most new housing will not be built in neighborhoods. In addition, attached products have trended toward rental apartments, and not for-sale units; the amenities and style of many recent multi-unit buildings have been oriented toward single or younger professional rather than families (e.g., do not have playgrounds or have limited green space). Modifying the land use descriptions or land use mix can help encourage new housing types that can meet the housing goals of the community.

What have we **learned** from the **Housing Boulder Project, Trends Report and Forecasts?**

The Housing Boulder project has been exploring a variety of programmatic and funding tools and has led to completion of items or significant milestones. Since adoption of Boulder's 1999 Housing Strategy, the community has made significant progress toward achieving the city's adopted housing goals, resulting in thousands of permanently affordable housing units for low and moderate income households and placing Boulder in the forefront of housing policy and action nationwide. However, Boulder's housing market continues to be strong, and housing affordability challenges have continued to grow, particularly during the recent economic recovery.

The Housing Boulder project has been exploring a variety of tools to achieve affordable housing. To date, discussion has generally held that Boulder will need a variety of strategies to address housing affordability, including land use changes to address the limited "supply" along with other interventions and approaches to provide additional affordable housing choices. The *Housing Boulder Action Plan for 2015/16* (approved by City Council in September 2015) identified a few questions and tools to explore through the BVCP, including any potential land use or policy changes that might help support the housing goals. BBC Research and Consulting has also prepared a *Middle Income Housing Study* that provides research on Boulder's challenges related to providing housing for middle income households.

What did the **Middle Income Housing Study** find?

Below are the key findings of the study (available at www.HousingBoulder.net):

- 1) The share of Boulder's middle income households has declined 6% since 1989, offset by an increase in high income households.
- 2) Middle income households can afford 99% of city's rentals, but only 67% of attached homes and 17% of detached homes for sale in 2015
- 3) Attached homes maintain affordability over time better than detached homes.
- 4) Attached units maintain a lower price even in high demand areas in Boulder.
- 5) Rentals remain affordable to middle income households and provide the best opportunity for middle income households to live in Boulder.
- 6) Purchasing an attached unit is less expensive than renting at market rates.

Housing Market Analysis and Housing Choice Survey (BBC)

In 2013, BBC Research and Consulting completed a market analysis and in 2014 surveyed over 3,000 Boulder Valley residents. Below are some key findings. Where possible, numbers have been updated to 2015.

- 1) Boulder rental market is very tight, with record low vacancy rates (9.7% in 2003, 1.6% in 2013, and 4.4% in 2015).
- 2) Housing prices in Boulder continue to outpace the county and region – median detached home sales price exceeded \$750,000 in 2015. Housing prices have risen 31% in the past two years alone.
- 3) The city’s inventory of permanently affordable rental units has helped preserve some lower income diversity.
- 4) Recent trends in some of the housing products being created in Boulder are consistent with shifting market demand towards smaller units, mixed-use, and walkable neighborhoods with high transit access.
- 5) Demand for housing in Boulder is likely to continue — an expanded toolkit of policies and programs is needed if the city wishes to maintain a mix of households and incomes in Boulder.

What are people saying about affordable housing and housing types and design?

The BVCP survey and focus group results conveyed interest in affordable housing, and contained multiple comments about the increasing challenge for middle income people to be able to afford Boulder – whether they are existing residents, or potential buyers and renters feeling squeezed because of rising prices, property taxes, or changing neighborhood character. Results showed:

1. Of the top three community values in greatest need of attention, “A diversity of housing types and price ranges” ranked as first priority (63 percent of people selected it as a first choice).
2. On housing growth rates, most selected the current system of limiting housing growth rate (43 percent) vs. 26 percent who would rather not limit the rate of growth or 15 percent who would rather reduce the rate of potential housing growth.
3. For new development, permanently affordable housing was identified as the most important community benefit requirement (47 percent selected as a top three priority).

Open-ended questions and focus group summaries provided more nuanced responses.

- Affordability and inclusivity were recurring themes.
- New housing should be affordable and fit neighborhood character (not big and bulky).
- Perceptions of neighborhoods changing (for the worse) included new “big” houses changing the physical character and social mix of the neighborhood.
- New housing should be more family- and age-friendly and have lasting value. The four story rental housing being built seems to appeal to younger or single people (e.g., fire pits instead of playgrounds or gardens).
- Design and quality of units, especially larger units, is important.
- Continue to limit housing growth rates (certain types especially, such as high end), while providing more affordable options.
- Reduce costs and incentivize homes with smaller footprints (e.g., less than 1,200 square feet).
- Housing and neighborhoods also need parks, services, and transit.

What are some **land use housing choices** to explore (and possible tradeoffs)?

The following choices will be explored as part of the BVCP project:

- A. Should the land use plan and policies be adjusted to allow diverse affordable housing within existing industrial and mixed areas in the city, including:
- Convert some underutilized industrial areas to residential designations on the Land Use Map (e.g., east part of Boulder along Arapahoe Ave.).
 - Incentivize the integration of housing as part of existing industrial areas while keeping industrial and business areas intact (e.g., infilling existing surface lots with housing).
 - Encourage redevelopment of existing single use industrial/office buildings in exchange for new, vertically mixed development that includes employment, housing, and other complementary uses.

Considerations and Tradeoffs:

The change could...

- Increase opportunities for the development of diverse housing outside established neighborhoods.
- Create opportunities for new housing development close to existing employment areas and/or transportation corridors, potentially reducing the travel distance between residents and employment places.
- Allow specialized new types of housing (such as senior housing) near existing services (e.g., Boulder Community Health).

However, it could...

- Displace or price out existing service commercial uses/employment.
- Reduce potential for additional jobs (contrary to survey preference to maintain or increase job potential).

- B. Should plans and policies expand the range of housing types (e.g., micro units, townhomes, accessory units, triplexes) that are either allowed or incentivized in certain locations (e.g., Regional Activity Centers, Neighborhood Centers, Corridors, and Industrial/Innovation Areas) to address affordable housing needs. *(Note: See the posters with housing prototypes.)*

Considerations and Tradeoffs:

The change could...

- Allow the city to be more targeted in the types of housing it encourages, focusing specifically on those that are affordable - or maintain affordability - for middle-income households.

However, it could...

- Introduce additional housing types, potentially altering the character of the city overall, or in certain areas.
- Not necessarily match people's preferences (i.e., people currently living in Boulder or working and looking for housing) with new housing units built in Opportunity Areas or types of tenure (i.e., for rent or sale).
- Not necessarily ensure affordable housing without other housing tools to fund and subsidize it.

- C. Tied to community benefits, should the city allow more intensity than what is currently allowed in certain locations (e.g., Regional Activity Centers, Neighborhood Centers, Corridors, and Industrial/Innovation Areas – not neighborhoods)?

Potential benefits could include:

1. Provision of permanently affordable housing for low, moderate, and middle households in excess of the 20% already required.
2. Protection of views and provision of open space, and recreation spaces.
3. Higher quality building design
4. Provision of new infrastructure such as intersection improvements and bike paths.
5. New energy efficiency and renewable resources (i.e., exceed energy building standards).
6. Accessible and useable public spaces, plazas, courtyards, seating, and art.
7. Other benefits.

Considerations and Tradeoffs:

The change could...

- Allow the community/city to receive benefits or amenities that they might not otherwise receive (including affordable housing).
- Help mitigate impacts of greater intensity above and beyond what the city would typically allow.

However, it could...

- Make some in community feel character would be compromised by intensity or other impacts.

- D. Should the city establish new residential transition requirements for different contexts within the city (e.g., where Opportunity Areas abut single-family neighborhoods, open space, other lower intensity uses) to protect the character of established neighborhoods and adjacent open spaces? (*Note: urban design chapter will include recommendations for new urban design illustrations and principles.*)

Considerations and Tradeoffs:

The change could...

- Manage the way new development is organized on a site and mitigate impacts to nearby neighbors.
- Allow for new housing (if development in transition areas is non-residential or mixed-use) along corridors.
- Create potential for better 15-minute neighborhoods.

However, it could...

- Limit development/redevelopment flexibility on certain sites.
- Not necessarily prevent new development from occurring near established neighborhoods or open spaces.

- E. Should the city encourage “gentle infill” in neighborhoods? “Gentle infill” is an approach to allow new housing types such as tiny homes, accessory units, subdivided larger homes, and smaller homes tucked around existing houses.

Considerations and Tradeoffs:

The change could...

- Allow greater diversity of housing within neighborhoods suited to handle these types of changes.
- Possibly increase access to new types of housing and affordable units for community members.

However, it could...

- Create some unintended impacts within neighborhoods.
- Not necessarily ensure the units would be affordable.

Questions:

- 1. How would you suggest refining or adding to these key choices?**
- 2. Which housing types are currently lacking in the Boulder and should be allowed/encouraged in appropriate locations (as noted on the poster or in the online questionnaire?)**
- 3. Where do you think a particular housing type does not belong?**

HOUSING PROTOTYPES

The BVCP includes a core value of achieving a “*diversity of housing types and price ranges.*” Additionally, the survey and focus group results from September, 2015 concluded that “A diversity of housing types and price ranges” was the community’s #1 priority.

This exercise seeks to find out what housing prototypes the community feels are currently lacking, and where they would be most appropriate.

DETACHED HOUSING PROTOTYPES

SMALL LOT SINGLE FAMILY	ACCESSORY DWELLING	COTTAGE COURT	TINY HOUSE
<ul style="list-style-type: none"> • 6-8 dwelling units per acre • 3,000 - 4,000 lot size • 1,500 - 2,000 SF unit size • Ownership or rental 	<ul style="list-style-type: none"> • 8-10 dwelling units per acre • <1,500 SF lot size • 450 - 1,000 SF unit size • Ownership or rental • Ground floor or above parking 	<ul style="list-style-type: none"> • 10-14 dwelling units per acre • <1,000 SF lot size • <1,500 SF unit size • Ownership or rental • Some models are attached • Shared common space 	<ul style="list-style-type: none"> • 15-20 dwelling units per acre • <1,000 SF lot size • < 500 SF unit size • Ownership or rental • Some models are on wheels 
			
			

Which housing prototypes are currently lacking in Boulder?

ACTIVITY INSTRUCTIONS:

Place a **GREEN DOT** where you think a particular housing prototype *is lacking and should be encouraged*.

 = “YES, this housing type should be encouraged in this location.”

Place a **RED DOT** where you think a particular housing prototype *does not belong*.

 = “NO, this housing type should NOT be encouraged in this location.”

NOTE: Refer to the previous poster for further descriptions of the Areas of Opportunity and specific locations. Existing Neighborhoods are not a specific Area of Opportunity, but may serve as a reasonable location for some housing prototypes.

AREAS OF OPPORTUNITY

REGIONAL ACTIVITY CENTERS				
<ul style="list-style-type: none"> • Regional destinations • Highest level of intensity • Has a distinct function, character, & mix of uses • Walkable/bikeable • Accessible to transit 				
NEIGHBORHOOD ACTIVITY CENTERS				
<ul style="list-style-type: none"> • Neighborhood gathering centers • Accessible by foot, bike, transit • Infill, redevelopment or adaptive reuse opportunities • Emerging identities • Adjacent to established neighborhoods 				
MAJOR CORRIDORS				
<ul style="list-style-type: none"> • Varied in use • Served by high frequency transit & connected to centers above • Fairly walkable/bikeable • Abutting established neighborhoods 				
INDUSTRIAL/ INNOVATION AREAS				
<ul style="list-style-type: none"> • Business & job rich areas • Aging buildings and infrastructure • Less walkable/bikeable • Usually not connected to, but near existing neighborhoods • Constrained by floodplain in some locations 				
NEIGHBORHOODS				
<ul style="list-style-type: none"> • Majority of existing housing: historic and pre-WWII housing; post-WWII housing and neo-traditional • May contain some services, public space or parks/open space • Walkable/bikeable 				

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HOUSING PROTOTYPES

ATTACHED HOUSING PROTOTYPES

ROWHOUSE/TOWNHOUSE

- 15-20 dwelling units per acre
- 1,500 - 2,000 SF lot size
- 1,500 - 2,000 SF unit size
- Ownership (condo) or rental
- Could include lower level rental unit



MULTI-PLEX

- 15-20 dwelling units per acre
- 6,000 - 12,000 SF lot size
- 1,500 - 2,000 SF unit size
- Ownership (condo) or rental
- 2-4 units per lot



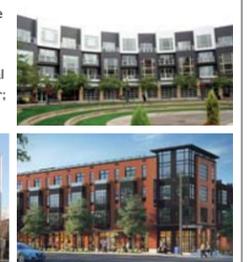
APARTMENTS / CONDOMINIUMS

- 20-30 dwelling units per acre
- 15,000+ SF lot size
- 750 - 2,000 SF unit size
- Ownership (condo) or rental
- Walk-up or interior corridor



MIXED-USE RESIDENTIAL

- 20-30 dwelling units per acre
- 15,000+ SF lot size
- 750 - 2,000 SF unit size
- Ownership (condo) or rental
- Commercial on ground floor; residential on upper floor(s)



MICRO-UNIT HOUSING

- up to 60 dwelling units per acre
- 15,000+ SF lot size
- 350 - 750 SF unit size
- Ownership (condo) or rental
- Could include single-room occupancy (SRO) units with shared common spaces



What's missing?

Are there *any other housing prototypes* that you feel are missing in Boulder *that would be appropriate* for the "Areas of Opportunity" and should be considered?

CLIMATE, ENERGY AND RESILIENCE

The community has shown consistent support for goals and actions to reduce climate impacts and overall greenhouse gas emissions as reflected in multiple surveys and support for the climate action tax. With emerging new goals related to climate commitment, energy system transformation, and resilience, the BVCP will need to be updated to support them. More recently it's become clear that the scale of the climate challenge is greater than originally understood, and the community now recognizes the need to address adaptation and resilience – how to bounce back after a disruption such as the 2013 flood.

What does the **current plan** say?

Climate Commitment

Boulder has long understood the importance of climate action and mitigation and has worked to reduce its climate impacts since the early 2000s. However, the Boulder's Climate Commitment (Oct. 2015 draft) establishes a significantly higher bar for action: "Boulder will reduce its energy-related emissions 80 percent or more below 2005 levels by 2050" ("80 by 50"). It calls for a fundamental transformation of Boulder's energy system, including a target of 100 percent clean, renewable electricity – building on improved energy efficiency in buildings and greater energy conservation. While the 2010 BVCP includes a goal to reducing greenhouse gas emissions, these more recent, broader, and more sweeping climate and energy goals are not yet reflected. To learn more about Boulder's Climate Commitment, please visit www.bouldercolorado.gov/climate.

Resilience

Although the 2010 BVCP also does not use the term "resilience," much of the planning and actions over the past few decades (e.g., floodways and greenways planning, managing open space in the foothills, planting diverse tree species, establishing a budget reserve) has made the community more resilient and ready to bounce back in times of emergency or disruption. More recently, the 2013 flood elevated awareness about the need to be adaptable and resilient at the local level. In addition, the 100 Resilient Cities grant has brought new resources to assist in evaluating the plan and recommending how to improve it in support of more resilience and co-benefits.



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OUR FUTURE.**
BOULDER VALLEY COMPREHENSIVE PLAN



**OUR LEGACY.
OUR FUTURE.**
BOULDER VALLEY COMPREHENSIVE PLAN

What are **people** saying about **climate, energy, and resilience**? (BVCP – SECTION 1 & 5)

The Boulder community has consistently supported city-led action to reduce greenhouse gas emissions, expressed recently by overwhelming support to extend the city's climate action plan tax in 2012 as well as in the responses to the BVCP survey from the fall of 2015 about climate action. While no specific questions in the survey asked about resilience, a few respondents noted that the plan should address resilience. Additionally, a climate and resilience survey from about one year ago suggested that most people in the community do not understand the concept of resilience, and therefore additional awareness and information would be helpful. Participants in the BVCP listening sessions from the fall of 2015 have also expressed interest in resilience.

Recent workshops and input as part of the Resilience Strategy have helped Boulder to increase its understanding about potential risks such as drought, flooding, pandemic flu, and wildfires. The community has also recognized vulnerable populations (e.g., mobile home residents, older people, and homeless and transient populations) and vulnerable systems (e.g., small business community, and some infrastructure) on which these potential risks could have a greater impact.

Recommended: **Add climate and resilience to the plan**

Climate: The Energy and Climate chapter will be updated to add language that reflects the Climate Commitment goal cited above ("80 by 50") and its described benefits to the community of transitioning to a clean energy economy and lifestyle. The chapter will be reorganized to reflect the organizing topics of the community's climate action plan: (1) Energy – Transforming the whole energy system, (2) Resources – Using Resources Wisely, and (3) Ecosystems – Restoring Ecosystems. Other proposed policy updates include addressing carbon sequestration in soil and developing an urban ecosystems management strategy or plan to enhance biodiversity, environmental health, and resilience of the entire natural environment of the Boulder Valley.

Resilience: Boulder's partnership in the 100 Resilient Cities organization has allowed the city to leverage consulting resources, HR&A Advisors, Inc., which prepared a report and recommendations about how to better address resilience in the BVCP. Summary recommendations are:

1. Frame resilience as a guiding principle of the BVCP (along with sustainability) and convey a clear statement about community resilience. It should be a cross-cutting principle for the plan.
2. Encourage community and stakeholder engagement by adding new policies and directions that support risk education and preparedness.
3. Continue integrated planning across government departments and jurisdictions, institutional organizations, and the private sector.
4. Establish measurable goals and integrated implementation strategies that build resilience value in the long term.

Key Elements of a Healthy, Stable and Adaptive Community:

- ✓ Strong social networks
- ✓ Public spaces
- ✓ Resilient infrastructure
- ✓ Economic diversity
- ✓ Regional connectivity
- ✓ Good governance

Revised Topic Area Approach



Some Resilience Themes

1. Identify Boulder’s risks (e.g., drought, flooding, fire, flue, storms, infrastructure failure)
2. Strengthen linkages between protections of ecologically functioning areas.
3. Reduce risk and harm to vulnerable residents (e.g., low income people, elderly, homeless and transient populations) and some businesses.
4. Assist neighborhoods in becoming more self-sufficient and resilient.
5. Ensure that different parts of the city have access to medical facilities, food and supplies, information and communication centers, and emergency assistance during times of emergency.
6. Engage diverse stakeholders and entities to identify residents, businesses, and households most likely to be disproportionately affected by a disruption to city services.
7. Include specific action-oriented items in each chapter to address risks and vulnerable populations, for instance:
 - New Safety and Preparedness chapter (e.g., Build community cohesion by identifying and engaging local stakeholders through regular and ongoing contact, such as programs that enable communities to organize during an emergency in a central place)
 - Community Well-Being (e.g., Support community-level education and preparedness, community-driven communications and information dissemination, and supply provision during emergencies.)
 - Economy (e.g., Identify policies that support small businesses in light of rising real estate costs, changing consumer behavior, and increasingly unpredictable natural risks.)

Address Sustainability Framework + Resilience

HR&A recommends framing resilience as a guiding principle of the BVCP along with sustainability. The following points highlight the distinct but complementary nature of these concepts:

- **Resilience** is the idea of the city and community being prepared for any disruption and able to bounce back stronger. It ensures responsiveness and adaptability to disruption. It builds on and complements the sustainability framework.
- **Sustainability** (building on multiple themes) ensures stability and continuity.
- **Both concepts** embody holistic points of view about the interactions of systems in a city; they are complementary. Together, they reinforce the notion that systems must be stable yet adaptable to disruption.

The “Recommendations for Resilience Integration” draft report from HR&A will be available on bouldervalleycompplan.net in late May.

Question: How would you refine and prioritize ideas related to climate and resilience for the plan update?

PROPOSED Boulder Valley Comprehensive Plan (BVCP) Reorganized Contents

Draft - 05/12/16

1—Vision and Values

(Formerly part of Sec. 1, Core Values...)

Will include:

- Boulder Valley Core Values
- Sustainability Framework and Resilience
- Boulder’s Planning History
- About this Major Update (i.e., Areas of Focus)
- How Plan is Organized (cross cutting topics)

2—How the Plan is Implemented and Relates to Other Plans

(Formerly Introduction)

Will include:

- How to Use this Plan
- Relationship to Other Plans and Programs
- Action Plan
- Plan Time Frame and Updates
- Intergovernmental Cooperation
- Growth management
- Framework for Annexation and Service Provision

3—Policies

Safe and Prepared Community

(New section.)

Will include safety and preparedness and resilience policies, police and fire that were formerly in Community Well-Being Chapter, etc.

Healthy and Socially Thriving Community

(Formerly Sec. 8, Community Well-Being)

Will include:

- Human Services
- Social Equity
- Community Health
- Community Infrastructure and Facilities (Schools, community facilities, parks and recreation)
- Arts and Culture
- Agriculture and Food (policies as relevant to health, socially thriving)

Livable Community and High Quality Built Environment

(Formerly Sec. 2, Built Environment. Headings and sections will be refined as the built environment area of focus and scenarios are prepared and analyzed)

Will include:

- City Structure, including: Projected Growth, Sustainable Urban Form Definition, Community Identity/Land Use Pattern, Rural Lands Preservation, Neighborhoods, Mixed Use and Higher Density Development, and Activity Centers
- Urban Design linkages
- Community Conservation (Historic Preservation)
- Design Quality

Housing the Community

(Formerly Sec. 7, Housing. Combine with Livability or keep as stand alone)

Pull forward the relevant existing sections and any new policies that emerge, including:

- Local Support for Community Housing Needs
- Housing Choices
- Diversity
- Growth and Community Housing Goals

Environmentally Sustainable Community

(Formerly Sec. 6, Natural Environment)

Will include:

- Natural Environment policies (i.e., Biodiversity and Native Ecosystems, Urban Environmental Quality, Geologic Resources and Natural Hazards, and Water and Air Quality)
- Former Sec. 3, Energy and Climate, including reorganized headings to reflect Climate Commitment and Energy section and waste and recycling, sustainable purchasing
- Former Sec. 6, Agriculture and Local Food policies that related to land and environment

Economically Vital Community

(Formerly Sec. 5, Economy)

Refine headings to reflect outline. Will include existing policies, as refined, including:

- Strategic redevelopment opportunities,
- Diverse economic base,
- Quality of life,
- Sustainable business practices,
- Job opportunities,
- Education, and training.

Accessible and Connected Community

(Formerly Sec. 6, Transportation)

Note: Refine headings to reflect TMP focus areas, including:

- Complete Streets
- Regional Travel
- Transportation Demand Management
- Funding
- Integrate with Sustainability Initiatives
- Airport
- Communications (new)

4—Land Use Map Descriptions

(Formerly Ch. III, Land Use Map Descriptions)

Will include new table approach and definitions for land use types and open space and parks.

5—Subcommunities and Area Planning

(Formerly part of Ch. IV, Subcommunity and Area Planning.)

Will carry forward the section related to Subcommunity and Area Planning and will include 1-2 page descriptions for the subcommunities and priorities for focused, localized planning

6—Implementation and Master Plans

(Formerly Ch. IV)

Will include Master Plans and Trails Plan

7—Amendment Procedures

(Formerly Ch. II)

Reorganized to be easier to follow.

8-Urban Service Criteria and Standards and Referral Process

(Formerly Ch. VI)

Later discussions about its role and purpose.

Maps

(Suggest putting with relevant sections above)

- Land Use
Area I, II, III
- Trails
- Natural Ecosystems

Plan Policy Integration Outline – WORK IN PROGRESS (05/12/16)

Multiple city and county departments have contributed to this outline to ensure policies in the Boulder Valley Comprehensive Plan (sections 2 through 9) align better with adopted master plans and to identify emerging areas of work. This annotated outline includes initial proposed policy updates. Further input from city and county staff, leadership, and public, and other suggestions from the Resilience Assessment (HR&A consultants) will help staff finalize a full outline of proposed changes to the BVCP plan. Additionally, the chapters may get reorganized based on the proposed Plan Outline.

2) BUILT ENVIRONMENT

The changes to this chapter reflect work since the 2010 plan including:

- Community Cultural Plan (2015),
- Parks and Recreation Master Plan (2013),
- Input from city Water Resources regarding the importance of ditches to agricultural lands rather than in the public realm as currently addressed in the plan,
- Further analysis will be done to determine what may be relevant from Form Based Code and Design Excellence initiatives.

Proposed Changes to Introductory sections, graphics, and policies

The current chapter includes elements that define city structure (natural setting, individual character areas, activity centers map, mobility grid, and the public realm). It also includes projected growth, sustainable urban form definition, and policies that address:

- Community identity/Land Use pattern
- Rural Lands Preservation
- Neighborhoods
- Mixed Use and Higher Density Development
- Activity Centers
- Community Conservation (and Historic Preservation)
- And Design Quality

Specific edits to policies for these sections will still need to be addressed. Additionally, policies in this chapter may get revised following input on the Areas of Focus and scenarios relating to jobs/housing balance, affordable and diverse housing, and input on design issues.

Note: The white papers and scenarios will address some topics for further improvement in the Built Environment chapter. For instance: better maps, relationship of transit corridors from Transportation Master Plan, illustrated principles of quality mixed use and higher density development, and other principles of design quality (such as sensitive infill and redevelopment).

Additional proposed new policies and changes include:

- Natural Settings (p. 18, 19): Add the clarification “manmade irrigation” before the word “ditches” in the sentence that starts with “Creeks and irrigation ditches...” Following that same sentence, add a new sentence that reads, “Irrigation ditches are a unique and important link between natural features and Boulder’s rural and agricultural areas.”
- Public Realm – remove “ditches” from types of areas in public realm.
- **New policy: Experience Culture and Art in the Public Realm** - focus on the expression of culture and creativity in the public realm through public art, the urban landscape, culture in the neighborhoods, and serendipitous arts encounters. Amplify the vibrancy of Boulder’s cultural destinations. (Community Cultural Plan)

- **New policy: Vibrant Public Spaces.** Include thoughtfully designed public spaces, a mix of events and destinations, and art. (Community Cultural Plan)
- **New policy: Reinvent Our Public Art Program** – Encourage individuals, businesses, organizations, and developers to invest in improvements to public spaces through the addition of meaningful, innovative, and quality works of art. Model investment in public art at city.
- **New policy: Create and Enhance Venues** (*Note: this is addressed in Economy section, so may not be needed here*).
- **Policy 2.20: Boulder Creek, Tributaries and Ditches as Important Urban Design Features:** Add a sentence: “The city and county will support agriculture by recognizing and accommodating irrigation ditch maintenance practices and operations.”
- **Policy 2.37: Enhanced Design for Private Sector projects** – Remove the word “ditches” from the list of “Public Realm” types. Add note: “Project sponsors should collaborate with irrigation ditch companies on design and construction. Where possible, projects elements should educate and inform about the connection between irrigation ditches and agricultural lands.”

DRAFT

3) NATURAL ENVIRONMENT

The changes to this chapter reflect work since the 2010 Plan including:

- The city currently is working on updates to its Integrated Pest Management policy, an Urban Forest Strategic Plan, the Resilience Strategy, and draft Climate Commitment.
- The city adopted the Bee Safe Resolution (2015) banning the use of neonicotinoids on city property and a Bear Protection Ordinance to secure waste from bears (2014). The county adopted a resolution to reduce and eliminate pesticide use to protect both people and pollinators (2015).
- Boulder County adopted the Environmental Resources Element of the Boulder County Comprehensive Plan (2015) and is currently working on policy related to Genetically Modified Organisms in the county.
- The city will be developing an Open Space Master Plan (2017).
- Boulder County is analyzing on how to address local oil and gas regulations, and looking at potential policy updates to better align the Fourmile Canyon Creek Watershed Master Plan (2015), Boulder Creek Watershed Master Plan (Urban Drainage and Flood Control District, 2015), and Consortium of Cities Water Stewardship Task Force Final Report (2013).

Proposed Changes to Introductory Paragraph

Update to reflect language about “ecosystems services” and resilience related to future stressors.

Proposed Policy Updates

- **Policy 3.03: Natural Ecosystems** – add language that also addresses “county critical wildlife habitats/migration corridors, environmental conservation areas, high biodiversity areas, rare plant areas, and significant natural communities” to provide clarity. (OSMP suggested addition)
- **Update Policy 3.04: Ecosystems Connection and Buffers** – address role of urban areas as “crucial for supporting biodiversity and maintaining wildlife habitat. Every effort should be made to optimize the quality and quantity of habitat on public lands and provide connections and corridors within the urban built environment to natural lands to support the movement of native organisms.” Note also the importance of buffers to mitigate impacts of urban and intensive land uses and human activity on natural areas. (Urban Wildlife Management Plan, IPM, and OSMP staff)
- **Update Policy 3.07: Invasive Species Management** – address management of both non-native and non-local native species using a cost-benefit ratio that includes documented threats to species of concern specific to each site, acknowledging that some non-native species may have become naturalized. Management should also take into account changing species composition due to climate change and other human impacts, as well as the potential benefit and ecosystem services that are provided by each organism, based on the best available science. (IPM program, OSMP)
- **New policy: “Climate Change Preparation and Adaptation”** - address Ecosystems and Biodiversity that will address future warming climate, aridification, and changes to the Boulder Valley ecosystems and vegetation and wildlife changes. The city and county will need to allow or facilitate ecosystems transition to new states in some sites and increase the stability and resiliency of the natural environment elsewhere as well as address the visitor experience in open space. (OSMP, Climate Commitment)
- **Update Policy 3.10: Urban Environmental Quality** – clarify language regarding when it is practicable to improve urban environmental quality
- **Update Policy 3.11: Urban Forests** - note that that the pending Urban Forest Strategic Plan will guide urban forest management. (Note: City is currently preparing the Urban Forest Strategic Plan.)
- **Update Policy 3.13: Integrated Pest Management** – reflect recent directions in integrated pest management toward thriving ecosystems and using more natural management processes to lower pest pressures. (City’s IPM program, county working in this direction)
- **New policy: Soil Sequestration** – note that agricultural and other land management practices may be used to sequester carbon out of the atmosphere as a possible strategy to stabilize the climate, and this should be addressed through more research within other master plans. (Boulder County also studying this topic, is in support of it and trying to find specific ways to implement it.)
- **Slight update to Policy 3.14: Unique Geological Features** – add “public land management” as one of the means noted.

- **Modify Policy 3.15: Mineral Deposits** – add language regarding how to evaluate mineral resources and extraction needs along with other community values such as community and environmental health, and carbon emission reduction. (Climate Commitment, and OSMP plans)
- **Policies 3.17 through 3.23 (Hillside Protection, Wildfire Protection and Management, Preservation of Floodplains, Flood Management, Non-Structure Approach, Protection of High Hazard Areas, and Larger Flooding Events)** – Consider separating these policies under a new “Geologic Features and Flood Hazards” subsection. Office of Emergency Management and Utilities staff will review.
- **Policies 3.24 through 3.29**, under Water and Air Quality, are consistent with the Water Utilities Master Plan and do not need revisions.
- **Policy 3.30: Protection of Air Quality** - should be checked by Transportation staff and the county.

Emerging Issues Related to Natural Resources and Environment

The combined impacts of continued development and climate change will have significant impacts on the natural environment. Effectively managing these impacts will require enhanced capabilities to monitor the health and function of ecological systems as well as a coordinated strategy for managing these impacts. A few emerging issues have been identified for additional work over the next five years. These include:

- **Establish Baseline Monitoring** - for soil health and other ecosystem dynamics that are likely to be impacted by climate change and development.
- **Coordinate Research** - coordination of research on strategies to support ecosystem adaptation to climate change and other impacts that could degrade environmental health and biodiversity. Address “natural disturbance regimes” as goal for maintaining and restoring.
- **Urban Ecosystems Management Strategy** - prepare urban ecosystems management strategy or plan that would provide a systematic foundation for coordinating “green infrastructure” plans and urban ecosystem management with the surrounding rural, agricultural and wildlands ecosystems in ways that enhance the environmental health, biodiversity, resilience of the entire natural environment of the Boulder Valley. Having such a strategy in place may better enable the city/county to qualify for reconstruction funding to reconstruct green infrastructure or restore ecosystems after a disruptive event.
- **Soil sequestration** – address this and other climate strategies relating to ecosystems (as noted above.)
- **Refresh Boulder Valley Natural Ecosystems Map** – This map hasn’t been updated for over 15 years and should locate high priority ecological features and connectivity corridors. Also, the Natural Ecosystems overlay (Environmental Resources Element of the plan that used to be on the website but is no longer available) needs to be refreshed.
- **Update language in Hillside protection** - Add language that explains “risk of earth movement and/or mud slides under adverse weather conditions, and need to pay special attention to soil types and underlying geological strata during planning, design and construction of any development on or at the base of hillsides.
- **Groundwater** – In recent years, the community has recognized issues related to groundwater such as excess water during flood events, dewatering, and potential for contamination.
- **Citizen Science Data Collection**

4) ENERGY AND CLIMATE

Reorganize the chapter to reflect Boulder’s Climate Commitment (draft Oct. 2015), and reflect ongoing work being done related to Boulder’s Energy Future, building codes, and Zero Waste Strategic Plan (2015). Boulder County suggests additional alignment with several plans and policies including:

- Zero Waste Action Plan (2010),
- Environmental Sustainability Plan (2012),
- Solid Waste Element of the Comprehensive Plan (is in the process of being updated in 2016)

The following plans may also be relevant in a resilience section:

- OEM’s All-Hazards Recovery Plan (2013),
- Boulder Recovery Plan Support Annex A – Damage Assessment (2013),
- OEM’s Emergency Operations Plan (2014),
- Disaster Debris Management Plan (2016), and

Proposed Changes to Introductory Paragraph

Add language that reflects the Climate Commitment goals and co-benefits to the community of transitioning to a clean energy economy and lifestyle, such as:

- Boulder will reduce its energy-related emissions 80 percent or more below 2005 levels by 2050.
- Boulder’s transition to clean energy through innovative strategies, products and services are aimed to dramatically reduce greenhouse gas emissions, enhance community resilience, enhance local environmental health and diversity, and support a vital and equitable economy.
- Boulder’s vision is to become a leader in the development, implementation and export of renewable energy and emissions reductions programs that create local economic opportunities, enhance community well-being and resilience, and inspire and enable other communities to participate in reducing carbon emissions and stabilizing the climate.

Topics to organize the chapter include:

Energy – Transforming the whole energy system

- High Performance Buildings (i.e., Building codes and ordinances, Energy Smart/PACE)
- Clean Mobility (Transportation Master Plan, implementation)
- Clean Energy Sources (Utility strategy – municipalization, capital and pilot projects)

Resources – Using resources wisely

- Waste (Zero Waste Plan)
- Water Use (Water Utilities Master Plan) *(Note: this topic is currently in the Natural Environment chapter.)*
- Food (Local food strategy) *(Note: this topic is currently addressed in its own chapter.)*

Ecosystems – Restoring Ecosystems

(Note: the following topics are addressed in the Natural Environment chapter.)

- Urban Ecosystems
- Wildland Ecosystems (Parks and Recreation Master Plan (2013), Urban Wildlife Master Plan; and ongoing or upcoming: Open Space and Mountain Parks Master Plan, Urban Canopy Plan)
- Agricultural Ecosystems

Proposed Policy Updates

Align the policies with Boulder’s Climate Commitment which includes emissions reduction targets and is organized around three themes: (1) Energy, (2) Resources, and (3) Ecosystems. Replace the headings “Climate Action and

Greenhouse Gas Emissions,” “Energy Conservation and Renewable Energy,” and “Land Use and Building Design” with those topics.

- **Policy 4.01: Greenhouse Gas Emissions** – replace with “reduce energy-related emissions” and goal “to rise to the climate challenge, and power a vibrant future...” “Boulder will reduce its energy-related emissions 80 percent or more below 2005 levels by 2050.”
- **Policy 4.02: Climate Adaptation Planning** – move this policy to the end of the chapter and replace with resilience policies as suggested through the HR&A Assessment.
- **Policy 4.05: Energy-Efficient Building Design** – put under new “Energy, Building” subsection and update language to reflect Net Zero Energy building goals and standards being developed.
- **Waste and Recycling Policies (4.06 and 4.07)** - update under a new “Resources” section and reflect the Zero Waste Strategic Plan (Nov. 2015) which encourages the prevention of waste and the recycling/composting of materials to ensure the efficient use of resources and reduce pollution; recognizes that the city does not have control of waste hauling; and relies on a strong network of nonprofit, for-profit, governmental and community partnerships to invest resources toward zero waste systems. Reflect the goal of 85% waste diversion in each sector by 2025 (residential single-family, residential multi-family, and commercial).

Emerging Issues

Other emerging topics to consider including in this chapter are:

- Transition to 100% clean electricity,
- Energy systems transition and utility strategy, and
- Building energy standards and timing and approach to Net Zero is in progress.
- On waste topic: There is need for market development of otherwise landfill-bound material; for processing activities to be allowed (i.e. compost sites, C&D processing facility, aggregate recycling/processing, etc.); for a temporary and/or permanent debris management site(s); and the transfer station concept in general needs to be accounted for (conservation easements and other zoning issues are restricting this type of work, i.e., LaFarge Plant, Rainbow Nursery) (Boulder County)

5) ECONOMY

Since 2010, City Council has approved:

- The Economic Sustainability Strategy,
- The Community Cultural Plan,
- In addition, the city will be developing a citywide retail strategy, framework for redevelopment and revitalization through public/private partnerships, and plans to enhance economic resilience, sustainable tourism, innovation/entrepreneurship, and multimodal access to support economic activity, as noted under emerging issues.

Proposed Changes to Introductory Paragraph

Update to reflect language from *Economic Sustainability Strategy*, including the following: (*adopted by City Council on Oct. 29, 2013*)

- Add a description of economic vitality in Boulder – “a public-private collaboration to promote a healthy economy that supports the outstanding quality of life enjoyed by its residents”;
- Note efforts to follow a sustainable path to economic development (e.g., maintain a positive business climate and enhance community character);
- Note challenges on the horizon (e.g., cost and lack of office space that meets contemporary standards); and
- Describe benefits of economic growth and collaboration with the business community (e.g., increased diversity and local job opportunities, development and infrastructure improvements).

Update to reflect community priorities from the *Community Cultural Plan*, including the following: (*adopted by City Council on November 17, 2015*)

- Add a description stating that all aspects of the Economy section will support the following community priorities regarding how culture and the creative economic sector are addressed:
 - a) support the resiliency and sustainability of cultural organizations to enhance their ability to benefit the community, and b) create a supportive environment for artists and creative professionals, while fostering innovative thinking and leadership among them. (*Community Cultural Plan, Strategies: “Cultural Organizations,” p.19; Community Cultural Plan, Strategies: “Creative Economy,” p.28*)
- Reflect the vision element from the Community Cultural Plan calling for Boulder to achieve strong “cultural vitality” through achieving “a highly diverse and innovative mix of cultural, economic and social activity that improves the life of every resident, worker, student, and visitor to Boulder.” (*Community Cultural Plan, “Vision” E.1- Cultural Vitality, p. 16*)

Proposed Policy Updates

- **Policy 5.01: Revitalizing Commercial and Industrial Areas** - Edit to include supporting the vitality of Boulder’s main employment centers and other employment areas through a place-based approach (*Economic Sustainability Strategy (ESS), “Place” Strategy 1, p. 12*)
- **Policy 5.05: Support for Local Business and Business Retention** - Edit to include expanding opportunities for workers to live within the city, including moderately priced market rate housing (*ESS, “People” Strategy 1, p. 8*); expanding regional transit alternatives with local partners so that commuters have more transportation options other than single occupant vehicles (*ESS, “People” Strategy 2, p. 8*)
- **Policy 5.06: Industry Clusters** - Update language describing Boulder’s primary industries (e.g. aerospace, bioscience, clean tech, and data storage, among others) (*ESS, “Boulder’s Economy,” p. 5*)
- **Policy 5.13: Responsive to Changes in the Marketplace** - Edit to include make doing business with the city easier, through improved application and permitting processes (*ESS, “Process” Strategy 3, p. 16*)
- **Add new policy:** Work with employers, educators and partners to develop and support programs designed to help attract workers with highly specialized skills and experience, and provide workforce training opportunities. (*ESS, “People” Strategy 3, p. 8*)

- **Add new policy:** Create and enhance venues to improve the resiliency of visual and performing arts organizations, and the experience of their audiences. (*Community Cultural Plan, Strategies: “Venues,” p.25*)
- **Add new policy:** Support the vitality of the creative economy by enhancing Boulder’s leading position as a home to creative professionals and businesses. (*Community Cultural Plan, Strategies: “Creative Economy,” p.28*)
- **Consider adding these additional new policies from Cultural Plan:**
 - Support cultural organizations (i.e., have a substantial and positive effect on the ability of Boulder’s many cultural organizations to advance their operational capacity, promote organizational resiliency, and encourage innovation for the benefit of the community). (*Community Cultural Plan, Strategies: “Cultural Organizations,” p.19*)
 - Attract and support artists and creative professionals through supporting their ability to thrive in the creative sector (*Community Cultural Plan, Strategies: “Creative Professionals,” p.34*)

Other Emerging Ideas

Emerging themes refer to ideas on the horizon that may become a topic of importance in the next two to five years. They may be related to current work, however it may be too soon as add as new policies into the BVCP, because analysis, community outreach, and other steps have not taken place yet. Other topics related to the economy that are being discussed include:

- Citywide retail strategy that reflects emerging regional and national trends
- Economic resilience plan
- Sustainability tourism plan
- Strategy for supporting innovation, entrepreneurship and startup activity
- Framework for redevelopment/revitalization and role of public/private partnerships
- Multimodal access and parking management strategy that supports economic activity of visitors, customers, employees, etc.

6) TRANSPORTATION

The changes to this chapter reflect work since the 2010 plan including:

- Boulder County Transportation Master Plan (2012) and Multimodal Transportation Standards (2013) *(Note: County staff is reviewing the outline for this chapter and may suggest additional updates to improve alignment with the plan and standards);*
- City Transportation Master Plan (2014) which included county and other partner input;
- City draft Climate Commitment strategy (2015);
- City Transportation Report on Progress (2016);
- County Mobility4All Needs Assessment (2016);
- The city has also been working on an Access Management and Parking Strategy (AMPS) and adopted new standards related to Transportation Demand Management (TDM).

Proposed Changes to Introductory Paragraph

Update to reflect focus areas from Transportation Master Plan (TMP) including:

- **Complete Streets**
- **Regional Travel**
- **Transportation Demand Management**
- **Funding**
- **Integrate with Sustainability Initiatives**

Proposed Policy Updates

Modify to reflect the focus areas from the TMP and county plan.

Complete Streets

- **Policy 6.01: All-Mode Transportation System (Change title to: “A Transportation System for People Using all Modes”)** – modify to reflect the “complete streets” principles and all note all modes. (TMP)
- **Combine Policy 6.02 (Reduction of Single Occupancy Auto Trips) and 6.03 (Congestion) into new policy: “Transportation Mode Shift”** - to reflect the TMP Vehicle Miles Traveled (VMT) reduction goal, mode shift objective, and congestion policies (TMP).
- **Policy 6.03: Congestion** – delete as standalone policy and combine with 6.02 above.
- **New policy, Renewed Vision for Transit** - note that transit investments and improvements will occur in an integrated manner in the areas of service, capital, policies, and programs to expand the Community Transit Network (CTN) and support regional transit initiatives (TMP).
- **Policy 6.05: Accessibility, combined with “6.06, mobility services”** – new language to address accessibility for all users including mobility for older adults and people with disabilities. Accessibility should be commensurate with job growth (TMP).
- **New policy: Safety** – add policy reflecting policy “Toward Vision Zero” to reduce serious injury and fatal collisions (TMP).

(New Heading) Regional Travel

- **Policy 6.04: Regional Cooperation** - modify title to “Regional Travel” and include corridors identified in the Renewed Vision for Transit, regional arterial bus rapid transit, and commuter bikeways. Acknowledge that city decisions have regional transportation impacts (County TMP).
- **New policy: Regional Transit Facilities** – add to reflect three regional transit anchors (i.e., Downtown Boulder, University of Colorado, Boulder Valley Regional Center, Boulder Junction), first and last mile connections to facilities, employment centers, and neighborhoods noted in the BVCP community structure and built environment chapter (TMP).
- **Policy 6.06: Mobility Services** – delete/combine with policy 6.05 above.

(New Heading) Transportation Demand Management (TDM)

- **New policy: Integrated TDM Programs** – Add new language regarding city and county cooperation and collaboration on TDM programs for residents, visitors, and employees.

(New Heading) Funding

- **Policy 6.07: Investment Priorities** – modify to address all TMP investment priority points, including but not limited to road capacity being managed and priced to provide reliable and rapid travel times for transit, and others (TMP).

(Modify Heading) Land Use Integration to “Integrate with Sustainability Initiatives”

- **New policy: Access Management and Parking Strategy** – add to address integrated multimodal access and parking management strategies in service of community’s sustainability goals (including community vitality and neighborhood livability) to provide accessible transportation options for people using all modes of travel (TMP). Reference Guiding Principles from AMPS, including providing for all transportation modes, supporting a diversity of people, customizing tools by area, seeking solutions with co-benefits, and planning for the present and future AMPS project (AMPS).
- **Policy 6.09: Integrate with Land Use** – modify to address land use around the three intermodal centers (Downtown, Regional Center/Boulder Junction and CU/University Hill), mobility hubs, and add consideration towards allowing density and reduced parking to support transit use and integrate with corridor and district planning (TMP).
- **New policy: Creating 15-Minute Neighborhoods** - address improving transportation facilities and the mix of neighborhood supporting commercial activities to create neighborhoods where residents can fulfill more daily needs through safe and convenient walking (TMP). *(Note: Also addressed in scenarios.)*
- **New policy: Mobility Hubs** – add to address mobility hubs that will provide seamless integration for people of all physical abilities between transit and other multimodal facilities, integrated with mix of land uses (TMP).
- **Policy 6.13: Improving Air Quality** – modify to change title to “Improve Air Quality and Achieve Climate Goals” to include transportation GHG emission reduction target. (TMP, Climate Commitment).
- **Airport policy** (Note: will confirm whether this policy needs any updates.)

Graphics and Maps to Add to Transportation Chapter

- Add new Renewed Vision for Transit
- 15 minute analysis map
- Transportation GHG reduction graph – 40% of reduction needed in the Clean Energy and Innovations area
- Images of Mobility Hubs
- Photos of people walking, bicycling, and transit
- Photos of recently completed capital construction projects (e.g. Boulder Junction and Broadway Euclid)

Emerging Transportation Issues

Additional topics that may need further study or mention in the BVCP may include:

1. Refining or removing policies related to congestion and level of service. The current policy serves to expand vehicle capacity at intersections and may work against investment in non-automotive investment (Boulder County). Furthermore, measure transportation from a person trip level.
2. Communitywide Eco Pass Program – address city and county partnership as it is implemented.
3. Railroad horn noise through Quiet Zones to support TOD development near transit hubs.
4. Impact Fee analysis *(Note: may affect changes to Policy 6.08, Transportation Impact)*
5. Technology and sharing economy may change travel behavior for Boulderites and people in the region.
6. Electric vehicles and low emission transportation vehicles may accomplish certain climate goals but may affect how city and county need to plan for roadway capacity.
7. Local and regional partnerships strengthened to deliver Boulder’s Renewed Vision for Transit.
8. Resilience recommendations added for transportation (under separate cover).
9. Expanding or adding parking districts in difference parts of the community.

7) HOUSING

Note: *The proposed policies in this chapter will be updated following work on the scenarios and key choices, which address housing.*

DRAFT

8) COMMUNITY WELL-BEING

(This section may be reorganized to reflect the proposed new organization of the plan that is more in line with the sustainability framework. Most of the content and policies in the current “Community Well-Being” section will carry over to a revised “Healthy and Socially Thriving Community” section; however, the policies relating to safety will move to a new “Safe and Resilient Community” section.)

Since 2010, City Council has approved the Parks and Recreation Master Plan (2013), Fire-Rescue Master Plan (2011), Police Master Plan (2013), and Homelessness Strategy (2010) that affect this chapter’s policies. In addition, the city is working on a Human Services Strategy, Library Master Plan, and initiatives related to community engagement. Several policies related to an aging population, aging in place, healthy child and youth development and youth opportunities have emerged since 2010.

Proposed Introductory Paragraph

In keeping with the reorganization noted above, revisions are proposed to the introduction to:

- Refresh information about emerging demographic and social trends relating to well-being such as aging population, some widening social disparities, the relative health of Boulderites compared to the statewide context, among others;
- Include narrative on the role of culture contributing to many aspects of well-being including community attachment (desire to build one’s life here), robust social offerings, welcoming environment, and mental/emotional fulfillment. (Community Cultural Plan)
- Prioritize the civic dialogue about the ability of culture to positively contribute to the economy, social offerings, the environment, and the authentic expression of diversity (Community Cultural Plan)
- Add language about achieving strong “cultural vitality” in accordance with the vision statement in the Community Cultural Plan (“Vision” E.1- Cultural Vitality, p. 16)

Proposed Policy Updates

From *Human Services planning and prioritization* (City Council Study Session 10-27-2015):

- Add policy language emphasizing guiding principles for Human Services delivery (e.g., data-driven outcomes; investing in prevention to forestall crisis and improve self-sufficiency; supporting best-practice and evidence-based programs (evaluate how clients and the community are better off as a result); and coordinating and integrating city-provided services with partners and the county and in the community. (Potential new policies and revisions to policies 8.01- *Providing for a Broad Spectrum of Human Needs*, 8.02- *Regional Approach to Human Services*, 8.03 – *Equitable Distribution of Resources*, 8.04 – *Addressing Community Deficiencies*)

From *Arts and Culture Plan* and *Parks and Recreation Master Plan*:

- *Policy 8.07-Physical Health*: expand definition of physical health to include total physical, mental and social well-being. Add values related to fostering mental and social well-being through the cultivation a wide-range of recreational, cultural, educational and social opportunities. (Sustainability Framework, Human Services Strategy Planning, Parks and Recreation Master Plan)
- Add *new policies*:
 - To emphasize importance and fostering of social capital in neighborhoods. (*Note: confirm source. Parks and Recreation Master Plan, Theme 4: Building Community and Relationships, “Overview”, p. 64.*)
 - To advance civic dialogue, awareness, and participation i.e., increased understanding of positive contributions of culture, access to information about culture, and participation). (Community Cultural Plan, Strategies: “Civic Dialogue,” p.37)
- Add *new policies* to the Culture subsection:
 - Regarding strengthening culture in neighborhoods and communities, i.e. all residents including underserved groups are able to creatively contribute to neighborhoods and the social community

and have access to cultural experiences near home. (Community Cultural Plan, Strategies: "Neighborhoods," p. 31)

- Regarding youth engagement, i.e., growing young people into cultural leaders (Community Cultural Plan, Strategies: "Youth," p.40)

Safety (As noted above, this content may all be moved and integrated within the "Safe and Resilient Community" section)

Add safety policies reflecting both the Fire-Rescue Master Plan and the Police Master Plan to:

- Adjust service delivery to efficiently respond to changing community needs including demographic changes as well as redeveloping and urbanizing areas to support safe and livable neighborhoods and vibrant business districts. This may include commitment to assessing / addressing facility and capital needs.
- Emphasize prevention and community education efforts including preparation and prevention goals for risk including: year-round wildfire, efforts to minimize disruption during emergency events, increased inspections, pre-planning toward effective deployment of resources, early intervention and prevention to meet critical human service needs, and working efficiently with partners.

Other Emerging Ideas

Other topics related to community well-being that are being studied or discussed include:

- In the context of the Library Master Plan Update, explore ways to use the library as a platform for civic dialogue.

9) AGRICULTURE AND FOOD

(This section may be moved and integrated within the “Healthy and Socially Thriving” section to reflect the proposed new organization of the plan that is more in line with the sustainability framework. The introduction of the section provides important context and definition and will need to be revised and included as the sections/chapters evolve.)

Since 2010, work on the Agriculture Resources Management Plan (in progress) in addition to ordinances and policy changes to promote local food sales suggest some new language in this chapter. Boulder County’s Cropland Policy (2011) and Environmental Resources Element (2014) may necessitate further policy refinements in this chapter to align policies. The initial proposed edits also include suggestions from Water Resources staff regarding irrigation ditches and their importance to agriculture.

Proposed Changes to Introductory Section

The introductory section will need to be revised to:

- Clarify the description and value and goals of maintaining a strong and resilient food system and the important relationship between these goals and efforts to promote local foods.
- Incorporate new thinking identified by OSMP Agriculture Planning and the Parks and Recreation Master Plan
- Incorporate lessons learned from the city’s last two years of integrated, cross-departmental focus on local foods

Proposed Policy Updates

From *OSMP Agricultural Resources Management Plan* and *Parks and Recreation Master Plan*, emerging issue areas and recent initiatives:

- **Policy 9.01: Support for Agriculture** - revise to provide a detailed approach for supporting food production (*OSMP Agricultural Resources Management Plan*). Add a statement about ditches to after, “These areas are important for preserving the rural character of Area III” that reads, “The success of agriculture on these lands is vitally dependent on their water supplies.” (Water Resources Dept.)
- **Policy 9.02: Urban Gardening and Food Production** - revise to include goals identified in the Parks and Recreation Master Plan around urban gardening and edible landscaping. (P&R Master Plan)
- **Policy 9.03: Sustainable Food Production Practices** - revise to clarify goals around sustainable production and include ecological conservation objectives, provision of pollinator and beneficial insect habitat, whole farm planning and support for farming communities. (*OSMP Agricultural Resources Management Plan*). Add “The city and county will also promote sustainable agriculture by recognizing the importance of irrigation ditch water to agricultural lands.” (Water Resources Dept.)
- **Policy 9.04: Regional Efforts to Enhance the Food System** - expand to reflect lessons learned and goals identified through the city’s significant regional collaborations with the “The Shed” (aka, “Making Local Foods Work”) group.
- **Policy 9.06: Change title to “Access to Healthy Food” from “Locally-Produced Food”** - expand to include support for programs (e.g. Harvest Bucks program) and goal of creating a market hall in the civic area.

2016 Boulder Valley Comprehensive Plan Update Recommendations for Resilience Integration **REVISED DRAFT - May 13, 2016**



Prepared for:

THE CITY OF BOULDER, COLORADO

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AS PART OF THE 100 RESILIENT CITIES INITIATIVE

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Downtown Boulder, 2015

2016 Boulder Valley Comprehensive Plan
Recommendations for Resilience Integration
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I. Introduction

The Boulder Valley Comprehensive Plan (BVCP) is a joint plan between the city and county to inform shared responsibility for long-range planning and development and preservation of the Boulder Valley. Sustainability is a unifying framework for policies that address the community's social, economic, and physical well-being.

Through the 100 Resilient Cities (100RC) program and as a part of the Resilient Boulder Strategy process, HR&A Advisors (HR&A) supported Boulder's Chief Resilience Officer (CRO), the Department of Planning, Housing and Sustainability (PH&S) staff, and a dedicated Working Group to assess the Boulder Valley Comprehensive Plan through the lens of resilience, affirm what resilience means to Boulder in this context, and integrate resilience principles and policies into the BVCP. One of the priorities of the Resilient Boulder Strategy is to integrate the city's processes and systems, as well as institutionalize resilience into the daily planning and operations of the city. Thus, it is important that the Plan highlight the interdisciplinary coordination that has occurred throughout the BVCP update.

Over the course of a four-month engagement beginning in January 2016, PH&S, the CRO, members of the BVCP Working Group, and HR&A partnered to achieve the following outcomes:

- **Conducted best practices research to identify comprehensive planning efforts that integrate resilience in other cities of comparable size and character**
- **Assessed how resilience is currently addressed within the BVCP and identified Boulder's existing and proposed resilient actions and policies through a review of existing plans and documents, as well as interviews with Working Group members**
- **Developed a methodology for incorporating resilience into the BVCP that accounts for Boulder's risks, recognizes vulnerable populations and infrastructure, and considers a systems-based approach**
- **Proposed draft policies and strategies to be considered for incorporation in the BVCP update**

What follows is a summary of the key recommendations that emerged out of this engagement and a synthesis of the process that led to their generation.

II. Guiding Principles for the Plan

The following recommendations underscore the connectivity between Boulder's systems and vulnerabilities, and illustrate ways that the BVCP can address Boulder's resilience, not only in times of disruption and crisis, but also on a day-to-day basis. The following organizing principles, policies, and actions were identified based on HR&A's analysis of key gaps across the Plan as well as targeted outreach to members of the Working Group:

Frame resilience as a guiding principle of the BVCP and convey a clear vision for resilience and the Plan. Resilience should be framed as a cross-cutting principle for the Plan and should build off of a well-articulated vision statement. The resilience statement should be included in the core values section of the Plan to establish the framework and provide context to the goals and policies set forth in the BVCP update. Identifying the city's risks, vulnerable communities, and neighborhoods is a critical step in defining resilience for the Plan. Defining resilience should also build off of the Resilient Boulder Strategy, indicate that policies and directions in the plan are intended to address Boulder's specific risks and vulnerabilities, and explain interrelated issues (e.g. transportation and economy; housing and community well-being). In some instances, the 2010 Plan already demonstrated the approach, such as Policy 2.19 *Urban Open Lands*, which identified the important role that open space planning plays in both providing a recreational and community amenity, and in planning for environmental protection, flood management, and multi-modal transit. Articulating this type of cross-cutting strategy across the Plan reflects the interrelated nature of Boulder's risks and priorities and presents a systemic approach to solutions.

Encourage community and stakeholder engagement with policies and directions that support risk education and preparedness. Engaged communities and residents are better prepared to support themselves in the event of a disruption and help the city make informed decisions about how best to assist and work with communities. Ongoing, robust outreach to communities and vulnerable residents to educate and prepare for disruption will improve the relationship and communication between residents and government. The Plan should also highlight the engagement process leading up to the BVCP update, including a synthesis of community engagement feedback and outcomes, which helped shape the Plan's goals and policies.

Improve transparency and integrated planning by better coordinating and conveying the integrated activities across government departments and jurisdictions, institutional organizations, and the private sector. An interdisciplinary approach that allows cross-departmental, regional, and cross-sector dialogue will strengthen a culture of collaboration to identify problems and develop solutions. Collaboration across departments and sectors promotes more efficient use of resources and opens opportunity to innovate. Like the concept of resilience, effective and transparent planning should be applied across the city's systems and policies, and woven throughout the Plan's topic areas. A city's risks, vulnerabilities, priorities, and availability of resources are never static. Boulder should also leverage Plan updates as opportunities to re-evaluate key risks, and implement a cross-departmental approach to revising policies in light of changing conditions.

Establish measurable goals and integrated implementation strategies that build resilience value in the long term. To connect broad policies and implementation, the Plan should identify the desired outcomes of its policy directions and establish measurable goals that can be used to track the achievement of these outcomes where possible. In some instances, the Plan already identifies a clear and measurable goal such

as Policy 3.06 *Wetland and Riparian Protection* which states that “the City will strive for no net loss and creation of wetlands.” Boulder could also consider refining the goals set in the Plan’s strategies in order to demonstrate the desired outcomes of interventions and establish a way to measure their success, such as the creation of metrics that track the outcomes of initiatives. For example, if investments in green infrastructure are encouraged in the Plan, the multiple benefits of the investment should be identified: reduction of flood risk and the impact of flood and storm events; increased resilience of Boulder’s businesses; improvement of access for emergency responders; enhancement of public space amenities; and protection and maintenance of the city’s transportation system. Specific outcomes related to these benefits could include the reduction of response time of emergency responders in the next flood event; the increased number of residents within a five-minute walking distance of open space; and annual reductions in infrastructure repair cost.

III. Recommendations by BVCP Topic Area

Process Summary and Initial Findings

The BVCP resilience integration process commenced by defining and recognizing the City's resilience goals, understanding the city's current shocks and stresses, and identifying Boulder's vulnerable residents and infrastructure. Once these critical issues were identified and confirmed, the 2010 Plan's sections or topic areas were examined in light of the city's key risks and vulnerabilities. Lastly, a comparative assessment of Boulder's Sustainability Framework – the unifying framework that guides the city and the Plan's policies – to the definition of resilience was conducted to confirm consistency across the two concepts.

Identify Initial Priorities

To identify top resilience priorities from city residents' point of view, the results of the Resilient Boulder and BVCP resident surveys were analyzed and mapped across common themes and divergent issues. The following set of priorities emerged and provided a starting point to inform resilience integration:

- Maintain high quality of life and public assets;
- Address affordable housing issue;
- Increase transparent community engagement;
- Address transportation options;
- Respond to climate change risks; and
- Articulate resilience in the context of the Sustainability Framework.

Articulate Shocks and Stresses

Under the 100RC framework, resilience is the capacity of individuals, institutions, businesses, and systems within a city to thrive despite the shocks and stresses they experience. Boulder's Chief Resilience Officer developed a list of Boulder's key shocks and stresses, then categorized shocks by high and moderate risk as shown below.

High risks	Moderate risks
Drought	Dam failure
Flooding	Extreme temperatures
Pandemic flu	Infrastructure/building failure
Wildfires	Hazardous materials incident
Winter storms	

Identification of the city's top risks is a critical aspect of incorporating resilience into the BVCP. Resilient policies are intended to address or respond to these risks, and reflect the connectivity between the systems impacted by disruptions in Boulder. It should be noted that risks are not static, and as future updates to the Plan are made, the above list of shocks and stresses should be revisited.

Identify Vulnerable People and Infrastructure

The BVCP Working Group then gained consensus on vulnerable residents and infrastructure most likely to be impacted by a disruption. Vulnerable populations were considered residents who presented the greatest exposure to the city's hazards (e.g., mountain residents) and/or lacked the social or financial capital to effectively respond to or bounce back from a disruption (e.g., homeless populations). Similarly, vulnerable

systems were defined as business, institutions, roadways, and other critical infrastructure that were most likely to be impacted by a disruption. Resilient policies in the Plan should focus foremost on protecting these vulnerable people and systems.

Vulnerable Populations	Vulnerable Systems
Low income people	Business community (e.g. small businesses, start-ups, in home businesses)
Mobile home residents	Infrastructure (e.g. roadways, water, sewer, power)
Elderly	
Homeless and transient populations	
Mountain residents	
Students	

Compare the Sustainability Framework and Definition of Resilience

Mapping the concepts of resilience to Boulder’s Sustainability Framework was a core discussion and output of the BVCP Working Group. Overall, the Working Group gained consensus that the two concepts are complementary. While resilience uses a lens of adaptability in light of disruption or risk, the Sustainability Framework aims to ensure stability and day-to-day continuity. Both concepts promote systems that are stable and adaptable to disruption and embody holistic points of view about the interaction of city systems. These conversations also led to agreement on the elements of a healthy, stable, and adaptive community that are needed to sustain Boulder during times of stability as well as during crisis.

Key Elements of a Healthy, Stable, and Adaptive Community
Strong social networks
Public spaces
Infrastructure
Economic diversity
Regional connectivity
Good governance

Review Existing and Consider Potential New Topic Areas

The 2010 BVCP’s Sections or Topic Areas were then examined in light of Boulder’s risk and vulnerabilities. To perform a systems analysis of the BVCP, the 2010 Plan’s topic areas were mapped across the city’s priority risks against the “drivers” of resilience to identify specific measures or actions most necessary to support Boulder in the event of a disruption. This process also revealed new content areas for the Plan to explore including Resilience, Governance, and Safety and Preparedness. Policies related to Resilience and Governance should serve as guiding principles for the Plan and be integrated throughout sections and policies given their overlap and consistency with many existing topic areas in the Plan. However, policies related to Safety and Preparedness may be more appropriately described in a new BVCP section due to the unique framework and content matter.

Revised Topic Area Approach



Identify Key Resilience Themes

Building off the systems analysis, the outcomes of the working session, the results of the community survey, and the Boulder PRA, seven key resilience themes were identified as priorities for the BVCP to address. These themes serve as the framework for evaluating and conceptualizing new or ongoing BVCP policies that ultimately cut across the Plan’s topic areas and departments to address risk.



Recommendations Overview

Based on meetings and interviews with the BVCP Working Group, a systems analysis of the Plan’s existing policies, consideration of key resilience themes, and review of comparable comprehensive plans, HR&A identified policy gaps in the 2010 Plan and proposed existing or ongoing activities or collaborations that integrate resilience. These recommendations are organized in two ways: “Guiding Principles,” or recommendations for overall framing of the plan, and “Recommendations by Topic Area,” which explore specific policies and or actions.

Recommended policies and actions outlined by Topic Area aim to clearly articulate vulnerable people, infrastructure, and systems as well as demonstrate the range of benefits that results from interdisciplinary actions. For example, a new recommended action would develop activities that encourage residents to be actively engaged in flood management interventions, such as tree plantings and green infrastructure

installation to promote community cohesion. This type of activity mitigates risk to infrastructure from flood hazards, builds community collaboration, and promotes greater access to green spaces.

The proposals outlined below expand on the key recommendations described in the previous section, inform ways to strengthen each topic area's goals or upfront framing, demonstrate the relationships between systems and topic areas, and provide specific recommendations for policy development and collaboration.

Proposed New Topic Area: Safety and Preparedness

Chapter Goals and Framing

- Reflect policies and strategies related to disaster response, community safety, and risk preparedness
- Identify isolated communities such as mountain residents and mobile homes that require a targeted approach to emergency response

Potential Policies and Directions

- Build community cohesion and promote education and preparedness for disruption by identifying and engaging local stakeholders through regular and ongoing contact, such as the development of community centers and programs that enable communities to organize during an emergency in a central place. Representative activities may include:
 - Inform community members about individual and neighborhood risks and ways to prepare, especially during times when government services are compromised
 - Encourage existing property owners to make building improvements that mitigate against flood, fire, and stormwater impacts

Topic Area: Energy

Chapter Goals and Framing

- Identify energy risk and need for islandable core service delivery centers to support communities, public facilities, and key land uses during and after a disruptive event

Potential Policies and Directions

- Assess and design a communitywide network energy resilience centers that ensure that basic services are available across the community in case of grid disruption.
- Develop energy policies that support continued “green” and renewable energy job opportunities supporting local community centers or schools to access financing for energy retrofits and access to generators
- Identify energy policies that create or support resilient energy infrastructure at the neighborhood/subcommunity level that can serve as both the foundation elements of a distributed renewable energy grid and provide essential energy services in the case of grid disruption

Topic Area: Built Environment

Chapter Goals and Framing

- Identify building typologies, land uses, and geographies most at risk to hazards and disruption
- Emphasize open space preservation as a strategy to promote community wellness and economic vitality

Potential Policies and Directions

- Encourage green infrastructure and appropriate landscaping as a means to mitigate natural hazards such as flood, fire, and extreme temperatures
- Propose design standards and incentives that encourage mitigation against natural risks such as flood, fire, and stormwater impacts
- Consider designing community buildings that could also serve as emergency shelters or as an operations center

Topic Area: Community Well-being

Chapter Goals and Framing

- Emphasize the importance of engaged communities and social networks to support the city during a disruption
- Specify vulnerable populations who are traditionally difficult to reach and engage
- Ensure efficient and equitable distribution of resources during a disruption

Potential Policies and Directions

- Develop policies that support community-level education and preparedness, community-driven communications and information dissemination, and supply provision during emergencies
- Develop data analysis tools and information sharing on community vulnerabilities such as community asset and risk mapping
- Propose ongoing and robust engagement strategies that build trust with government and communities, with targeted approaches to engaging residents who are typically difficult to reach
- Continue to convene public (e.g., federal, state, county, and city partners) and non-profit stakeholders responsible for service provision during disruptions and on a daily basis to improve information sharing and efficient service and resource distribution

Topic Area: Economy

Chapter Goals and Framing

- Clarify how land use and housing policy affects the cost of doing business in Boulder
- Articulate the risk of global and national economic downturns and the related vulnerability of industry clusters (e.g. tech, federal resourced research institutions), as well as various industries throughout the city
- Recognize Boulder's open space assets as an important contributor to the economic health of the city
- Present Boulder's risk of losing businesses to adjacent communities (e.g., Longmont, Broomfield, Denver) that offer lower leasing rates, more and larger available commercial spaces, newer building stock, etc.

Potential Policies and Directions

- Create policies that generate "green" jobs and advance sustainable energy goals (according to the Bureau of Labor Statistics, "green" jobs are jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources)
- Develop policies that support economic resilience such as transportation redundancy, business continuity planning, and plans for large-scale residential displacement
- Identify policies that support businesses in light of rising real estate costs, changing consumer behavior, and increasingly unpredictable natural risks

Topic Area: Transportation

Chapter Goals and Framing

- Highlight transportation vulnerabilities as having physical, economic, and social implications
- Discuss transportation as a means for access, evacuation, and movement of goods during and after an event
- Describe vulnerabilities in transportation infrastructure during a disruption as being connected to other issues such as housing affordability
- Identify the impact of potential transportation failures on displaced residents after a disruption
- Encourage infrastructure investments that provide multiple benefits, including improvements that mitigate risk

Potential Policies and Directions

- Identify impact on vulnerable communities and emergency response access (i.e., first responders primarily living outside the city and facing difficulty entering Boulder after a disaster)
- Assess and develop solutions with key stakeholders on the city and county level that are needed to coordinate transportation policies and response in the event of a disruption
- Integrate priorities of the 2014 Transportation Master Plan and Greenways Master Plan particularly as it relates to green infrastructure and multi-modal access provision
- Encourage green infrastructure as part of all infrastructure improvements
- Develop policies to accommodate emergency vehicles, buses, trucks, and construction vehicles during and after an event

Topic Area: Housing

Chapter Goals and Framing

- Identify shifting economic trends that impact housing affordability and supply
- Specify vulnerable populations most in need of affordable housing options during times of disruption and on a day-to-day basis

Potential Policies and Directions

- Address the needs of residents who use their homes to conduct business and space needs of small businesses and startups
- Add language into existing policies to support or expand workforce housing that can, along with working families, accommodate emergency responders and skilled workers
- Encourage mixed used development, multi-modal transit, and provision of critical services near residential areas, particularly where there are concentrations of vulnerable people
- Explore ways to expand public-private partnerships as a model to finance affordable and workforce housing
- Expand policies and programs that support low income Boulderites who face displacement, home repair costs, additional transportation costs, and lost wages after a disruptive event

Topic Area: Agriculture and Food

Chapter Goals and Framing

- Identify risks to the food system such as water availability, drought, wildfire, and flood
- Explain how green infrastructure interventions can support the food system and build community networks

Potential Policies and Directions

- Create policies that support local food and agriculture as a part of a broader economic development strategy that encourages tourism, food destination, and “green jobs”
- Encourage community-driven food practices such as community gardens and local food co-ops to build community networks and build cultural assets
- Convene stakeholders at the city and county level such as transportation specialists, the agricultural sector, and the business community to identify redundant food networks, supply methods, and distribution
- Analyze Boulder’s potential capacity to grow its own food through activities such as edible landscapes, promotion of community and residential gardening, and use of city-owned open spaces for agriculture
- Work to keep agricultural water available to farmers and ranchers

The below matrix synthesizes all of the activities recommended by Topic Area. Recognizing that the implementation of each recommendation varies in complexity, this matrix also proposes timing and prioritization of activities and whether there are already ongoing activities in Boulder to support implementation.

Currently being prepared. Will be added later.

IV. Recommendations for the BVCP Land Use Designations and Map

Resilient land use and zoning policies should respond to risk, consider a systems-based approach, and reflect vulnerable people and places. The 2010 BVCP addresses resilient land use policies primarily in the Natural Environment section; however, resilience can be incorporated in discussions of land use and zoning among other Topic Areas. There are additional opportunities to highlight and expand on resilient land use policies in the 2016 update by providing a section on resilient land use strategies organized by the following key themes:

1. Development guidelines for vulnerable areas
2. Reduction of risk and harm to vulnerable residents
3. Self-sufficient and resilient neighborhoods
4. Adaptive and resilient environment

Through the land use plan, the BVCP can promote development that enhances the ability of people, buildings, and natural places to withstand and recover from a natural disaster or other major disturbance. Land use planning and zoning policies can be framed to respond to a changing environment, economy, and social conditions by being adaptive and flexible. Policies should continue to respond to a variety of physical scales -- from neighborhoods to the city as a whole -- as well as consider the regional implications of land use decisions (e.g., housing policy to shape regional transportation and commuting patterns).

Development Guidelines for Vulnerable Areas

The 2010 Plan provides guidelines around development and preservation of places in hazardous areas, primarily in the Natural Environment section. Identify geographies most at risk to disruptions and policies and actions that encourage and incentivize building modifications and design standards to mitigate against flood, fire, and stormwater risk. In addition, regular and ongoing review of existing infrastructure to assess structural integrity and adequacy to withstand future disruptions is key, especially as part of routine maintenance inspections that consider changing risks and hazards. Developments of lesser intensity would be recommended in vulnerable or hazardous locations. For example, development in the flood plain would be subject to careful control or prohibition.

Seattle's draft comprehensive plan, Seattle 2035, suggests a number of actions to address this issue:

- **Protect the ecological functions and value of environmentally critical areas**, including wetlands and fish and wildlife conservation areas; prevent erosion caused by development on steep slopes; and protect public health, safety and welfare in hazard-prone areas, including areas subject to landslides, liquefaction or floods, while permitting development that is reasonable in light of these constraints.
- **Review rezones in areas located in or adjacent to a critical area or a hazard prone area** by considering the effect of the rezone and recognize that lower-intensity zones are generally more appropriate than higher-intensity zones in these areas.
- **Identify landslide-prone areas by examining the geologic, hydrologic and topographic factors that contribute to landslides and regulate development to protect against future damage** due to instability that might be created or exacerbated by development, including potential damage to public facilities. Consider the relative risk to life or property when reviewing development proposals for landslide-prone areas.

Reduction of Risk and Harm to Vulnerable Residents

Vulnerable populations can be defined as those individuals and households who lack the social, physical, and/or economic means to effectively respond to and bounce back from an event. In Boulder, these residents may include seniors, chronically ill or disabled people, low income residents, and students. As the definition of social vulnerability varies across communities and across households within communities, it is important that this list be reassessed or redefined in each neighborhood or community based on the risks these places face.

Within Boulder, vulnerable residents may reside in manufactured housing developments, senior housing, affordable housing units, and assisted living facilities. The siting of these types of uses, in particular, should be carefully considered for their exposure to natural hazards. If these uses are already located in a known hazard area, mitigation efforts to minimize risk through building improvements or redundant or self-sufficient power generation should be encouraged.

Self-sufficient and Resilient Neighborhoods

Resilient communities and neighborhoods have well-connected social networks, as well as a mix of key land uses that can provide self-sufficiency when access or communications are cut off during or after an event. The 2010 BVCP described policies supporting Neighborhood Activity Centers that serve as a focal point for commercial activity in a sub-community or collection of neighborhoods. Additionally, the Plan indicates that within certain residential areas, there is the potential for “limited small neighborhood shopping facilities, offices or services through special review.” These policies can be adapted or framed in a way that encourages the development of supportive local activity nodes that support self-sufficient neighborhoods during times of crisis and could be a consideration when planning subcommunity districts. For example, when neighborhood access is cut off after an event, a community that has an appropriate mix of uses in the CBA, such as a grocery store, hardware store, clinic, pharmacy, and/or community center or public space to serve as a venue for disseminating information and providing charging stations will be better prepared to respond to an event. Resilient neighborhoods also support multiple forms of transportation access during times of crisis, including access for emergency vehicles, buses, construction vehicles, as well as bikes and pedestrians.

Specific recommendations to support this theme could include:

- **Support policies that encourage mixed-use neighborhood development** to ensure that each neighborhood has access to medical facilities, food and supplies, information and communication centers, and emergency assistance. These policies would support and advocate for a smaller, more neighborhood-serving mix of uses as recommended in Portland, Oregon’s comprehensive plan which encourages small, neighborhood-based retail food opportunities. Efforts to promote mixed-use self-sustaining neighborhoods could also support community resilience centers proposed in the Resilient Boulder Strategy. Community resilience centers could be sited in individual neighborhoods and provide small scale or compartmentalized infrastructure systems that can operate independent of the larger utility system to sustain a sheltering facility during wide scale disruption. A neighborhood venue for assembly and education could also serve as a local engagement point during times as well as crisis.
- **Identify and prioritize neighborhoods** that present the greatest service and/or access needs.
- **Integrate the Transportation Master Plan and BVCP Land Use Plan** to identify key access routes that are needed to accommodate emergency vehicles and ensure that emergency transportation access is coordinated across the plans.

- **Engage diverse stakeholders and entities to identify the residents, businesses, and households most likely to be disproportionately affected by a potential disruption to city services.** As an example, water utility and infrastructure entities and water conservation stakeholders can work together to articulate and prioritize strategies around who and what is impacted by a potential disruption to water availability and drought. Based on this information, zoning measures can be considered to reduce water usage in existing or new buildings.

Comparable comprehensive plans have addressed these issues through the following policies and actions:

Portland 2035

- **Encourage small, neighborhood-based retail food opportunities,** such as corner markets, food co-ops, food buying clubs, and community-supported agriculture pickup/drop sites, to fill in services gaps in food access across the city.

Seattle 2035

- **Prioritize the preservation, improvement, and expansion of existing commercial/mixed use areas** over the creation of new business district in order to strengthen those existing areas.
- **Use a development pattern, mix of uses, and intensity of activity generally oriented to pedestrian and transit use** in pedestrian-oriented commercial/mixed use zones

Adaptive and Resilient Environment

Environmental and natural resource preservation policies that leverage and expand on the city's existing open space and natural resources can serve to mitigate against the impacts of natural events and chronic stresses. Many of these policies are currently described in the 2010 Plan's Natural Resources chapter; however, highlighting these recommendations in the Land Use discussion may be appropriate as many of these interventions impact the city's urban form and design.

The following efforts are in line with Boulder's Sustainability Framework and can contribute to community engagement activities:

- **Highlight the benefits of committing resources to the natural environment** as risk reducing and promoting economic stability. The continued preservation of the city's open space, urban forest, and green infrastructure measures can be tied to natural hazard mitigation, improvement of air quality, added recreational activities, and stormwater mitigation. For example, green and grey infrastructure can provide multiple benefits, such as reducing the impact of flood and extreme temperature risks while limiting water and energy use.
- **Identify opportunities for residents to be actively involved in physical mitigation efforts.** Even common place activities, such as tree plantings, can serve as educational tools to promote community engagement and highlight protection of critical assets.

Again, Portland and Seattle have demonstrated leadership in addressing these issues in their respective comprehensive plans:

Portland 2035

- **Promote seismic and energy efficiency retrofits** of historic buildings and other existing structures to reduce carbon emissions and improve public safety

- **Encourage the integration of nature** into the built environment
- **Reduce carbon emissions and promote energy and resource efficient** neighborhoods and buildings
- **Integrate natural and green infrastructure**, such as street trees, green spaces, ecoroofs, gardens, and vegetated stormwater management systems, into centers and corridors
- **Encourage building and site design that promotes human and environmental health** and safety and respond to the local context

Seattle 2035

- **Use landscaping requirements and other tools to minimize impact** on the natural environment, including increasing storm water infiltration where appropriate

V. Resilience Integration Process

As in many traditional comprehensive plans, the 2010 BVCP was organized around discrete Topic Areas, such as land use, transportation, housing, and economy; and policy recommendations emerged from these Topic Areas. This process presented an opportunity for BVCP policies and recommendations to be better integrated across the Topic Areas, reflective of the risks that Boulder faces, comprehensive in their approach to engaging stakeholders and building partnerships, and more responsive to the vulnerable populations that they aim to serve.

Integrating resilience into the BVCP requires a thorough assessment of the Plan against Boulder's risk, identifying resilience priorities for the Plan to address, and proposing recommendations for resilient policies and programs as illustrated in Figure 1:



Figure 1. BVCP Resilience Integration Process Overview

Key Input: Goals and Visions of Boulder and the BVCP

As shown in Figure 1, the initial assessment of the BVCP began by defining and recognizing the City's resilience goals, understanding Boulder's current state (i.e., shocks and stresses), and identifying how these goals relate to the Plan's vision and goals. Boulder's Preliminary Resilience Assessment (PRA) provides a summary of the City's risk overview, resilience perceptions, and City/County actions. The PRA is informed by feedback from stakeholder meetings and working group discussions, as well as a citywide survey.

Another key input to the BVCP integration process was a consideration of the work done to-date on the Plan. These activities include data collection and analysis performed by PH&S, including the release of the 2015 BVCP Trends Report, a comprehensive citywide survey, and the outputs of a series of six focus groups.

Comparing the results of the Resilient Boulder and BVCP surveys, including common themes and divergent issues, was an important first step in understanding City residents' point of view on the BVCP update. A

preliminary set of priorities emerged and provided a starting point for the Working Group to consider and identify priorities for integrating resilience into the BVCP:

- Maintain high quality of life and public assets;
- Address affordable housing issue;
- Increase transparent community engagement;
- Address transportation options;
- Respond to climate change risks; and
- Articulate resilience in the context of the Sustainability Framework.

Key Input: Risk Assessment

Under the 100RC framework, resilience is the capacity of individuals, institutions, businesses, and systems within a city to thrive despite the shocks and stresses they experience. Acute shocks include single event disasters such as floods, wildfires, and winter storms; stresses are defined as factors that weaken the fabric of a city on a day-to-day or chronic basis, such as economic hardship or social inequality.

Based on a review of City documents, such as the City of Boulder’s Multi-Hazard Mitigation Plan and other relevant materials, as well as feedback from a March 2015 workshop with professionals and researchers in the field of emergency management, climate science, and resilience, Boulder’s CRO developed a list of Boulder’s key shocks and stresses, then categorized shocks by high and moderate risk as shown below in Table 1:

High risks	Moderate risks
Drought	Dam failure
Flooding	Extreme temperatures
Pandemic flu	Infrastructure/building failure
Wildfires	Hazardous materials incident
Winter storms	

Table 1. Boulder’s Priority Risks

This risk prioritization exercise informed the City-specific risks that the Comprehensive Plan could address and remains an important illustration of the connectivity between the systems impacted by disruptions in Boulder.

Resilience Integration Process Summary

As shown in Figure 2, the resilience integration process spanned a four-month period from January to April 2016. Each step is illustrated in further detail below.

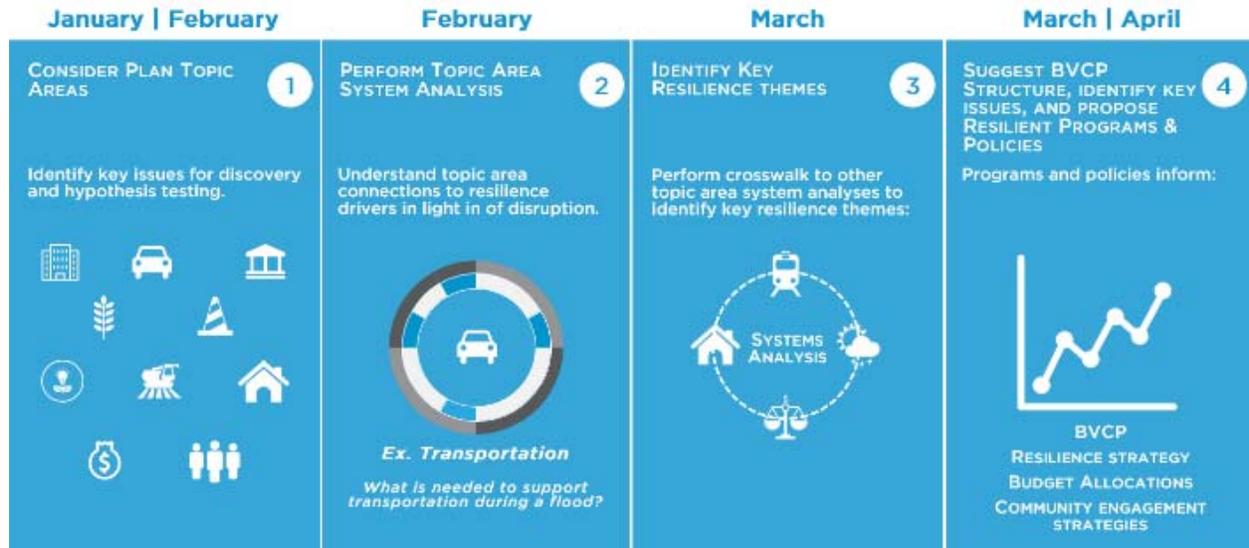


Figure 2. BVCP Resilience Integration Process Schedule

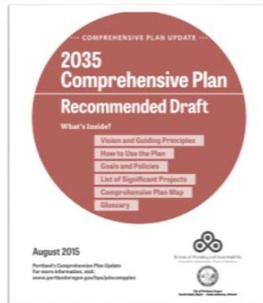
Step 1. Consider Plan Topic Areas

Case Study Research

As a first step, HR&A Advisors identified small to mid-size American cities that integrated resilience into their comprehensive plans. As many comprehensive plans are organized around a similar set of topic areas (or chapters) to the BVCP, this exercise identified how different comprehensive plans defined resilience, prioritized resilience goals, and organized or integrated resilience policies. The following cities -- Portland, Oregon; Seattle, Washington; Norfolk, Virginia; and Grand Haven, Michigan -- emerged as exciting examples of how other municipalities are thinking about integrating resilience into their comprehensive plans. For example, Portland’s Vision 2035 Comprehensive Plan has a well-articulated resilience approach defined by adaptability to natural and human-made disasters, climate change, and economic shifts as well as a clear set of prioritized risks including floods, landslides, extreme heat, and economic and energy shocks. In this plan, resilience was used as a guiding principle and cut across the plan’s policies and strategies, a concept that was ultimately applied to the current BVCP resilience integration process and recommended for the Plan’s update.

City of Portland, OR Vision 2035 Comprehensive Plan

Population: 619,400



Resilience Approach

- Define as adaptability to natural, human-made disasters, climate change, and economic shifts
- Prioritize risks as floods and landslides, earthquake, climate change, extreme heat, and economic and energy shocks

Integrating Resilience in the Plan

- Resilience is one of five “Guiding Principles” of the Plan (Economic Prosperity, Human Health, Environmental Health, Equity, Resilience)
- Resilience used to frame and prioritize at-risk geographies
- Frames investments and policies as risk reducing and community building

Resilience Goals

- Support compact centers and corridors
- Develop City Greenways and Urban Habitat Corridors
- Expand living-wage employment opportunities
- Invest in infrastructure in under-represented and under-served communities

Figure 3. Case Study: City of Portland, Oregon, Vision 2035 Comprehensive Plan

Working Group Meetings

The results of the BVCP survey and focus groups, and excerpts from the Boulder PRA were presented at the BVCP Working Group kick off in January 2016 ([Appendix C](#)). Working Group members represent a wide range of disciplines as well as City and County departments and provided technical knowledge and thought leadership throughout the process.

At a follow up work session in February 2016 ([Appendix D](#)), the Working Group reconvened to brainstorm key Plan topic areas and their relationship to Boulder’s risks. This interactive meeting generated ideas around the interconnectivity of topic areas, key issues that emerge during a shock, and the vulnerable populations and infrastructure that would most be impacted by a disruptive event or chronic stress. Working Group members brainstormed- the impacts of a hypothetical shock (e.g. an earthquake) across a selection of the City’s systems and the Plan’s topic areas, discussed the vulnerable people and places most at risk (e.g. mountain residents and infrastructure), and generated a list of opportunities to improve the City’s ability to respond to the disruption (e.g. improve availability and access of emergency responders.) During the working session, Working Group members also reached consensus on the alignment of resilience and the City’s Sustainability Framework (Figure 4).

Major outcomes of the working session included alignment on the intersection between resilience and sustainability (Figure 4); a robust list of vulnerable populations and systems (Table 2); and agreement on the key elements of a healthy, stable, and adaptive community (Table 3). Brainstorming a potential shock resulted in a robust conversation and alignment that populations such as low-income residents, mobile home residents, mountain residents, students, homeless, and transient populations face unique and disproportionate challenges not only in the event of a disruption, but also during the recovery phase. Issues such as inhibited communication and information sharing, strength of community and social networks, and capacity to access aid and resources emerged as key issues for vulnerable populations and directly inform ways that the BVCP can become more responsive to the needs of the most vulnerable. It became clear that strong social networks, public spaces, robust infrastructure networks, economic diversity, regional connectivity and coordination, and transparent and streamlined governance were some of the key elements needed to support Boulder and its

most vulnerable residents and systems. These themes brought into focus some of the resilience priorities for the BVCP and the need for Boulder’s systems to be agile and adaptable not only in times of emergency, but also during daily activities.

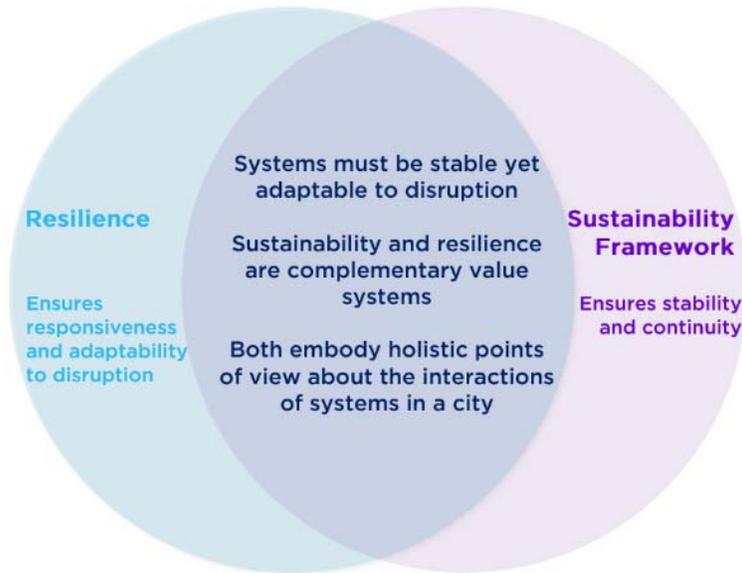


Figure 4. BVCP Working Group Session Output – Resilience and the Sustainability Framework

Vulnerable Populations	Vulnerable Systems
Low income people	Business community (e.g. small businesses, start-ups, in home businesses)
Mobile home residents	Infrastructure (e.g. roadways, water, sewer, power)
Elderly	
Homeless and transient populations	
Mountain residents	
Students	

Table 2. BVCP Working Group Session Output – Vulnerable Populations and Places

Key Elements of a Healthy, Stable, and Adaptive Community
Strong social networks
Public spaces
Infrastructure
Economic diversity
Regional connectivity
Good governance

Table 3. BVCP Working Group Session Output – “Key Elements of a Healthy, Stable, and Adaptive Community”

Ultimately, the BVCP Working Group and PH&S agreed that an overhaul of the existing topic area structure was not immediately necessary to the resilience integration process. However, resilience, governance and engagement, as well as safety and preparedness emerged as three new additions to the “Topic Area Approach” of the BVCP. Recognizing that there may still be opportunity to modify the topic areas, and the need for resilience and governance to cross-cut all of the topic areas, the following represents the topic area approach that was referenced and refined throughout the BVCP Resilience Integration Process:

- Built Environment
- Natural Environment
- Energy and Climate
- Economy
- Transportation
- Housing
- Community Well-being
- Agriculture and Food
- Resilience (*new*)
- Governance and Engagement (*new*)
- Safety and Preparedness (*new*)

Step 2. Topic Area Systems Analysis

The Comprehensive Plan is one document in a series of tools, including other policies and plans, which the City can leverage to advance its resilience goals. Integrating resilience into the BVCP starts with examining the relationships between topic areas and considering a systems-based approach to planning, analysis, and policy development. As an example, a systems-based approach to transportation and flooding may need to consider access of emergency responders living outside of Boulder, redundant infrastructure, and business continuity planning.

Building off of the Working Group session, HR&A developed a methodology to assess the BVCP’s responsiveness to Boulder’s risks. The City Resilience Framework (CRF), developed by Arup with support from the Rockefeller Foundation, provides a lens to understand the complexity of cities and the drivers that contribute to their resilience, and a common language that enables cities to share knowledge and experiences (Appendix B). As such, it is a useful tool to evaluate the current comprehensive plan. The CRF is built on four essential dimensions of urban resilience: Health and Wellbeing; Economy and Society; Infrastructure and Environment; and Leadership and Strategy. Each dimension contains three “drivers,” which reflect the actions cities can take to improve their resilience. This analysis mapped the 2010 BVCP chapters/topics, and the City’s priority risks against the “drivers” of resilience to identify specific measures or actions most necessary to support Boulder in the event of a disruption (e.g. redundant and diverse infrastructure is needed to support transportation in the event of a flood). A set of “sub-drivers” emerged as most needed to support Boulder in light of its risks, which provided an additional consideration to help identify resilience priorities in the context of the BVCP (Appendix E).

Step 3. Identify Key Resilience Themes

Building off the systems analysis, the outcomes of the working session, the results of the community survey, and the Boulder PRA, seven key resilience themes were identified as priorities for the BVCP to address (see Figure 5, Appendix F). These themes serve as the framework for evaluating and conceptualizing new or ongoing BVCP policies that ultimately cut across the Plan’s topic areas and departments to address risk (e.g. transportation policies may address issues such as emergency response, regional economic connectivity, and risk mitigation.)



Figure 5. Key Resilience Themes for the BVCP

One way of articulating these themes is through an effective vision statement and framing of resilience as a guiding principle in the plan. Again, the Portland Vision 2035 Plan provides a comparable example of how to incorporate resilience as a guiding principle of a plan.

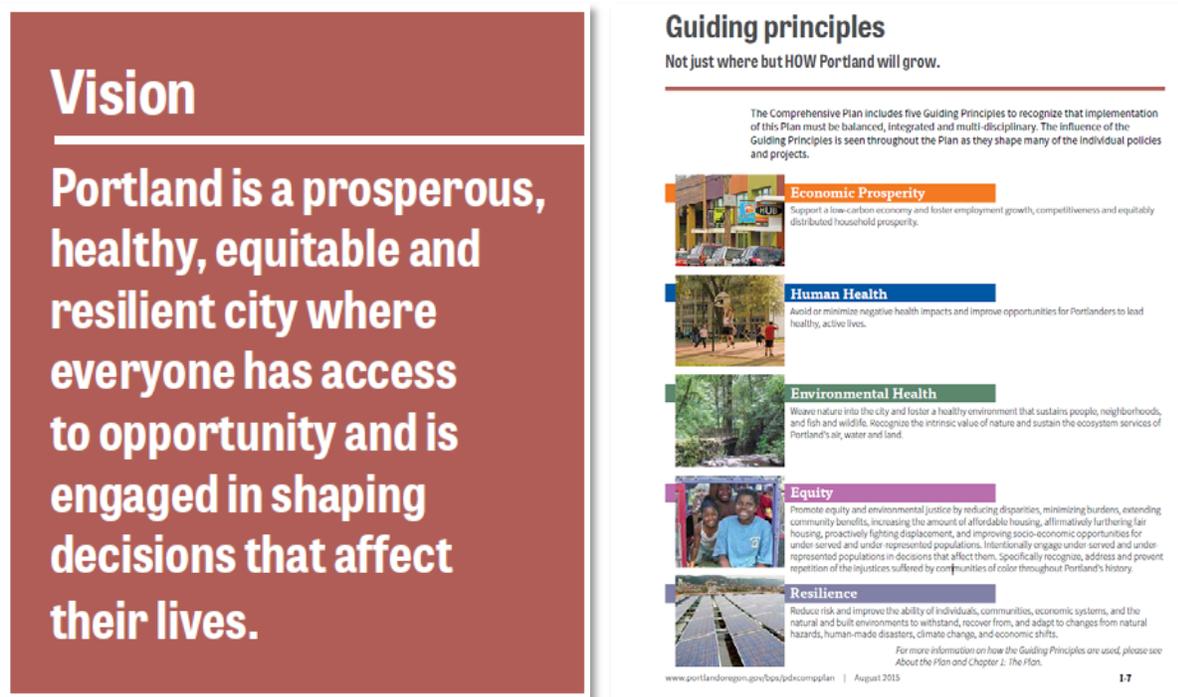


Figure 6. Excerpts from “Vision for 2035: Portland”

Step 4. Develop Recommendations

Resilient programs, policies, and initiatives address risk in a holistic way, target vulnerable populations and infrastructure, and result in coordinated actions. To that end, the proposed recommendations that emerge from this process are intended to cut across departments, issues, and stakeholders. To help identify specific future recommendations, HR&A conducted a thorough review of the existing policies and strategies outlined in the 2010 BVCP, and identified policies by chapter/topic area that exhibited resilient qualities as well as those that lacked a resilient approach. Resilient policies were also identified through a case study research of other comprehensive plans to demonstrate a specific, model approach. HR&A also conducted one-on-one interviews with a selection of Working Group members to identify existing resilient plans that should be considered and to assess potential resilient policies that could be reflected in the BVCP update. These interviews surfaced existing and planned policies and strategies of City departments, identified specific opportunities for agency collaboration, and developed potential new policies that the BVCP could highlight or advance.

VI. Next Steps: Creating a More Resilient BVCP

In order to continue resilience integration and institute a holistic approach to the BVCP update, PH&S and the City should continue to build on and refine these recommendations with the input and feedback of partners from City of Boulder departments, County of Boulder representatives, and public and private stakeholders. The following next steps can help PH&S and the City advance the resilience integration process and content development:

1. **Frame resilience as a guiding principle of the BVCP and convey a clear vision for resilience within the Plan as part of other high level themes related to the city’s vision.** A well-articulated vision statement can drive the direction of the Plan, demonstrate consensus among stakeholders engaged in the BVCP update, and establish resilience as a priority for the Plan. The Plan should define resilience as a responsiveness to risk and potential disruption, a systems-based approach to policy, and a collaborative approach to community engagement and planning.
2. **Identify the potential policies and directions outlined in this report that are most resonant.** A long list of possible themes and actions have been identified in this document based on feedback from PH&S, Working Group members, and the CRO, as well as review of comparable comprehensive plans. As a next step, this list should be refined and edited to be considered for inclusion in the Plan update. The priority areas and potential actions should be tied to key stakeholders and decision makers in the city, county, private, public, and/or institutional sectors who can help refine these strategies.
3. **Prioritize short term and ongoing actions and policies.** Based on the priority areas identified, actions should be prioritized based on their complexity and implementable time frame. Many short term activities are already being considered or are being undertaken by city departments. In some cases, some recommended actions have also been proposed in the Resilient Boulder Strategy document. Actions that already have city buy-in and ownership that also address Boulder’s top risks, such as flooding and wildfires, may be worth advancing in the short term.
4. **Meet with relevant stakeholders with the aim of strengthening existing or creating new policies.** To better articulate and develop strategies around a specific set of topics and issues, relevant stakeholders should be identified and meetings and discussions should be held. An example of a multi-stakeholder, topic-based convening could include community leaders, the Boulder Human Services Department, transportation specialists, and emergency responders to better articulate policies around communications, engagement, and risk preparedness.
5. **Establish measurable targets, goals, and well-articulated implementation strategies for the Plan’s policies.** The most effective policies in the existing Plan are those that establish measurable goals, such as “the City will strive for no net loss of wetlands.” The Plan should articulate the intended outcomes of its policies, present methods to measure these outcomes, and establish a reporting system that tracks policy success through implementation.

Integrating resilience into the Boulder Valley Comprehensive Plan will not only shape the policies and direction of the City, but set the ground work for more robust partnerships, a greater awareness and responsiveness to Boulder’s risks and vulnerabilities, and provide a model for other cities looking to build a more resilient future.

VII. Appendix

- a. Case Study and Best Practices Research
- b. The City Resilience Framework
- c. Working Group Kick Off
- d. Working Session Presentation
- e. BVCP Topic Area Risk and Systems Analysis
- f. Working Group Outputs and Systems Analysis
- g. Policy Gaps and Preliminary Recommendations

Case Studies and Best Practices



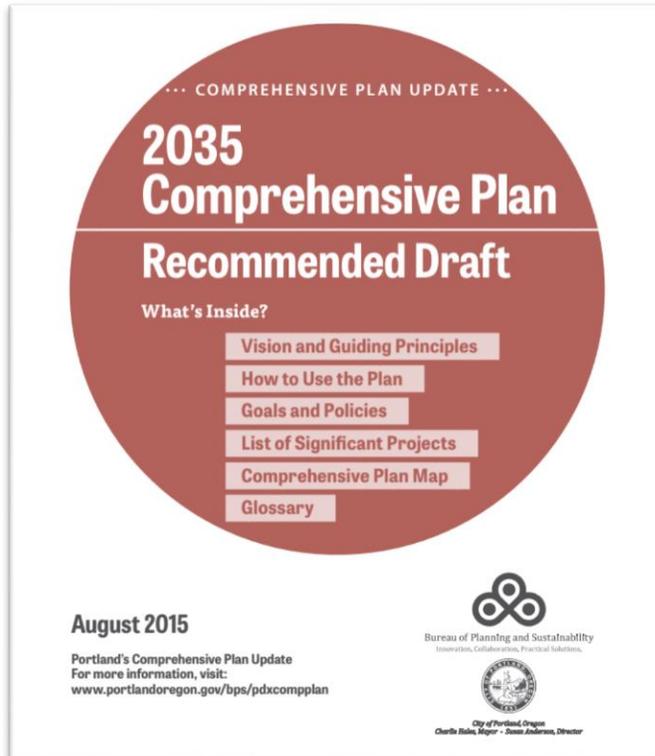
Comp Plan	Vision and Goals	Focus Areas	Engagement Processes	Agency Coordination	Resilience Definition	Implementation/Budget	Tracking	Project Examples
<p>ImagineBoston Boston, MA 2015-Ongoing Pop. 655,900</p>	<ul style="list-style-type: none"> First citywide plan in 50 years will guide neighborhood-based approach to: preserve wisely, enhance equitably, and grow intelligently. Goals: 1. Foster broad public engagement; 2. Guide positive physical change; 3. Support effective governance. 	<p>Nine themes:</p> <ul style="list-style-type: none"> Housing Mobility Environment & Adaptation Parks & Open Space Land Use, Design & Placemaking Prosperity & Equity Health & Safety Arts, Culture & Creativity 	<ul style="list-style-type: none"> Two-year process with six milestones incorporating engagement. Innovation engagement tools include: Textizen text messaging tool, TED-style forums, "City Hall To Go" van, "visioning session" kits. 	<ul style="list-style-type: none"> Process will integrate all current planning initiatives and respective agencies: Go Boston 2030 (transit), Boston Creates (culture), Open Space Plan 2015-2021, Greenovate Boston (climate action), Housing a Changing City, Aging in Boston. As part of effective city governance goal, will create framework to increase effective inter-agency collaboration as well as among neighborhoods and with neighboring cities. 	<ul style="list-style-type: none"> Within "Environment & Adaptation": using natural resources wisely while preparing for climate change. Concurrent Climate Ready Boston and 100 Resilient Cities Boston strategic planning for resiliency likely to inform results. 	<ul style="list-style-type: none"> Major milestones include strategic vision draft summer 2016, final citywide plan summer/fall 2017. Budgeting in progress. 	<ul style="list-style-type: none"> Goal to establish performance indicators for tracking city's achievement of major planning and policy goals. 	<ul style="list-style-type: none"> In progress.
<p>Long Beach Listens Comprehensive Plan Update Long Beach, NY 2015-Ongoing Pop. 33,700</p>	<ul style="list-style-type: none"> Update to 2007 plan that incorporates resilience planning from post-Superstorm Sandy recovery and accelerates transition from recovery to resilience. "Develop a vibrant, resilient, sustainable and green community that protects and enhances safety, health, environment, diversity, culture and economy of current and future residents and guests of Long Beach." Focus on developing planning concepts based on feasibility, resiliency benefits, and economic development potential. 	<ul style="list-style-type: none"> Guiding principles based on resilience and with individual vision statements: Livable built environment Harmony with nature Resilient economy Interwoven equity Healthy community 	<ul style="list-style-type: none"> Public open houses and community charrettes. 	<ul style="list-style-type: none"> Waterfront plan effort will require review and approval by NYS Department of State (DOS), NYS Department of Environmental Conservation, along with federal agencies such as the Army Corps of Engineers. Participation from Sustainable Long Island, New York State Energy Research and Development Authority, DOS, Long Beach economic development and planning departments, City Manager, City Council. 	<ul style="list-style-type: none"> "Ability of the City and its residents to withstand and recover quickly from natural and economic instability with less impact," including integration of social, economic, and environmental actions into policy and projects. "Resilient economy" describes community preparedness for both positive and negative changes in economic health and building reliance on local assets. 	<ul style="list-style-type: none"> In progress. 	<ul style="list-style-type: none"> In progress. 	<ul style="list-style-type: none"> In progress.

Comp Plan	Vision and Goals	Focus Areas	Engagement Processes	Agency Coordination	Resilience Definition	Implementation/Budget	Tracking	Project Examples
<p>OneNYC New York City, NY 2015 Pop. 8.5 million</p>	<ul style="list-style-type: none"> OneNYC envisions New York City in its 5th century and sets goals to ensure that all New Yorkers can thrive in a city that is dynamic, livable, and safe. 	<ul style="list-style-type: none"> Long-term plan focusing on four Visions: Growing Thriving City; Just Equitable City; Sustainable City; Resilient City. Strategies address: income inequality, growing and aging population, evolving economy, workforce development, aging infrastructure and updating transportation networks, effects of climate change and environmental conditions, regional coordination, and civic engagement. 	<ul style="list-style-type: none"> Meetings with issue-based groups, civic/neighborhood organizations, elected officials; Advisory Committee consultation; Online survey (8,000 responses collected) and phone poll; Survey comments cross-walked with proposed goals and initiatives; select comments included in the Plan. 	<ul style="list-style-type: none"> Agency reps assembled in multi-disciplinary working groups around "domains." Included regional partners and leaders. Initiatives designate specific interagency collaborations to carry out implementation. Infrastructure investment and systems updates specifically will require leveraging interagency / intergovernmental collaboration. 	<ul style="list-style-type: none"> One of four visions covers "resiliency," or response to physical risks associated with climate change. Shocks and stresses were considered throughout and addressed within the integrated approach. In addition to physical risk reduction, addresses local capacity-building for social and economic resiliency. 	<ul style="list-style-type: none"> Goals within each vision correspond to initiatives/sub-initiatives. Indicators have target timeframes and designate lead agency and funding status and source. Capital projects designate lead agency. 10-Year Capital Strategy for capital spending to align with funding. Plan advocates for additional state and federal funding. 	<ul style="list-style-type: none"> Annual Progress Reports will track targets and indicators. Provides status/milestones for sustainability and resiliency goals established prior to OneNYC. 	<ul style="list-style-type: none"> Support small business and local commercial corridors in flood-prone neighborhoods to protect against flood risk, enhance connectivity, and improve local infrastructure that provides basic services to businesses. Ensure workforce development is part of all resiliency investments.
<p>Pattern for Progress: City of Kenner Comp Plan Kenner, LA 2015 Pop. 67,000</p>	<ul style="list-style-type: none"> Enhance 2008 land use plan using holistic approach that integrates community resilience planning and adaptability. Vision for livable regional center reversing decline in population and employment through coordinated strategic investments in economic development, neighborhood / housing revitalization, public infrastructure. 	<ul style="list-style-type: none"> Chapters include Planning Framework, Land Use, and Resilience. Four focus areas: <ul style="list-style-type: none"> Housing Economic Development Community and Public Facilities Implementation Strategies "Spotlight on Resilience" call outs included throughout plan. 	<ul style="list-style-type: none"> In addition to community workshops, administered "community image survey" that presented 40 slides of land use/urban design for participants to rate preferences. 	<ul style="list-style-type: none"> Louisiana State Comprehensive Resiliency Pilot Program funding to integrate resilience and comprehensive planning into recent land use planning effort. 	<ul style="list-style-type: none"> "Community resilience" defined as: <ul style="list-style-type: none"> Awareness of and preparedness for potential hazards by ensuring adequate infrastructure pre- and post-disaster; Willingness and ability to recover from disaster by identifying and reducing vulnerability to disasters over long-term; Being proactive for disaster preparedness and recovery. Plan refers to global economy, pandemic diseases, terrorism, industrial accidents, and natural disasters. 	<ul style="list-style-type: none"> No implementation guidance or budget figures included. 	<ul style="list-style-type: none"> Annual monitoring report by Planning Department to ensure land use development remains consistent with plan vision, goals, and objectives, including three to five year large scale review in relation to major demographic and economic shifts. 	<ul style="list-style-type: none"> Four resilience-specific recommendations with corresponding policies/actions: <ul style="list-style-type: none"> Hazard Mitigation Plan 2008 integration New resilience initiatives (e.g., critical infrastructure hardening, emergency preparedness education and capacity-building; electrical power infrastructure analysis) Resilience-supportive development patterns (code and flood regulation review) Stormwater management upgrades.
<p>PlaNorfolk2030 Norfolk, VA 2013/2014 Pop. 245,400</p>	<ul style="list-style-type: none"> Updated vision for Norfolk's development over the next 20 years as part of major update to 1992 General Plan of Norfolk. New focus on community involvement and engagement in decision making; technology and communications advancements for citizen involvement; environmental challenges such as flooding and sea level rise; transportation network access; and government efficiency and transparency with respect to city funds and economic challenges. 	<ul style="list-style-type: none"> Land use strategies and discussion of 10 vision components: <ul style="list-style-type: none"> Neighborhoods Transportation Economy Environment Housing Lifelong learning Quality community services Cultural and recreational offerings Heritage preservation Regional cooperation 	<ul style="list-style-type: none"> Six open house meetings producing 425 comments; online forum for discussion; draft plan distribution at all libraries. Engagement as major planning goal outcome for neighborhoods focus category; seeks to identify core group of engaged residents and build capacity for neighborhood-based engagement. Open house meetings, online public discussion forum. Civic outreach to involve traditionally underserved residents, such as youth. 	<ul style="list-style-type: none"> Norfolk City Planning Commission, City Council, and City staff collaboration. Technical advisory team for each plan element involving City staff to draft goals/outcomes tied to actions and metrics. 	<ul style="list-style-type: none"> Environmental challenges and natural hazard events whose potential risks require awareness and preparedness. 	<ul style="list-style-type: none"> Implementation-specific chapter for plan use and amendments including metrics for implementation status and reviews. 	<ul style="list-style-type: none"> Each implementation outcome has very specific metrics, annual updates, and regular review timeline; two-year reviews of implementation progress and metrics resulting in plan revisions; five-year reviews of full plan. 	<ul style="list-style-type: none"> Evaluate impact of potential sea level rise and revise development requirements. Identify areas particularly susceptible to inundation and develop communication strategy to notify residents before and during flood events.

Comp Plan	Vision and Goals	Focus Areas	Engagement Processes	Agency Coordination	Resilience Definition	Implementation/Budget	Tracking	Project Examples
<p>Resilient Michigan: Planning for Resilient Communities 2015-Ongoing</p> <p>Pop. 9.9 million MI; 11,000 Grand Haven</p>	<ul style="list-style-type: none"> Eight individual city master plan updates for statewide land use planning and design project, promoting coastal community planning and adoption of major master plan revisions incorporating resilience. 	<ul style="list-style-type: none"> Community-specific drafts address comprehensive planning. Focus areas also include youth perspective on future, planning for coastal and climate trends, and defining vulnerability in the community. 	<ul style="list-style-type: none"> Public meetings, community / leadership summits, youth charrette. Events sponsored by APA-Michigan chapter, University of Michigan College of Architecture and Urban Planning, Kresge Foundation. 	<ul style="list-style-type: none"> Funding from state agencies (Coastal Zone Management Program, Office of the Great Lakes). Town / city associations (Michigan Townships Association, Michigan Municipal League). Grand Haven City and Township (first-ever collaboration). 	<ul style="list-style-type: none"> Community resilience: measure of community capacity to recover or bounce back from or adjust to adversity / change; climate variance; extreme weather events, global economic challenges; social cohesion. Resilience as adaptive capacity; resiliency planning as vulnerability assessment and hazard sensitivity / exposure reduction. 	<ul style="list-style-type: none"> Goals and objectives chapter estimates timeframes for implementation of each recommended project. Chapter dedicated to implementation strategies for near- and midterm zoning amendments and six sub area plans including resources required including labor; no budgeting specified. 	<ul style="list-style-type: none"> In progress. 	<ul style="list-style-type: none"> Six sub-area plans completed or in process.
<p>Vision for 2035 Comp Plan Portland, OR 2014/2015</p> <p>Pop. 619,400</p>	<ul style="list-style-type: none"> Long-range land use development and public infrastructure investment plan (first comprehensive plan update in 35 years). To guide land use decisions, envisions Portland as prosperous, healthy, equitable, resilient, with universal access to opportunity and engagement in decision making. Emphasizes growth-related infrastructure and compact development. Aims to meet needs of 120,000 new households and 140,000 new jobs. 	<ul style="list-style-type: none"> Seven key directions guide plan: <ul style="list-style-type: none"> Complete neighborhoods; Job growth; Low carbon community; Enhanced natural areas and open spaces; Reliable infrastructure for citywide equity; Resiliency; "One size does not fit all" planning and design. 	<ul style="list-style-type: none"> Encourages involvement of and consideration for underserved and underrepresented communities. Investment in education and training for community capacity-building, land use literacy, and agency capacity-building. Online "MapApp" illustrates land use, citywide systems, transportation system, zoning, street design. 	<ul style="list-style-type: none"> Consistency with two regional plans (Regional Transportation Plan and Urban Growth Management Functional Plan) and Metro transportation system. Service coordination agreements: seeks to maintain coordination agreements with local adjoining jurisdictional governments for mutual recognition of urban service boundaries; special service districts; public school districts. 	<ul style="list-style-type: none"> Improved ability of individuals, community, economic systems, natural and built environments to withstand, recover from, and adapt to changes from natural and man-made disasters, climate change, and economic shifts. Reducing vulnerability of neighborhoods, businesses, and built and natural infrastructure to withstand environmental, economic, and social challenges resulting from major hazardous events. Response to climate change and natural disaster impacts through strong local economy and equitable economic opportunities; need for robust resilient regional economy. Resilience encompasses other guiding principles: prosperity, human and environmental health, equity all essential components. Focus on vulnerable populations: focus growth in lower-risk areas; build housing near transit and services; manage open space and stormwater for flood reduction; develop strong and resilient infrastructure and public buildings. 	<ul style="list-style-type: none"> Early Implementation project phase with 2015-2016 implementation schedule. 	<ul style="list-style-type: none"> "Portland Plan" (strategic plan) measures of success will be used for Comp Plan tracking (e.g., includes measure of success for household property as "self-sufficiency index" based on required income for meeting household needs). Establish multimodal performance measures to evaluate and monitor transportation service progress and system performance. Community Involvement Program manual and oversight body will guide and monitor community participation in decision-making. 	<ul style="list-style-type: none"> Grow compact centers and corridors. Invest in infrastructure gaps in under-represented and -served communities. <ul style="list-style-type: none"> Respond to neighborhood differences. Promote schools as multi-use facilities and assets for whole community.

City of Portland, OR Vision 2035 Comprehensive Plan

Population: 619,400



Resilience Approach

- Define as adaptability to natural, human-made disasters, climate change, and economic shifts
- Prioritize risks as floods and landslides, earthquake, climate change, extreme heat, and economic and energy shocks

Integrating Resilience in the Plan

- Resilience is one of five “Guiding Principles” of the Plan (Economic Prosperity, Human Health, Environmental Health, Equity, Resilience)
- Resilience used to frame and prioritize at-risk geographies
- Frames investments and policies as risk reducing and community building

Resilience Goals

- Support compact centers and corridors
- Develop City Greenways and Urban Habitat Corridors
- Expand living-wage employment opportunities
- Invest in infrastructure in under-represented and under-served communities

Incorporating Resilience Solutions

Portland 2035 Comp Plan: Topic Approach

- Create a **coordinated, efficient, and more affordable** multimodal transportation system.
- Make **cost effective investments and system management decisions** that encourage people to choose healthy, active, and low-carbon transportation modes and systems, and **enhance the economic competitiveness** of the region.
- **Reduce service disparities and achieve equitable access** to all types of facilities and transportation modes.
- **Ensure safety** for users of all transportation modes, **with attention to the most vulnerable** road users.
- **Guide the location and design** of new street infrastructure.
- Direct how and when transportation infrastructure is **managed and maintained**.
- Provide policy guidance for developing and **implementing the Transportation System Plan**

Incorporating Resilience Solutions

Portland 2035 Comp Plan: Goal Setting Framework

Goals are long-term outcomes the City hopes to achieve by implementing the Comprehensive Plan. They are aspirational, expressing Portland residents' collective desires and values.

- Safety
- Multiple goals
- Great places
- Environmentally sustainable
- Equitable transportation
- Positive health outcomes
- Opportunities for prosperity
- Cost effectiveness
- Airport Futures

Incorporating Resilience Solutions

Portland 2035 Comp Plan: Approach to Solutions

Policies set preferred direction and describe what must be done to achieve these broad goals. They are specific enough to help determine whether a proposed project or program would advance the values expressed in the goals.

- Designing and planning
- Land use, development, and placemaking
- Streets as public spaces
- Modal policies
- System management
- Parking management
- Finance, programs, and coordination

Incorporating Resilience Solutions

Portland 2035 Comp Plan: Sample Solutions

Streets as Public Spaces

Streets, including sidewalks and planting strips, provide critical transportation and utility function. In Portland, streets are the most abundant type of public space, occupying nearly 20 percent of land area in the city. The following policies support community desire to expand the use of streets beyond their transportation functions.

Policy 9.14 Streets for Transportation and Public Spaces

Integrate both the place making and transportation functions when designing and managing streets by encouraging design, development, and operation of streets to enhance opportunities for them to serve as places for community interaction, environmental function, open space, recreation, and other community purposes.

Policy 9.15 Repurposing Street Space

Encourage repurposing street segments that are not critical for transportation connectivity to other community purposes.

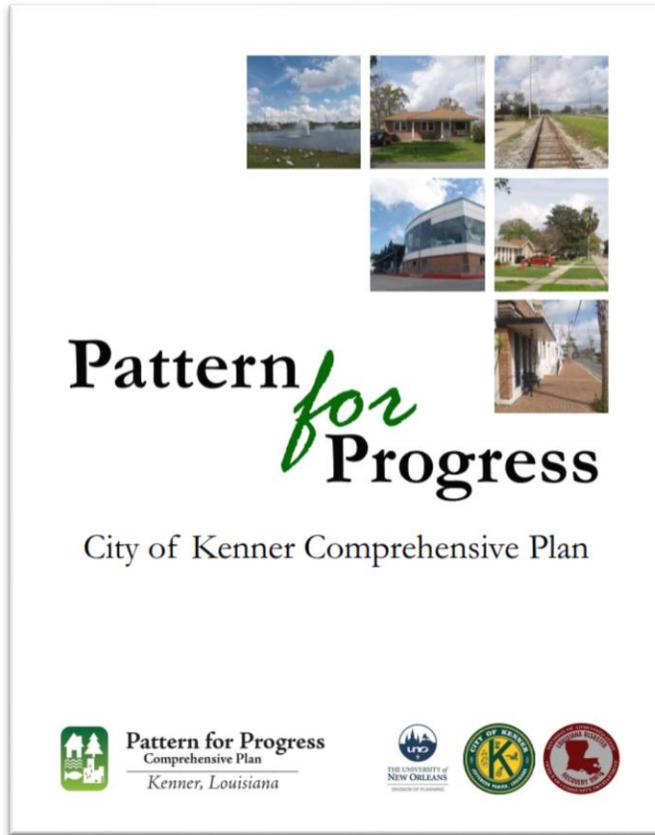
Policy 9.16 Design with Nature

Promote street alignments and designs that respond to topography and natural features, when feasible, and protect streams, habitat and native trees.

City of Kenner, Louisiana

Pattern for Progress Comprehensive Plan

Population: 67,000



Resilience Approach

- Build awareness and preparedness of hazards, disasters and recovery
- Address ability to recover from disasters by identifying and reducing vulnerability
- Defined by a vision for quality of life, economic development, and cultural preservation

Integrating Resilience in the Plan

- Resilience is one of five “Elements” (chapters) of the Plan (e.g. Land use, Housing etc.)
- “Spotlight on Resilience” call out boxes highlight chapter concepts throughout plan
- Land Use Goals are organized by Resilience, Urban Design and Transportation
- Specific set of Resilience Goals and Policy Objectives

Resilience Goals

- Reduce and eliminate impacts of hazards
- Identify and pursue prevention of hazards
- Harden infrastructure
- Enhance awareness
- Identify recovery funds and resources for future aid

Grand Haven, Michigan

Resilient Michigan Master Plan

Population: 10,412

RESILIENT GRAND HAVEN

City of Grand Haven 2015 Master Plan



Resilience Approach

- Integrate hazard mitigation, climate adaptation, community capacity and equity
- Builds off extensive community outreach process

Integrating Resilience in the Plan

- Cross-cut the Plan and frame with specific recommendations
- Upfront framing of Resiliency as a “Guiding Principle” of the Plan
- “Building a Resilient Future” an incorporates Placemaking, Coastal Resilience, Vulnerability, and Youth
- Plan organizes 21 Goals by Housing and Neighborhoods, Transportation and Connectivity, Employment and Economy, Natural Features and the Environment, Infrastructure and Governance, and Resiliency

Resilience Goals

- Education and resilience awareness
- Disaster preparedness
- Food availability
- Active and healthy living
- Environmental protection and preservation

New Orleans, Louisiana

Plan for the 21st Century: New Orleans 2030

Population: 348,000



Resilience Approach

- Comprehensive approach to identifying hazards
- Integrate hazard mitigation with community resilience and adaptability
- Focuses on storm and flood hazards
- Highlights opportunities for regional and inter-agency collaboration

Integrating Resilience in the Plan

- Plan organized by three guiding pillars: Livability, Opportunity, and Sustainability
- “A Resilient City” is defined as “Living with Water and Natural Hazards” as it’s own chapter with a unique set of goals and policies
- Identifies resources to support each resilience goals and assigns ownerships and timelines for each

Resilience Goals

- Raise standards of resilience from flooding, to coastal restoration, to storm water management regulations
- Decrease likelihood of evacuations to address new development hazard resistance, secure additional funding to mitigation, and updates to the HMP

2010 BVCP Resilience Assessment



Economy | Case Examples

Norfolk 2030 Comprehensive Plan

- Improving public infrastructure and promoting available grant funding for aesthetic improvements of commercial properties;
- Providing technical assistance to businesses by guiding them through city processes, hosting education and training workshops on how to start or expand a business, and coordinating financial options;
- Evaluating the impact of city processes on doing business, including zoning, and modifying where appropriate to support business investment;
- Coordinating long range planning with universities and medical institutions to attract spinoff investment in research and development and provide opportunities for training.

Portland Vision 2035 Comprehensive Plan

- Promoting a high citywide jobs-to-households ratio that supports tax revenue growth at pace with residential demand for municipal services;
- Aligning plans and investments with efforts to improve energy efficiency and reduce lifecycle carbon emissions from business operations;
- Promoting employment opportunities associated with energy efficiency projects, waste reduction, production of more durable foods, and recycling;
- Conserving and enhancing Portland's cultural, historic, recreational, educational, food-related, and ecosystems assets and services for their contribution to the local economy and their importance for retention and attraction of skilled workers and businesses;

Resilient Grand Haven Master Plan

- Developing a “new business relocation guide” to assist new businesses with the permitting process to legally occupy and operate in the City;
- Evaluating and implementing a streamlined permitting and approval process for job generating economic development projects;

2010 BVCP Resilience Assessment



Transportation| Case Examples

Portland Vision 2035 Comprehensive Plan

- **Adopting geographically-specific policies in the Transportation System Plan**, to ensure that transportation infrastructure reflects the topography, historic character, natural features, economic needs, demographics, and land uses of each area;
- **Improving service** to areas with high concentrations of poverty and historically under-served communities;
- Coordinating land use and transportation plans and programs with other public and private stakeholders to **encourage vehicle technology innovation**, shifts towards elective and other cleaner more energy efficient vehicles and fuels;
- **Maintaining a network of accessible emergency response streets** to facilitate safe and expedient emergency response and evacuation.

Resilient Grand Haven Master Plan

- Developing an implementing trails and pathway designs that **minimize runoff through use of porous surfaces**;
- Establishing a **regional bicycle and pedestrian plan** and coordinating with adjacent communities to create seamless non-motorized connections across municipal boundaries to serve residential, commercial and institutional land uses.

2010 BVCP Resilience Assessment



Housing| Case Examples

Portland Vision 2035 Comprehensive Plan

- **Limit involuntary displacement** of under-served and under-represented people. Use public investments and coordinate with nonprofit housing organizations to mitigate impacts of involuntary displacement;
- **Improve equitable access to transportation, jobs, open spaces, high-quality schools, and supportive services and amenities** in areas with high concentrations of under-served and under-represented populations;
- **Evaluate plans and investments for their impact on household cost**, and consider ways to reduce the combined cost of housing, utilities, and/or transportation. Encourage energy-efficiency investments to reduce overall housing cost;
- **Evaluate plans and investments for potential redevelopment pressure on existing mobile home parks** and impacts on park residents and protect this low-moderate housing option;
- **Encourage site designs and relationships to adjacent developments** that reduce social isolation for groups such as older adults, the disabled, communities of colors, and immigrants.

Resilient Grand Haven Master Plan

- Evaluate the formation of a community development corporation to **offer homeowner assistance and strengthen neighborhoods**;
- **Weatherize** existing housing stock;
- Evaluate the construction/building permitting process to improve, streamline, and clarify. Seek input from building and neighboring communities for standardization.

2010 BVCP Resilience Assessment



Community Well-being | Case Examples

Norfolk 2030 Comprehensive Plan

- Develop a list of improvements to public spaces, including streets, which can **enhance visual character and improve pedestrian environment**;
- Encourage the use of **pattern books and design guidelines**, to achieve a higher level of architectural quality.

Norfolk Resilience Strategy

- **Crowd-sourcing resident asset mapping** to support Vision 2100 with the city's offices of Planning, Neighborhood Development, and Emergency Preparedness;
- Implementing "Bank On Norfolk" to **connect unbanked and underbanked residents to emergency fund accounts** through coordination of volunteers and recruitment of education specialists

Seattle 2035 Comprehensive Plan

- **Supporting access to preventative interventions** at agencies that serve the homeless, mentally ill, and chemically dependent populations;
- Promoting volunteerism and community service among people of all ages and cultures by providing information about opportunities to contribute their time, energy or resources;
- Collaborate with Public Health- Seattle & King County, private hospitals and community health clinics to maximize opportunities under health care coverage for preventative care, behavioral health, and long-term care;
- Support youth-based training opportunities that provide classes, coaching, and the development of skills leading to jobs with livable wages .

2010 BVCP Resilience Assessment



Food and Agriculture | Case Examples

Resilient Grand Haven Master Plan

- Supporting and **promoting convenient access to local food sources** such as roadside stands, edible landscaping, and front yard gardens;
- **Expanding the market for local food sources** in schools and area businesses;
- **Partnering with local restaurants and grocers** to expand and advertise the use of fresh and health foods;
- Researching the viability of **“Urban/Residential/Backyard Farming”** and amending ordinances;
- Establishing regulations to **support development of community gardens**.

Seattle 2035 Comprehensive Plan and other Plans

- Encouraging public and private efforts that support culturally appropriate food opportunities that **meet needs of infants, children, elders, and other vulnerable populations**;
- Considering using City land, including parks and surplus property, to **expand the capacity to grow, process, distribute, and access local foods**
- Passed **“Food System Sustainability and Security Resolution”**;
- Seattle Parks and Recreation implementing **“Good Food” program** in improve heath, support local food system, build community, and increase stewardship.

2010 BVCP Resilience Assessment



Governance and Engagement | Case Examples

Portland Vision 2035 Comprehensive Plan

- Working with district coalitions, neighborhood associations, and business districts to help them **reflect of diversity of people** and institutions they serve
- **Increasing City staff capacity**, tools, and skills to design and implement processes that engage a broad diversity of affected and interested communities;
- Providing meaningful opportunities for individuals and **communities to be involved in inventories, mapping, data analysis, and development of alternatives**;
- **Establishing clear roles, rights, and responsibilities** for participants and decision makers in planning and investment processes;
- **Evaluating and documenting participant demographics** through planning and investment processes to assess whether participant reflects the demographics of affected communities.

Resilient Grand Haven Master Plan

- **Coordinating capital projects** such as street projects with neighborhoods development (i.e. resurfacing street after water/sewer installation);
- **Reviewing Zoning Ordinance** for opportunities to include language to address coastal flooding in cooperation with University of Michigan;
- Coordinating with other area communities in the evaluation and implementation of **joint approaches to service delivery**.

Seattle 2035 Comprehensive Plan

- **Partnering with other governments, school, institutions, and CBOs** to involve people of all backgrounds to meaningfully participate in planning and decision-making;
- **Providing opportunities for, and actively recruiting, diverse representation** on City of Seattle boards, commissions, and advisory committees that contribute to City decision-making;
- **Encouraging use of existing facilities and co-location of services**, including joint use of schools and City and community facilities, to make services available in underserved areas.