

Sustainability Evaluation of St. Vrain Blueprint Plan

August, 2017

On April 12, 2017, a sustainability review of the most recent version of the St. Vrain Blueprint Plan was completed by a team made up of City staff and the consultant that prepared the Blueprint. The review was initiated in response to concerns from members of the community that environmental factors had not been adequately addressed in the plan. The Sustainability Evaluation System (SES) developed by Public Works & Natural Resources (PW& NR) was used for the review. The SES is the tool recommended in the City's Sustainability Plan for evaluating the sustainability aspects of projects. The SES is meant to be used by a multi-disciplinary team, if possible. The team members for the Blueprint review were:

David Bell, Natural Resources Manager (PW&NR)

Dan Wolford, Open Space and Land Program Administrator (PW&NR)

Erin Fosdick, Senior Planner (Planning and Development Services)

Brad Schol, Special Projects Manager (External Services)

Millissa Berry, Project Manager (MIG-Winston)

The review was led and facilitated by Cal Youngberg, Environmental Services Manager and Lisa Knoblauch, Sustainability Coordinator (PW&NR).

The SES is a tool that provides a structured way to address social, environmental, and economic considerations in order to help make more informed and transparent decisions about plans, projects or programs. The SES helps users apply interdisciplinary thinking across sustainability-related topic areas, and consider important questions that might otherwise be overlooked. The SES is intended to be used as early possible in a project so that sustainability can be integrated into decisions from the beginning to avoid having to mitigate a project or decision after the fact.

Many projects, programs and plans can benefit from a sustainability analysis. Using the SES to evaluate the St. Vrain Blueprint plan is appropriate because of the scale and significance of the development proposals in the plan.

The SES is made up of two modules. **Module 1** guides reviewers through sustainability categories and topics to determine which topics are applicable to the project, plan or program under review. **Module 2** lets the review team rate alternatives using the topics in Module 1 that were determined to be applicable.

The categories and topics in the SES are as follows (categories are shown in **bold**):

Best Practices (Organizational)

- Alignment
- Integration
- Partnerships
- Stakeholder engagement

Best Practices (Assets and Infrastructure)

- Adaptability
- Commissioning
- Ongoing monitoring & evaluation
- Long-term maintenance and repair
- Reliability
- Infrastructure Resilience

Best Practices (Financial)

- Debt ratios
- Funding of capital costs
- Operations & Maintenance (O&M) cost recovery
- Rate impacts

Buildings and Infrastructure

- Accessibility
- Ambient light and noise
- Cultural and historic preservation
- Development footprint
- Floodplain protection
- Heat island effect
- Housing options
- Indoor air quality
- Infill or redevelopment
- Low impact development (LID)
- Public spaces
- Scale and massing
- Site compatibility
- Vegetation
- Wayfinding

Energy

- Alternative fuels
- Energy efficiency
- Renewable energy
- Embodied energy

Transportation

- Bicyclists and pedestrians
- Freight delivery systems
- Level of service

- Parking
- Transit
- Vehicle miles traveled (VMT)

Community and Individual Well-being

- Arts and culture
- Crime and law enforcement
- Diversity and rights
- Education
- Environmental justice
- Food and nutrition
- Hazard mitigation
- Health and human services
- Safety features
- Sense of community

Economic Vitality

- Business development
- Affordable housing
- Jobs
- Local commodities and services
- Economic Resilience

Materials and Waste

- Deconstruction/reuse
- Environmentally responsible materials
- Waste

Natural Environment

- Agricultural lands
- Air quality
- Aquatic habitat
- Climate adaptation
- Ecological connectivity
- Natural floodplains
- Greenhouse gas emissions (GHG)
- Tree Canopy
- Wildlife and habitat

Water Resources

- Irrigation efficiency
- Water conservation
- Water source protection
- Water management

Water Quality

- Watershed health
- Pollution control
- Stormwater management

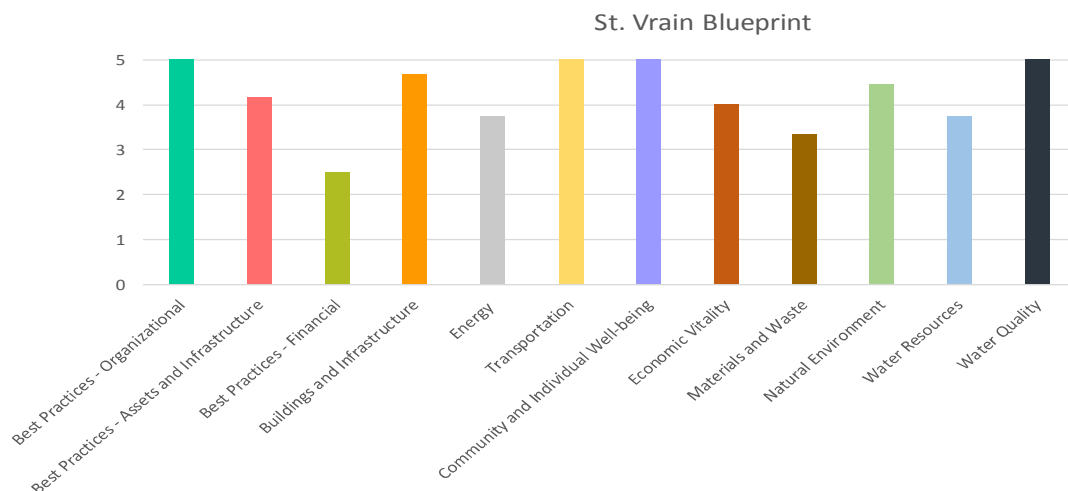
After discussing the categories and topics in Module 1, the review team decided that some of the topics were not applicable to the St. Vrain Blueprint in its current form. Because the Blueprint is a concept plan, it does not specifically define the size and type of buildings that might be result from the plan,

future land use designations and zoning or the effects of the revised floodplain on the area after the flood recovery projects are completed. The financial aspects of the plan are also very preliminary. As a result of these uncertainties and a subsequent discussion with the Special Projects Manager, we decided that Module 2 of the SES could not be used because the plan is not at the stage of implementation where many of the topics could be rated. Module 2 is also oriented to evaluating alternatives and the Blueprint plan does not include alternative scenarios.

However, the categories and topics in Module 1 can be used as a guide to help make more sustainable decisions or guide future sustainability evaluations as development occurs. Module 1 also supports the goals and policies in the Envision Longmont plan. The results for the team ratings of Module 1 are shown graphically below. These indicate the relative importance of the categories on a scale of 1 (lowest) to 5 (highest). The scores are based on the number of topics in each category that were considered to be applicable. Financial best practices were rated the lowest primarily because the plan does not include enough information about financial and rate impacts to rate all of the topics. This does not mean that the financial best practices or the other lower-rated categories are unimportant, or that higher-rated categories are perfect. There were comments from the review team in many of the categories that should be addressed in the Blueprint. The plan can be amended to include language or suggest actions that would improve the sustainability of any public projects or private development that would result from implementing the plan.

Module 1 Results:

| | Raw Score |
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| Best Practices - Organizational | 5.0 |
| Best Practices - Assets and Infrastructure | 4.2 |
| Best Practices - Financial | 2.5 |
| Buildings and Infrastructure | 4.7 |
| Energy | 3.8 |
| Transportation | 5.0 |
| Community and Individual Well-being | 5.0 |
| Economic Vitality | 4.0 |
| Materials and Waste | 3.3 |
| Natural Environment | 4.4 |
| Water Resources | 3.8 |
| Water Quality | 5.0 |
| Total (Out of 5) | 4.2 |



Sustainability Recommendations

Detailed comments from the review team and from subsequent follow-up discussions are contained in the Appendix to this report. Those comments were considered when developing the following recommendations for adding language to the plan that would help any development resulting from the implementation of the plan to be more sustainable. The recommendations are listed in the applicable SES categories.

| Sustainability Category | Recommendations to Improve Sustainability of the St. Vrain Blueprint Plan |
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| Best Practices – Financial | <ol style="list-style-type: none"> 1. The plan should list the types of information that will be needed to review the financial impacts of development in the Blueprint planning area and recommend appropriate changes to development review requirements. As proposals related to the plan come forward for City review, more detailed financial information is needed, especially with respect to the public investment and public debt financing that would be needed to realize the plan. 2. The plan should list the categories of O&M costs for maintaining the infrastructure and features related to proposed development and recommend any changes to development review requirements so that an analysis of rate and fee impacts can be done during development review. |
| Best Practices - Infrastructure | <ol style="list-style-type: none"> 1. The plan should include a recommendation that specifications for any public buildings in the Blueprint planning area include commissioning requirements, especially for energy efficiency, lighting, HVAC, indoor air quality, etc. 2. The plan should include a recommendation for the City to establish a long-term monitoring program for infrastructure improvements in the Blueprint area, including streets, drainage and electric service. |
| Buildings and Infrastructure | <ol style="list-style-type: none"> 1. The plan should recommend that the City create, adopt and apply sustainability standards for evaluating development and land use proposals, as recommended in the Sustainability Plan. Sustainability-related requirements that are already in the City’s land use code can be consolidated and combined with other criteria to create guidance for development review. 2. The plan should reflect the status of the RSVP project by noting that development proposals in the Blueprint area that are in proximity to the identified floodplain should be deferred until the RSVP project is complete. 3. The plan should recommend that the City define the public space requirements for the Blueprint area before development occurs. |
| Community and Individual Well-Being | <ol style="list-style-type: none"> 1. The plan should identify and make recommendations related to any opportunities presented by the Blueprint to enhance diversity and individual rights or reduce discrimination. Examples include zoning and land use designations that favor small and disadvantaged businesses, a mix of housing types that are available to all income levels and encouraging inclusive and non-discriminatory housing policies. 2. The plan should include a preliminary proposal for the mix of businesses in the Blueprint area that would improve access to healthy and affordable |

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| | <p>food.</p> <ol style="list-style-type: none"> 3. The plan should recommend any changes to the City’s review process that would ensure that the members of the community whose quality of life or exposure to pollution may be impacted by increases in density proposed for the Blueprint area are involved in the process for making decisions about development. 4. The plan should recommend continuation of or changes to land use or transportation features that would improve access to or availability of health and human services. 5. The plan should suggest that the City clarify its policies regarding displacement of disadvantaged populations and support for/availability of affordable housing and discuss how, or if, the policies would affect development in the Blueprint area. |
| Energy | <ol style="list-style-type: none"> 1. In order to promote sustainable energy practices in the Blueprint planning area, the plan should recommend that the City adopt changes to the International Energy Conservation Codes as soon as possible after they are available. 2. The plan should reference the City’s energy efficiency goals and recommend that the City clarify its energy policies, including compliance with new code requirements, for both existing and new development.. |
| Economic Vitality | <ol style="list-style-type: none"> 1. See comment 5 in Community and Individual Well Being, above. 2. The plan should include a recommendation that the City’s economic development effort encourage a diverse and viable mix of businesses in the Blueprint area. 3. The plan should recommend any changes that are needed to the City’s economic development policies to encourage and support local businesses in the Blueprint planning area.\ 4. The plan should include some discussion of the City’s affordable housing goals and policies and how those might be reflected in development of the Blueprint planning area. |
| Materials and Waste | <ol style="list-style-type: none"> 1. The plan should recommend goals for waste diversion, materials reuse and use of renewable resources and environmentally responsible materials in the construction of development in the Blueprint area and identify any associated code or standards changes needed to realize the goals. 2. The plan should recommend that the City develop guidance or standards for waste diversion and recycling features to include in the Blueprint area as development occurs. |
| Natural Environment | <ol style="list-style-type: none"> 1. Although the natural floodplain in the Blueprint corridor is small, the plan should point out any additional enhancements and protections that could be completed in conjunction with the RSVP project and any applicable code or standards changes that might be needed, including changes to the process for granting variances to riparian setbacks that would better protect and maintain riparian areas. 2. The plan should recommend that the City adopt and apply energy-related development standards or current national codes that would reduce GHG emissions. See the recommendations for energy efficiency and renewable energy in the Energy category. 3. The plan should recommend that the City include specific considerations |

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| | <p>for wildlife and habitat and habitat protection and enhancement in the development review process.</p> <p>4. The plan should note that air quality impacts be part of the development review process.</p> |
| Transportation | <p>1. The plan should recommend that delivery corridors and systems within the Blueprint area be designed to provide for efficient delivery of materials and minimize congestion.</p> |
| Water Quality | <p>2. The plan should include a description and/or map of the proposed water quality features in the RSVP project for St. Vrain Creek in the Blueprint planning area and adapt the land use and development in the Blueprint plan to protect those features.</p> <p>3. The plan should recommend that the City develop and implement a long-term water quality monitoring program for St. Vrain Creek in the Blueprint planning area to assess the effects of development and land use changes in the corridor..</p> |

In addition to the specific recommendations in the above table, it is also recommend that the Sustainability Evaluation System be used to review public projects in the Blueprint area to help identify what could be added to the projects or how features of the projects could be modified or improved to enhance their sustainability. Public Works & Natural Resources staff has already had internal discussions to determine which Department projects would benefit from an SES review and at what point in a project’s planning and design schedule a review should be done. This same process could be used to identify the publicly funded projects resulting from the Blueprint plan that would be candidates for an SES review. The best time for an initial SES review is when a project is at a point in the planning or pre-design stage where some cost estimates have been done and/or there are still some decisions to be made about alternatives or optional approaches to the project.

APPENDIX: Summary of review comments for SES criteria and topics

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The following comments and observations are from the SES review done by the team and subsequent discussions with City staff.

Best Practices – Assets and Infrastructure

| TOPIC | COMMENTS AND OBSERVATIONS |
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| Adaptability | This topic was determined to not be applicable because adaptability to future conditions will be determined by the actual types of development that occurs in the Blueprint area. |
| Commissioning | This may be applicable to specific buildings or infrastructure but not to the project as a whole. |
| Ongoing monitoring & evaluation | For the purposes of the review, this topic was considered to be monitoring and evaluation of the public improvements associated with the plan as it is implemented. |
| Long-term maintenance and repair | Maintenance requirements and costs will depend on the type of development that occurs. Ongoing maintenance by private parties or the City will be required regardless of what portions of the plan are implemented. |
| Reliability | Reliability of infrastructure depends on the resultant impact of the plan’s implementation on the stream corridor and floodplain. |
| Infrastructure Resilience | Resilience in the Blueprint area is primarily related to the proximity of development to the floodplain. |

Best Practices – Financial

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| Debt ratios: | The financial aspects of the proposals in the Blueprint plan are very preliminary and speculative and the actual financial benefits or costs will depend on the types of development that occur. |
| Funding of Capital Costs | See above comments and recommendations under Debt Ratios. |
| O&M Cost Recovery | See recommendations in SES review summary. |
| Rate impacts | See recommendations in SES review summary. |

Buildings and Infrastructure

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| Accessibility | The Blueprint plan does not specifically address this topic. Accessibility will be affected by the actual type and scale of development that occurs in the area. |
| Ambient light and noise | See recommendations in SES review summary. |

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| Cultural and historic preservation | There are no cultural or historic features in the Blueprint area. |
| Development footprint | See above comments and recommendation under Accessibility. |
| Floodplain protection | The RSVP project will provide a degree of floodplain protection to buildings and infrastructure in the Blueprint area, but the full level of protection will not be realized until the RSVP project is done. |
| Heat island effect | See recommendations in SES review summary. |
| Housing options | The plan does not address this. The housing options in the Blueprint area would be determined by City policies. |
| Indoor air quality | This would be applicable to specific buildings and is generally covered by current buildings codes. |
| Infill or redevelopment | The Blueprint plan proposes some land use changes related to infill and redevelopment, but does not address redevelopment effects on ecosystems or ecosystem services in the Blueprint area. |
| Low impact development (LID) | See recommendations in SES review summary. |
| Public spaces | Some public spaces and public uses are included in the plan. The number, size and type will depend on the actual development that occurs. Current code requirements apply but any additional public space requirements will depend on City policy. |
| Scale and massing | See above comments under Accessibility |
| Site compatibility | See recommendations in SES review summary. |
| Vegetation | See recommendations in SES review summary. |
| Wayfinding | See recommendations in SES review summary. |

Energy

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| Alternative fuels | This topic is not applicable. There is a possibility of using alternative fuels during construction but the plan does not address construction activity. |
| Energy Efficiency | This topic is not applicable. Efficiency standards for development are covered by existing building codes. |
| Renewable Energy | Opportunities for renewable energy exist for development in the Blueprint area, but there are no specific City requirements. |
| Embodied energy | This topic is not applicable. There is very little infrastructure in the current project area so opportunities to conserve embodied are minimal. |

Community and Individual Well-being

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| Arts and culture | The plan does not address this topic. Funds for public art will be provided by the City's 1% from capital improvement projects that are constructed in the Blueprint planning area. |
| Crime and law enforcement | The plan does not address this topic. Lighting in the Blueprint corridor may be affected by wildlife considerations; CPTED concerns are a City-wide issue and would be considered when development occurs. |
| Diversity and rights | The plan does not address this topic. If the City has stated goals for respecting diversity and human rights, the Blueprint needs to reflect those concepts in the urban design and land uses. |
| Education | The plan does not address this topic. There are opportunities as the area develops to provide public education about St. Vrain Creek, Longmont's history, features of the area, etc. |
| Environmental justice | The plan does not address this topic. The increases in urban density proposed in the plan could result in increased pollution levels and have an effect on quality of life both inside and outside of the Blueprint area.. |
| Food and nutrition | The plan does not address this topic. There are opportunities for incorporating urban agriculture, farmers markets, etc. in the plan, but these will be determined by final land use/business mix and zoning. |
| Hazard mitigation | This topic is not applicable to the plan, but is addressed by the Resilient St. Vrain project. The primary hazard potential in the Blueprint area is related to the floodplain and the Resilient St. Vrain Project will minimize flood-related hazards. Development in the Blueprint planning area will have to conform to the flood mitigation being constructed as part of the Resilient St. Vrain project. See recommendations in SES review summary. |
| Health and human services | The plan does not address this topic. Possibilities for access to these services exist but depend on eventual zoning or land use changes resulting from implementation of the plan. |
| Safety features | This topic is not applicable because it is addressed by existing design and development code standards. Development in the Blueprint planning area will have to meet these standards. |
| Sense of community | The plan does not address this topic. There are opportunities to enhance the sense of community with appropriate design & features that will be determined by the type of development that occurs. There is an opportunity for the City to encourage or require community-oriented design in the Blueprint area. |

Economic Vitality

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| Business development | This topic could not be evaluated because actual economic impacts of the concepts in the plan are speculative and still to be determined. |
| Affordable housing | The plan does not address this topic, although the proposed development concepts in the plan could either increase or decrease the availability of affordable housing. The amount and |

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| | location of any affordable housing in the Blueprint area (and in other areas of the City) depends on City policies. |
| Jobs | The plan does not address this topic. Jobs would be created during construction. The number and type of longer-term jobs depend on the type of resultant development. |
| Economic resilience | The financial projections in the plan are tied to assumed increases in property values. Economic resilience will be determined by the mix of businesses and the actual levels of employment and revenues that are realized as development occurs. |
| Local commodities and services | The plan does not contain details related to this topic. The ability to utilize local goods and services will depend on the land use and business mix in the plan area. |

Natural Environment

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| Agricultural lands | This topic is not applicable, because there is no agricultural land in the plan area. |
| Air quality | The plan does not address this topic. Air quality may be affected by increased energy use and additional traffic associated with development but the overall impact is unknown |
| Aquatic habitat | The plan does not address this topic. Habitat improvements are being implemented in the creek corridor as part of the Resilient St. Vrain flood remediation project. |
| Climate adaptation | The plan does not address this topic. The Resilient St. Vrain Project provides some protection from extreme flooding events that could increase in frequency due to climate change. |
| Ecological connectivity | The plan does not address this topic. The Resilient St. Vrain Project will include wildlife corridors and ecosystem connectivity to the extent possible. Development resulting from the Blueprint will have to accommodate those features. |
| Natural floodplains | The plan does not address this topic. The floodplain through the Blueprint planning area will be managed through constructed features; there are few opportunities for preservation or enhancement of natural floodplains because of existing development. |
| Greenhouse gas emissions (GHG) | The plan does not address this topic. Building codes should result in a minimization of GHG emissions associated with any buildings in the Blueprint planning area. Emissions from transportation will depend on the ultimate land uses in the area. |
| Tree Canopy | The plan does not address this topic. The City's landscaping requirements will apply to development in the Blueprint area and meet established canopy and coverage goals. |
| Wildlife and habitat | The plan does not address this topic. The urbanization already existing in the Blueprint area reduces the opportunities for supporting or enhancing wildlife and habitat but these factors should be considered in the development review process as development occurs. |

Materials and Waste

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| Deconstruction/reuse | The plan does not address this topic. The Sustainability Plan has a strategy for developing guidelines or standards by 2020 for City-funded improvements and projects. |
| Environmentally responsible materials | The plan does not address this topic. Standards for use of environmentally responsible materials will be part of the guidelines or standards referenced in the previous topic. |
| Waste | The plan does not address this topic. Management and production of waste will depend on the nature and type of development that results from the Blueprint plan. |

Transportation

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| Bicyclists and pedestrians | The plan does not address this topic. Bicycle and pedestrian features will be evaluated as development occur and will follow the concepts in the Envision multimodal plan. |
| Freight delivery systems | The plan does not address this topic. Transportation corridors and access to businesses should be designed for efficiency of freight delivery. See recommendations in SES review summary. |
| Level of service | The plan does not address this topic. The ultimate effect of development in the Blueprint area on level of service will depend on the actual type and density of development that occurs. |
| Parking | City parking requirements will apply; alternatives to parking will depend on alternate transportation options that are available as the Blueprint area is developed. |
| Transit | The plan does not address this topic. Transit options for the Blueprint area are unknown at this time and will be reviewed for any development proposals. |
| Vehicle miles traveled (VMT) | The plan does not address this topic. Any effect on VMT will depend on the level and type of development resulting from implementation of the Blueprint plan. |

Water Resources

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| Irrigation efficiency | The plan does not address this topic. Irrigation needs will be determined by the type of development resulting from the Blueprint plan. Water efficiency is already required by existing codes and policies. |
| Water conservation | The plan does not address this topic, but water conservation is addressed by existing City codes and policies. |
| Water source protection | This topic is not applicable. The Blueprint plan has no effect on water supply sources. |
| Water management | This topic is not applicable. The Blueprint plan does not affect water management practices. |

Water Quality

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| Watershed health | Aquatic life and water quality issues are being addressed by the RSVP project in the Blueprint area. |
| Pollution control | The plan does not address this topic. Sediment loadings to the creek and runoff-related pollution could be affected by land use changes proposed in the plan, but mitigation/treatment is required by State and local stormwater regulations. |
| Stormwater management | See above comments. |