

Appendix 1: Project Scope and Process

A. Scope

The CBCN conducted this Project in the face of rapid population growth and urban expansion throughout the Denver Metropolitan area and within the greater Chatfield Basin. The Project first involved a broad scale evaluation of watershed issues. The study then focused on the northwestern corner of Douglas County to more effectively and efficiently use resources. This sub-region within the Chatfield Basin was chosen as the study area because it is the next likely area to develop.

The study area consists of the region north of Highway 67, east of Highway 85 to the eastern edges of Cherokee Ranch, Daniels Park and the Backcountry Wilderness, north to the Douglas County line, and west to the South Platte River. While the study area represents a distinct area within the Chatfield Basin, the analysis, concepts and principles developed through this effort can be applied throughout the greater Basin and used as a model in other parts of the arid West.

B. Process

To lead the Project, CBCN engaged Paul Hellmund, the President of the Conway School of Landscape Design in Conway, Massachusetts, the previous CBCN Coordinator, and a Colorado State University professor, and Brooke Fox, a natural resource policy consultant, a prior Chair of CBCN, and prior Director of Open Space and Natural Resources for Douglas County. Hellmund and Fox developed a scope of work adapted from Ecology of Greenways (Hellmund 2006, in press) to:

- Identify elements that make up the system of green infrastructure.
- Inventory resources to identify functions, components, features, critical alignments and indispensable patterns needed to ensure a functioning green infrastructure system.
- Determine potential obstacles and constraints to the identification, establishment, and maintenance of green infrastructure.
- Specify tools, best management practices or other mechanisms to secure areas.
- Secure the places that make up the system of green infrastructure.
- Maintain and manage the system for the benefit of nature and people.

Using a series of questions set in four stages as a guide (see Table 3, pg 50), the CNCB engaged stakeholders and other interested parties collected and analyzed existing and new information, conducted field work, developed case studies and reviewed other relevant green infrastructure examples, and synthesized collected data and information to develop this report. As with other CBCN projects, this process actively engaged and utilized the diverse expertise of CBCN members and other interested professionals. The information garnered from this process was analyzed and consolidated into this report and its accompanying maps and figures.

Stakeholder Meetings and Workshops: The CBCN is made up of people with a substantial expertise in a variety of fields including wildlife biology, ecology, botany, water quality, conservation, recreation, outdoor education, historical resources, land use and much more. The CBCN has historically tapped into this knowledge base to assist in its various projects. This Project continued this practice by engaging CBCN stakeholders as a primary source of knowledge in three large group meetings, numerous team workshops, several one-on-one meetings and a conservation quality assessment in the field. Four assessment teams worked on each element of green infrastructure: water, wildlife and wildlife habitat, recreation, and sense of place (see Section 3 and Appendix 2, pg. 53). Each session was designed to focus on developing answers to the series of questions presented in Table 3, to research and analyze data and other information, and to develop and review green infrastructure mapping.

Table 3. Stages of Analysis for Identifying Green Infrastructure Systems

Stage 1: Characterize the broader region and potential stakeholders.	
1.1	What is the general extent of the region to be studied?
1.2	Generally which areas in the region are already conserved, by what organizations or agencies, and for what objectives?
1.3	Which unprotected areas have already been targeted for conservation?
1.4	What is the current thinking about constraints to maintaining a system of green infrastructure?
1.5	Identify possible case study areas.
1.6	Identify potential stakeholders.
1.7	What scientific field work needs to be done?
Stage 2: Conduct a rapid landscape evaluation. Information gathered within the region to assess opportunities and constraints to providing functioning natural and recreational systems in the basin.	
2.1	Generally, how fragmented is the region's habitats? What are the trends?
2.2	Are there significant unprotected and untargeted areas that are critical to providing a functioning network of open space? Define network of recreation opportunities and gaps?
2.3	What could be the key functions of linear and conservation areas in this region?
2.4	What are the constraints within the region related to maintaining a functioning system of green infrastructure?
2.5	What are the opportunities?
2.6	What and where are the indispensable patterns or elements of green infrastructure this region?
2.7	What will be the key open space and recreational uses for this region?
2.8	Are there obvious connections/linkages that deserve protection to promote properly functioning natural or recreational systems (such as streams, abandoned rail lines or other landscape features that might form the spine of a greenway).
2.9	What are the purposes of open space? (community separators, wildlife habitat/corridors, etc.)
2.10	Where are vibrant natural systems located, and what elements are needed to maintain system health?
Stage 3: Identify indispensable patterns of green infrastructure.	
3.1.	Where are the critical alignments for the green infrastructure network?
3.2.	What edge effects, conditions, or impacts that will likely confront the green infrastructure and what are the implications for green infrastructure's long-term function?
3.3	Where should green infrastructure alignments be located in response to the requirements of key uses?
3.4	Who are the adjacent landowners/managers and what opportunities are there for collaboration with them?
Stage 4: Identify high, medium and low priorities for inclusion in functioning green	

infrastructure.	
4.1.	What are the possible tools for implementing the overall vision?
4.2	What are the priorities for securing the indispensable patterns to provide for a functioning system of green infrastructure?
4.3	Where are the critical points to construct facilities (such as trails, wildlife underpasses, bridges, etc.) to ensure a properly functioning network of recreational opportunities?
4.4	Are there areas needing ecological restoration and what are the opportunities and constraints for the restoration of these areas?

Research and Analysis: In addition to stakeholder meetings and workshops, the Project team collected, reviewed and analyzed:

- Existing zoning, regulatory, and comprehensive planning documents and mapping
- Land use, ownership and open space mapping
- Wildlife inventories and mapping
- Vegetation inventories and mapping
- Soil mapping
- Water resource information and mapping
- Conservation quality assessment field work
- Green infrastructure case studies and examples
- “Low impact development” research and articles
- Plum Creek Flood plain delineation
- Other relevant documents and information

Research and analysis focused on:

- Delineating the focus area
- Identifying necessary field work
- Conducting inventory updates
- Answering Stage 1 through Stage 4 questions in Table 3, pg 50
- Developing relevant maps of research findings and recommendations

Sections 3 through 6 of this report contain the results of the research and analysis conducted as part of this Project.

Field Work: CBCN stakeholders conducted a Conservation Quality Assessment (CQA) of a number of unprotected portions within the Chatfield Basin as part of the Green Infrastructure Project. The CQA evaluated the following habitat characteristics:

- Habitat type (identified not ranked)
- Native or beneficial vs. non-native or non-beneficial vegetation
- Buffer potential
- Corridor potential
- Stepping stone potential
- Fencing (for determining permeability for wildlife)
- Existence of habitat for threatened, endangered or species of concern
- Development impact
- Agriculture impact

- Restorability

The Conservation Quality Assessment provided a coarse grained evaluation of the general habitat condition within the Basin and provided a general understanding of the locations to be included within a system of green infrastructure. In addition, the CQA provided a better understanding of the habitat types needed as part of a system of green infrastructure (i.e. potential corridors, stepping stones, and buffers). In the future, the CQA evaluation criteria can be used to:

- Assess the quality of unprotected land within the Basin
- Evaluate and compare properties to guide conservation priorities
- Guide restoration and conservation management of protected properties
- Assist in evaluating parcels for land use changes
- Assess direct and indirect impacts of development

Mapping: Six new maps were developed as a result of the stakeholder meetings, research and analysis, and field work conducted as part of this Project. Each map is briefly summarized here, and described in more detail in the appropriate sections below. Four maps related to the individual green infrastructure elements identified by the CBCN - water, wildlife and wildlife habitat, recreation and sense of place. Each of these maps depicts identified components or features of the green infrastructure elements. For example, the Wildlife and Habitat Stakeholder Team identified 7 habitat types to be mapped to understand their relationship to current land uses and potential conservation opportunities. The fifth map is the Land Use Opportunities and Constraints map developed to show existing and potential future conditions within the study area. This map illustrates the varying degrees of opportunities to protect green infrastructure. The final map provides the Chatfield Basin Conservation Network's recommended green infrastructure system.