The future of Denver’s park and recreation system rests in the city’s ability to protect and care for its physical resources. In this chapter, two areas of sustainability are discussed — the conservation of natural resources such as water, soil, and air, wildlife, and native vegetation; and the protection of designed resources such as historic parks and fountains.

DPR could be a national leader in sustainable park practices. Chapter 9 addresses the economic strategies necessary for financial sustainability.
ENSURING OUR LEGACY SURVIVES FOR THE FUTURE

As in the city’s comprehensive plan, a key priority for the Game Plan is protection and wise management of existing and future resources. Throughout the Game Plan public process, Denver residents encouraged the city to take a more aggressive and innovative role in natural resource protection.

In the 2001 Game Plan Survey, nearly half (48 percent) of respondents rated the city’s management of natural resources as fair or poor; and 83 percent thought that water conservation should be a moderate or major priority. And, most survey respondents and open-house participants expressed a strong desire for the city to acquire, restore, and protect more natural areas.

SUSTAINABLE NATURAL RESOURCES

DPR is one of the city’s largest departments. As steward for nearly 20,000 acres of public land, including urban forests, 29 recreation centers, cultural facilities, and seven golf courses, DPR has the responsibility and perspective to achieve the goal of environmental sustainability outlined in the city’s comprehensive plan. As we build our City in a Park, DPR can weave public lands into productive green infrastructure, helping to achieve these goals through innovative design and management.
As a major consumer of resources, DPR should be a model for conservation, demonstrating best-management practices for air and water quality, water conservation, stormwater management, and green-building technologies.

Natural areas must be restored and protected. At the same time, our parks and other public lands and facilities must remain beautiful and functional places for people to enjoy. Such efforts will require major resources.

For example, the most effective and comprehensive way to dramatically reduce DPR’s annual water consumption of 2 billion gallons is to retrofit the DPR’s miles of irrigation lines and heads. Some are more than 40 years old and are made of hazardous materials. An estimated $58 million is needed for an entire retrofit.

Although Denver’s current and projected drought conditions exacerbate the need for dramatic water reduction, Denver’s existence as a growing city perched on the arid high plain always will demand water conservation.

Beyond the financial investment, Denver needs DPR to take a leadership role in protecting our natural resources for our long-term environmental, human, and financial health, and to provide a public model for change.

Goal for Conservation of Natural Resources

Denver parks, open spaces, and facilities will be a sustainable system in which environmental, economic, and human resources are managed wisely. DPR will take a leadership role in conserving and enhancing Denver’s natural resources through work practices and through an open space system designed to function as “green infrastructure.” Wise water management will be a priority.

Recommendations

1. Create performance standards and best-management practices for water conservation. To move Denver Parks and Recreation, a major water consumer, into a key leadership role in the city and to dramatically conserve water, DPR should:
   - Develop a rigorous water-management program with other agencies that incorporates citywide drought-management plans and best-management practices and anticipates long-term drought.
   - Retrofit outdated irrigation systems and install automated irrigation control and monitoring to save money and resources.
   - Establish water-reduction goals, accountability, and incentives.
   - Install low-water-use landscapes.
   - Train field staff in best-management practices for soil amendments, plant
selection and maintenance, irrigation design and management, and weed control.

- Convert bluegrass areas to alternative grasses and native plants, where appropriate. Designate turf areas for summer dormancy.
- Expand the use of nonpotable or recycled water for irrigation.
- Convert plumbing features in facilities to reduce water consumption.
- Educate the public about water conservation and the environmental advantages of converting bluegrass lawns to more natural landscapes.

2. Take a leadership role in changing the way people think and communicate. To encourage an ethic of environmental awareness and to educate people about sustainable environmental practices, DPR should:

- Establish working teams and partnerships with other agencies, such as CPD, Public Works, the Water Quality Group, the Department of Environmental Health, Denver Water, Wastewater, and Vector Control. Create shared performance standards, training, and technical assistance, and jointly fund and monitor new programs.
- Actively participate in the city’s on-going stormwater drainage plan and water quality study.
- Create and support a Natural Resources Unit.
- Require continual training for DPR staff responsible for implementing best management practices.
- Provide staff to expand volunteerism, youth programs, and partnerships.
- Educate the public and staff about the benefits of environmental conservation, and publicize successes.
- Initiate a program of environmental awareness and conservation in the recreation centers and programs.
- Use the DPR website, newsletters, and other communications venues to reinforce DPR’s commitment.

3. Plan and build with best sustainable practices. To transform parks and open space into green infrastructure, DPR must change planning and construction practices. Planning principles must integrate natural and built systems and include design standards for both. The planning process should:

- Address the entire system (not just the site), considering elements and conditions such as urban waterways, stormwater, tree canopy, natural areas, and parklands.
- Work closely with other agencies, developing all potential public lands as green infrastructure, including stormwater control and quality, and wildlife habitat.
- Require DPR Natural Resource review of plans for new parks and drainage system.
- Require DPR Natural Resource review of plans for private developments.
Incorporate sustainable planting designs that conserve water, create wildlife habitat, and are low-maintenance.

Plan parks and green connections with transit in mind. Continue developing green connections according to Blueprint Denver. Encourage bicycle and pedestrian access for DPR employees and residents throughout the city.

Encourage the reuse of brownfields and industrial lands for parks and natural areas. Employ innovative design solutions for contaminated lands.

Reduce immediate and long-term infrastructure costs by using natural technologies, such as naturalized creeks for stormwater control and life-cycle cost analysis.

**Design standards should:**

- Increase the diversity of woody and herbaceous plant species to improve wildlife habitat and increase sustainability.
- Experiment with adaptable, low-water, and native plants.
- Implement Forestry’s tree canopy goals of 18 percent in residential areas and 10 percent in the Central Business District and light-industrial districts.
- Increase naturalized areas and reduce bluegrass in parks and golf courses, where compatible with recreation activities.
- Encourage surface drainage systems and the reuse of stormwater for irrigation. For example, use permeable paving to allow stormwater to soak into the ground and to recharge aquifers.
- Protect, restore, or create wetlands in new developments and when naturalizing parkland and golf courses. Develop zoning and plan review processes for natural areas. Develop zoning for wildlife corridors.
- Require the use of nonpoint source strategies, such as wetlands, to reduce pollution from new or refurbished golf courses and parks.
- Incorporate “green” architecture when possible in new construction and remodels. The Department of Health (DEH) should review the design of all significant construction projects. Assure that each new building is registered with the U.S. Green Building Council and achieves at least a silver rating in the council’s Leadership in Energy and Environmental Design program (LEEDS).
- Consult Utilities and DEH early in the design process about using renewable energy sources.

4. **Change the way we manage.**

Parks, open space, and facilities must be managed, both in terms of daily operations and long-term improvements, with criteria for conservation and natural resource quality. DPR must set and follow stringent standards for resource management and establish best-management practices for achieving them by doing the following:
- Create incentives for researching the environmental and cost-savings benefits of new technologies.
- Create incentives for staff to conserve water.
- Establish a system of staff accountability.
- Start a ranger program.
- Encourage flexible work schedules, telecommuting, and alternative commuter transportation.
- Provide a phased schedule of staffing and capital resources to achieve these goals.
- Develop recreational management plans for natural areas and waterways.
- Implement comprehensive landscape health and weed/pest management programs.
- Meet requirements to control noxious weeds through integrated management that minimizes use of pesticides and herbicides.
- Establish a comprehensive lake and waterway management program with the city’s Water Quality Group.
- Enforce emissions standards for equipment. Enforce mandatory limits for single-stroke engines that conform with voluntary requirements for high-ozone days.
- Adopt mowing/spraying routines that minimize pollution.
- Adopt sustainable operations and maintenance (O&M) plans and provide continual mandatory staff training with other city agencies.
- Refine efficient maintenance practices (minimizing truck sizes and access).
- Manage recreational uses of fuel-powered watercraft to minimize pollution.
- Work closely with Solid Waste Recycling to institute recycling programs throughout the parks and recreation centers.
Denver has a rich legacy of design in its civic spaces, buildings, and artwork. Historic parks and parkways and their carefully designed meadows, lakes, woods, classic structures, scenic drives, and artwork are treasures that define our neighborhoods and mountain parks. That legacy also is reflected in the innovative, high quality parks and facilities being built today.

Many of Denver’s historic parks are listed in the National Register of Historic Places or offered protection as local Denver landmarks. And hopefully public places being designed today are of the timeless quality to warrant permanence and future preservation.

Yet, the integrity of Denver’s designed places (and especially older, historic ones) is not assured. Lack of funds, increasing growth and traffic, and misinformed maintenance decisions have eroded the beauty of landmark structures and the integrity of historic sites.

Protection requires identifying and preserving the historic elements that create the character of a place while responding to changing times and uses. This is a complex process because critical features, such as views, meadows, and even details such as the material of a sidewalk are subtle and may be overlooked.

Protection also means incorporating changing uses and maintenance procedures without ruining the original design. A sustainable design legacy means doing things right today by designing and caring for high-quality spaces and structures that will endure into the future.

**Goal for Protection of Designed Resources**

DPR will preserve the integrity of its design legacy, the built and historic resources, including buildings, parkways, landscape designs, and sculptures. Maintenance, repair, restoration, and adaptation to new uses will be carried out according to stringent standards for historic preservation and design quality.

**Recommendations**

1. **Establish a historic preservation ethic** for Denver’s park design legacy through education and public outreach:

   - Create internal advocacy and direction through a historic preservation policy
2. Protect historic structures and design features through comprehensive management and regulatory practices, including those for identification, documentation, maintenance, and funding:
- Implement a mandatory review process for changes affecting significant built and historic resources, including public land in the right-of-way managed by Public Works.
- Work closely with Public Works, CPD, and other agencies on design and engineering standards that do not negatively impact public space.
- Complete master plans and management guidelines for all major parks and parkways, and structures.
- Enforce stricter regulatory protection of historic and potentially historic resources.
- Strengthen regulatory protection with a better relationship with the CPD and DLC through regular meetings and cooperative projects.
- Complete guidelines developed with the Planning Office and DLC for the review and protection of historic landscapes, and a strategy to achieve city, state, and national landmark designation for historic resources.
- Include comprehensive new zoning categories and uses for parks as the city implements Blueprint Denver. (Examples include a Green Street ordinance to

- Develop a comprehensive historic preservation plan, including:
  - guidelines for inventories, evaluation of conditions, design, and preservation options,
  - a comprehensive inventory and framework,
  - identification of historic themes for Denver Parks,
  - identification of potential historic park resources system wide,
  - identification of threatened resources and priorities for preservation, and
  - standards, criteria, and guidelines for all parks.
- Use a variety of materials and venues for public education.
- Train staff and public officials about historic resource issues and management through continual workshops and presentations.

- Strengthen partnerships with design and preservation communities and agencies, including the Denver Planning Office, Denver Landmark Commission (DLC), Historic Denver, the Colorado Historical Society, the American Institute of Architects, the American Society of Landscape Architects, and the Denver Public Library.

- Use a variety of materials and venues for public education.

- The landscape design is apparent in this photo of Civic Center Park under construction.

Historic Chief Hosa Lodge on Genesee Mountain now hosts meetings and weddings.
expand the parkway and boulevard system citywide and a citywide zoning system for parks and open space.)

- Identify and protect significant mountain and views of Downtown from public parks and open spaces that are impacted by increasing development. Parks located in Blueprint Denver’s areas of change whose views are potentially threatened include Hirshorn Park, Jefferson Park, and Barnum North.

- Ensure that business agreements (concessionaires, enterprise zones, lease agreements) provide for the protection of historic sites and structures — their integrity as well as infrastructure.

3. **Continue our design legacy through high standards for planning, construction, and maintenance.**

- Implement rigorous design standards and review processes.
- Encourage innovative design through professional education and incentives.
- Mandate sustainable design and building practices for DPR projects.

- Provide staff training to ensure consistent in-house review of projects.
- Use high-quality materials and lifecycle costing, and bidding and purchasing alternatives that ensure high-quality contractors.
- Establish a preventative maintenance and a lifecycle repair schedule.
- Establish citywide standards of maintenance and repair, with community oversight.
- Maintain a library or archive of maintenance and capital repair manuals for completed projects, and accurate as-built drawings.

Some parks whose current spectacular views may be threatened by vertical development are Hirshorn, Jefferson, and Barnum North Parks.

Northside Park was designed to reuse old water treatment architecture as park focal points.