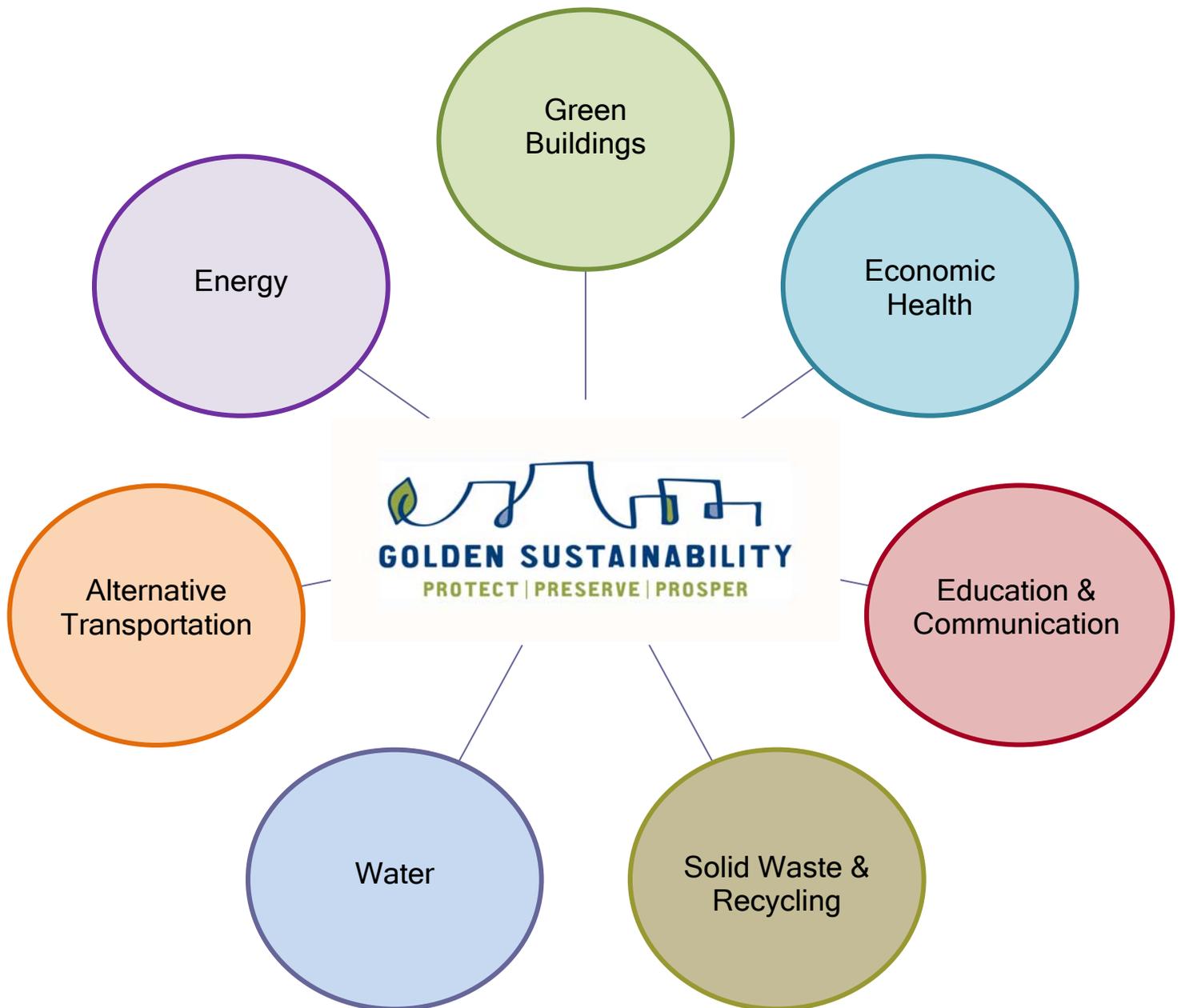


2015 City of Golden Sustainability Strategic Plan



A Five-Year Approach Toward Meeting Golden's Sustainability Goals

Executive Summary

This update to the original City of Golden Sustainability Strategic Plan outlines a 5-year approach for the Community Sustainability Advisory Board to follow on its path to achieve the city's adopted sustainability goals. The initiatives featured in the Plan include:

- Encouraging energy efficient buildings
- Improving economic health
- Providing thorough and relevant sustainability education and communication
- Reducing energy consumption
- Increasing our commitment to renewable energy
- Reducing our solid waste
- Finding alternative methods of transportation
- Conserving water and improving water quality

Several documents are cited throughout the Plan and are attached here by Reference:

Appendix A: Past Initiatives and Accomplishments

Further description and details on the City's past sustainability initiatives and projects are contained within Appendix C.

Appendix B: Resolution No. 2330 - Sustainability Goals

Detailed goals can be found in each section of this Plan and in Resolution No. 1793, adopted by City Council on August 23, 2007.

Purpose

The purpose of this Strategic Plan is to investigate, identify, and develop a series of programs, investments, and initiatives that could facilitate the City's achievement of its sustainability goals. The strategic plan will help assess the effectiveness and degree of difficulty of various approaches, providing prioritizations in the plan. The plan will be used as the basis for CSAB's advice, suggestions, and assistance to the City in achieving its sustainability goals.

CSAB recognizes that the path to becoming a sustainable city is a long-term commitment which has no finite end. In striving to become more sustainable, these strategies will provide direction in the city's consideration for new ideas and emerging technologies.

As Golden implements the initial policy initiatives, CSAB is committed to continually reviewing its policy goals in light of new technologies, scientific advances and changing local, regional, and national objectives. As a necessary part of fulfilling its mission and evaluating progress, CSAB intends to include the following:

- Review the Sustainability Strategic Plan on an annual basis and update as necessary
- Review goals and metrics in 5 years (2020), or sooner, if warranted.

- Trend performance through successive calendar years and provide an annual Sustainability Progress Report

In future versions of the Sustainability Strategic Plan, CSAB will look for opportunities to revise or expand sustainable policies to address Golden's current needs and abilities. Consideration of all proposed initiatives and programs will include a rigorous cost-benefit analysis and CSAB will recommend that Council adopt policies and programs that offer the greatest benefit to Golden residents and businesses.

What is Sustainability?

In Golden, and indeed across the U.S. and other nations, we are faced with impacts as a result of population growth, resource consumption, and energy needs. Golden is also affected by regional impacts such as the economy, the structuring of local tax revenues, and competing needs for resources by adjacent communities.

Balancing these factors, the Community Sustainability Advisory Board defines Sustainability as living or acting in a manner that balances improving our quality of life, a healthy vibrant community, and mindful stewardship of the natural resources and environment while protecting the ability of future generations to do the same. With this in mind, the Board recognizes that sustainability efforts are not an end goal, but endeavors to continually strive toward improvement.

CSAB Mission Statement

The mission of the Community Sustainability Advisory Board is to assist the City of Golden in defining and achieving its sustainability goals and to empower the community to live in a way that assures a high quality of life for current and future generations.

The Community Sustainability Advisory Board is made up of seven Golden residents who bring a broad perspective of sustainability expertise: Phillip Saieg (chair), Kurt Bendl (vice chair), Jim Dale, Jeff Oxenford, Whitney Painter, Maya Silver, and Karen Smith. CSAB meets the fourth Wednesday of each month and invites members of the public to attend and provide comments. For more information on Golden's sustainability programs and meeting dates and times, please visit www.cityofgolden.net/sustainability.

History

In 2006, the Golden Sustainability Initiative began with over 200 residents who attended the first sustainability open house on a cold and snowy night. After four months of work, recommendations by seven community working groups were adopted by City Council in 2007.

The adoption of fifteen goals over seven topic areas forms the basis for this Strategic Plan. Under the leadership of the Golden City Council, with support from the Community Sustainability Advisory Board and participation by citizens, the City has made a long-term commitment to sustainability and environmental stewardship. With the adopted goals, Golden recognizes both the operational challenges and opportunities that it will face in upcoming years. Nevertheless,

Golden is committed to creating a set of governmental and community policies, metrics, and benchmarks that will assure that the community, businesses and residents are able to take

proactive steps to meet ongoing challenges as well as capitalize on new opportunities. The City of Golden recognizes that it will obtain significant economic, social, and environmental benefits through successful integration of sustainability into our operations, investments, and day-to-day living.

In 2010, the Board adopted the first City of Golden Sustainability Strategic Plan, which outlined a plan of action using the strategies within Golden Sustainability Initiative Working Group recommendations and actions that Board members proposed through their own areas of expertise. Forty-eight specific strategies across the seven goal areas were defined in the 2010 version. While some projects did not make sense to implement, the Board researched each one and took action on more than 80% of the strategies.

Throughout 2013, CSAB reviewed each of the original sustainability goals and measured progress or achievement in each area. In early 2014, the Board proposed amendments to the goals which were adopted by City Council on March 13th through Resolution No. 2330. The significant changes to the goals include a new focus on carbon reduction strategies and collaboration for businesses, an extension of the timeline to achieve the city's renewable energy goals, and a new goal to track additional waste stream diversions. For more information, Resolution No. 2330 is contained in the Appendix.

Other Strategies

At its retreat in May 2014, the Board identified several other strategic initiatives that will contribute toward the success of the goals. While they do not necessarily tie to any specific adopted goal, they remain key strategies critical to the success of the city's sustainability efforts. They include:

1. Develop a Climate Adaptation or Climate Resiliency strategy for all sectors.
2. Develop justification for additional staff support for consultant assistance and events.
3. Develop a checklist or evaluation for all CSAB projects using a Triple Bottom Line (TBL) analysis.
4. Create an advocacy plan for boards and commissions who have primary responsibilities for action on sustainability issues.
5. Discuss culture change and alternative management strategies.

GREEN BUILDINGS

Goals

Improve the energy efficiency and reduce the environmental impact of new and existing buildings in Golden. Specifically:

Goal 1: Ensure that within ten years 90% of all new buildings constructed in Golden each year are built to green building standards.

Goal 2: Ensure that within ten years 50% of all remodels in Golden each year are built to green building standards.

Goal 3: Revise Golden's land use code to reflect the best practices in sustainability once every five years.

Strategies

Strategy 1: Research a point-of-sale energy audit for buildings.

The last time CSAB considered this topic was in 2008 and at the time, it was determined that the strategy was politically unfavorable and that there were other incentives to increase the use of energy audits that should be pursued first. Considering the length of time since the initial consideration, it may be time to revisit this issue for relevancy.

Strategy 2: Review incentive strategies.

The Board will continue to research opportunities to incentivize green building activities, such as the previous programs to waive building permit fees (2008-2009) and the Solar Friendly Communities policies (2014). Incentives may include recognition for exceeding green menu requirements or performing above current code.

Strategy 3: Identify city projects that can include green infrastructure.

These projects might address smaller buildings exempted from the City's LEED Silver requirements or projects that can incorporate best management practices for storm water runoff.

Strategy 4: Develop schedule for review & adoption of new building codes.

The recommendations to City Council should consult other stakeholder groups such as Planning Commission and the City Building Department and be consistent with a proactive approach to adopting early.

Strategy 5: Provide informational resources to homeowners.

For homeowners wanting to upgrade, the Board should develop templates for common building types.

Strategy 6: Finish LEED certification for Public Works building.

Building upon the recent improvements including the addition of a 40 kW solar photovoltaic system, additional resources will be provided to complete this effort.

ECONOMIC HEALTH

Goals

Improve the economic health of our community by increasing business opportunities focused on energy efficiency and renewable energy and by reducing the energy costs of all Golden businesses. Specifically:

Goal #1: Encourage local businesses to improve their sustainability and profitability by developing their offerings of sustainable products and services and their use of sustainable products, services, and practices.

Goal #2: Create or attract new jobs and businesses in the sustainability sectors.

Goal #3: Create opportunities focused on carbon reduction, supporting Golden's local economy, and pursuing collaborative efforts.

Strategies

Several of the economic health strategies defined in this section also support the energy efficiency/renewable energy and alternative transportation goals due to the interrelated nature of these objectives. With the understanding that other groups may have primary responsibility in effectively working toward the economic goals, the Board will pursue the following:

Strategy 1: Partner with the Economic Development Commission, Golden Urban Renewal Authority and the Downtown Development Authority.

- 1.1 Discuss opportunities & coordination with these groups.
- 1.2 Hold regular joint meetings or sub-group meetings to discuss mutual interests.
- 1.3 Brief CSAB with an update on transition to DDA and propose next steps.
- 1.4 Based on CSAB input, visit groups to collaborate for strategic approach.
- 1.5 Submit proposals to CSAB for review and recommendation to City Council.

Strategy 2: Work with DDA to promote energy efficiency grants.

Building on the success of previous GURA-funded energy efficiency grants, the Board should capitalize on the opportunity to partner with DDA to increase funding, outreach and marketing efforts toward energy efficiency in downtown Golden.

Strategy 3: Implement a LED grant program.

The Board committed funding in 2014 for a grant program to assist business owners with energy efficient lighting retrofits. This program should address barriers that inhibit business owners from investing in the technology and improve communication between business owners (tenants) and building owners (landlords).

EDUCATION

Goals

Increase our community's awareness of and encourage commitment to actively take part in sustainability as a public value that supports cultural, economic and environmental health for all citizens. Specifically:

Goal 1: Create effective, ongoing two-way communication that informs, educates and inspires community involvement in city-wide sustainability efforts.

Strategies

Strategy 1: *To facilitate increased communication amongst CSAB members, as well as with City Council and other boards.*

- 1.1 Develop a strategy for more frequent board communication between meetings without violating the Sunshine Law.

The Board should develop regular electronic communication practices to keep members informed about ongoing progress, including a consideration to increase the frequency of meetings as necessary and/or holding committee meetings. CSAB should provide regular updates to City Council and other relevant groups.
- 1.2 Create a CSAB Project Dashboard that inventories all past and present projects with data on history, status, personnel, timeline, budget and efficacy metrics.

The Board should first define needs for tracking projects, then enter projects into Dashboard and make accessible to all members. Finally, a built-in program evaluation component should be established to evaluate success on a quarterly basis. As a follow up, the Board should adopt a policy to record metrics and refine programs based on evaluations.
- 1.3 Actively engage with Colorado School of Mines (CSM) Sustainability Board, and other relevant groups.

CSAB should actively engage the current CSM board to learn about their current work, identify opportunities for collaboration, and create regular communication between the two boards. This process should be replicated for other organizations with which CSAB would like to collaborate.

Strategy 2: *To better communicate CSAB's work and all available local sustainability programs, opportunities and initiatives to the Golden community.*

- 2.1 Improve online communications. This strategy should include:

- Improving usability and appearance of the website.
- Creating a more public-facing page or series of pages on sustainability in Golden.
- Cataloguing and regularly updating local programs, events and resources with helpful links.
- Creating a blog or use guest blog posts on existing website to provide up to date sustainability information.
- Using social media to communicate sustainability information.
- Considering creating a newsletter on sustainability or incorporating sustainability information into an existing newsletter.
- Disseminating sustainability information for residents, businesses and tourists on other local websites (e.g. City, Chamber of Commerce).

Strategy 3: To spur the Golden community to engage in the pursuit of sustainability through action, support and program participation.

3.1 Develop a 2014-2017 CSAB Communications Strategy to append to the Strategic Plan.

The Board should create three-year communications goals, objectives, activities and resources necessary for implementation. Potential inclusions include events strategy and 2014-2015 schedules, a list of existing events that CSAB can leverage, e.g. festivals, farmers' markets, beer talks, workshops, etc. (evaluate summer 2014 Farmers' Market outreach effort), ideas for signage to engage Golden, a plan for ongoing communication and collaboration with youth and service groups, including K-12 Schools, Eagle Scouts, honor students, and community service, and a strategy for outreach to the commercial sector.

3.2 Actively engage local community in sustainability efforts. The Board should:

- Recognize community leaders in sustainability through improved promotion and structuring of the Sustainability Awards.
- Consider participating in the State of Colorado Department of Public Health & Environment's Environmental Leadership Program (ELP).
- Engage local students in ongoing sustainability initiatives.
- Re-engage the organizational Green Team: function, management, coordination, etc.

ENERGY EFFICIENCY & RENEWABLE ENERGY

Goals

This goal has two components: reducing energy consumption and increasing the use of renewable energy sources (e.g., solar photovoltaic and thermal systems, wind, hydropower, geothermal, and biomass).

Increase our community's energy efficiency and our use of renewable sources of energy. Specifically:

Goal #1: Reduce the City of Golden's energy usage by 25% and increase to 50% the proportion of its energy use derived from renewable energy sources within twenty years (25 x 50 x 20).

Goal #2: Reduce overall community energy usage in Golden by 20% and increase to 20% the proportion of its energy use derived from renewable energy sources within twenty years (20 x 20 x 20).

Strategies

City of Golden:

Strategy 1: *Continue to support city renewable energy projects, including smaller scale systems and alternative financing models such as leasing.*

Strategy 2: *Pursue feasibility of Solar Garden investment. This includes preparedness for a city-directed development of a third party garden and opportunities for subscription in existing Jefferson County solar gardens.*

Community:

Strategy 1: *Reach out to largest commercial consumers.*

- 1.1 Promote commercial and industrial energy efficiency and renewable energy.
- 1.2 Analyze energy consumption by sector.

Strategy 2: *Develop an Energy Advisor Program for all sectors.*

- 2.1 Provide expert advice to homeowners to improve energy efficiency and renewables.

While an ongoing energy advisor program has been challenging to sustain without annual funding, the City should look to other regional and national examples to create a program appropriate for Golden.

Strategy 3: *Refer to the Renewable Energy Technical Advisory Committee (RETAC) Report for new projects and general guidance.*

Strategy 4: *Support electric fueling stations through expansion of additional facilities and/or alternative electric technologies.*

4.1 Evaluate infrastructure requirements for alternative vehicles in public places.

As utility infrastructure becomes more connected throughout the region, the Board should periodically assess the viability of new alternative fuel stations to encourage private vehicle investment.

Strategy 5: *Pursue feasibility of local Solar Garden projects for residents and businesses.*

After preliminary research of over 20 different potential sites in Golden, only a few qualified to be evaluated further. One of the sites, the landfill cap at Rooney Road, should continue to be evaluated for electric interconnection accessibility and for its cost/benefit contributions to the community.

In addition, it is hoped that in 2014, the Colorado Public Utilities Commission will establish criteria for electricity and gas utility reporting and in doing so, Golden may have a reliable source of annual metrics with which to measure progress. CSAB will continue to analyze and consider this data as it is acquired in determining next steps for the energy goals.

SOLID WASTE & RECYCLING

Goals

Goal #1: Reduce our waste stream contributions by 25% in ten years.

Goal #2: For waste streams that are tracked but cannot be measured as a whole, increase diversion by 10% each year.

Strategies

Strategy 1: *Send recommendations to City Council for a city-wide Pay As You Throw ordinance.*
It is anticipated that a draft ordinance will be presented to City Council by end of 2014.

Strategy 2: *Evaluate existing PAYT program.*

In preparation for the re-bid of the single hauler contract, the Board and staff should evaluate the lessons learned over the past five years, incorporate public comment on potential new services, and make recommendations to City Council prior to a decision to select a bidder.

Strategy 3: *Address downtown recycling.*

In parallel to the city-wide Pay As You Throw ordinance, the Board should assess options for downtown recycling and recommend potential solutions that incorporate the needs of businesses and residents given the space limitations.

Strategy 4: *Promote a policy-level discussion for a plastic bag ban or fee.*

This issue was considered in 2009, but failed to move forward for lack of political support, citing business hardship concerns. With neighboring communities considering this issue, it may be appropriate to revisit this topic.

Strategy 5: *Promote zero-waste events & define scope.*

Strategy 6: *Evaluate alternate or regional program for yard waste.*

Strategy 7: *Create an educational program about compost.*

Strategy 8: *Further the Parks recycling effort.*

ALTERNATIVE TRANSPORTATION

Goals

Increase the ability of Golden residents and visitors to travel to and through Golden using alternative transportation. Specifically:

- Reduce the community's total Vehicle-miles Traveled by 15% in ten years

Strategies

Strategy 1: *Improve walkability and bikeability along South Golden Road, Pleasant View, North Golden, and West Colfax Avenue.*

Strategy 2: *Promote the Call & Ride bus.*

Strategy 3: *Identify appropriate average vehicle fuel efficiency metrics.*

Provide input to the Energy goals by identifying an average vehicle fuel efficiency that can be used to represent travel in Golden. Use this to estimate total fuel consumed as input to Energy Goals.

Strategy 4: *Modify and simplify the VMT model.*

Strategy 5: *Install and look for opportunities to expand Electric Vehicle Charging Station locations.*

Strategy 6: *Support Bike-To-Work efforts, including Optimist program RTD facilities, and bike trail network.*

Strategy 7: *Improve walkability connections.*

Other strategies (Low Priority)

- Connect to Gold Line
- Support Shop Local to reduce travel trips
- Promote commuter programs to Golden employers
- Support the Complete Streets projects through the South Golden Road and West Colfax Avenue corridors.

WATER

Goals

Ensure that Golden sustains a clean, stable water supply into the future. Specifically:

Goal 1: Reduce Golden's per capita water use by 15% in fifteen years. (Applies to treated water as consumed by all uses within city limits.)

Goal 2: Maintain better than regulatory water quality from water treatment plant to end-user. (Stricter than both state and federal standards.)

Goal 3: Increase the efficiency of the water delivery system. Includes water infrastructure (pipes, valves, pump stations) from reservoir to plant and to end user, which is a reflection of public and private water line losses.

Goal 4: Improve the health of the ecosystem associated with the Golden waterways. Health will be defined by more than one specific metric to cumulatively measure ecosystem indicators.

Strategies

Strategy 1: *Support Advanced Meter Program and Aqua Hawk Software rollout.*

CSAB will define its role within the effort through:

- 1.1 Identification of stakeholders (City Council Public Works, Communications, General public) and how we will perform outreach.
- 1.2 Identify metrics and how these will be tracked
- 1.3 Develop action items and implementation plan.
- 1.3 Evaluation of a water loss program for residential and commercial customers

Strategy 2: *Evaluate water data in context with industry calculations for weather normalization.*

Strategy 3: *Conduct an organizational water audit.*

Strategy 4: *Tie water pricing to consumption to send market signal to curb wasteful use (tiered rates).*

Strategy 5: *Promote outdoor water conservation.*

The City should continue to partner with the Center for Resource Conservation to promote its *Slow The Flow* program to offer free outdoor water audits and look for ways to expand these opportunities to larger land uses such as schools and industrial areas.

Strategy 6: Use city parcels as low water landscape examples.

Where possible, xeric plants and drip irrigation should be used to not only serve as demonstration areas, but also to reduce the City's maintenance costs.

Strategy 7: Adopt regulations to reduce water use within new developments.

The Board should work with Planning Commission to research further innovations and ideas to minimize outdoor water use in new and redevelopment projects.

Strategy 8: Provide increased and well-publicized opportunities for residents to report water waste.

Strategy 9: Prioritize and provide funding assistance to projects within the Ecosystem Health Plan.

Each year, the City plans for drainage way maintenance and increasingly, for unplanned weather events that damage ecosystem areas each year. The Board should consider funding the design or implementation of one or more of these projects on a periodic basis and as consistent with the Board's Ecosystem Health Plan.

Appendix A: Past Initiatives and Accomplishments

Green Buildings

- Adoption of the 2009 and 2012 International Building Codes, including the International Energy Conservation Code, which is estimated to be 15% more energy efficient than previous versions.
- Joint efforts with the Planning Commission to develop the Green Menu, integrating sustainability best practices into new construction and remodels for multi-family and commercial buildings and related code amendments.
- Adoption of the U.S. Green Building Council's LEED Silver standard for new municipal building projects.
- Contracted with an energy service provider, McKinstry to make energy efficiency improvements and guarantee savings for municipal buildings. The City received \$500,000 from the Department of Local Affairs to offset costs for this project, which included a new solar thermal system at the Golden Community Center.

Economic Health

- Held an Economic Health Summit in November 2012 to collaborate with community economic groups and identify cross-benefit projects and relationships.
- Partnership with the Shop Local committee for joint projects highlighting reasons to support local businesses and joint marketing efforts.
- Promotion of downtown business through the City's First Friday events.
- As part of efforts within the private marketplace, several sustainability-related businesses have located in Golden.

Education & Communication

- K-12 education projects, including annual elementary school Earth Day art shows featuring recycled art, recycling facility tours and a reusable bag fundraising project.
- Ongoing CSM student collaboration projects through the EPICS classes, including VMT modeling, cost-benefit analysis for LED streetlights, industrial ecology studies, and small wind turbine feasibility studies for 10 Golden business owners.
- Financial support of the Golden Tour of Solar Homes, Colorado Environmental Film Festival, Golden Earth Days Council, and the Renewable Energy Demonstration Center.
- Regular inclusion of sustainability information in the Informer, Golden Transcript and electronic newsletters and news items.
- A new look. CSAB created a logo that represents the many interests of sustainability and provides resources through the sustainability section of the Golden Informer.
- City-wide educational / promotional campaign were implemented for reducing solid waste, energy reduction (promote CFL use), alternative transportation and water consumption.
- Engage School of Mines EPIC students in wind turbine study; engage CU Boulder and CU Denver graduate students in sustainability planning and research
- CSAB has supported Shop Local campaigns through communication and coordinated efforts (ex. Community gardeners are encouraged to shop at Meyer's Hardware)

- CSAB holds joint meetings with the Economic Development Commission and Planning Commission in order to identify mutually beneficial activities such as local business development through sustainability-related projects and green building codes.
- In 2009, the City hosted a series of free sustainability workshops to provide resources and encouragement to Golden residents. Topics included learn to compost, compost with worms, improving the energy efficiency of your home, and sew your own reusable bag.
- CSAB identified support of a community garden citizen group as one of its priorities, and provided support to the group that subsequently emerged. That group established the Golden Community Garden, which uses a vacant city parcel and provides rental plots, education, and community interaction to Golden residents.
- Annual Sustainability Awards: Individuals and businesses in Golden are honored through the annual sustainability award.
- Energy efficiency tools can be borrowed from the City's library of products such as a Kill-A-Watt meter which measures the electric consumption of any appliance in your home or a digital infrared thermometer to identify sources of leaks around windows, doors, or vents.

Energy Efficiency & Renewable Energy

For City buildings:

- More than 600kW of solar photovoltaic panels installed at nine city facilities which creates a total of 12 buildings with net zero electricity use and a payback period of 15 years.
- Projects implemented as part of the Performance Contract by McKinstry Inc include lighting upgrades, a Community Center pool lighting retrofit, exterior light upgrades, solar pool heating and pool systems optimization, replacement of rooftop air handlers, heating and building comfort optimization and improvements, replacement of inlet guide vanes with variable frequency drives, controls upgrade centralization, installation of vending misers, and domestic hot water system optimization. Most notable within this effort is the 90-panel solar thermal system installed on the Community Center roof to supplement pool heating.
- Creation of a comprehensive database of energy consumption, including electricity, natural gas, and diesel use and overall annual carbon measurements. The database is used to analyze departmental energy use and to measure impacts of individual energy reduction efforts.
- Traffic signals retrofitted to LED. [how many? What savings are achieved annually?]

For Community-wide programs:

- Effective use of state and national experts in renewables to make recommendations to Golden for the best renewable energy strategy - aka the Renewable Energy Technical Advisory Committee (RETAC) report.
- Home Energy Audits. The City of Golden provided \$60 rebates to 50 homeowners who obtained an energy audit through Xcel Energy program. Homeowners were able to use the audits to make informed decisions about the best energy efficiency projects for their homes. The City of Golden is using data collected from the audits to plan for future programs.

- Free Energy Efficiency Kits. In 2009, Golden partnered with Xcel Energy to provide free energy efficiency kits to 400 residents. Volunteers canvassed the Golden Hills and Golden Heights neighborhoods to deliver kits that contained six compact fluorescent light bulbs, two sink aerators, and a low-flow showerhead.
- 2007 Greenhouse Gas (GHG) Emissions Inventory Study. The City of Golden partnered with the UCD's Center for Sustainable Infrastructure Systems and the Colorado Municipal League. As part of this study, the UCD researchers quantified energy use and renewable energy generation by three key sectors (residential, commercial, and industrial) and identified specific actions that can be implemented to simultaneously reduce GHG emissions and assist the City's efforts to meet its community goals related to energy efficiency and renewable energy.
- Small Wind Pilot Project. In early 2010, 450 Colorado School of Mines students were paired with ten Golden business owners to recommend and design a commercial wind renewable energy system.
- Solar Permit Fee Waivers. In 2009 and 2010, CSAB provided funding to offset the cost of building permit fees for homeowners who installed solar photovoltaic or solar thermal systems. Through this effort, over 40 homeowners took advantage of more than \$30,000 in fee waivers.
- Public Parking Garage LED upgrade.

Solid Waste & Recycling

- More than 3,400 households are served by the City's single hauler contract which includes Pay-As-You-Throw pricing and expanded access to recycling service. In 2010, the City entered into a contract with EDS Waste Solutions for waste and recycling service, in part, to provide curbside service to all residential households in the program. In addition, optional services to collect compost at the curb and a twice-annual collection of yard waste are included.
- Encourage downtown recycling. As part of a Golden Urban Renewal Authority initiative in 2010, GURA placed containers to collect waste and recycle material Washington Avenue as part of a streetscape project.
- Yard Waste drop off events
- Holiday Tree recycling
- Storm-damaged tree events
- Pride Days events.
- Electronic Recycling
- Fleet department fluids management
- Office & public buildings recycling programs

Alternative Transportation

- VMT baseline analysis by Colorado School of Mines students in the EPICS program
- Collaboration with local efforts to support electric charging stations at the Jefferson County Light Rail Station
- Develop a metrics model to measure VMT that can be used to monitor VMT on an annual basis.

- Ongoing traffic counts and studies. To maximize timing efficiency and prepare for fluctuations in road maintenance impacted by traffic.
- Transit-oriented development [cite new zoning designation & description here]
- Adoption of the Complete Streets design for street reconstruction projects.
- Implementation of Walkability and Bike Task Force recommendations through capital planning efforts.
- Support for the three Community Call & Ride Buses.
- Bike Corrals. Constructed through the 2011-2014 USA Pro Cycling Challenge events in Golden, new bike rack systems with a capacity to store more than 300 bikes are now available for large city events.
- Bike Storage at the West Rail Line. Racks are available at the platform and all of the community circulator buses and the light rail trains allow bikes.
- Participation and promotion of DRCOG's annual Bike To Work Day.

Water

- Aqua Hawk smart meter software pilot program. As part of the advanced meter infrastructure planned for 2015-2016, the inclusion of this web interface software will increase household access to water consumption data.
- Annual compliance with the City's *Partnership For Safe Drinking Water* agreement, to exceed Clean Water Act requirements.
- Annual partnership with the Center for ReSource Conservation to provide water conservation communication and consultant expertise
- Residential Irrigation Audit Program. Annual free irrigation audits to Golden residents through the Slow The Flow program
- Xeriscape Programs. Annual discount program for Golden residents to purchase xeric plants through the *Garden In A Box* program and *A Greener Golden* events each spring.
- Water conservation Classes
- Interagency coordination. Demonstration xeric gardens, low water grasses, landscape management, and city orchards.
- Earth Day promotion in 2009 to provide water conserving fixtures such as low-flow showerheads and sink aerators to over 400 Golden residents.
- Pharmaceutical Roundups
- Clear Creek Cleanups
- Annual Water Month partnerships
- Drought Response Planning
- Water Reclamation
- Raw Water Program
- Ordinances. Drip irrigation, green menu.
- Street Sweeping program & storm water education