

CITY OF BANNING CLEAN & GREEN

REPORT & RECOMMENDATIONS

JUNE 2008

ACKNOWLEDGEMENT & INTRODUCTION

Banning Staff would like to thank the City of Riverside and especially Riverside's Clean and Green Task Force, which allowed Banning to utilize its "Clean & Green Sustainable Riverside Report" as the blueprint upon which this report is based. It is very much appreciated.

The making of a clean and green city depends on civic leadership with the political will to adopt and fund needed programs and on an equally committed and educated citizenry willing to implement and support both public policy and private initiatives. We believe both requirements are met in Banning and we need only a comprehensive program to focus our collective effort to achieving full clean and green status.

This report lists existing programs as a benchmark upon which we recommend both expanded and new programs. The list includes official City programs, water and power agency programs and efforts at local schools, the combined impact of which is considerable.

The entire subject of energy efficiency, alternative fuels and local/on-site power generation requires further study and program development. The Banning Public Utilities Department has initiated some excellent programs that need additional support and funding, incentives to achieve broad market acceptance and educational programs to stimulate industry involvement and investment. Alternative fuels for automobile and power generation is a broad national topic gathering increasing attention and, we advocate, directed focus in a comprehensive national energy strategy.

EXECUTIVE SUMMARY

We have reached several conclusions: First, Banning has enormous potential to be a "Clean and Green" city that exemplifies sustainable living and becomes a model for the Pass Area. Second, Banning has an established foundation for sustainable living and civic action spearheaded by the Banning Public Utilities programs in renewable energy sources and photovoltaic power generation programs. Third, Banning has a core of interested and committed residents ready to devote themselves to a sustainable future.

Sustainability in the civic context means maximizing energy efficiency; optimizing resource use while minimizing negative environmental impacts; minimizing waste production and pollution; capturing the benefits of natural processes while minimizing damage from natural events and meeting the economic and social needs of all its people in a manner that does not degrade or destroy the productivity of its natural and man-made systems.

As Staff reviewed existing programs and discussed future applications, we came to understand that the range of issues pertaining to sustainable living can be as broad or as narrow as we choose. Our review of other cities' programs places our recommendations in the

middle ground of possible programs. We identified the following broad areas of interest for subsequent consideration:

- Public Policies, Regulations, Guidelines and Implementation Programs
- Regional Sustainability Issues
- Green Building Programs
- Facilities Operations and Maintenance

Sustainable thinking leads to a special kind of decision-making, i.e., choices based on a commitment to leave our children a place better for our having served as steward of their environment inheritance, a clearly defined civic conservation ethic and a deep regard for the quality of the total environment, both natural and man-made.

The genuine benefits of measurable improvements in the quality of the natural and man-made environment are both obvious and too numerous to list herein. A sustainable Banning is committed to a *continual improvement in the quality of both the built and natural environment* resulting in a legacy of genuine value.

PUBLIC POLICIES FOR A SUSTAINABLE BANNING

A deep rooted commitment to becoming a Clean and Green city requires policies and programs that create the basis for a sustainable future and the ability of the community to easily, affordably and intelligently pursue sustainable development. A formal statement of intent that commits the City to sustainability and outlines the broad scope of interest is necessary to lay the policy foundation for policies and programs to follow.

The current national sustainability movement dates from the late '80s to early '90s, the time period that roughly parallels the "Smart Growth" movement in community design. The two movements are simply different sides of the same environmental quality coin. Smart growth addresses the quality of community in terms of functional, aesthetic and social qualities with direct links to environmental quality in open space development, urban containment and alternative modes of transport/transit. Sustainability focuses on environmental quality in terms of energy efficiency, water conservation, use of renewable materials, increased densities to reduce the demand for raw land, optimizing indoor air quality with direct links to smart growth in walkable communities, alternative modes of transportation, mixed use developments, densification and an emphasis on infill, brownfield and redevelopment.

DRAFT POLICY STATEMENT

The values of legacy, conservation and respect are the foundation of a sustainable city. Just as the smart growth movement re-focused attention on the values of a humane and friendly urbanism, sustainability integrates environmental knowledge and ecological processes, the ethics of conservation, technological and design innovation, enlightened public policy and effective implementation programs.

The heart and core of almost every environmental effort revolves around the conservation of resources and their use in a manner that has zero impact on the environment or actually improves existing conditions. A sustainable Banning embodies a civic conservation ethic that mandates conservation as a prime decision-making criteria in the design, development, operation and management of our man-made environment while preserving and protecting the natural environment out of which we carve our human habitat.

Creating a Sustainable Banning requires the City to recognize the following five general procedural goals:

- Provide and update useful and timely data to inform our residents about the resources available on living sustainably and keeping our City clean;
- Adopt General Plan policies that integrate land use, circulation, open space, energy use and conservation practices so that a Sustainable Banning is the natural and inevitable consequence of the proper application of those policies;
- Ensure policy follow-through, adopt implementation plans, programs and regulations that facilitate sustainable development, maintenance and operations;
- The City also recognizes the need to lead by example and commits to developing pilot projects that demonstrate the benefits of proven sustainable action as well as those at the cutting edge;
- Particularly in the areas of clean air and traffic congestion, the City will work with regional agencies and adjacent cities and counties to design and implement regional programs to which Banning contributes and receives benefits.

Regional Sustainability

Regional Sustainability is wholly predicated on the region's constituent cities becoming sustainable themselves – no region with two-thirds of its residents living in cities can be sustainable without the City's full support and participation. A Sustainable Banning responds to regional issues with innovative programs for land use (mixed use, high density residential, transit oriented development, etc.), circulation and transit, open space development, waste water treatment, storm water handling and energy generation/conservation. Particularly in the areas of clean water, clean air and traffic congestion, the City will work with regional agencies and adjacent cities and counties to design and implement regional programs to which Banning contributes and receives benefits.

RECOMMENDATIONS:

In general, our recommendations are to: 1) endorse Sustainable Banning as a vital and necessary civic goal; 2) commit the resources necessary to explore each of the key areas of interest; 3) assess our current capabilities and policy status; 4) develop new policies, guidelines and codes/regulations; 5) create implementation programs that ensure sustainable action and 6) monitor and measure progress toward a Sustainable Banning.

General Plan Review

Appoint a Clean & Green Committee to review the draft Sustainable Banning Policy; examine the General Plan for consistency with the adopted Sustainable Banning Policy and recommend changes and additions to the General Plan to insure horizontal consistency and vertical integration and to initiate the process of defining programs and practices to implement the Sustainable Banning Policy.

Clean & Green Committee

To keep abreast of emerging information and potential programs, appoint a Clean & Green Committee staffed by the appropriate personnel and reporting to the City Council. This committee will act as the citizen review function for all sustainable programs, investigations, special projects and will provide leadership for emerging task forces and working groups that will from time to time be created for specific focused investigations and program development.

COST/BENEFIT SUMMARY

Sustainable design, building and operations is perhaps the most rapidly expanding amalgam of policies, programs and practices dealing with the entirety of the environment that we have witnessed as a culture. Still a young movement, it is based on ancient wisdoms combined with state-of-the-art technologies and is generating deep interest from those interested in environmental quality as well as the long term benefits of economic performance and an improved quality of life.

While every project is unique, generalized benefits have been observed and measured, including first cost savings through streamlined permitting, reduced infrastructure cost, potentially dramatic savings in waste handling, substantial savings in mechanical equipment and where available, tax credits and other incentives.

Operating costs can be reduced in lower energy, water and resource consumption, increased life of mechanical and electrical systems, reduced maintenance costs, reduced daily waste generation. There is now evidence of increased commercial property values, increased sales and lease-up, reduced employee turnover and easier recruitment.

More than any other institution, the City benefits from life cycle analysis of costs and benefits, and when sustainable features, equipment, materials and systems prove cost effective, and increasingly they do, it is incumbent upon the City to both employ them in municipal projects and to promote their use by the general public.

One of the most meaningful benefits is in the health and productivity arena where overall health is improved (fewer employee sick days), enhanced comfort zones, increased productivity and learning, faster recovery after illness and in commercial retail applications, increased retail sales.

The overall community benefits from reduced demand for civic services, reduced waste handling and reduced automobile use and congestion/pollution. Environmental benefits are manifold, including reduced consumption of depletable resources, reduced resource extraction and processing impacts, reduced toxic emissions, reduced transportation costs and impacts, reduced urban heat islands and the preservation of natural wildlands and agricultural areas.

PLANNING AND DEVELOPMENT PROGRAMS

Current planning and development documents do not reflect sustainability as a design criteria and may, in fact, conflict with sustainable practices as we currently understand them. A General Plan Sustainability Element should set forth planning and design principles upon which review and modification of statutes such as the Zoning Code or Citywide Design Guidelines could proceed.

Much more so than in typical development, sustainable planning and design is highly site sensitive and context responsive. It is worth noting that as in all newly emerging disciplines, more innovation, not less, is required to define the acceptable bounds of the solutions proposed. Therefore, as policies, regulations, practices and programs are reviewed and alternatives offered, a wide-ranging and comprehensive investigation should be the norm. Specifically we recommend review of Public Works policies and construction standards and the adopted building codes with the purpose of removing barriers and conflicts between existing standards and sustainable practices.

RECOMMENDATIONS:

As a general policy, sustainable standards and guidelines should supersede the traditional regulations wherever conflicts occur. It is inevitable some conflicts will remain in the various documents discussed below and these conflicts will be addressed as they arise.

Zoning Ordinance

Review the entire Zoning Code, identifying conflicts with sustainable planning/design principles. Draft alternative language for conflicting requirements and evaluate for horizontal consistency across the range of regulated issues.

Prepare a Sustainable PRD set of standards or an addition to the PRD ordinance for sustainable projects. As appropriate, use LEEDs and Green Building criteria and/or use such criteria by reference to a "to be adopted" program. This is the area in which consistency is critical to avoid a sustainable project that meets LEEDs or Green Builder criteria, but fails to meet zoning regulations that prohibit the very solutions that make the project sustainable.

Building Codes

The California Building Code should be reviewed for requirements and standards that are potentially in conflict with sustainability objectives and practices and where so identified, language crafted to resolve the conflicts.

Citywide Design Guidelines

Prepare alternative Sustainable Design Guidelines or better yet, include them in a Citywide Design book.

Public Works Standards

Prepare alternative Public Works Construction Standards and include them in the Standard Drawings for Construction. Prepare and adopt specifications for sustainable materials, systems and assemblies and revise bidding and contracting procedures to permit their utilization.

Parks and Recreation

Review the current design and construction standards for sustainability, prepare alternative language where appropriate and adopt the same bidding and contracting procedures as mentioned above.

Code Enforcement

Rigorously enforce all "clean" ordinances and require City enforced clean-ups to follow recycling practices. In such instances, the City should consider providing suitable recycling containers of the appropriate size and bill the responsible party for removal and handling.

INCENTIVE PROGRAMS

Sustainability is a qualitative issue, not a cheaper solution than traditional practices and as such requires incentives to push the issue in the marketplace. Sustainability is about doing things right, about reaching for excellence rather than settling for the status quo. Incentives are necessary for the simple reason that many beneficial sustainable products and practices are insufficiently available or utilized to have passed the profitability threshold or they are still so new that the trades have yet to build up a competitive labor pool of skilled workmen and qualified installers.

Incentives, which require a real financial component, need to be administered so that their use by the recipient yields genuine public benefit with a clear nexus to public policy. The basic rational of incentives is that the personal or corporate use of sustainable goods and services also benefits the larger community by expanding the breadth and depth of sustainable programs. For example, the use of photovoltaic panels to generate electrical power for a home also reduces the need for additional generating capacity, increases disposable income and sales tax revenues by reducing utility costs and acts as example for others to involve themselves in the program.

RECOMMENDATIONS:

- Adopt the California Green Builder program for residential construction.
- Adopt LEED standards for municipal buildings.
- Identify all applicable funding opportunities and provide user friendly access and links.
- Apply for all applicable loans and grants available to the City and other non-profit groups.

EDUCATION AND PUBLIC AWARENESS

We have identified the following general categories of residents who could be well served by a comprehensive program of public information, program coordination and project guidance:

- Residents seeking to live more sustainably and with a greater participation in keeping Banning clean and beautiful.
- Students of any age seeking focused information on clean and green topics.
- Commercial enterprise seeking information on making their businesses more sustainable.
- Agencies, private organizations and citizens seeking to partner with others in clean and green activities.
- Developers and builders (from large national builders to residential home decorators) seeking to build more sustainably.

In the context of education (we use "education" to mean the delivery of usable and accurate information) we recommend the following kinds of information and data resources be made available to Banning residents and those doing business here:

- Guidelines, practices and "how to's" for living cleaner and greener;
- Specific information on locally available programs for achieving sustainability in the home, business, school and industry;
- Funding sources that assist in sustainable living and commerce;
- Focused educational information on sustainability.

RECOMMENDATIONS:

Media Campaign

- Print media Business Press, banners, brochures, etc.
- Video media cable TV channel, public access, etc.
- Publicize current accomplishments
- Work to expand increased ridership and use of green fuels and vehicles

Education

- Utilize current educational programs with Banning Public Utilities
- Establish speakers bureau from committee, engage other environmental groups (VAF, UCCE MG) and Chamber of Commerce to publicize/utilize with a program CD
- Establish/publicize model water efficient landscaping garden spots throughout the community
- Work with local retailers and nurseries to educate/advocate water efficient landscaping
- Booths at community events to publicize clean and green through use of promotional items
- In-service for City staff (appropriate department heads, supervisors, landscape maintenance personnel, etc.) on clean and green practices

Incentives

- Offer incentives to developers who exceed Title 24 standards
- Offer incentives to residents for remodeling to exceed Title 24 standards and/or water efficient landscaping

REGIONAL SUSTAINABILITY

The manner in which topics are assigned to larger categories is a decision based on intent and for our purposes, regional sustainability focuses on those two critical issues over which the City of Banning has little control, yet is severely impacted in a negative way: Clean air and transportation. Their separate but related challenges cannot be solved locally—our most effective response seems to be participation in regional planning and regulatory bodies.

Clean Air

- Continue promoting City Rideshare Programs
- Clean Fuel Fleet Program under the guidance of the Fleet Maintenance Manager we continue to convert more vehicles to alternative fuels. Currently 9% of the fleet is alternative fuel vehicles (AFV) or hybrid vehicles.
- Freeway signs for CNG signage for alternative fuels for the public. City signs are already in place.
- Banning has a public access CNG fueling station.

Transit and Transportation

The issue of transit as a significant component of an overall transportation strategy is controversial and thus subject to different studies supporting diametrically opposite positions. Few argue the benefits of transit use; the controversy seems to focus on the lack of market acceptance, the inconvenience of local distribution networks and the perceived nature of most transit modes as user friendly. Yet despite a dearth of support, transit planning is advancing along highly focused lines, for example the on-going WRCOG investigation into transit oriented development in selected community centers throughout the county.

It was predictable that as gas prices exceeded \$4 per gallon, transit ridership would spike upwards as those at the bottom of the economic ladder felt the pinch of economic necessity and switched from cars to busses. If and when prices stabilize, it is expected that some portion of the increased ridership will revert to car commutes leaving the balance to complement the core of traditional riders.

RECOMMENDATIONS:

Support WRCOG's investigation of transit oriented development and transit oasis as a viable development paradigm with staff support and coordination of interest group participation.

Review the General Plan and the City's contributions to regional transportation planning in terms of transit adaptive development parameters that, while not immediately necessary, will provide the needed infrastructure for the future retrofit.

Where appropriate, review land use policies for increased densities in neighborhood centers as a critical component of creating the "critical mass" needed for economical transit operations.

WATER: CONSERVED AND EFFICIENT

All new projects and whenever possible all redevelopment projects should be designed to keep storm water from running off into the storm drain system carrying the water and pollution into our waterways and out to the ocean. Instead, projects should be designed to keep as much water as possible on site to allow for penetration into the soil to filter and clean the water and recharge the aquifers. For example, small retention basins/drywells, pervious soil and paving, and landscaping can be used to minimize rainwater runoff.

Since the early 1990's Banning has passed a number of Ordinances establishing water conservation plans to reduce water consumption in the landscape environment, as well as the restriction of water use during water supply emergencies. In addition, the City updated its Urban Water Management Plan in 2005, which addressed the following areas:

- Water Sources
- Water Use
- Water Resource Reliability
- Supply and Demand Comparisons
- Water Shortage Contingency Plan
- Water Demand Management Measures
- Water Recycling

Banning has begun to develop a more comprehensive water conservation/customer incentive program which will be used to help achieve real water sustainability. These include the following four areas:

- First, conservation is founded in an expanded green building program through which reduced water consumption is achieved;
- Second, efficient equipment, appliances and irrigation systems will reduce demand and lower water costs;
- Third, implement requirements for all new and redeveloped private and public properties to capture all storm water runoff and provide methods for the water to filter into the soil to replenish the water aquifers; and
- Forth, implement and expand education programs to increase public awareness and knowledge of water conservation measures and incentives available.

Conservation: Reduced demand is the goal and the regard to development, designing and building more water efficient buildings and landscapes. Technology has increased significantly enabling developers and homeowners to build-in or retrofit buildings with equipment and appliances (faucet aerators, low flow shower heads, ULF toilets, etc.) and landscape/irrigation systems that will greatly reduce water demand.

Efficient use: Efficiency addresses the manner in which water is used after conservation has reduced demand. In buildings this principally comes down to how water is used for domestic or commercial applications within the structure, and irrigation/landscape use outside. Decreasing duration of showers, reducing frequency and length of landscape irrigation cycles, and turning off faucets when not directly using the water are just a few ways to efficiently use and conserve water.

RECOMMENDATIONS:

Conservation: Encourage and offer incentives for the installation of water efficient equipment, appliances and irrigation systems.

Efficient use: Encourage and offer incentives for reducing water consumption 20 percent or more over the previous year during the same time period.

Education: Develop new and expand existing education programs to increase public awareness and knowledge of water conservation measures and incentives available.

ENERGY: CONSERVED AND EFFICIENT

Banning has an aggressive public utility program to which four other components could be added to achieve real energy sustainability.

- First, conservation is founded in an expanded green building program through which reduced energy demand is achieved;
- Second, efficient equipment, appliances and systems will reduce demand and lower utility costs;
- Third, on-site generation via photovoltaics and other low cost site specific technologies reduce demand; and
- Forth, the expanded use of alternative fuels will reduce demand on fossil fuels and contribute to lower pollution levels.

Energy use and generation is an area of highly focused attention, new technologies are emerging as fossil fuel prices escalate and foreign supplies become tenuous. Energy independence seems a long way off, but is nonetheless an important national goal and clearly an essential component of a national security strategy. That said, local efforts might seem less than relevant, but it is clear that the combined effect of small improvements yields a powerful impact on energy use and hence, policy.

Conservation: Reduced demand is the goal and the regard to development, designing and building more effective envelopes that mitigate external environmental inputs, e.g., heat, cold, and fresh air, will result in lower design loads, in turn generating lower demand for power. Effective building envelopes are hyper-insulated, utilize passive heating/cooling features, employ sustainable landscapes and use natural functions to augment (and sometimes replace) active systems.

Efficient use: Efficiency addresses the manner in which power is used after conservation has reduced demand. In buildings this principally comes down to environmental controls and power for lighting and appliances/equipment within the structure. When buildings are built with highly insulated envelopes, the lower demand may also permit use of much less energy dependent heating/cooling systems; natural daylighting means fewer and less powerful fixtures and Energy Star appliances require less energy to cook, wash and entertain. Emerging examples include compressor-less AC systems, whole house fans, super efficient evaporative coolers, high efficiency fluorescent fixtures, low voltage illumination, etc.

Buildings with automated environmental and power system controls (smart buildings) employ highly sensitive monitoring devices combined with the sophistication of computer controlled equipment and appliances. Not only are very efficient micro-adjustments possible, but certain functions can be shifted to off-peak periods.

Local generation: On-site generation of electrical power promises the potential for very substantial energy savings as photovoltaic costs drop with increased use and consumers see direct reductions in monthly utility bills. Our environment is uniquely suitable to offer maximum advantage with long daylight exposures during the summer when peak demand loads occur.

RECOMMENDATIONS:

Conservation: Encourage and offer incentives for the use of hyper-insulation, passive heating/cooling features and other energy conserving features in the built environment.

Efficient use: Encourage and offer incentives for the use of compressor-less AC systems, whole house fans in lieu of AC, instant-on fluorescent bulbs, and other super efficient appliances, fixtures and systems.

Local generation: Encourage and offer incentives for the installation of photovoltaic systems, co-generation, and other non-polluting energy producing systems.

AVAILABLE REBATE & INCENTIVE PROGRAMS OFFERED BY THE BANNING PUBLIC UTILITIES DEPARTMENT

Photovoltaic (PV) Rebate – Residential and Commercial: Monetary incentives for the purchase and installation of photovoltaic (PV) or solar powered systems, which are typically installed on the rooftops of homes and businesses.

Commercial – Energy Conservation/Weatherization Rebate: Monetary incentives for commercial customers to replace inefficient materials with products that will improve the energy efficiency of their facility and reduce energy use. Commercial customers can receive rebates for a variety of energy saving efforts alone or together including: Window/Door Replacement, Attic Insulation, Exterior Wall Insulation and Lighting.

Residential – **Energy Conservation/Weatherization Rebate:** Monetary incentives for residential customers to replace and/or install conservation measures that will improve the energy efficiency of their homes and reduce energy use. Residential customers can receive rebates for a variety of energy saving efforts alone or together including: Window/ Door Replacement, Attic Insulation, Exterior Wall Insulation and Whole House Fans.

Commercial – Central Air Conditioning and Heat Pump Rebate: Monetary incentives for commercial customers who purchase a new high efficiency central air conditioner and/or heat pump unit, *replacing* an existing air conditioning and/or heat pump. Incentives are based on the energy efficiency and size of the unit (tonnage).

Residential – Air Conditioning Replacement Rebates: Monetary incentives to replace an existing central air conditioning unit with a new high-efficiency unit. Rebates are based on the size and seasonal energy efficiency rating (SEER) of the unit.

Commercial – New Construction Energy Conservation: Monetary incentives for new construction projects that exceed California's Title 24 efficiency standards pertaining to air conditioning equipment, lighting and insulation. This incentive is designed to encourage developers to use more energy efficient materials.

Residential – New Construction Energy Conservation: Monetary incentives for new single home construction projects that exceed California's Title 24 efficiency standards pertaining to air conditioning equipment, lighting and insulation.

Energy Star Refrigerator Purchase Rebate: A monetary incentive for replacing an old and inefficient refrigerator with a new energy efficient refrigerator that is at least 14.3 cubic feet.

Refrigerator/Freezer Recycling Rebate: Monetary incentives to remove and recycle <u>operating</u> old and inefficient refrigerators and freezers. Customers must use a qualified contractor to remove the old unit.

Energy Star Product Rebate – Residential and Commercial: Monetary incentives for purchasing products that meet the "Energy Star" criteria. Rebates are based on the amount of purchase and/or the efficiency rating of the product.

Ultra Low-Flush Toilet Rebate: A water conservation program that offers monetary incentives to replace high water use toilet fixtures with water saving toilets.

Residential – Shade Tree Rebate: Monetary incentives to plant shade trees around homes to help reduce the amount of energy used for air conditioning.

Energy Audits: This program provides residential and commercial customers with a variety of recommendations for reducing energy consumption in their homes and businesses.