



# ENVIRONMENTAL SUSTAINABILITY PLAN

February 2, 2009

## **Introduction**

The Town of Snowmass Village recognizes that preserving our natural environment and confronting global climate change are fundamental to the ongoing success and enjoyment of our resort community. This Environmental Sustainability Plan is intended to bring ecological awareness into all aspects of Town governance, and to encourage the development and implementation of projects, programs and operational practices that engender pride in our community's environmental performance.

In recognition of those issues, which the community has deemed most critical to our sustainability, the plan is built around the following topics:

1. Energy Conservation and Climate Protection
2. Affordable Housing and Community-Serving Commercial
3. Land Use and Open Space
4. Water
5. Resource Conservation, Recycling and Solid Waste
6. Green Building
7. Mobility and Transportation
8. Watershed Water Quality
9. Air Quality
10. Wildlife Habitat and Physical Environment

Specific Goals and a broad collection of Implementation Concepts are presented under each of these headings. A set of Selection Criteria is provided to help the community prioritize resource allocations and implementation efforts in pursuit of those Goals. And finally, the 2009 Environmental Implementation Plan is presented to outline the various initiatives to be pursued in the coming year.

## **Background and Process**

In January 2008 a local citizens' group requested that the Town Council approve funding to develop an Environmental Sustainability Plan for Snowmass Village. The Council made the necessary appropriations and engaged the Rocky Mountain Institute to help facilitate a public process and collect community input on the topic.

In July 2008, more than 50 Snowmass Village and Roaring Fork Valley community members convened to participate in a series of public workshops focused on identifying and prioritizing community environmental issues, problem areas, and goals. In addition, performance objectives were discussed and potential action items were identified. Finally, a set of selection criteria was developed to help the community prioritize action items for implementation.

On August 4, 2008, Council reviewed an initial draft of the Environmental Sustainability Plan and requested that staff provide recommendations concerning the various implementation concepts and additional details describing how this plan would be put into action.

On February 2, 2009, this Environmental Sustainability Plan will be presented to Council for further consideration. Staff is recommending that Council formally adopt the document and direct staff to carry out the proposed 2009 Environmental Implementation Plan.

## **Going Forward**

The citizens of Snowmass Village have spearheaded this effort because we know it's the right thing to do. However, the success of this plan will be governed by our commitment to implementing it.

Within the Town organization, responsibility for this plan will lie with the Town's Economic Resource Director, who, in collaboration with the Town Council, other Town departments and the community-at-large, will lead our efforts to accomplish the various initiatives that are selected for implementation. As funding and staff resources are made available, the appropriate Town departments and other community partners will be convened to develop implementation strategies for the selected Implementation Concepts.

A critical component of success will be to involve the citizens of Snowmass Village and other community partners beyond the Town organization. This will require extensive data sharing and educational efforts, combined with an aggressive marketing and volunteer recruitment campaign. In addition, the Town will continuously seek community feedback and suggestions concerning our sustainability initiatives.

This plan is intended to be a living document that will evolve over time. Each of the Goals and Implementation Concepts are intended to help accelerate the community's progress toward environmental sustainability. It is hoped that the results emerging from this effort will address our shortcomings and capitalize on opportunities to be better stewards of our natural environment.

# Snowmass Village

## Environmental Sustainability Goals

### 1. Energy Conservation and Climate Protection

- A. Significantly reduce consumption of non-renewable energy and fuels.
- B. Increase use of locally generated, non-polluting, renewable energy.
- C. Significantly reduce greenhouse gas emissions.

### 2. Affordable Housing and Community-Serving Commercial

- A. House as many Snowmass Village employees as want to live within Town limits.
- B. Build new and update existing affordable housing using energy efficient, green construction practices incorporating renewable energy generation systems.
- C. Increase inventory of affordable commercial space and community-serving retail businesses offering basic supplies for residents.

### 3. Land Use and Open Space

- A. Adopt land use regulations promoting development that is consistent with the Town's energy conservation and environmental sustainability goals.
- B. Preserve quality of existing open space and increase acreage of protected lands.

### 4. Water

- A. Ensure adequate water availability to meet current and future demand, and to serve new development, while maintaining healthy aquatic systems.
- B. Promote conservation mentality and secure adequate storage facilities to eliminate need for water restrictions.

### 5. Resource Conservation, Recycling and Solid Waste

- A. Reduce per capita waste generation and increase use of environmentally friendly consumer products.
- B. Increase long-term capacity (lifespan) at the Pitkin County landfill.
- C. Maximize efficiencies in waste collection, hauling, and sorting systems.

### 6. Green Building

- A. Increase energy efficiency and the use of renewable energy in new and existing construction.
- B. Adopt regulations requiring sustainable design and the use of green building materials in new construction.

### 7. Mobility and Transportation

- A. Develop an integrated mobility strategy that minimizes single occupancy vehicle trips by providing attractive, safe and convenient transportation alternatives.

### 8. Watershed Water Quality

- A. Minimize negative impacts to watershed water quality.
- B. Improve water quality in Brush Creek to eliminate its Roaring Fork Conservancy designation as an "Impacted" waterway.

### 9. Air Quality

- A. Minimize airborne dust and other pollutants, including building and vehicle emissions.
- B. Stay within allowable Pm10 levels at all times.

### 10. Wildlife Habitat and Physical Environment

- A. Minimize negative impacts to wildlife habitat and migration corridors.

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 1. ENERGY CONSERVATION AND CLIMATE PROTECTION

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Establish a grant/rebate/subsidy program using Renewable Energy Offset Program (REOP) funds to incentivize and assist in implementing renewable energy generation projects and energy efficiency upgrades.	BUILDING, ECONOMIC RESOURCES	CORE, HOLY CROSS	\$
2. Create incentive program to encourage Town employees to carpool and use public transportation to get to work.	FINANCE (HUMAN RESOURCES), TRANSPORTATION, ECONOMIC RESOURCES, PUBLIC WORKS (FLEET)	RFTA	\$
3. Produce "Energy Fair" event in Snowmass Village.	MARKETING (SPECIAL EVENTS), BUILDING, PUBLIC WORKS (FLEET, FACILITIES), ECONOMIC RESOURCES	HOLY CROSS, SOURCE GAS, AREDAY	\$
4. Conduct baseline analysis of Town Environmental Indicators, including energy use (electricity, natural gas, gasoline, diesel) and other resources for Town organization and community as a whole.	PUBLIC WORKS (FLEET, FACILITIES), ECONOMIC RESOURCES, TRANSPORTATION, TOWN ENGINEER	HOLY CROSS, SOURCE GAS, CORE, CLEAR	\$ - \$\$\$\$
a. Inventory Town-owned buildings, facilities, and vacant land, and prioritize opportunities to incorporate on-site renewables.	PUBLIC WORKS (FACILITIES), BUILDING, ECONOMIC RESOURCES, TOWN ENGINEER	WATER & SAN, ASPEN SKIING CO., HOLY CROSS, SOURCE GAS	\$ - \$\$\$\$

1. COST ESTIMATE: (\$ - \$0 to \$5,000), (\$\$ - \$5,000 to \$25,000), (\$\$\$ - \$25,000 to \$50,000), (\$\$\$\$ - \$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>1. ENERGY CONSERVATION AND CLIMATE PROTECTION</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
b. Evaluate building shells and mechanical systems to identify opportunities for efficiency upgrades.	PUBLIC WORKS (FACILITIES), TRANSPORTATION, BUILDING, TOWN ENGINEER	HOLY CROSS, CORE, CLEER	\$ - \$\$\$\$
c. Investigate new technologies for higher-efficiency street lights	TOWN ENGINEER, PUBLIC WORKS (FACILITIES), TRANSPORTATION, BUILDING	HOLY CROSS, CORE, CLEER	\$ - \$\$\$\$
d. Evaluate Inclusion of hybrid, electric, flex-fuel, and/or biodiesel technology in new vehicle and equipment purchases.	PUBLIC WORKS (FLEET, ROADS)		\$ - \$\$\$\$
e. Set percentage reduction targets based on baseline data.	ECONOMIC RESOURCES< TOWN ENGINEER< PUBLIC WORKS (FLEET, FACILITIES)		\$
5. Evaluate feasibility of incorporating methane recovery and biomass energy generation systems at County Landfill.	PUBLIC WORKS (SOLID WASTE, FACILITIES), ECONOMIC RESOURCES, TOWN ENGINEER	PITKIN COUNTY	\$
6. Develop energy procurement and generation strategy that includes consideration of on-site energy generation, renewable energy purchases and/or carbon offsets to minimize carbon footprint for Town operations.	ECONOMIC RESOURCES, FINANCE, PUBLIC WORKS (FACILITIES), TOWN ENGINEER	HOLY CROSS, CORE, CLEER	\$ - \$\$\$\$
7. Identify and remove Town regulations that serve as barriers to developing renewable energy generation projects.	ECONOMIC RESOURCES, PLANNING, BUILDING, TOWN ENGINEER, PUBLIC WORKS	HOLY CROSS, WATER & SAN	\$

1. COST ESTIMATE: (\$ - \$0 to \$5,000), (\$\$ - \$5,000 to \$25,000), (\$\$\$ - \$25,000 to \$50,000), (\$\$\$\$ - \$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>1. ENERGY CONSERVATION AND CLIMATE PROTECTION</b>			
<b>IMPLEMENTATION CONCEPTS</b>	<b>TOWN RESOURCES</b>	<b>OTHER PARTNERS</b>	<b>ESTIMATED COST<sup>1</sup></b>
8. Create informational resources outlining strategies for reducing energy use and the financial resources available to support those efforts.	ECONOMIC RESOURCES, BUILDING, FINANCE	HOLY CROSS, CORE, CLEER, SOPRIS FOUNDATION	\$
9. Explore opportunities to establish shared renewable energy infrastructure (i.e., neighborhood solar inverters, distribution systems).	ECONOMIC RESOURCES, BUILDING, FINANCE, PUBLIC WORKS (FACILITIES), TOWN ENGINEER	HOLY CROSS, WATER & SAN	\$ - \$\$\$\$
10. Work with part-time residents, lodges and property managers to reduce energy use in unoccupied homes and empty lodge rooms.	ECONOMIC RESOURCES, MARKETING (GROUP SALES), BUILDING	PART-TIME RESIDENTS ADV. BD., LODGES, PROPERTY MGMT., SOPRIS FOUND.	\$
11. Pursue grants and assist community members in pursuing grants for renewable energy generation projects and other efficiency upgrades.	ECONOMIC RESOURCES, BUILDING	CORE, CLEER, HOLY CROSS	\$
12. Track and promote progressive climate legislation at the local, state and federal levels.	ECONOMIC RESOURCES	ASPEN SKIING COMPANY, CORE, CLEER	\$

1. COST ESTIMATE: (\$ - \$0 to \$5,000), (\$\$ - \$5,000 to \$25,000), (\$\$\$ - \$25,000 to \$50,000), (\$\$\$\$ - \$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 2. AFFORDABLE HOUSING AND COMMUNITY-SERVING COMMERCIAL

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Pursue seasonal housing partnerships with educational and arts providers, businesses, and non-profits to maximize housing development potential on Town land.	HOUSING, ECONOMIC RESOURCES	EDUCATIONAL & ARTS PROVIDERS, NON-PROFITS, LOCAL BUSINESS	\$\$\$\$
2. Amend Housing policy to allow cost recovery to affordable housing owners for investments in energy efficiency upgrades.	HOUSING, BUILDING, PUBLIC WORKS (FACILITIES), ECONOMIC RESOURCES	CORE	\$
3. Establish standards requiring renewable energy generation, high-efficiency systems and other green building strategies to be incorporated into new affordable housing.	HOUSING, BUILDING, PUBLIC WORKS (FACILITIES), TOWN ENGINEER	CORE, CLEER, HOLY CROSS	\$ - \$\$\$\$\$
4. Develop plan to incorporate renewable energy generation, green building products, and efficiency upgrades into existing affordable housing stock.	HOUSING, FINANCE, BUILDING, PUBLIC WORKS (FACILITIES)	HOMEOWNERS ASSOCIATIONS, CORE	\$ - \$\$\$\$\$
5. Increase enforcement efforts regarding occupancy of accessory dwelling units and employee housing units.	PLANNING, HOUSING	HOMEOWNERS ASSOCIATIONS	\$\$\$
6. Create incentives for developers to go above and beyond minimum affordable housing mitigation requirements.	PLANNING, HOUSING, ECONOMIC RESOURCES	DEVELOPMENT COMMUNITY	\$\$\$\$
7. Explore land trust model and other publicly-assisted economic development strategies, as well as regulatory tools available to create and/or maintain affordable community-serving commercial space.	ECONOMIC RESOURCES, PLANNING, FINANCE, TOWN ATTORNEY	LOCAL BUSINESS	\$ - \$\$\$\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 3. LAND USE AND OPEN SPACE

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Strengthen development review standards concerning environmental impact analysis and consideration of environmental carrying capacities.	PLANNING		\$
2. Clarify and strengthen development code requirements for energy conservation, and create specific review criteria for Energy Conservation Plans.	PLANNING, BUILDING, PUBLIC WORKS (FACILITIES)	CORE, CLEER, HOLY CROSS, SOURCE GAS	\$
3. Clarify Community Purpose provisions regarding "Sustainable Development" and "Preservation of Open Space."	PLANNING, BUILDING, ECONOMIC RESOURCES	CORE, CLEER, ASPEN VALLEY LAND TRUST, PITCO OPEN SPACE	\$
4. Simplify application submittal requirements and create expedited review processes for projects incorporating renewable energy generation systems.	PLANNING, BUILDING	HOLY CROSS, CORE, CLEER	\$
5. Identify opportunities to produce food on open space lands (i.e., community garden program) and to incorporate edible landscape components in the built environment (where feasible in ways that are consistent with local wildlife control policies).	PUBLIC WORKS (GREEN TEAM), POLICE (ANIMAL CONTROL), PLANNING	HOMEOWNERS ASSOCIATIONS, PITKIN COUNTY	\$
6. Develop collaborative process to review and make recommendations on new development applications related to sustainable design and construction.	PLANNING, BUILDING		\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

**Snowmass Village**  
**Environmental Sustainability Implementation Concepts**

**"Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.**

**4.WATER**

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Amend building code to require low-flow plumbing fixtures in new construction, and provide incentives to encourage retrofits in existing buildings (i.e., low-flow fixture rebate/subsidy program).	BUILDING, TOWN ENGINEER	WATER & SAN DISTRICT	\$\$
2. Increase use of grey water systems, ditch water and snowmelt/stormwater recapture systems for irrigation purposes.	BUILDING, PUBLIC WORKS (GREEN TEAM), TOWN ENGINEER	WATER & SAN DISTRICT	\$\$\$
3. Verify that building code requirements for plumbing infrastructure are aimed at maximizing both energy efficiency and water conservation – amend as necessary.	BUILDING, TOWN ENGINEER	WATER & SAN DISTRICT	\$
4. Replace top-load clothes washers with energy- and water-efficient front-load washers in Town laundry facilities and affordable housing units.	HOUSING, PUBLIC WORKS (FACILITIES)	CORE	\$\$\$
5. Amend development code requirements and review criteria to mandate drought tolerant landscaping in new development.	PLANNING, PUBLIC WORKS (GREEN TEAM)		\$

**1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)**

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 5. RESOURCE CONSERVATION, RECYCLING AND SOLID WASTE

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Reduce office paper use by 20% throughout Town organization.	ALL DEPARTMENTS		\$
A. Promote use of TOSV website and other electronic means to distribute information.	COMMUNITY RELATIONS, FINANCE (I.T.), ALL DEPARTMENTS		\$
B. Install monitors and/or "smart-boards" in conference rooms	FINANCE (I.T.)		\$ - \$\$
C. Require double-sided printing capability in all new printer purchases, and implement reuse of paper already printed on one side for "fax" and draft print jobs.	FINANCE (I.T.), ALL DEPARTMENTS		\$
D. Transition document archiving from paper-based to electronic format.	TOWN CLERK, FINANCE (I.T.), ALL DEPARTMENTS		\$\$
E. Convert to paperless Council packet, newsletter and payroll systems	TOWN CLERK, FINANCE (I.T.)		\$\$
F. Develop electronic Building Permit application	BUILDING, FINANCE (I.T.)		\$
2. Establish bulk purchasing program to address cost barriers to purchasing more environmentally friendly products used throughout Town organization (i.e., non-toxic cleaners, recycled paper products, etc...).	FINANCE, TOWN CLERK, ALL DEPARTMENTS		\$
3. Establish Town procurement policy requiring the use of products containing recycled content when available.	FINANCE, TOWN CLERK, ALL DEPARTMENTS		\$
4. Establish design criteria for trash, recycling, and composting facilities in new development.	PLANNING, PUBLIC WORKS (SOLID WASTE), BUILDING		\$
5. Amend land-use application submittal requirements to include all information in electronic format and minimize the number of printed copies required.	PLANNING, FINANCE (I.T.), ECONOMIC RESOURCES		\$

**1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)**

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>5. RESOURCE CONSERVATION, RECYCLING AND SOLID WASTE</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
6. Increase enforcement and fines for littering and unauthorized use of trash facilities.	POLICE		\$\$
7. Improve waste collection systems to minimize overall number of pick-ups, maximize hauling efficiency, reduce recycling contamination and maximize recycling program participation.	PUBLIC WORKS (SOLID WASTE)	HOMEOWNERS ASSOCIATIONS	\$\$
8. Expand local and regional recycling facilities to accommodate a wider assortment of recyclable materials (i.e., chipboard, #5 plastic, electronics, etc...)	PUBLIC WORKS (SOLID WASTE)	PITCO - LANDFILL	\$\$\$\$
9. Provide trash and recycling containers at all Town parks, buildings, and public gathering places.	PUBLIC WORKS (SOLID WASTE, GREEN TEAM)	MALL OWNERS, BASE VILLAGE OWNERS, SNOWMASS CENTER OWNERS, ASPEN SKIING COMPANY, LOCAL BUSINESS	\$\$ - \$\$\$
10. Expand composting capabilities to accommodate commercial food-waste, as well as household and yard waste.	PUBLIC WORKS (SOLID WASTE)	PITCO - LANDFILL, LOCAL BUSINESS, LODGES, PRIVATE COMPOST HAULERS	\$\$
11. Adopt a recycling ordinance requiring diversion of construction and demolition waste, and participation in the Town's recycling program for all commercial operations and special events.	PUBLIC WORKS (SOLID WASTE), PLANNING, BUILDING, ECONOMIC RESOURCES	PITCO LANDFILL, PRIVATE WASTE / RECYCLING HAULERS	\$
12. Create incentives for participation in the Town's recycling program.	PUBLIC WORKS (SOLID WASTE), ECONOMIC RESOURCES		\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>5. RESOURCE CONSERVATION, RECYCLING AND SOLID WASTE</b>			
<b>IMPLEMENTATION CONCEPTS</b>	<b>TOWN RESOURCES</b>	<b>OTHER PARTNERS</b>	<b>ESTIMATED COST<sup>1</sup></b>
13. Adopt green special event criteria aimed at reducing consumption, while maximizing recycling and composting of waste.	PUBLIC WORKS (SOLID WASTE), MARKETING (SPECIAL EVENTS)		\$
14. Use recycled asphalt whenever possible to establish roadway subgrade base courses.	TOWN ENGINEER, PUBLIC WORKS (ROADS)		\$
15. Test use of recycled and alternative paving materials in new Town sidewalk and roadway surface specifications.	TOWN ENGINEER, PUBLIC WORKS (ROADS)		\$
16. Develop partnerships to incentivize waste reduction (i.e., participation in reusable bag challenge).	ECONOMIC RESOURCES, MARKETING (SPECIAL EVENTS), PUBLIC WORKS (SOLID WASTE)	CORE, CAST, PITCO LANDFILL, LOCAL BUSINESS, LODGES	\$
17. Improve household hazardous waste collection system.	PUBLIC WORKS (SOLID WASTE)	CORE, PITCO LANDFILL	\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 6. GREEN BUILDING

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Establish an expedited review process and discounted fee structure for renewable energy generation projects and for efficiency enhancing retrofits.	BUILDING, PLANNING	CORE, CLEER	\$\$
2. Adopt a comprehensive "Green Building Code" for both new construction and renovations to existing buildings, requiring:	BUILDING, PUBLIC WORKS (FACILITIES)	CORE, CLEER, SOPRIS FOUNDATION, LOCAL BUILDERS & MATERIALS SUPPLIERS	\$
A. High-performance energy efficient design - building envelope, lighting, windows, mechanical equipment	BUILDING, TOWN ENGINEER	CORE, CLEER, SOPRIS FOUNDATION, LOCAL BUILDERS	
B. On-site renewable energy generation in new development	BUILDING, TOWN ENGINEER	CORE, CLEER	
C. Third-party systems commissioning	BUILDING, PUBLIC WORKS (FACILITIES), TOWN ENGINEER		
D. Use of green building materials with consideration given to embodied energy, renewable resources, recycled materials content, chemical off-gassing, place of origin, etc....	BUILDING	CORE, LOCAL BUILDERS & MATERIALS SUPPLIERS	
E. Incorporation of direct digital controls and other energy load management technology	BUILDING, PUBLIC WORKS (FACILITIES), TOWN ENGINEER		
F. Water-conserving plumbing fixtures (i.e., waterless urinals, dual flush toilets or 1.6gpm toilets, 2.0gpm shower heads, etc...).	BUILDING, TOWN ENGINEER	WATER & SAN DISTRICT	

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>6. GREEN BUILDING</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
3. Develop and distribute an informational guide to green building products, energy efficient design and construction practices.	BUILDING, PUBLIC WORKS (FACILITIES), TOWN ENGINEER	LOCAL BUILDING MATERIALS SUPPLIERS, CORE, CO ENERGY STAR	\$
4. Incorporate energy usage standards into Town's Lighting Ordinance to discourage use of incandescent and other higher consumption technologies.	BUILDING, PLANNING, PUBLIC WORKS (FACILITIES)	CORE, CLEER, HOLY CROSS	\$
5. Develop economic and other incentives for new construction and renovation projects to exceed the minimum energy efficiency standards.	BUILDING, ECONOMIC RESOURCES	CORE, CLEER, HOLY CROSS	\$\$
6. Work with new and existing commercial, lodging and residential properties to encourage and incentivize green operating and maintenance plans, including:	ECONOMIC RESOURCES, BUILDING, MARKETING (GROUP SALES), PUBLIC WORKS (FACILITIES)	LODGES AND PROPERTY MANAGEMENT, SOPRIS FOUNDATION, PTRAB, HOA's, CORE, CLEER	\$
A. Appliance maintenance programs.	BUILDING		
B. Use of energy-efficient light bulbs.	BUILDING		
C. Electrostatic furnace ignition vs. pilot lights.	BUILDING		
D. Occupancy-based controls systems on snowmelt and other building systems.	BUILDING, TOWN ENGINEER		
E. Timers, moisture and temperature sensors on snowmelt systems.	BUILDING		
F. Programmable thermostats.	BUILDING		
7. Conduct energy audits and thermal imaging analysis on all Town-owned buildings.	PUBLIC WORKS (FACILITIES), HOUSING	CORE, CLEER, HOLY CROSS	\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>6. GREEN BUILDING</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
8. Develop purchasing policy requiring purchases of high-efficiency equipment and appliances that allow for more sustainable operations within TOSV organization (i.e., Energy Star appliances, double-sided printers, low-flow fixtures, etc...).	PUBLIC WORKS (FACILITIES), TOWN CLERK, HOUSING, FINANCE (I.T.), ALL DEPARTMENTS	CORE, CLEER, HOLY CROSS	\$\$
9. Develop standard design specifications requiring all new Town buildings to be LEED certified, or to provide DOE certification indicating achievement of equivalent energy efficiency standards.	PUBLIC WORKS (FACILITIES), ECONOMIC RESOURCES, HOUSING, BUILDING	CORE, CLEER, HOLY CROSS	\$\$ - \$\$\$\$
10. Require third-party commissioning on all new Town-owned buildings.	BUILDING, PUBLIC WORKS (FACILITIES)	CORE, CLEER	\$\$\$\$
11. Develop standard specifications for retro-commissioning and retrofitting existing Town buildings with energy efficiency upgrades, including fixture-, appliance-, systems-, and building shell improvements.	PUBLIC WORKS (FACILITIES), HOUSING, BUILDING		\$\$\$\$
12. Continue to develop and implement Efficient Building Standards and a Renewable Energy Offset Program to curb impacts of inefficient building design and outdoor energy use.	ECONOMIC RESOURCES, BUILDING	CORE	\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 7. MOBILITY AND TRANSPORTATION

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Adopt land use regulations that encourage transit-oriented development and maximize multi-modal connectivity between development clusters.	PLANNING, TRANSPORTATION, ECONOMIC RESOURCES	EOTC, RFTA	\$
2. Develop a comprehensive and strategic transportation plan that addresses relationships and trade-offs among single-occupancy vehicle use, the provision of parking infrastructure, and public and private transit services.	PLANNING, TRANSPORTATION, ECONOMIC RESOURCES	EOTC, RFTA, PRIVATE TRANSPORT SVC. PROVIDERS	\$\$\$
3. Expand winter trail maintenance to promote year round walkability.	PUBLIC WORKS (GREEN TEAM)		\$\$ - \$\$\$
4. Increase the number of pedestrian and bike trail access points throughout the Village.	TRANSPORTATION, PLANNING, PUBLIC WORKS (ROADS, GREEN TEAM)		\$ - \$\$\$\$
5. Integrate future trail planning with existing transit infrastructure to enhance the safety and quality of pedestrian connections throughout the Village, especially along Brush Creek Rd., and close to high-use commercial and high-density residential development.	PUBLIC WORKS (ROADS, GREEN TEAM), TRANSPORTATION, PLANNING		\$ - \$\$\$\$
6. Foster development of a centralized shuttle system to provide airport transportation – to replace redundant and inefficient use of independent property airport shuttles.	TRANSPORTATION, ECONOMIC RESOURCES	LODGING COMMUNITY, PRIVATE TRANSPORT SVC. PROVIDERS	\$ - \$\$\$\$
7. Continue free bus service throughout Snowmass Village, and between Snowmass Village and Aspen.	TRANSPORTATION	RFTA, EOTC	\$\$\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>7. MOBILITY AND TRANSPORTATION</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
8. Maintain convenient and consistent fixed-route transit service to high-density residential neighborhoods and commercial nodes (including the SV Recreation Center), while utilizing “dial-a-ride” service (and/or expanded private service provider partnerships) to serve single-family and outlying neighborhoods.	TRANSPORTATION	PRIVATE SERVICE PROVIDERS	\$\$\$\$
9. Encourage higher degree of regional integration among public transit, aviation, and highway transportation management strategies.	TRANSPORTATION, PLANNING	PITCO AIRPORT, RFTA, CDOT, AMTRAK, EOTC	\$
10. Continue to prioritize and incentivize use of public transit and park & ride for Town-sponsored special events and commuters.	TRANSPORTATION	RFTA, EOTC	\$ - \$\$\$\$
11. Engage in Pitkin County Airport planning process to promote transit connection enhancements.	TRANSPORTATION, PLANNING, ECONOMIC RESOURCES	EOTC, RFTA	\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

### 8. WATERSHED WATER QUALITY

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Update the Town's Greenway Master Plan to better understand current riparian ecosystem health, sediment loads, biological diversity, etc....	PLANNING, PUBLIC WORKS (GREEN TEAM)	USFS, ROARING FORK CONSERVANCY, CDOW	\$\$
2. Regulate use of magnesium chloride and other chemical ice melters and dust suppressants within Town limits.	PLANNING, PUBLIC WORKS (ROADS, GREEN TEAM), ECONOMIC RESOURCES	ASPEN SKIING COMPANY, USFS	\$
3. Develop standardized creek water quality testing protocols in partnership with the Roaring Fork Conservancy.	PLANNING, PUBLIC WORKS (ADMIN), TOWN ENGINEER	ROARING FORK CONSERVANCY, WATER & SAN DISTRICT	\$
4. Implement wetland restoration and expansion projects, and promote the use of permeable paving and bio-swales to allow natural filtering and minimize sheet-flow of stormwater run-off.	PUBLIC WORKS (GREEN TEAM, ROADS), TOWN ENGINEER		\$ - \$\$\$\$
5. Expand annual clean-up efforts and explore other methods to limit siltation impacts associated with sanding of Town roadways.	PUBLIC WORKS (ROADS, GREEN TEAM, SOLID WASTE)		\$\$
6. Find opportunities to re-use or recycle contaminated 3/8" chip that is picked up from ditches and stream beds each spring.	PUBLIC WORKS (ROADS, GREEN TEAM, SOLID WASTE)		\$
7. Examine water quality impacts associated with livestock intensive activities and operations (i.e., Rodeo Grounds, Krabloonik).	PLANNING, PUBLIC WORKS (GREEN TEAM)	ROARING FORK CONSERVANCY, WATER & SAN DISTRICT	\$
8. Work with Water and Sanitation District to gain understanding of Town-wide stormwater and sanitary sewer infrastructure health.	PUBLIC WORKS (ADMIN), BUILDING, PLANNING	WATER & SAN DISTRICT	\$
9. Improve domestic pet pick-up enforcement and scoop bag availability.	PUBLIC WORKS (GREEN TEAM), POLICE		\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# Snowmass Village

## Environmental Sustainability Implementation Concepts

<b>8. WATERSHED WATER QUALITY</b>			
IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
10. Develop a Town-wide Stormwater Management Plan.	TOWN ENGINEER, PUBLIC WORKS (ADMIN)	WATER & SAN DISTRICT	\$\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

**Snowmass Village**  
**Environmental Sustainability Implementation Concepts**

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

**9. AIR QUALITY**

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Require use of biodegradable, non-chemical dust suppressants on construction sites and service roads.	BUILDING, PUBLIC WORKS (ROADS), TOWN ENGINEER	ASPEN SKIING COMPANY, DEVELOPMENT AND CONTRACTING COMMUNITY	\$
2. Post signs and enforce adopted vehicle idling regulations.	POLICE		\$
3. Train Town staff to recognize violations of, and enforce air pollution standards.	POLICE, BUILDING, PLANNING		\$\$
4. Conduct minimum amount of fixed-route street sweeper operations along with on-demand response, as necessary to minimize roadway dirt and dust.	PUBLIC WORKS (ROADS), BUILDING	DEVELOPMENT AND CONTRACTING COMMUNITY	\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

**Snowmass Village**  
**Environmental Sustainability Implementation Concepts**

("Implementation Concepts" represent a broad collection of ideas identified to help the community reach its environmental Goals. Implementation Concepts will be selected for inclusion in an "Environmental Implementation Plan" as priorities dictate, and as resources are made available.)

**10. WILDLIFE HABITAT AND PHYSICAL ENVIRONMENT**

IMPLEMENTATION CONCEPTS	TOWN RESOURCES	OTHER PARTNERS	ESTIMATED COST <sup>1</sup>
1. Strengthen code regulations regarding excessive noise, and train staff to recognize violations and enforce them.	PLANNING, BUILDING, POLICE		\$\$
2. Strengthen code regulations regarding impacts to wildlife and protection of wildlife habitat.	PLANNING, POLICE (ANIMAL CONTROL)	COLORADO DEPARTMENT OF WILDLIFE (CDOW)	\$
3. Examine benefits to wildlife, recreational quality and public safety associated with limiting or banning hunting within Town limits.	POLICE, ECONOMIC RESOURCES, PARKS & RECREATION, MARKETING	CDOW, US FOREST SERVICE	\$
4. Increase educational, outreach and enforcement efforts regarding trash regulations.	POLICE (ANIMAL CONTROL)	CDOW	\$
5. Pursue grant opportunities related to environmental and wildlife education, outreach and signage.	POLICE (ANIMAL CONTROL), ECONOMIC RESOURCES		\$
6. Develop and distribute expanded informational resources regarding wildlife issues, especially during migration and calving periods.	POLICE (ANIMAL CONTROL)	CDOW	\$
7. Work with US Forest Service to develop pre-emptive pine beetle strategy.	PLANNING, ECONOMIC RESOURCES, PUBLIC WORKS (GREEN TEAM)	US FOREST SERVICE	\$ - \$\$\$\$\$
8. Continue to implement Town's 10-Year Weed Management Program.	PUBLIC WORKS (GREEN TEAM)	PITCO OPEN SPACE	\$ - \$\$\$\$\$
9. Develop improved strategies for weed abatement on private property.	PUBLIC WORKS (GREEN TEAM)		\$
10. Preserve and expand wetland habitat where feasible.	PUBLIC WORKS (GREEN TEAM), TOWN ENGINEER		\$ - \$\$\$\$\$

1. COST ESTIMATE SCALE: \$ (\$0 to \$5,000), \$\$ (\$5,000 to \$25,000), \$\$\$ (\$25,000 to \$50,000), \$\$\$\$ (\$50,000 and up)

# **Snowmass Village**

## **Environmental Sustainability Plan**

### **Selection Criteria**

Given a limited set of resources, whether related to finances, personnel, or time, these selection criteria are intended to provide the means to compare the pros and cons of various policies, programs and projects proposed in pursuit of the community's Environmental Sustainability Plan Goals.

1. Project fulfills one or more Goals and/or Implementation Concepts identified in the Town's Environmental Sustainability Plan.
2. Project satisfies triple bottom-line analysis:
  - Project is cost-effective (i.e., big environmental bang for the buck) and implementable given existing technology and resources, and cost is not prohibitive to be sustainable at the local level,
  - Project improves social fabric of the community, as well as the health, safety, and welfare of citizens,
  - Project is determined to have a positive environmental impact, given a clear understanding of the environmental trade-offs associated therewith.
3. Project will reduce pollution and/or the community's contribution to global climate change.
4. Project focuses on greening Town government operations and/or policies.
5. Project will have tangible, high-visibility results, which demonstrate the benefits and ease of implementing green initiatives.
6. Project increases individual responsibility for environmental health and/or builds community support for sustainability initiatives.
7. Project addresses needs that would not be fulfilled by the free market acting alone, and optimizes leveraging opportunities, either financial or for in-kind contributions.
8. Project demonstrates collective leadership and a broad base of community support for implementation.
9. Project demonstrates cutting-edge technology in energy efficiency or environmental sustainability.
10. Project serves to stimulate and promote a sustainable economy.

# **Snowmass Village**

## **2009 Environmental Implementation Plan**

**February 2, 2009**

As of this date, the Town of Snowmass Village is operating under a contingency budget plan, which has required cuts to existing programs, services, and staffing levels throughout the organization. As such, the 2009 Environmental Implementation Plan does not include any Implementation Concepts that involve new budget appropriations or staff resources.

Responsibility for this Implementation Plan will lie with the Town's Economic Resource Director, who, in collaboration with other Town departments and community partners, will spearhead efforts to accomplish the various initiatives presented. A biannual status report and plan update will be presented to Council, in order to track the progress being made within each of the initiatives described below.

### **1. Collaborate With Town Staff and Other Community Partners**

Convene quarterly meetings of Town departmental representatives to brainstorm opportunities and report on ongoing efforts to make Town operations, policies and procedures more environmentally friendly. Convene quarterly meetings with other community partners (such as the Aspen Skiing Company, utility providers, special districts, other regional jurisdictions, and community interest groups) to develop relationships, share knowledge, and coordinate efforts around common environmental goals.

### **2. Continue Ongoing Efforts and "Green" Operating Procedures Already In Place**

Staff has identified numerous operational initiatives, programs and procedures that are already being implemented, and which are consistent with the Town's Environmental Goals. These efforts are being implemented throughout the Town organization, and will continue to be implemented as standard operating procedures. A list of these initiatives will be discussed during staff's presentation to Council.

### **3. Conduct Baseline Analysis of Town Environmental Indicators**

Work with Town departments to develop a broad understanding of our environmental footprint. Examine organizational use of electricity, natural gas, gasoline and diesel fuel, and office paper. Understand waste generation rates at the organizational level and Town-wide. Inventory Town-owned buildings and vehicles and identify opportunities for efficiency upgrades and renewable energy generation projects. Conduct in-house energy audits and building shell analyses on Town-owned buildings. Consider special events and other Town-sponsored activities in terms of opportunities to reduce environmental impacts. Set percentage reduction targets based on baseline usage.

### **4. Pursue Grants and Provide Grant Assistance**

Identify and pursue grant opportunities available to help fund renewable energy generation projects (i.e., micro-hydro, solar, etc...) and other projects to help reduce the community's carbon footprint and accelerate our progress toward environmental sustainability. Provide information and assistance to community members interested in pursuing sustainability-oriented grants (i.e., for appliance rebates, home energy efficiency upgrades, etc...).

### **5. Improve Waste Collection and Diversion Strategies**

Work with the Town's Solid Waste Dept. to convene a working group to identify opportunities to improve the Town's waste collection systems and waste diversion/recycling programs.

## **6. Adopt “Green” Special Events Criteria**

Work with the Town’s Marketing Dept. to develop criteria and standard operating procedures designed to minimize the environmental footprint of special events held within the Town. Identify best practices for minimizing waste, energy consumption, and greenhouse gas emissions.

## **7. Prioritize Electronic Communications**

Work with the Town’s Community Relations and Marketing Depts. to prioritize use of electronic communications strategies, as opposed to distributing printed materials (i.e., for surveys, advertisements, public notices, etc...).

## **8. Evaluate Building, Land Use & Development Codes**

Work with the Town’s Planning and Building Departments to review the Building Code, and the Land Use & Development Code to identify potential amendments aimed at strengthening environmental protections and enhancing energy efficiency requirements in new building and development proposals.

## **9. Reduce Town’s Organizational Paper Consumption by 20%**

Transition Town organization to electronic record retention system. Adopt internal purchasing policy requiring all future printer/copier purchases to have double-sided printing capability. Develop plan to transition to a paperless packet system (for Town Council, Boards and Commissions). Investigate benefits of acquiring Smartboards for Town conference rooms to avoid paper use. Re-use single side printed paper for fax and “draft” printing jobs.

## **10. Follow Up On Renewable Energy Offset Program**

Return to Council in March 2009 to address REOP fee schedule. Return to Council prior to November 2009 to address REOP fund distribution (grant/subsidy) program.

## **11. Improve Trail to Transit Integration**

Work with Transportation Dept. and Trails Committee to identify opportunities to better integrate bike/pedestrian trails with transit infrastructure.

## **12. Participate in Reusable Bag Challenge**

Partner with the Village Market, CAST and CORE in the Reusable Bag Challenge to encourage a reduction in the use of plastic shopping bags.

## **13. Track and Support Progressive Climate Legislation**

Staff will monitor and bring to council’s attention legislative initiatives representing progressive climate policy at the local, state, and federal levels.

## **14. Develop Energy Procurement & Generation Strategy**

Begin development of an energy procurement strategy that considers a mix of generation technologies and sources for satisfying the Town’s energy needs. Once financial resources are available, this strategy would be ready for implementation.

## **15. Develop Informational Resources and Conduct Educational Outreach**

Work with Full and Part-Time Residents, Business and Lodging Operators, and Property Managers (in partnership with the Sopris Foundation, CORE, CLEER, and local utility providers) to develop informational resources and practical strategies for reducing energy use in Snowmass Village.