

# Ecosystem Stewardship: Common Value 1





## Why is Ecosystem Stewardship a Common Value?

The Greater Yellowstone Ecosystem – the largest intact ecosystem in the lower 48 states – transcends the physical boundaries of Jackson and Teton County. Accordingly, ecosystem stewardship is a common value of the community in and of itself. Further, our vision delineates that preserving the area's ecosystem transcends our other common values, inspiring and resulting from achievement of each of them. Wildlife, natural and scenic resources, open space, and climate are at the core of our community character and growth management values, but they have additional intrinsic value beyond our form and socioeconomic character. The quality of this ecosystem has attracted numerous visitors throughout the years and is the primary reason many residents live here. We understand that our quality of life depends on many factors, but the primary factor is the continued health and viability of the ecosystem in which we live. With this Plan, the community recommits to responsible stewardship of the ecosystem to ensure that the abundant wildlife, quality natural resources and scenery, open space, and climate that we experience today lasts long into the future. While our community's international popularity and location in an intact ecosystem heighten the importance of ecosystem stewardship, growth management, and community character, they also provide the community with an opportunity to lead in implementing strategies for climate sustainability and protection of wildlife, natural and scenic resources, and open space. Our community must lead by example to show how local efforts can positively affect entire ecosystems. The community's stewardship of our surrounding ecosystem has been and will continue to be our legacy to future generations.

## How are we going to achieve Ecosystem Stewardship?

### *Section 1. Stewardship of Wildlife, Natural Resources and Scenery*

- Maintain healthy populations of all native species (Principle 1.1)
- Preserve and enhance water and air quality (Principle 1.2)
- Maintain the scenic resources of the area (Principle 1.3)
- Conserve remaining undeveloped open space (Principle 1.4)

### *Section 2. Climate Sustainability through Energy Conservation*

- Reduce consumption of non-renewable energy (Principle 2.1)
- Reduce energy consumption through land use (Principle 2.2)
- Reduce energy consumption through transportation (Principle 2.3)
- Increase energy efficiency in buildings (Principle 2.4)
- Conserve energy through waste management and water conservation (Principle 2.5)

# Section 1. Stewardship of Wildlife, Natural Resources and Scenery

Maintain healthy populations of all native species and preserve the ability of future generations to enjoy the quality natural, scenic, and agricultural resources that define Teton County's current physical character.

What does this section address?

*Principle 1.1 - Maintain healthy populations of all native species*

*Principle 1.2 - Preserve and enhance water and air quality*

*Principle 1.3 - Maintain the scenic resources of the area*

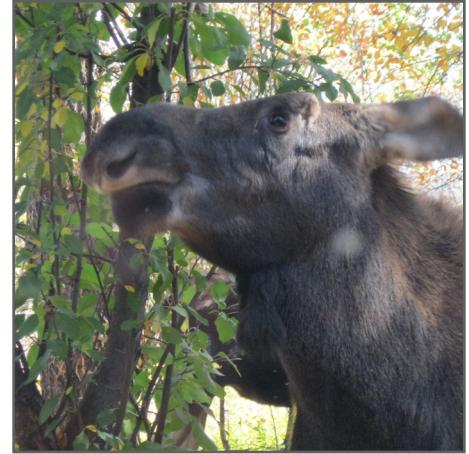
*Principle 1.4 - Conserve remaining undeveloped open space*

Why is this section addressed?

Our abundant wildlife, natural and scenic resources are internationally renowned. These resources largely define the community's ecological, social, and economic character. Most members of the community live in the area because of the access to wildlife, natural resources, and outdoor recreation. The community recognizes that our policies regarding development, transportation, recreation, and energy consumption have both direct and indirect impacts on the entire ecosystem. The community will continue to preserve and protect our wildlife, natural, scenic, and open space resources by supporting and maintaining our historic stewardship, conservation, and agricultural ethic.

The community is located in the Greater Yellowstone Ecosystem—the largest generally intact ecosystem in the lower 48 states. Our location in this ecosystem sets the Town of Jackson and Teton County apart from other resort and rural communities, particularly in terms of the abundance of wildlife. Although 97% of Teton County is publicly owned, the dynamic natural systems of our ecosystem do not conform to jurisdictional boundaries. This makes wildlife susceptible to the impacts of local development, transportation and energy consumption policies.





Privately owned lands in the county continue to provide critical habitat for many species. The community respects land owners' private property rights while acknowledging that effective stewardship of wildlife requires protecting critical areas from the impacts of development. Preserving habitat quality is also needed to dampen the impacts of global climate change and aid wildlife in adapting to an altered climate.

The human causes of natural and scenic resource degradation are not always immediately apparent. While direct local impacts can usually be identified and mitigated, it is the sum of direct and indirect impacts that, over time, threaten the health of the ecosystem at a regional scale. The human populations in Jackson Hole, Star Valley, and Teton Valley, Idaho, which have grown because of our area's natural beauty, will continue to have direct and indirect impacts on the ecosystem at a local and regional level that must be addressed.

The protection of wildlife and natural and scenic resources provides for the economic well being of the community. Abundant wildlife, daily interactions with nature, and panoramic scenic vistas are cornerstones of the quality of life of Teton County residents and the quality of our visitors' experience.

The international desire to live and/or visit Jackson Hole depends upon the continued stewardship of wildlife and natural and scenic resources. It also provides the opportunity for us to set a positive ecosystem stewardship and energy conservation example for approximately 3 million visitors a year.

Jackson Hole's stewardship of wildlife and natural resources is part of our history. Of the 76,000 acres of private land in Teton County, conservation efforts have resulted in approximately 22,000 acres of permanently protected and actively stewarded open space while 36,000 acres remain as agricultural open space. Moving forward we realize that it is in the best interest of the ecosystem and the community to continue to act as stewards of wildlife, scenic and natural resources.



## *Principle 1.1—Maintain healthy populations of all native species*

In order for future generations to enjoy the ecosystem that exists today the community must manage our impacts to wildlife, wildlife habitat, and wildlife movement corridors on private and public land. The prevalence of wildlife that is central to our ecological, social, and economic character requires an intact ecosystem that supports all native species. Therefore, efforts to protect wildlife must extend to all native species.

### **Policy 1.1.a: Protect focal species habitat based on relative critical value**

Protecting wildlife requires protecting wildlife habitat and wildlife movement corridors. Our Natural Resource Overlay (NRO) that protects wildlife habitat and wildlife movement corridors will consider the importance and abundance of habitat types and be based on a set of focal species that indicate the health of all native species and includes culturally and economically significant species. The most abundant and visible wildlife species are not necessarily indicative overall ecosystem health.

Likewise, while a habitat may be important, it may also be abundant and therefore only relatively critical, while another important habitat may be declining and/or disappearing due to development and climate change and therefore absolutely critical. As our NRO and other programs to protect wildlife habitat from the impacts of development and transportation evolve, they should be updated to reflect the best available data on the relative critical value of different habitat types for identified focal species.

Since 1994 elk, moose, mule deer, bald eagle and trumpeter swan crucial winter habitat; elk and mule deer migration corridors; bald eagle and trumpeter swan nesting areas and cutthroat trout spawning areas have defined the NRO and been protected by the Town and County.



Until NRO definitions can be updated to reflect the relative critical value of different habitat types for identified focal species, these previously identified habitats will continue to define the NRO and be protected using the best available science and data.

#### **Policy 1.1.b: Protect wildlife from the impacts of development**

The community is committed to protecting the wildlife, wildlife habitat, and wildlife movement corridors that exist on private land. However, it is necessary to respect the development rights of private property owners and the need for certain transportation network infrastructure. When such development occurs it should be sized, located, and designed to avoid or limit impacts to wildlife.

A tiered system of protection should be established so that the most critical habitat and movement corridors (as defined by Policy 1.1.a) receive the highest level of protection and site specific study. Applicable tiers of protection should respect property rights, previous approvals, and community-wide clustering efforts. For example, a stricter tier of protection will likely apply along the Snake River than would apply in downtown Jackson. Limits to impacts from development within each tier may address density, intensity, building size, location and consolidation of development, alteration to the natural landscape and wildlife permeability.

### wildlife protection tiers



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### **Policy 1.1.c: Design for wildlife permeability**

Whether small or large, development and transportation corridors should be designed to accommodate wildlife movement. Protecting critical habitat is important, but equally essential is ensuring that wildlife can move between areas of habitat. The tiered system of protections described in Policy 1.1.b should include best management and design practices for wildlife permeability. Best practices may include wildlife friendly fencing, pet control, building clustering, landscape modification and clearing and wildlife crossings.

### **Policy 1.1.d: Limit human/wildlife conflicts**

Limiting impacts to wildlife, wildlife habitat, and wildlife movement includes limiting wildlife/human conflicts. Designing for wildlife permeability is necessary, but attracting wildlife into the built environment can be dangerous for both wildlife and humans. Human/wildlife conflicts, especially those involving large predators, can result in human injury and/or relocation or killing of the animal. The tiered system of protections described in Policy 1.1.b should consider measures to limit wildlife attractants such as palatable vegetation and accessible trash near the built environment.

### **Policy 1.1.e: Understand the impacts of development on wildlife**

It is a goal of the community to better understand the impacts of development on wildlife. In complex situations, such as understanding impacts of individual developments on an entire ecosystem, science cannot provide precise answers in the timeframe of an individual project because baseline study and years of data are needed. Through the Natural Resource Technical Advisory Board, the Town and County will gather the baseline information needed to create and implement a system to monitor the impacts of growth and development on wildlife, wildlife habitat, and wildlife mobility over time. As we gain a greater understanding of our impact on wildlife, our protection measures will be updated to ensure we are maintaining healthy populations of all native species.



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#### **Policy 1.1.f: Require mitigation of unavoidable impacts to habitat**

While avoidance is preferable, where it cannot be achieved the Town and County will require mitigation of impacts to the most critical habitat types resulting from development and transportation projects. These impacts are inevitable as humans live, work, and play in the community; however, they should be mitigated in order to maintain healthy populations of all native species. Direct impacts are more easily quantified; however, programmatic steps consistent with Policy 1.1.e should also be taken to identify and mitigate indirect and cumulative impacts.

#### **Policy 1.1.g: Encourage restoration of degraded areas**

The community supports public, private, and cooperative efforts on public and private lands to restore areas with habitat potential. Beyond protecting existing critical habitat and corridors there are also opportunities to enhance the ecosystem by increasing the wildlife habitat and/or corridor value of some degraded areas. The Town and County will work with private and public land owners and managers to identify degraded areas with wildlife habitat or connectivity potential and direct off-site mitigation and restoration efforts to those areas.

#### **Policy 1.1.h: Promote responsible use of public lands**

Stewardship of wildlife, wildlife habitat, and wildlife movement corridors cannot be achieved through the management of growth and development on private lands alone; it must also be pursued through the responsible enjoyment of State and Federal lands. If recreationists and other users cannot enjoy public lands responsibly, the health of our intact ecosystem will suffer and State and Federal land managers will likely have to further regulate and restrict public use and access. The Town and County will work with State and Federal agencies to promote stewardship and responsible use of public lands; preserve and steward existing authorized access points to rivers, creeks, and State and Federal lands; and eliminate unauthorized access points.



## *Principle 1.2—Preserve and enhance water and air quality*

Clean water and air are the most basic requirements of a healthy ecosystem and community. The high water and air quality of Jackson and Teton County are important to the ecosystem and scenic beauty that residents and visitors enjoy. Stewardship of waterbodies, wetlands, riparian areas, and air is important to sustain healthy populations of native species and for the health and safety of the human community.

### **Policy 1.2.a: Buffer waterbodies, wetlands, and riparian areas from development**

In the interest of ecosystem and community health, the Town and County will protect the functionality of waterbodies, wetlands, and riparian areas as growth and development occurs. Wetlands and riparian areas are more important to wildlife and ecological health than any other habitat type. They also provide natural flood protection, sediment control, and nutrient filtration, all of which improve water quality. Clean surface water is essential to high quality aquatic habitat, clean potable water supplies, and better functioning wetlands and riparian areas. Development will be designed to include buffers around waterbodies, wetlands and riparian areas that preserve their ecological function.

### **Policy 1.2.b: Require filtration of runoff**

In cases where natural filtration systems such as wetlands, floodplains and riparian areas cannot effectively protect surface water quality, best management practices should be employed to enhance the function of natural systems. Land development causes changes to the natural quantity and quality of stormwater that drains into the area's water bodies. The Town and County will promote innovative stormwater and snowmelt collection, storage, and diversion systems to reduce the amount of sediment and pollution entering our local water bodies. This is especially applicable in developed areas along waterways such as Flat Creek, Cache Creek and Fish Creek.

### **Policy 1.2.c: Monitor and maintain water quality**

Maintaining quality water is essential to ecosystem and public health. Because the extent of human impact on water quality in the community is not quantitatively known, it will be important to monitor the cumulative impacts of human actions on water quality and the effectiveness of mitigation efforts as part of the monitoring system established by Policy 1.1.e. The Town and County will exceed State and Federal requirements for quality and monitoring to maintain and enhance water quality in the area.

### **Policy 1.2.d: Improve air quality**

Also critical for ecosystem protection and public health is air quality. Air quality in Teton County is currently well within the levels mandated by the Environmental Protection Agency. However, our location in a high mountain valley exacerbates the effects of wood smoke, dust, vehicle exhaust and other emissions on air quality, so there is still an opportunity to improve our air quality. Efforts to improve air quality may include: reducing vehicle miles traveled through a shift to alternate modes of travel, reducing wood burning emissions, reducing dust from unpaved roads and large construction sites and offering incentives for the use of new technologies and practices that reduce carbon emissions.



## *Principle 1.3—Maintain the scenic resources of the area*

Scenic resources, natural landforms and dark skies are vital to the community's natural character. Mountains, moraines, meadows and other natural viewsheds provide residents and guests with a constant reminder of their location within the Greater Yellowstone Ecosystem. Interruption of these natural forms by the built environment detracts from Teton County's scenic character and should be avoided.

### **Policy 1.3.a: Maintain natural skylines**

Development along butte tops and ridgelines will be avoided or mitigated so that key skyline viewsheds retain a natural appearance uninterrupted by built forms. Buttes, ridgelines, and mountains are the most prominent aspects of our landscape. Through Scenic Resource Overlay (SRO) development restrictions and mitigation requirements, skyline viewshed protection from the Town and County will be enhanced beyond the guidance of the 1994 Plan to the extent that it does not prohibit development of property rights or cause greater impact to wildlife habitat or wildlife movement.

### **Policy 1.3.b: Maintain expansive hillside and foreground vistas**

Development on hillsides and in the scenic foreground should be avoided or mitigated to protect the appearance of vast, uninterrupted natural vistas. Views of expansive forested hillsides and foreground meadows are essential to the rural and scenic character of the community. Through Scenic Resource Overlay (SRO) development restrictions and mitigation requirements, the protection of scenic foregrounds and forested hillsides in the Town and County will be enhanced beyond the guidance of the 1994 Plan to the extent that it does not prohibit development of property rights or cause greater impact to wildlife habitat or wildlife movement.

### **Policy 1.3.c: Maintain natural landforms**

In order to avoid the appearance of a manmade landscape, natural landforms should be maintained. Town and County regulations on grading and landform modification will ensure that final contours appear to be naturally occurring, are consistent with surrounding features, and do not obstruct protected viewsheds.

### **Policy 1.3.d: Maintain dark night skies**

The prominence of nature over the built environment should extend beyond daytime viewsheds. Lighting of individual developments cumulatively impacts the ability to see dark and starry night skies. Although lighting is required for public safety, especially along pedestrian corridors, non-essential lighting will be limited and all lighting will be designed to meet dark skies best practices. Existing development will also be encouraged to implement best practices.

## *Principle 1.4—Conserve remaining undeveloped open space*

Protecting undeveloped open space preserves habitat and scenery and maintains our agricultural western heritage. Avoiding development in critical wildlife areas and providing recreational opportunities that reduce pressure on habitat are vital to maintaining a healthy ecosystem. Conservation easements provide permanent protection of open space from development as well as active stewardship of the land by the holder of the easement. In addition, agricultural open space provides much of our scenic and western character, and should therefore be protected and encouraged.

### **Policy 1.4.a: Encourage non-development conservation of wildlife habitat**

Avoiding development in critical wildlife habitat and wildlife movement corridors is a central goal of the community. Large, contiguous expanses of habitat that provide connectivity between critical areas, enable migration and reduce human conflict are most valuable to wildlife. However, small areas can also provide critical habitat and may be just as important to ensuring countywide habitat connectivity. Past public and private efforts have been successful in permanently preserving such strategic habitat lands. The community will continue to seek incentives and partnerships to permanently protect valuable open space for wildlife from future development.

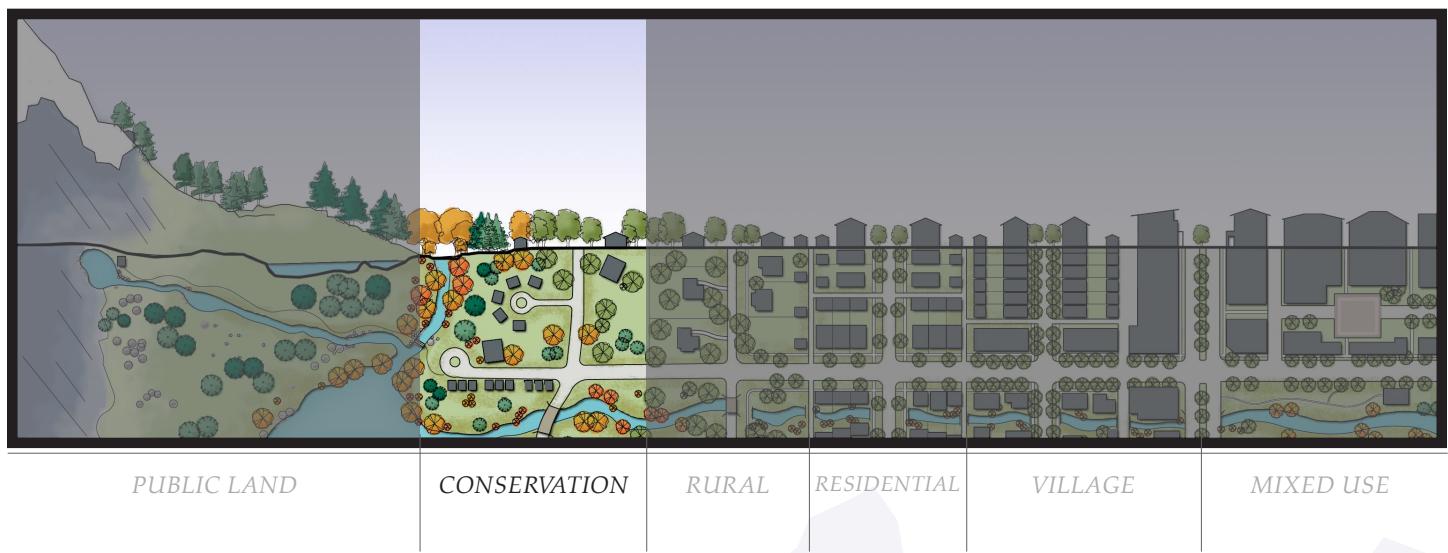
### **Policy 1.4.b: Conserve agricultural lands and agriculture**

The conservation of agriculture and agricultural lands also conserves open space from development. Historically, the agricultural community has provided much of the stewardship of the natural and scenic resources valued by the community. Conservation of open space via agriculture protects the historic western character of the community and can support wildlife movement corridors, natural resources and scenery. Regulations that are generally applicable to development may functionally or procedurally impede the continuation of agricultural operations. The County will evaluate the impacts of its regulations on active agricultural operations that conserve significant open space and continue to provide exemptions to requirements that preclude continued agricultural stewardship of large tracts of open space. The County will also explore other incentives to support and encourage continued agricultural conservation of open space.

### **Policy 1.4.c: Encourage rural development to include quality open space**

It is the community's primary goal to permanently extinguish development rights in critical wildlife habitat, habitat connections, scenic viewsheds and agricultural open space. However, 35-acre State subdivision exemptions and existing parcel configurations may necessitate continued development incentives in exchange for the donation of permanent conservation easements and clustering of development away from sensitive areas in order to achieve the community's stewardships goals. The incentive program should be designed to achieve a more functional web of wildlife habitat and connections than is possible through State exempt subdivisions. Possible incentives may include density bonuses as well as house size, location, guesthouse and other options.





#### **Policy 1.4.d: Establish a funding source for open space**

The community should explore the establishment of a dedicated funding source for conservation easements and other measures that protect the wildlife habitat, habitat connections, and scenery valued by the community. Critical habitat, habitat connections and scenic viewsheds are often located on valuable private land. A dedicated funding source would allow the Town and County to work with conservation groups and private land owners to establish permanent conservation easements on lands the community wants to protect from development. The funding source could also be leveraged for wildlife protection efforts such as wildlife crossings in the Town and County.

#### **Policy 1.4.e: Conserve open space to use public lands more responsibly**

Providing alternative locations for recreational activities can reduce impacts to wildlife and scenery in sensitive areas. As the community grows, so will recreational use of State and Federal lands and the associated impacts to valuable wildlife habitat and corridors. Trails, parks, pathways, dog parks and other public recreational opportunities should be pursued on Town and County lands as part of a conservation strategy. Conservation easements may also provide the opportunity to manage access to public lands in coordination with State and Federal land managers.

# Strategies

The community will undertake the following strategies in initial implementation of the policies of this common value. This list is only a starting point and not all inclusive. As strategies are completed and/or new best practices, technology and information become available, the community may pursue additional strategies. Prioritization of the strategies to be implemented will occur annually as described in Policy 9.2.b.

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## *Strategies to maintain healthy populations of all native species (Principle 1.1)*

- 1.1.S.1:** Create a vegetation cover map that can be used to help inform the identification of relative criticalness of habitat types.
- 1.1.S.2:** Identify focal species that are indicative of ecosystem health and determine important habitat types for those species. Evaluate habitat importance, abundance and use to determine relative criticalness of various habitat types.
- 1.1.S.3:** Establish a monitoring system for assessing the impacts of growth and development on wildlife and natural resources. Implement actions in response to what is learned to provide better habitat and movement corridor protection.
- 1.1.S.4:** Evaluate and amend wildlife protection standards for development density, intensity, location, clustering, permeability and wildlife-human conflict. Standards should be tiered based on the wildlife protection goals of an area and the relative criticalness of habitat for focal species.
- 1.1.S.5:** In the interim, as focal species are being identified, work with Wyoming Game and Fish and other partnering agencies and entities to update the mapping that provides a general indication of the location of the Natural Resources Overlay (NRO), based on current protection of critical “species of special concern” habitat.

- 1.1.S.6:** Evaluate mitigation standards for impacts to critical habitat and habitat connections and update as needed.
- 1.1.S.7:** Identify areas appropriate ecological restoration efforts.
- 1.1.S.8:** Identify areas appropriate for underpasses, overpasses, speed reductions, or other wildlife protection measures in heavy volume wildlife-crossing areas.



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*Strategies to preserve and enhance water and air quality (Principle 1.2)*

- 1.2.S.1:** Evaluate and update natural resource protection standards for waterbodies, wetlands and riparian areas.
- 1.2.S.2:** Evaluate and update surface water filtration standards, focusing on developed areas near important waterbodies.

*Strategies to maintain the scenic resources of the area (Principle 1.3)*

- 1.3.S.1:** Evaluate and remap the Scenic Resources Overlay based on accumulated knowledge of potential visual impacts and intent to expand scenic protection.
- 1.3.S.2:** Evaluate and amend lighting standards based on dark skies best practices.

*Strategies to conserve remaining undeveloped open space (Principle 1.4)*

- 1.4.S.1:** Update the Planned Residential Development (PRD) tool to better protect wildlife resources. Reconsider applicability of the PRD tool on smaller (35- to 120-acre) parcels. Consider incentives in addition to density bonuses including house size, locations, guesthouses, and other options.
- 1.4.S.2:** Evaluate and update agricultural exemptions and incentives to encourage continued agricultural conservation of open space. Ensure exemptions and provide incentives to enable continuation of agriculture.
- 1.4.S.3:** Explore non-development incentives for the permanent protection of open space.
- 1.4.S.4:** Explore establishment of a dedicated funding source for the acquisition of permanent open space for wildlife habitat protection, scenic vista protection and agriculture preservation.
- 1.4.S.5:** Evaluate and update the definition of publicly valuable open space to include the provision of active recreation opportunities in less critical habitat to relieve recreation pressure in areas of more critical habitat, and manage public lands access.



## Section 2. Climate Sustainability through Energy Conservation

Consume less nonrenewable energy as a community in the future than we do today.

What does this section address:

*Principle 2.1 - Reduce consumption of non-renewable energy*

*Principle 2.2 - Reduce energy consumption through land use*

*Principle 2.3 - Reduce energy consumption through transportation*

*Principle 2.4 - Increase energy efficiency in buildings*

*Principle 2.5 - Conserve energy through waste management and water conservation*

Why is this section addressed?

The contribution to climate change from the consumption of nonrenewable energy is a perfect example of how seemingly insignificant individual actions can add up to a measurable impact at a larger scale. Global climate change cannot be addressed by our community alone, but the local, regional, and global impacts of climate change are inconsistent with our common values and must be addressed to the extent possible. A changing climate threatens the Greater Yellowstone Ecosystem by altering or eliminating habitats, making it harder for native species to survive. We will also experience local impacts as food, potable water and habitable land diminish across the world. The cost of bringing food into our remote location, demand for our water, and pressure to develop our valued open space will all increase.





## Sustainability

**is a system of practices that are healthy for the environment, community and economy and can be maintained for current and future generations.**

However, the community sees climate change as an opportunity as much as a threat. Our stewardship legacy and international recognition provide the perfect chance for us to set an example of how the global issue of climate change can be addressed at the community level. We can become a model for energy conservation and energy independence for over 3 million visitors every year. We have hydro, solar, wind, and geothermal renewable energy resources available to us. Through the development and use of renewable resources and improved energy conservation we can limit our dependence on non-renewable energy resources.

Climate sustainability through energy conservation is included in this Plan because transportation and buildings constitute 95% of the community's energy consumption. In order to meaningfully address our climate impacts in the long-term, energy consumption, land use, and transportation planning must be holistically addressed. The transportation and infrastructure required to sustain a sprawling development pattern requires far more energy consumption than a compact, connected series of complete neighborhoods where services and infrastructure already exist and residents can use alternate modes of travel to move within and between built areas. Our buildings can also be designed to be much more energy efficient than they are now.

Beyond reducing our contributions to climate change, energy conservation also makes economic sense for the community. Reliance on diminishing non-renewable resources will cause the cost of energy to increase. This will further increase the cost of living in our community and have detrimental effects on our goals for community character. If we can reduce the amount of motor vehicle travel needed to move around the community, we will be less affected by rising gas prices. If we consume less power in the operation and construction of our public and private buildings and our management of waste, we can continue to have some of the lowest priced and most renewable power in the country. As we become a true example of sustainable energy consumption, visitors may be attracted to the area for our climate stewardship alone.

Awareness of the importance of energy conservation has recently gained momentum with an initiative to reduce Town and County energy consumption by 10% over the past five years and the completion of a communitywide emissions inventory through an unprecedented cooperative commitment between the Town, County and Lower Valley Energy. These efforts will assist in meeting the community's energy consumption reduction goals. Moving forward, we realize that it is in the best interest of the ecosystem and the community to continue promoting climate sustainability through energy conservation.

## ***Principle 2.1—Reduce consumption of non-renewable energy***

In order to reduce the emission of greenhouse gases that contribute to climate change, the community will reduce its consumption of energy from non-renewable sources. The Town and County will lead by example and encourage reductions in energy demand and the use of renewable energy sources. However, it will be the daily responsibility of the entire community to reduce consumption of non-renewable energy whether for climate, financial or other reasons.

### **Policy 2.1.a: Shift community energy consumption behavior**

The community commits to shifting its behaviors to consume less energy. Reducing energy demand is the simplest way to consume fewer nonrenewable energy resources. Achieving communitywide energy conservation requires reducing individual consumption of energy with every decision. The Town, County, and partnering organizations will educate the community on best available methods for reduction of energy demand and facilitate and encourage each community member to reduce personal energy consumption.

### **Policy 2.1.b: Encourage energy conservation through energy pricing**

The Town and County will work with local energy providers to develop a sliding scale energy pricing structure where the cost of a unit of energy increases with the total amount energy consumed. Money is a significant motivator in all decisions, including energy conservation. The pricing structure will be set up to reward energy consumers contributing to the community goals of conservative and efficient use of energy without punishing households that cannot afford to upgrade energy inefficient structures.

### **Policy 2.1.c: Increase local use and generation of renewable energy**

Using solar, wind, geothermal, and/or hydro energy that has less impact to the climate is the community's preference. The community will work with local utilities and other agencies, non-profits, and businesses to identify local renewable energy generation opportunities so that it is not necessary to add non-renewable energy sources to the community's energy portfolio. Integration of renewable energy into the community's energy portfolio should be done consistently with the community's vision.

### **Policy 2.1.d: Allow and encourage onsite renewable energy generation**

Production of energy from renewable sources on individual properties should be allowed and encouraged. The transmission of electricity is extremely inefficient. Reducing that component of our energy infrastructure could result in a large cumulative decrease in demand for non-renewable energy. Exemptions to Town and County regulations should be considered to facilitate the installation of on-site renewable energy sources. The community will also explore incentives for on-site renewable energy, utilizing best available practices.



## *Principle 2.2 – Reduce energy consumption through land use*

Land use patterns have a great effect on the community's overall energy consumption and should be designed with energy efficiency in mind. Complete neighborhoods require less energy consumption for travel within and around the community; and compact mixed-use infill and redevelopment requires less energy in the provision of services and infrastructure.

### **Policy 2.2.a: Enhance existing and future complete neighborhoods**

Principle 3.2 details the community's policies to encourage development, infill, and redevelopment that enhances suitable locations into complete neighborhoods that contain: defined character and quality design; public utilities; quality public space; a variety of housing types; schools, childcare, commercial, recreation and other amenities within walking distance; and connection by complete streets. Complete neighborhoods contain the greatest potential for low energy consumption living because of the close proximity of residences to services and jobs. Complete neighborhoods in the Town and County will lead to energy conservation through a reduction in motor vehicle miles traveled and consolidation of waste disposal and other infrastructure.

### **Policy 2.2.b: Direct growth out of habitat, scenery, and open space**

Principles 1.4 and 3.1 detail the community's commitment to conservation of wildlife habitat, habitat connections, scenic viewsheds, and undeveloped open space. Development of these areas would not only negatively impact wildlife and scenery but also require far more energy to install and maintain infrastructure and transport people and energy around the community. As the climate changes, preserving open spaces from development will also ease the pressure on wildlife as they adapt to a changing ecosystem.



Decreases

Energy efficiency

Increases

## *Principle 2.3 – Reduce energy consumption through transportation*

Transportation accounts for approximately 80% of the total carbon emissions in the community and should be a focus of the community's efforts to reduce energy consumption. Reducing fuels consumed for transportation and using renewable fuels has the greatest potential to reduce the community's overall carbon emissions and consumption of non-renewable resources.

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### **Policy 2.3.a: Meet future transportation demand through the use of alternative modes**

Principle 7.1 details the community's policies to promote the use of alternative modes over use of the single occupancy motor vehicle. The use of single occupancy motor vehicles is the least energy efficient mode of transportation, as only one person is transported and road and parking infrastructure is required for each individual.

### **Policy 2.3.b: Create a safe, efficient, interconnected multimodal transportation network**

Principle 7.2 details the community's policies to provide a multimodal network to meet our future transportation demand. The community will fund an integrated transportation management plan that will look at all modes of travel and the most effective solutions for transportation in the community, considering long-term impacts such as consumption of non-renewable fuels and the energy costs of transportation infrastructure.



## **Principle 2.4— Increase energy efficiency in buildings**

It is the community's goal to achieve carbon neutral buildings by 2030. Increasing the energy efficiency of buildings and reducing the energy used for the construction of buildings will greatly increase the community's energy conservation efforts, as the construction and operation of buildings currently accounts for close to 15% of energy use in Jackson and Teton County. Publicly funded construction projects will lead by example in implementing this policy, and incentives will be provided to reduce the energy demand of new and existing private buildings.

### **Policy 2.4.a: Construct energy efficient buildings**

The community should improve the energy efficiency of its buildings. Buildings with tight building envelopes that minimize the loss of energy are more energy efficient because they require less energy yet provide the same level of comfort as buildings with other designs. The Town and County will adopt the most recent energy codes in order to maximize the energy efficiency of new construction and improvements to existing buildings. Additionally, the Town and County will explore requirements and incentives for building design that employ best practices for energy efficiency in new and retrofitted buildings.

### **Policy 2.4.b: Renovate and reuse existing buildings**

Where appropriate, the community should renovate, reuse, and repurpose existing buildings. The energy required to extract, produce, transport, and assemble building materials is known as the "embodied energy" of a building. The easiest way to reduce the embodied energy of a structure is to reuse a structure that already exists. The community will encourage the reuse, repurposing and renovation of existing buildings where a safe, energy efficient building can be achieved without constructing a new building.

### **Policy 2.4.c: Use and reuse construction material sustainably**

Where it is not practical to renovate an existing building as described in Policy 2.4.b, the embodied energy of a building should be reduced through the recycling and reuse of building materials or use of sustainable, local materials. The Town and County will lead by example when constructing public buildings and affordable housing units by giving

preference to recycled and local materials and local contractors, within reasonable performance and cost limits. The Town and County should also explore providing locations for materials recycling that make it more cost-effective to recycle than to dispose of material.

### **Policy 2.4.d: Use energy efficient building systems and appliances**

Practices to reduce energy consumption should continue throughout the use of a building, regardless of the energy efficiency of a building's design or the amount of energy initially used to create the building. The Town and County will provide standards for high efficiency heating, ventilation and air conditioning (HVAC) equipment, lighting fixtures, appliances, and other building systems. Where possible, programs will encourage the use of the best available energy efficiency technology for building systems and appliances.

### **Policy 2.4.e: Encourage smaller buildings**

The Town and County will encourage the construction of smaller, energy efficient buildings to improve energy conservation communitywide. Energy efficiency and the amount of energy required to construct a building is directly related to overall building size. Smaller buildings require less material to achieve high energy efficiency and contain less volume to condition, light, and maintain. The community will explore regulations and incentives to encourage the construction of smaller buildings.

## ***Principle 2.5—Conserve energy through waste management and water conservation***

The community will reduce the amount of energy required to distribute, clean, and dispose of water and waste through conservation efforts. Our current water consumption and waste management practices will have long-term adverse impacts on the ecosystem and the community's energy demand if conservation measures are not pursued.

### **Policy 2.5.a: Encourage water conservation**

While our community is lucky to have abundant water supplies, water conservation should still be pursued in order to conserve energy and manage natural resources responsibly. As fresh water resources are depleted, the energy required to provide potable water increases. Conservation of water saves aquifer supplies for future generations, protects habitat, and respects downstream users. To better encourage water conservation, municipal pricing should reflect the true long-term cost of production and encourage water conservation. The Town and County will also encourage practices that demand less water, such as landscaping with native species.

### **Policy 2.5.c: Reduce energy consumption in wastewater treatment**

The community should utilize the most energy efficient wastewater treatment methods and technology to discharge effluent that meets or exceeds the quality of the receiving waters at any time. Wastewater treatment is extremely important to the health of the ecosystem and the community, but can be an enormous consumer of energy. The Town and County will lead by example in attempting to exceed State discharge requirements while limiting the amount of energy consumed by wastewater treatment processes.

### **Policy 2.5.b: Manage our waste stream for sustainability**

The community will minimize the amount of solid waste it directs to landfills with a goal of “zero waste” by increasing efforts such as recycling and composting of waste. Disposing of solid waste in landfills requires energy for waste transportation, land moving, and other landfill operations. Landfill disposal also requires increased disturbance of otherwise open spaces due to the length of the decomposition process. The community will increase opportunities for recycling, reuse, and composting and seek productive uses for solid waste such as waste-to-energy solutions to minimize the solid waste that must be placed in a landfill. In addition, the Town and County will lead by example by using products that can be recycled or composted and encouraging all members of the community to do the same.



# Strategies

The community will undertake the following strategies in initial implementation of the policies of this common value. This list is only a starting point, and not all inclusive. As strategies are completed and/or new best practices, technology and information become available, the community may pursue additional strategies. Prioritization of the strategies to be implemented will occur annually as described in Policy 9.2.b.

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## *Strategies to reduce consumption of non-renewable energy (Principle 2.1)*

- 2.1.S.1:** Coordinate with the wide range of organizations working on energy conservation to educate the community about the benefits of reducing consumption of energy from non-renewable sources.
- 2.1.S.2:** Work with partners to distribute technological devices, such as home area networks, into the community to raise awareness of the amount of energy being consumed and opportunities for reduced consumption.
- 2.1.S.3:** Partner with organizations such as the Yellowstone-Teton Clean Energy Coalition to educate residents and guests about the negative impacts of vehicle idling.
- 2.1.S.4:** Work with local energy providers to develop a sliding scale energy pricing structure where unit cost increases with total energy consumption.
- 2.1.S.5:** Evaluate and update land use regulations to support renewable energy generation in the community.
- 2.1.S.6:** Coordinate education efforts to avoid private Codes, Covenants & Restrictions (CC&Rs) that prohibit on-site renewable energy generation and other sustainable practices.

## *Strategies to reduce energy consumption through land use (Principle 2.2)*

See Strategies 3.1.S.1 through 3.1.S.5 and 3.2.S.1 through 3.2.S.8.

## *Strategies to reduce energy consumption through transportation (Principle 2.3)*

See Strategies 7.1.S.1 through 7.1.S.7 and 7.2.S.1 through 7.2.S.8.

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*Strategies to increase energy efficiency in buildings (Principle 2.4)*

- 2.4.S.1:** Adopt the most recent International Energy Conservation Code.
- 2.4.S.2:** Develop a comprehensive sustainable building program that includes requirements and incentives for government operations and new private construction to use energy efficiency best practices.
- 2.4.S.3:** Develop a program of incentives and financing options for owners of existing buildings to participate in a communitywide energy retrofit program.
- 2.4.S.4:** Develop a program to facilitate the reuse and recycling of building materials and raise awareness of the benefits of the use of sustainable construction materials.
- 2.4.S.5:** Develop a program to encourage the use of the most energy efficient building systems and appliances.
- 2.4.S.6:** Evaluate and update regulations on building size to encourage smaller, more energy efficient buildings and consume less energy.

*Strategies to conserve energy through waste management and water conservation (Principle 2.5)*

- 2.5.S.1:** Implement a sliding scale water pricing structure.
- 2.5.S.2:** Increase awareness and opportunities for recycling, reuse, and composting, including communitywide curbside recycling.

