

# CLIMATEWISE IN MISSOULA COUNTY

## STRATEGIES FOR PROTECTING OUR LAND, WATER & COMMUNITY

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*Developed by local stakeholders in a June 2011 ClimateWise workshop,  
convened by the Clark Fork Coalition and its partners.*

### **RISK FOUR -** INCREASED FLOODING AND CHANGES IN WATER QUALITY

#### **HOW MIGHT EXTREME WEATHER EVENTS & FLOODING AFFECT WATER QUALITY?**

Flooding – like wildfire – is a natural part of the ecology in Missoula County that can also have adverse effects. Climate change has the potential to generate larger floods, increasing impacts on infrastructure, property, and natural systems.

Warmer temperatures in spring may cause rain to fall on snow, which in turn leads to big spikes in runoff and flooding. Sudden floods could wash pollutants from streamside development into channels, harming water quality. Efforts to reduce excessive erosion and keep pollutants out of our rivers are even more important.

#### **STRATEGIES & ACTIONS**

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#### **ENCOURAGE COLLABORATION BETWEEN PUBLIC AGENCIES AND PRIVATE LANDOWNERS TO BE GOOD STEWARDS ACROSS LAND AND WATER OWNERSHIPS.**

- **EDUCATE** and reach out to residents. Continue to promote and use Missoula County's PLACE (Practical Landscape Assessment for Conservation and Enhancement) project.
- **SET UP** demonstration areas in parks and along trails to show specific ways to improve ecosystem services, like restoring native plants along rivers that in turn help filter pollutants and preserve water quality.
- **ASSIST** landowners with renewable energy production, erosion control, water conservation, and other efforts to improve water quality and reduce emissions.

#### **RETAIN AND ENHANCE NATURAL SYSTEMS AND ECOSYSTEM SERVICES.**

- **ASSEMBLE DIVERSE GROUPS** to form partnerships and carry out restoration projects that will also serve as showcases for education. Examples might include beaver reintroduction in headwater streams away from agricultural lands, or restoring floodplains to better hold and absorb high waters.
- **DELINEATE FLOODPLAINS** for rural communities to assist in better land use and emergency services planning.
- **CHANGE FOREST MANAGEMENT POLICY** to increase ecosystem services and healthy, resilient natural systems.

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## PROVIDE ECONOMIC INCENTIVES FOR A SYSTEM OF NATURAL FLOOD CONTROL.

- **DEVISE NEW REVENUES**, like fees or tourism taxes, to invest in natural flood control, such as preservation of riparian areas and wetlands. Savings in emergency services would offset the fees and lower the cost of ecosystem services compared to traditional water storage and flood control systems.
- **STEER DEVELOPMENT** away from floodplains and natural areas that provide ecosystem services. Consider transferring development rights to assure development is in the most appropriate areas.

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## SUPPORT AGRICULTURE TO MEET PRODUCTION NEEDS, AND ALSO TO CONSERVE AND PROTECT WATER.

- **OFFER EDUCATION** and incentives to improve irrigation methods, and to reduce sediment, fertilizer, pesticide, and herbicide runoff into waterways. Similarly, work with agricultural users to buffer riparian areas, conserve native species and habitats, and improve grazing and farming methods to better protect streams and rivers.

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## MAINTAIN, UPGRADE AND INCREASE THE EFFICIENCY OF INFRASTRUCTURE.

- **FOSTER NEW PARTNERSHIPS** to better prepare for floods, preserve water quality, and prevent impacts to infrastructure.
- **SUPPORT MAINTENANCE** and upgrades of roads and buildings to prepare for climate change via new revenue streams.
- **IDENTIFY VULNERABLE INFRASTRUCTURE**, including wastewater treatment plants, Smurfit Stone ponds, transportation corridors, Stimson lumber, wells, and water lines.

For more information on the 2011 workshop and strategies, please visit: [www.clarkfork.org](http://www.clarkfork.org)

