I. INTRODUCTION

In the American West, water is the face of climate change. Everyone who lives here does, or will shortly, experience climate change most immediately and acutely through too much water at the wrong time, too little water over a long period of time, or through an increasingly unhealthful water supply.

A critical aspect of this changing water supply story is the resilience of forested headwaters. Western water providers and their customers depend on natural watershed processes to filter pollutants, control erosion, regulate temperature, attenuate floods, and buffer human activities from drinking water resources.

The mountain watersheds that provide over 60% of the drinking water to the American West are at great risk. Uncharacteristic wildfires, invasive species, and past forest management legacies are all exacerbated by climate change. These combined challenges threaten the ability of our forested headwaters to provide clean, reliable water to the millions of people who rely on it.

Of all the threats to the West’s headwaters, perhaps the most urgent are the uncharacteristic wildfires devastating entire landscapes in our National Forests and other public lands and the resulting post-fire flooding and debris flows. Currently, the five federal land management agencies conducting firefighting activities use 10-year historic data to develop their fire suppression plans. However, as we have seen in the past five years alone, western wildfires are becoming bigger, hotter, and less predictable, leading to greater loss of life, homes, and infrastructure. Increased degradation of the watersheds that provide downstream water supply calls for new strategies on how best to adapt our approaches to wildfire in a changing climate.
This Policy Platform outlines actionable strategies that can be implemented now, to protect and restore the watersheds of the American West, as recommended by Carpe Diem West’s Healthy Headwaters Alliance. The Alliance, a coalition of water utility managers, conservationists, public agency staff, scientists, community advocates, tribes and businesses, supports and guides local and regional partnerships built around strong, non-traditional alliances that are working to:

► Ensure clean, abundant water for communities across the American West
► Connect upstream and downstream communities in a shared mission to preserve and protect water supply
► Build resilience for stressed watersheds as the climate changes
► Foster and spotlight the smart practices and actions communities are taking
► Support wise, multi-faceted approaches to headwaters forest preservation and restoration
► Develop broadly-shared funding mechanisms that are supported by all affected parties in the watershed

II. CHALLENGES

The challenges to forest and watershed health are complex, varied, and evolving. This Policy Platform focuses on the following challenges:

► Unhealthy forests are at increasing risk to catastrophic fire and flooding, which in turn threatens water supply for the majority of downstream western communities.

► Emerging research from a growing number of western communities points to increasing human health impacts from unhealthy forests and watersheds, including poor air quality and clean water availability. In addition, 40% of western watersheds are threatened by toxic runoff from abandoned mines.

► Currently, government funding (FEMA, state and federal fire suppression programs, etc.) focuses primarily on post-disaster responses and not on actions to avoid or mitigate these disasters.
III. OPPORTUNITIES FOR FEDERAL POLICY CHANGE

A. Make Long-term Watershed Health a Priority

In a changing and evolving climate, forested watershed and source water protection is critical. These steps will help to ensure more resilient forested watersheds.

1. Engage all landowners in the Watershed Condition Framework (WCF) outcomes

The US Forest Service’s Watershed Condition Framework sets restoration priorities, guides the implementation of projects and monitors the results of restoration work on the 15,000 watersheds of the National Forest system nationwide.

While many Forest Supervisors do, as a matter of good land policy, engage other landowners (public, private, and tribal) in lands adjacent to the watersheds, they are not required to do so; nor is there funding available for them to work collaboratively with other landowners to develop joint action plans.

2. Provide dedicated, multi-year funding for the Watershed Condition Framework

By providing dedicated, multi-year funding for the WCF, Forest Supervisors will be able to more effectively develop and implement action plans to protect and restore watersheds.

3. Through state and federal legislation and policies, further acknowledge and empower local and regional stakeholder groups

Headwaters restoration and protection programs are best designed through collaborative processes that engage a full range of stakeholders including utilities, tribes, conservationists, the business community, elected officials, agency personnel, scientists, and citizens. Diverse collaboratives are a proven strategy for developing headwaters programs that are responsive to community priorities and attract broad-based public support and diverse funding streams.
4. **Require federal health agencies to provide direction, technical assistance, and support for state and local health agencies**

The recent catastrophic wildfires in the American West and in British Columbia brought high levels of unsafe, smoke-filled air to a number of cities, small and large. Federal health agencies such as the Centers for Disease Control should study this issue, and provide practical advice and support for local health agencies on how they can best communicate with and treat their communities.

**B. Make Smarter Choices On How State and Federal Fire Suppression Funds Are Spent**

1. **Reform state and federal fire suppression budgets**

Currently, agencies like the Forest Service must borrow from non-fire accounts when fire suppression costs exceed the budget. “Fire borrowing” was intended to be an extraordinary, temporary measure, but as fire seasons have grown more destructive it has become common practice. This has created a devastating cycle that prevents agencies from doing much-needed hazardous fuels removal or timber harvests and leads to even more destructive fires.

Federal fire suppression spending has increased substantially over the past 20 years. In the mid-1980’s, 70% of the Forest Service’s budget was dedicated to actually managing the national forests; today it is only 30%. Restoring forests is an effective way to prevent wildfire and avoid spending significant taxpayer dollars on firefighting.

2. **Prioritize watershed restoration under the Collaborative Forest Landscape Restoration Program (“CFLRP”)**

Revise the CFLRP original legislative intent to broaden the focus from primarily fire reduction activities to a more holistic watershed restoration approach. This would also allow for better incorporation of the Watershed Condition Framework process (see above) to set priorities and track progress.
3. Provide permanent statutory authorization for the Legacy Roads and Trails Program

This program provides an important source of funding for reducing sediment run-off into watersheds by maintaining and removing roads on National Forest lands. Permanent authority and increased funding would help restore the health of key watersheds. Toward this end, valuation of the program should be linked to the Forest Service’s Watershed Condition Framework program.

4. Incorporate climate change projections into fire suppression and restoration planning

The Forest Service and other agencies have completed some mapping of places where the most destructive fires are projected to occur. By incorporating climate projection data with data from the Watershed Condition Framework and current drought forecasts, the federal land management agencies can more proactively prioritize restoration and thinning, and develop adaptation plans that will help guide Burned Area Emergency Response actions.

C. Smart Responses Post-Catastrophic Flooding and Fires (and Avoiding Them in the First Place)

1. Community engagement and updating of Burned Area Emergency Response policies

When a wildfire burns federal land, the land managers employ the Burned Area Emergency Response (BAER) process to respond to imminent and unacceptable risks triggered by changed conditions caused by the fire. The purpose of BAER is to employ those measures that will, to the extent feasible, stabilize hill slopes and drainages to meet erosion reduction or hydrologic function improvement objectives.

The BAER process works under a very short time frame, including a 10-day assessment period. Forest Supervisors, using the Watershed Condition Framework for their forest’s watersheds, should bring local expertise from stakeholders including municipal utilities, knowledgeable environmental groups, tribes and watershed associations to map out a plan ahead of time to advise BAER in the event of a wildfire.
2. Ensure FEMA actions and funding to mitigate extreme weather events (fires and floods)

Studies have shown that targeted investments in mitigation will prevent and reduce large-scale wildfires and save money in the long run. A 2007 Congressional Budget Office (CBO) study of FEMA’s Pre-Disaster Mitigation (PDM) program found that a very small share of the agency’s mitigation funding went to wildfires. Yet, in the same report, CBO concluded that, of all FEMA mitigation categories, these infrequently funded fire mitigation projects have one of the highest returns on investment, saving more than five dollars in future disaster losses for every one dollar in mitigation funding.

3. Develop and implement criteria for using NEPA’s “Special Arrangements” for post-catastrophic events

Over the past five years, the Forest Service has made only three requests to the Council on Environmental Quality (CEQ) to speed action on parts of the National Environmental Policy Act in order to take timely actions to mitigate the effects of catastrophic wildfires.

As wildfires become more prevalent in the American West, and with downstream water quality at increased risk post-fire, criteria should be developed to help guide CEQ for effective assessment of requests. These criteria would be based on lessons learned from actual “mega-fire” events -- to ensure long-term benefits, not just to address short-term problems.
Carpe Diem West leads an innovation network of diverse western water leaders. Together, we develop new and sustainable responses to impacts of climate change on water resources. Through this broad-based network, leaders access a collaborative framework, identify new approaches for addressing climate change impacts, share information quickly, and integrate communication strategies and tools to promote success.

We work at the local level to advance and bring to scale watershed protection programs in individual communities. We work at state, regional, and national levels by supporting the use of smart science and innovative approaches in the crafting of public policy.

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Carpe Diem West leads the Healthy Headwaters Alliance, a coalition of water utility managers, conservationists, public agency staff, scientists, community advocates, tribes, and businesses. Together, we guide and connect successful efforts around the region to multiply their impact and tell the stories of successful source water protection efforts to spread knowledge about these innovative approaches.

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