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Before the
Senate Committee on Energy and Natural Resources
Hearing on "the Federal government's role in wildfire management, the impact of fire on communities, and potential improvements to be made in fire operations"

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Chairman Murkowski, Ranking Member Cantwell and members of the Committee, thank you for the opportunity to testify before you on "the Federal government's role in wildfire management, the impact of fire on communities, and potential improvements to be made in fire operations." For over a hundred years, the Salt River Project (SRP) has responsibly managed water supply for the Phoenix valley including efforts to protect the forested headwaters that provide the majority of the water for metropolitan Phoenix. Around the turn of the 20th century, watershed protection efforts centered on setting aside lands in the federal forest system to ensure development and timber harvest were conducted in a way that preserved a sustainable water supply for Arizona. Today, the unhealthy state of these forests, created in large part to protect the water flowing from them, has led to catastrophic wildfires that threaten not only the wildlife, recreational, and multi-purpose value of these forests, but also the reliability, sustainability and quality of drinking water for millions of Arizonans.

SRP is currently involved with several forest restoration projects which have highlighted the need for federal action to address both fire suppression funding and the planning and compliance processes in order to accelerate the pace and scale of work needed to protect our forestlands and water supply. As the Committee has recognized, fixing the annual "fire borrowing" that often funds fire suppression, at the expense of preventative restoration activities, is important to increase the capacity of projects the U.S. Forest Service can administer. We appreciate efforts by the Chairman, Ranking Member, Senators Flake and McCain, and other senators to find an acceptable solution to this ongoing problem. However, budget is only one of several issues that must be addressed. The length of time it takes to undertake the required planning, environmental compliance, and administrative activities also needs to be addressed to recognize delayed action increases the risk of a catastrophic fire that will damage our national forests and watersheds, ecosystems, and species for decades.

Salt River Project

SRP is composed of the Salt River Valley Water Users' Association ("Association") and the Salt River Project Agricultural Improvement and Power District ("District"). Under contract with the federal government, the Association, a private corporation authorized under the laws of the Territory of Arizona, and the District, a political subdivision of the State of Arizona, provide water from the Salt and Verde Rivers to approximately 250,000 acres of land in the greater Phoenix area. Over the past century, most of these lands have been converted from agricultural to urban uses and now comprise the core of metropolitan Phoenix.

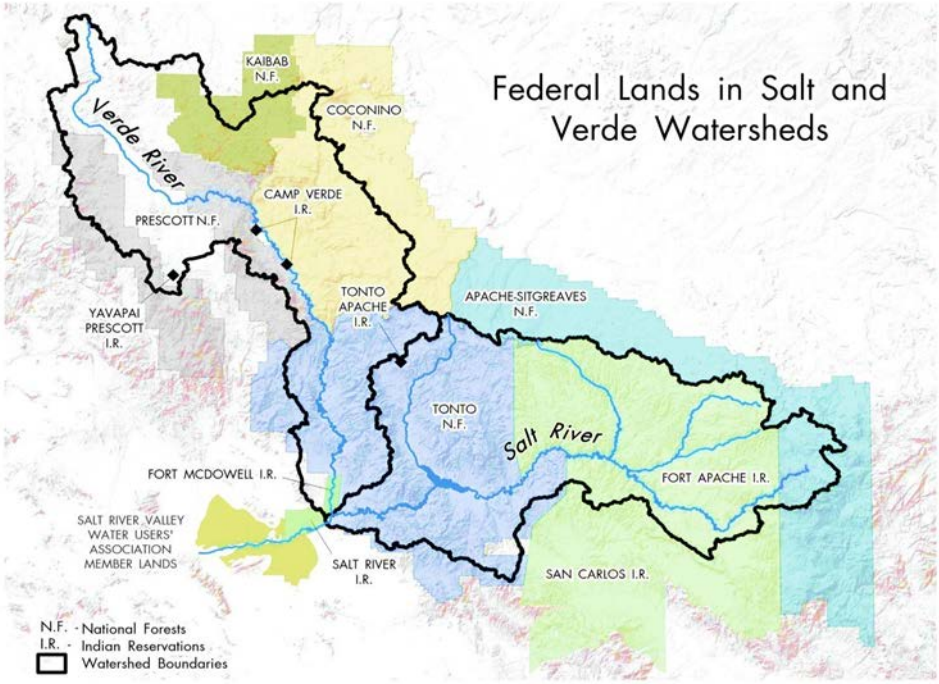
The Association was organized in 1903 by landowners in the Salt River Valley to contract with the federal government for the building of Theodore Roosevelt Dam, located some 80 miles northeast of Phoenix, and other components of the Salt River Federal Reclamation Project. SRP was the first multipurpose project approved under the Reclamation Act of 1902. In

exchange for pledging their land as collateral for the federal loans to construct Roosevelt Dam, which loans have long since been fully repaid, landowners in the Salt River Valley received the right to water stored behind the dam.

SRP now operates six dams and reservoirs on the Salt and Verde Rivers in the Gila River Basin, one dam and reservoir on East Clear Creek in the Little Colorado River Basin, 1,300 miles of canals, laterals, ditches and pipelines, groundwater wells, and numerous electrical generating, transmission and distribution facilities. The seven SRP reservoirs impound runoff from multiple watersheds, which is delivered via SRP canals, laterals and pipelines to municipal, industrial and agricultural water users in the Phoenix metropolitan area. SRP also operates approximately 250 deep well pumps to supplement surface water supplies available to the Phoenix area during times of drought. In addition, SRP provides power to over 1 million customers in the Phoenix area, as well as other rural areas of the State.

SRP Watershed

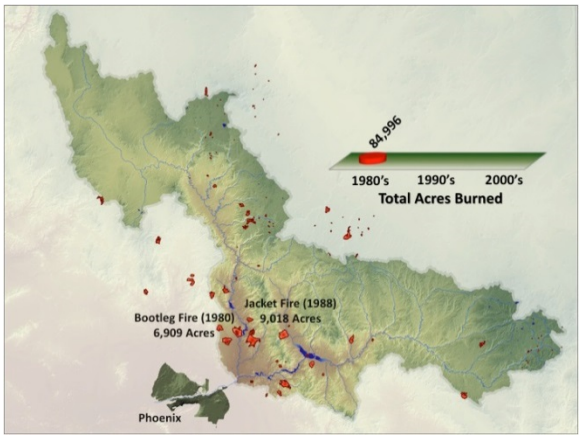
Since the end of the nineteenth century, farmers and residents of the Salt River Valley have been integrally involved and interested in the management of the Salt and Verde watersheds. Although the Valley's involvement with the forested land has changed over the decades, the interest has remained constant due to the watersheds' vital role in producing water for the Valley.



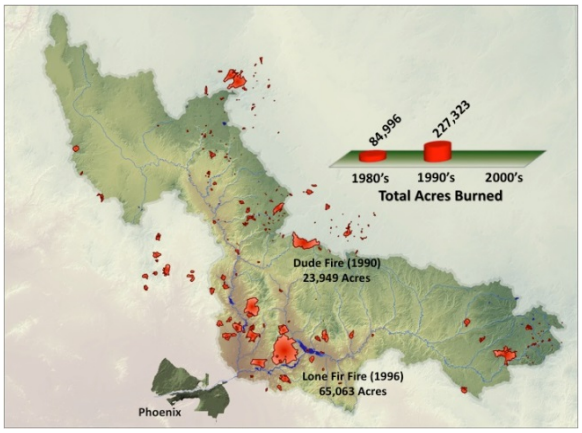
In 1891 and 1897, the U.S. Congress passed legislation enabling the federal government to set aside forests to help preserve the nation's water supply for future generations. In 1897, the Arizona Territorial Legislature wrote to Congress and stated, "The forests on these water-sheds [Salt and Verde]... are in great danger of being entirely removed by settlers and large lumber companies to the great detriment of our water supply." Over the next decade, National Forests were created primarily to protect the watershed above Theodore Roosevelt Dam and to protect the watershed along the Verde River. In 1901 the *Arizona Republican* touted the designations by saying*:* "Protection to the magnificent forest and the conservation of the waters that feed the Verde and Salt Rivers. The value of this action to the people of the Salt River valley cannot be overestimated." Today, 59% of SRP's 13,000-square-mile watershed lies within national forests as part of a plan to provide a renewable water supply for the Valley. The hydrologic values associated with healthy forests were recognized by the federal government during the early part of the 20th century, and was the underlying reason most forest lands were set aside in Arizona; for the protection of the water supplies used in the Salt River Valley.

Risk & Impact of Inaction

As the last three decades have proven, failure to take action to better manage and restore forested lands have resulted in more and larger fires. The growing size and impact of wildfires on SRP's watershed can be clearly seen in the included graphics. In the 1980's just under 85,000 acres in the watershed burned and a 5,000-10,000 acre wildfire was considered very large. In the 1990's the total acres burned grew to about 227,000, and since 2000 nearly 2 million acres have burned, with two fires alone consuming nearly 1 million acres.



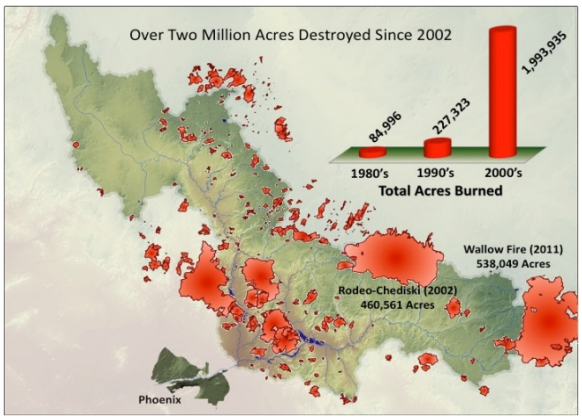
The growing size and frequency of wildfires has clear economic, ecological and human impacts. Fighting and recovering from a catastrophic wildfire can cost up to 30 times more than restoration, and studies done following the historic Wallow fire in Arizona have shown that the total economic impact is quickly approaching $1 billion.



Deteriorating forest health and catastrophic wildfires also impact the hydrologic characteristics of watersheds. Runoff and water yield, peak flows and low flows, erosion and sedimentation, and water temperature and chemistry are all negatively impacted by unnatural forest conditions and severe wildfires.

Water Supply and Storage

Unhealthy forests and catastrophic wildfires affect the short and long term management and sustainability of our water supply. The timing and characteristics of runoff, reservoir storage capability and water yield are being adversely impacted by the state of our forests and the recent mega-fires that continue to occur on the watersheds.



In Arizona and throughout the west, reservoir storage is a critical component of water supply and drought management. Dams are typically designed to have a specific useful life with storage capacity gradually decreasing as sediment carried by the streams and rivers discharge into the reservoir. Catastrophic wildfires, unlike the low intensity fires seen in healthy forests, cause burn areas that devastate the landscape and produce increased loads of sediment, ash and debris causing reservoirs to fill up faster and reduce the life and storage capacity of reservoirs. The loss of trees and groundcover from wildfire may also affect the timing and behavior of runoff, impacting the predictability and operations of water supply.

Heavily forested and steep walled watersheds have characteristics that amplify the impact of sedimentation due to wildfire. SRP's C.C. Cragin watershed, discussed below, is one such circumstance and is especially at risk of significant decrease of capacity from a single wildfire. In Colorado, wildfires in the watershed that feeds the Strontia Springs reservoir, a reservoir similar in size to C.C. Cragin reservoir, followed by summer rains, washed more than one million

cubic yards of ash and debris into the reservoir. The significant inflow of sediment and debris required Denver Water to spend more than $60 million in slope re-stabilization efforts, water treatment and reservoir dredging to mitigate the impacts caused by these wild fires.

Forest restoration may also have a positive effect on water yield, however the volume of potential benefit have not been analyzed extensively nor thoroughly investigated from a field measurement perspective. SRP's participation and funding of research efforts and in the field monitoring of precipitation, snowpack and stream flow will broaden community understanding of the connection between forest management in the Salt and Verde watersheds and dependable, high-quality water supplies in the Phoenix area. Together with NAU and the other State universities there will be increased focus on gathering field data and modeling water yield between control watersheds and those that have been treated. Other studies have estimated increases of runoff from 5% - 40% due to restoration, or forest thinning programs. However, the characteristics of each watershed differ in landscape, climate and geology. This study project with the State universities should provide SRP a better understanding of the impacts of restoration on surface water runoff and groundwater recharge.

Water Quality

The water quality impact of catastrophic fire and post-fire flooding has both short and long-term impacts, reaching throughout the watershed, and extending far beyond the immediate impact area of the fire and the surrounding communities.

The ash and sediment picked up by runoff after a fire severely impact the taste and purity of drinking water supplies causing an increase in turbidity, and nutrient and organics loads that must be removed during treatment. Runoff events following fires have also resulted in significant changes in the levels of nitrates, sulfates, chlorides and organics entering SRP's reservoir system. Over the longer term, the increased volume of sediment deposited behind reservoirs due to changes in runoff patterns and soil destabilization can impact the taste and odor as dissolved organics increase in the water.

In situations where fires occur low on the watershed and the runoff from the affected area does not enter a reservoir prior to entering delivery canals, the water quality impacts can be more immediate and severe. One such fire and post-fire flood required SRP to blend water in our canals with Central Arizona Project Water to bring down the particulates before delivering it to water treatment plants, and also required that a large quantity of valuable runoff be dumped without being put to a beneficial use.

The increase in organics and sediment in the SRP water supply from fires and ever increasing water quality standards have directly led to increased capital and operational costs at city water treatment plants. In many cases treatment facilities have been upgraded by adding carbon filtration to handle the increased levels of organics and sediment at a cost of hundreds of millions of dollars. SRP is partnering with our municipal customers to invest in forest restoration projects as a way to improve the health of the watershed and avoid ever increasing treatment costs related to water quality impacts from catastrophic wildfire.

SRP Forest Restoration Activities
SRP is actively involved in protecting the health of the watersheds that serve SRP customers and shareholders, with a primary goal of expediting forest restoration efforts through collaboration, targeted investments and fundraising, project and policy development, and educational programs that show the clear link between the interests of valley cities and businesses and the health of our forests. SRP also continues to invest in scientific research to better understand and communicate the importance of forest restoration treatments on the hydrologic function.

Four Forest Restoration Initiative
Through the nation's largest forest restoration effort, known as the Four Forest Restoration Initiative (4FRI), over 2.4 million acres are designated as needing some form of restorative work to improve the resiliency of the forest.

The Four Forests Restoration Initiative (4FRI) is a collaborative effort to restore more than 2.4 million acres of forests in northern Arizona. The goal is to restore these forests to a healthy state-- reducing the risk of catastrophic wildfire, while promoting functioning forests and supporting a sustainable forest industry that works to keep forests healthy and strengthen local economies. 4FRI is the largest landscape-scale restoration project in the United States, working to restore forested lands in the Coconino, Kaibab, Tonto and Apache-Sitgreaves National Forests. 4FRI is a collaborative effort that centers around the Forest Service working with more than 50 stakeholders to ensure that the multi-purpose nature of these Federal Lands is preserved. Additionally, 4FRI works to re-establish a strong forest products industry in the state—an effort that is essential in performing the restorative treatments necessary to reach the goal of a healthy and resilient forest. The efforts taken by the Four Forests Restoration Initiative are key in helping ensure that the forested lands in the Salt and Verde watersheds are not destroyed by catastrophic wildfire.

The Restoration of C.C. Cragin Reservoir Watersheds MOU
The Town of Payson, US Forest Service, Bureau of Reclamation, the National Forest Foundation and Salt River Project signed a Memorandum of Understanding (MOU) on July 17, 2014. The MOU aims to reduce the threat of severe wildfire in and around the watersheds that drain into the C.C. Cragin Reservoir. The MOU was formed under the Western Watershed Enhancement Partnership program enacted by the U.S. Departments of Interior and Agriculture in 2013. The partnership was formed in response to the need for forest restoration activities to protect the C.C. Cragin reservoir, a water supply to the Town of Payson, Salt River Project and communities in northern Gila County. The area of interest has more than 64,000 acres of ponderosa pine and mixed conifer forests at risk to catastrophic wildfire. The project team is currently working to develop a 5-year action plan which specifies accomplishment targets for planned restoration and protection activities within the project area. The first year of planning is underway, requiring $378,909 appropriated in the FY15 Coconino National Forest Service budget. The Coconino National Forest has requested $501,000 be appropriated in FY16 for NEPA planning processes for the C.C. Cragin fuels reduction project.

Northern Arizona Forest Fund
Developed in partnership between SRP and the non-profit National Forest Foundation (NFF), the Northern Arizona Forest Fund (NAFF) was created to provide a funding mechanism for investment in site-specific projects on federal lands that are critical to improving the health and resiliency of forests located within the Salt, Verde and East Clear Creek watersheds. These watersheds provide surface water supplies and other important natural resources to SRP's

customers, shareholders, and municipalities. With declining forest health and tighter federal budgets, leveraging public-private partnerships is critical.

The NAFF's projects focus on reducing wildfire risk, improving streams and wetlands, enhancing wildlife habitat, and minimizing erosion and sedimentation that can affect Arizona streams, rivers and reservoirs. NAFF's first year projects include two high-priority projects in the Verde Watershed; The Oak Creek Erosion Control Project and the Upper Beaver Creek Forest Health Project. Together, these projects will protect over 1000 acres of forested critical habitat for the Mexican spotted owl and improve conditions of over 20 miles of forest roads which minimizes sedimentation into the Oak Creek Watershed.

Along with SRP and NFF, Valley stakeholders, businesses, philanthropic groups and cities are committing to their engagement in the NAFF, improving the resiliency of the Salt and Verde watersheds – especially addressing the threats of fire, insects, drought and a variable climate. At the same time, SRP through the NAFF is providing certainty to our shareholders, while building capacity and awareness of the critical link between our forests and the long-term sustainability of the Valley's water supply.

Opportunities to Accelerate Forest Restoration

In Arizona as in many western states, there is a deep body of science that clearly demonstrates the need and benefit of thinning projects in overgrown forests, and important partnerships between academia, local stakeholders and conservation groups, and the federal, state and local governments that are working to translate the science into action. However, despite the strong coalition and engagement from a diverse set of interests, limits on USFS resources and capacity, litigation driven decision making, and lengthy environmental compliance requirements are slowing progress on forest restoration. Congress should consider a number of improvements to current law that reflect the urgency of action in our forests and rebalance the level of environmental analysis based on the risk of wildfire and severity of impact on ecosystems and habitat.

Fire Borrowing & Project Administration

As has been discussed, the growing cost of USFS fire suppression activities is negatively impacting the budget available to carryout critical restoration projects that protect forests and will begin to reduce firefighting costs over the longer term. SRP supports the FLAME Act Amendments of 2015 (S.508), but also recognizes there may be other potential structures that would address the "fire borrowing" issue. In order to provide the confidence necessary to encourage the private sector investments needed to repair our forests, it is important that the final solution provide budget flexibility to prevent the fire suppression spending from cannibalizing the budget for other USFS programs and provides assurances that increases in budget authority will provide dedicated and sustained funding for forest restorations programs. It is important to SRP that any increased funding or budget flexibility is directed toward restoration programs first to not only protect these federal lands but as an upfront investment to decrease future suppression costs.

Providing greater flexibility for stakeholders partnering with the USFS on specific projects to pursue opportunities for contractors to conduct portions of the planning, compliance or implementation process is another way to improve the resource and capacity issues faced by the agency. In addition, empowering project partners to play a greater role in the execution of this work could have the benefit of addressing the challenge associated with changing agency personnel and leadership at the forest level. Specifically, giving project partners some formal role in affecting which authorities and established processes the Forest Service uses to

undertake thinning work could allow for best practices and success stories to be replicated in more projects.

Environmental Compliance
Conducting the extensive analysis and administrative steps needed to comply with the National Environmental Protection Act (NEPA) and Endangered Species Act (ESA) commonly takes multiple years and is often required prior to undertaking any work to reduce fire risk. While in some circumstances Categorical Exclusions can accelerate work on a limited number of acres, an EIS is typically required for projects of the scale necessary to significantly mitigate fire risk on watersheds. In order to accelerate forest restoration, some level of compliance streamlining is needed.

The C.C. Cragin watershed project discussed above is a good example of a project of critical priority – where the landscape is highly susceptible to a catastrophic wildfire and the impacts would severely impact a municipal water supply – but the environmental compliance processes is expected to take 2 years before hazardous fuels reduction activities can begin on the ground. That will leave the endangered species, ecosystem, and water supply vulnerable for two fire seasons, despite the known risk of delaying action for this length of time. While it is important to take reasonable steps to ensure that thinning projects avoid impacting endangered species and sensitive habitat, the current process prioritizes analyzing any potential impact over protecting against the certainty that a single unlucky lightning strike or cigarette can destroy the entire landscape.

One step that would be valuable in accelerating compliance is reassessing the basis in which Categorical Exclusions for forest restoration activities are granted to include the likelihood, intensity and effects of wildfire on wildlife and ecosystem function - factors that are being assessed as part of the USFS Wildfire Risk Assessments. These factors, as opposed to the size (in acres) of a project, are a better determinant of whether fire presents a greater risk to the environment than inaction. Additionally, limits on the intensity of thinning (i.e. hazardous fuels reduction v. full restoration) could also be a more appropriate assessment of potential impacts than simply the size of a project.

Another policy change that would improve the compliance process for treatments requiring a full EIS is allowing projects designed to mitigate fire risk on watersheds highly susceptible to catastrophic wildfire to analyze zero or one alternative no matter which existing authority the project partners utilize to undertake the work. This process authorized as part of the Healthy Forest Restoration Act has been useful where it applies, but expansion to allow it to be used on the most vulnerable landscapes could reduce the length and complexity of NEPA compliance.

Judicial Review
Litigation is often the cause of lengthy delays in forest restoration projects that increase the risk of catastrophic wildfires. Clearly changes to judicial review procedures can be contentious, but given the risk and impact of a catastrophic wildfire, a higher standard should be required to stop or delay projects in the most critical areas. Additionally, the constant threat of lawsuits often forces USFS staff to be more focused on process than on the risks and needs of the forest. In order to begin improving the functionality of the dispute resolution process to better align with the urgency of forest restoration, Congress should consider moving toward a process focused on an acceptable middle ground based on impacts and risks.

As has been discussed and proposed, a positive approach that would place a premium on timely resolution to and constructive engagement on disagreements is instituting binding

arbitration in place of litigation on certain forest restoration projects. Limiting legal standing to entities that are directly impacted by the project in question and/or have registered an interest in the project during the scoping and public engagement opportunities would also provide for a process geared toward finding consensus on what work can be undertaken quickly rather than obstructing progress on all actions regardless of whether they have broad consensus.

Conclusion

The continued value of our National Forests in providing wildlife habitat, ecological protections, clean water supply, recreational opportunities, forest products and healthy rural economies depend on accelerating restoration and hazardous fuels reduction. Restoration also results in significant carbon sequestration in certain forest types, which has a positive environmental benefit and may present an additional revenue stream to fund forest thinning. SRP and multiple partners in the conservation, forest products, academic and government sectors remain committed to taking every step possible as quickly as possible to treat and protect Arizona's forests. Thank you again for the opportunity to testify before you today and for your continued efforts on this critical and timely issue.