As snow accumulates in the mountains of northern and eastern Arizona, replenishing next year’s water supply, the Northern Arizona Forest Fund (NAFF) celebrates the accomplishments of its inaugural year. Thanks to the forward-looking and generous support from all of its partners and technical support and coordination with the U.S. Forest Service (USFS), the NAFF accomplished the following:

• completed two high-priority watershed restoration projects,
• added fourteen new strategic program partners,
• developed three cooperative marketing campaigns, and
• expanded working capacity of local nonprofits and contractors.

Through this year’s successes, the NAFF established a strong programmatic foundation that will foster stewardship on National Forests and restore watersheds that provide clean, reliable water to millions of Arizonans.
The NAFF Program

Developed by the Salt River Project (SRP) and the National Forest Foundation (NFF), the NAFF provides an easy way for businesses and residents of Arizona to invest in the lands and watersheds they depend on. With declining forest health and tighter federal budgets, local partnerships are more critical than ever.

The NAFF supports a comprehensive suite of on-the-ground watershed improvement projects that accomplish the following objectives:

• reducing wildfire risk through forest restoration treatments,
• restoring stream health and wetland function by protecting and enhancing these aquatic resources,
• improving water quality by limiting erosion and sedimentation, and
• improving wildlife habitat by removing invasive and re-establishing native plants.

Contributions to the NAFF are collected by the NFF, a congressionally chartered non-profit organization. The NFF coordinates the NAFF program by working directly with the USFS and allocating funds to local partners to implement high-priority projects.

These projects create jobs, provide volunteer opportunities, and support local conservation and stewardship groups. The NAFF program helps restore watersheds across the Apache-Sitgreaves, Coconino, Kaibab, Prescott, and Tonto National Forests.

Protecting water supplies through forest restoration

As the health of forests and watersheds decline, high-severity wildfires are now more of a concern than ever. Landscape-destroying wildfires impair watersheds by increasing runoff and erosion and degrading habitat. These events deposit ash, silt and debris into streams, reservoirs and canals—the source of our water supplies. Ultimately, this results in increasing water treatment costs and decreasing storage capacity of our reservoirs, which impacts everyone.

So how can we help? Forest thinning and prescribed fire activities protect watersheds by reducing the risk of high-severity fire. These forest restoration activities reduce the amount of fuel (pine needles, dead trees, branches and small diameter trees) available to burn during a wildfire event. Treatments create a more open and natural forest structure, which also limits the potential for fire to move from the ground into the crowns or tops of trees. The reintroduction of ground fire, through prescribed burning, helps remove fuels and reinvigorate the soil. Prescribed burning also promotes the establishment of grasses, forbs, and shrubs, which provide a diversity of forage types for wildlife species and help keep soils in place. This makes our water cleaner and the watershed more resilient!

$140,000

Expended towards on-the-ground restoration.

“The water from the watersheds that fill the reservoirs in SRP’s water system starts as rain and snow in the forests of northern Arizona. Stewardship of these watersheds is a fundamental principle for SRP.”

—Mark Bonsall, SRP, Chief Executive Officer.
$230,000

Invested by NAFF to support 2015 projects

“Looking at the detrimental effects and costs that unhealthy forests and wildfire can have on water quality and water supplies this partnership just makes sense. The City has already invested significantly in water treatment activities. This is now an exciting opportunity to improve water quality at the source—Northern Arizona’s forests.”

—W.J. ‘Jim’ Lane, Mayor of Scottsdale, Arizona.

2015 Project Accomplishments

The NFF successfully implemented two high-priority NAFF watershed restoration projects in 2015. Both NAFF projects were completed on the Coconino National Forest, protecting tributaries of the Verde River. The Verde River watershed is a focus for NAFF projects because it directly contributes to SRP’s reservoirs and downstream water-delivery system.

The Upper Beaver Creek Forest Restoration Project improved watershed health by reducing severe wildfire risk in ponderosa pine forests, which helps reduce the likelihood of post-fire flooding and prevents sediment-laden runoff from filling the streams and reservoirs in the Verde River system. The Oak Creek Erosion Control Project reduced sediment loading into Oak Creek and its tributaries by improving road drainage.

The NFF worked closely with the USFS to complete the 2015 NAFF projects, on time and within the same calendar year of selection. The projects also met all defined objectives and milestones while staying under budget. Unspent funds will remain in the NAFF program, and will support the subsequent year’s projects. In total, the NAFF program spent approximately $230,000 to support 2015 projects. Approximately $140,000 was expended towards direct, on-the-ground restoration activities that will provide valuable watershed protection for years to come. An additional $30,000 was dedicated to monitoring to ensure projects achieve their restoration objectives. Remaining funds were used for NAFF program administration, which includes partner and agency coordination, outreach, and project tracking, implementation, and reporting.

The 2015 projects demonstrate the high-value restoration work that can be accomplished with investments from funding partners. The restoration accomplishments in 2015 include:

• hand-thinning ponderosa pine forests within and adjacent to critical Mexican Spotted Owl habitat in the Upper Beaver Creek Forest Restoration Project area,
• 3,740 acres of prescribed burning fuel treatments in the Upper Beaver Creek Forest Restoration Project, and
• erosion control and drainage improvements along 31 miles of Forest Service roads near Oak Creek.
Creating landscape benefits from small restoration projects

Forest thinning is often associated with mechanized, commercial treatments, where the forest industry harvests and utilizes wood products to help offset treatment costs. However, there are locations across our forests where industry-supported thinning is not ecologically appropriate or economically feasible. As a result, many ecologically important thinning projects remain unfunded.

The NAFF supports implementation of these otherwise unfunded strategically placed thinning treatments, often in or near habitat for endangered or sensitive wildlife species. Hand-thinning—even in small project areas—strategically reduces fuel loads to levels where prescribed fires and natural fires can be safely re-introduced to the landscape without posing a risk to sensitive areas. While smaller in scale and relatively higher in cost than industry-supported mechanical thinning, hand-thinning enables the reintroduction of relatively low-cost prescribed fire across a larger scale, which enhances the overall benefits for an entire landscape.
Upper Beaver Creek Forest Restoration Project
Mogollon Rim Ranger District, Coconino National Forest

The Upper Beaver Creek Forest Restoration Project is located along the scenic Mogollon Rim overlooking the Verde Valley. The 48,000 acres of ponderosa pine forest provide year-round flow to the Upper Beaver Creek, a tributary of the Verde River. The project objectives were to improve the health of the larger Verde River watershed by addressing fire, habitat, and erosion.

Through the NAFF program, NFF helped the Mogollon Rim Ranger District complete 3,740 acres of forest restoration. USFS crews also completed hand-thinning activities near sensitive Mexican Spotted Owl habitat. The hand-thinning reduced the threat of high-severity fire in protected activity centers for the federally listed Mexican Spotted Owl, and allowed for the more widespread use of relatively low-cost prescribed fire. In total $49,000, or approximately $13 per acre, was invested in on-the-ground work associated with this forest restoration project.

Prescribed burning and hand-thinning successfully accomplished the following objectives:
- removed ground fuels,
- raised crown heights of large trees (reducing risk of devastating crown-fires), and
- reduced the number and volume of small diameter trees.

This work improves the forest resiliency and reduces the risk of uncharacteristically large and severe wildfires, thus providing the following benefits:
- restoring the health and diversity of forests in the Upper Beaver Creek watershed,
- reducing catastrophic fire risk in the watershed and subsequent erosion and sedimentation that follows in post-fire runoff events,
- protecting rural communities and important infrastructure like the Discovery Telescope, the Happy Jack Ranger Station, and numerous power transmission lines, and
- protecting the Mexican Spotted Owl nesting and foraging habitat.
Prescribed burn treatments in the Upper Beaver Creek Forest Restoration Project reintroduced low severity fires, improving forest health and watershed function.

Photo below: Low intensity surface fire burning in Upper Beaver Creek Forest Restoration Project area. Low intensity burns remove small trees, recycle nutrients by breaking down dead trees, and open forest canopies ultimately creating healthier more diverse forests.

Photo at bottom: Burned area after prescribed fire in the Upper Beaver Creek Forest Restoration Project area.

Mexican Spotted Owl
Oak Creek is an international destination, known for its beauty, recreational opportunities, and tremendous ecological value. For these reasons it has been designated as an “Outstanding Arizona Water” by the Arizona Department of Environmental Quality. With its headwaters forming on the Coconino National Forest just south of Flagstaff, this creek flows through Sedona and Arizona’s Red Rock country before reaching the Verde River. Oak Creek faces a number of water quality challenges, including sedimentation and turbidity caused by erosion from forest roads. Roads are recognized as a prominent source of sediment in these stream channels, and improper drainage on roads exacerbates sediment delivery into connecting drainages and streams. Poor drainage along area roads has already created conditions, such as gullying, that increase sediment delivery to streams.

The NAFF is supporting projects developed by local stakeholders and the Coconino National Forest to protect and improve water quality in Oak Creek. The long-term goals of this project include drainage improvements and the rehabilitation of damaged ecosystems along miles of forest roads within the Oak Creek watershed. The first year of restoration work focused on improving road conditions, catching sediment, and improving drainage.

Through the NAFF, the USFS reduced erosion along 31 miles of roads near Sedona. Local contractor Earth Resources Corporation, of Dewey, Arizona, completed approximately $90,000 of roadway and drainage improvement work.

**Sediment and erosion control activities included:**
- resurfacing and stabilizing roadways,
- protecting erosion prone areas from vehicle impacts,
- clearing ditches to improve drainage, and
- installing check dams to slow runoff and trap sediment.

**This work provides the following benefits:**
- minimizes water quality impacts to Oak Creek, the Verde River, and downstream reservoirs by reducing erosion and sediment transportation into waterways,
- protects Verde River reservoir storage capacity by reducing sedimentation, and
- improves existing road conditions, increasing safety while reducing impacts to nearby streams.

“In an era of climate change and continued drought the City of Phoenix must take direct steps to protect the lifeblood of our economy—our water supply. This partnership will do exactly that. We must protect and preserve the rivers and watersheds that our City relies upon for continued economic prosperity.”

—Greg Stanton, Mayor of Phoenix, Arizona.
31 Miles of road drainage improvements completed

The image below shows a ditch in need of check dams that will slow run-off and trap sediment.

The image right shows an Arizona Conservation Crew member working with volunteers in the Oak Creek Watershed.

The image at bottom displays the road after installation of a check dam that will slow runoff and trap sediments.
Building Partnerships

Volunteer Opportunities

In 2015 the NAFF program helped connect Arizonans to their watersheds and public lands through hands-on stewardship opportunities. More than 70 employees from PepsiCo and SRP volunteered for a Friends of the Forest® volunteer day, completing a much needed restoration project in the Oak Creek watershed near Sedona. The NFF, USFS and the Arizona Conservation Corps worked with volunteers to improve a historic irrigation ditch by removing sediment and pruning vegetation. This work increased the efficiency of water delivery to a community garden, other landscaping at a popular National Forest recreation area, and an important riparian ecosystem.

“I’m so proud to work for a company that believes doing good is good for business and provides opportunities for employees to live this ideal and bring it to life helping others.”

—Steve Jones, Plant Director, Tolleson Gatorade Facility.
In 2016 NAFF and its local partners will coordinate more volunteer opportunities across northern Arizona’s National Forest lands.

If your business or organization is interested in hosting or participating in a NAFF volunteer event, please contact Marcus Selig at mselig@nationalforests.org or (720) 437-0290.

The NAFF’s current strategic partners include:

- Rocky Mountain Elk Foundation
- Waste Management Phoenix Open
- Pepsico
- Coconino County Arizona
- Freeport-McMoRan Copper & Gold
- Crescent Crown Distributing
- City of Phoenix
- City of Scottsdale
- Empire CAT
- Green Living Magazine
- NINA MASON WILLIAM CHARITABLE TRUST
- STAR JEEN TOURS
- WM HEALTH MANAGEMENT

Strategic Funding Partners

Financial and in-kind contributions from fourteen strategic partners made the NAFF’s 2015 watershed restoration goals a reality. The NAFF’s partners also helped raise public awareness of the program, attracted new funders and provided volunteers for projects. The diverse array of partners includes municipalities, local businesses, foundations, and individual donors. The breadth of interests represented among the NAFF’s strategic partners is indicative of the importance of watershed health to a diverse public and the business community.
Cooperative Marketing

The NFF developed three cooperative marketing campaigns promoting the NAFF program, with the following strategic partners: SRP, SanTan Brewing Company, Crescent Crown Distributing, and Pink Jeep Tours.

• SRP hosted the Healthy Forest, Vibrant Economies conference, which provided a high profile event that showcased the NAFF program. The numerous expert presentations and the release of a short documentary highlighted the importance of forest restoration for maintaining healthy watersheds, which provide water for millions of Arizonans.

• With support from SanTan Brewing Company and Crescent Crown Distributing, NAFF will launch the “Tap to Top” in early 2016. “Tap to Top” highlights the connection between healthy forests and the need for a clean and reliable source of water for Phoenix metro-area businesses.

• Customers of Pink Jeep Tours are now able to make a small donation to the NAFF program when booking a Pink Jeeps Tour. The collective support through customer donations will increase awareness and provide substantial benefits to implementing high-priority restoration projects.

Using its existing relationships and the networks brought by strategic partners, the NAFF has been able to seize unique opportunities to increase public awareness and raise funds for restoring northern Arizona’s National Forest watersheds. Detailed descriptions of each campaign are provided as follows.

“Healthy Forests, Vibrant Economies” Conference

In October 2015, SRP hosted the 3rd annual “Healthy Forests, Vibrant Economies” conference in Scottsdale, Arizona, convening government leaders, business interests, universities and industry partners to discuss forest restoration solutions. The keynote address of the conference included the premiere of a short documentary produced by SRP with support from NFF. The documentary highlights the connection between forest health and a reliable water supply and features the NAFF program as a solution to foster investment in the restoration and stewardship of distressed watersheds.

With more than 300 people in attendance, representing a broad range of interests, the conference provided an opportunity for networking, information sharing, and relationship development with existing and potential partners. By highlighting the work already accomplished in 2015, the NAFF program attracted significant attention from participants because the program offers a timely and effective means of targeting high-priority projects.

Condensed versions of the documentary presented at the “Healthy Forest, Vibrant Economies” conference can be found online at NorthernArizonaForestFund.org.
“Tap to Top” Campaign

SanTan Brewing Company, Crescent Crown Distributing, and the NFF, with support from SRP, developed the “Tap to Top” campaign, a collaborative marketing effort to educate the public about the origins of water supplies for the Phoenix-metro area. “Tap to Top” delivers three clear messages, (1) forests are important for providing reliable water supplies for businesses, meeting residential needs, and especially in brewing beer; (2) watersheds and forests are imperiled and in need of restoration; (3) there is an easy way to help restore watersheds in northern Arizona: by contributing to the NAFF through the “Tap to Top” campaign.

“Tap to Top” will also raise funds for the NAFF through the sale of SanTan’s Southwest Style Ales. SanTan Brewing and Crescent Crown Distributing have agreed to donate $1 to the NAFF for every case of SanTan beer sold.

The campaign will officially launch at the beginning of 2016, with in-store materials and online engagement. The campaign’s website provides information about the NAFF program, including a short, high-quality video. Visit the “Tap to Top” website and watch the video at TapToTop.org.

Pink Jeep Tours Partnership

Every year Pink Jeep Tours (PJT) helps thousands of tourists explore the National Forests of Arizona. Now those visitors can help protect these picturesque places by making a $1 donation to the NAFF when they book their online reservation with PJT. These funds will protect the Oak Creek and Verde River watersheds on the Coconino National Forest, which also serve as the scenic backdrop for Pink Jeep Tours near Sedona, Arizona. PJT will also raise public awareness about the NAFF program through their website and social media channels. This new partnership will help drive the restoration of northern Arizona watersheds.

“The time to act to improve Arizona forests is NOW! It is simple: healthy forests equal clean water, which SanTan Brewing uses to make the highest quality, freshest local beer.”

—Anthony Canecchia, Founder and Brewmaster, SanTan Brewing Company.
2016 Restoration Projects

To follow-up on the success of 2015, the NAFF program expects to triple the number of projects completed in 2016. Leveraging the unique skills and local knowledge of its diverse partners, the NAFF will carry out six high-impact projects across all five of northern Arizona’s National Forests: Apache-Sitgreaves, Coconino, Kaibab, Prescott and Tonto. These priority projects have undergone National Environmental Policy Act analysis, the USFS review processes, and are now ready for implementation. Accomplishing this work will involve working in close coordination with volunteer groups, nonprofits, private contractors, and USFS staff and seasonal employees.

In total, more than $640,000 will be invested to accomplish on-the-ground-work over the next year. The 2016 projects will help protect forests from severe wildfire, improve roads on public lands while reducing erosion, and restore and protect streams and meadows. By the time this year’s snow pack turns into spring runoff, these projects will be well underway.

Stoneman Lake Watershed Health and Habitat Protection Project

This project is part of the larger Upper Beaver Creek Forest Restoration Project, which encompasses more than 48,000 acres of the Coconino National Forest. The long-term goals of the Upper Beaver Creek Forest Restoration Project include forest-thinning activities on approximately 16,000 acres and prescribed burning on 44,000 acres. The Stoneman Lake project is a particularly important component of the Upper Beaver Creek Forest Restoration Project, which the USFS lacks the resources to implement. The project is designed to reduce the threat of unnaturally severe wildfire in an area of the watershed that has high visitation and contains critical habitat for sensitive and endangered wildlife.

In 2016, the NAFF will support forest-thinning activities on approximately 25 acres that were strategically selected to protect Mexican Spotted Owl nesting habitat. Although relatively smaller in size than other NAFF project areas, the Stoneman Lake project will benefit a much larger landscape as part of the overall Upper Beaver Creek Forest Restoration Project area. Hand-thinning improves habitat characteristics and allows prescribed burns to occur across other parts of the forest without jeopardizing the owls’ habitat.

$640,000
To be invested in 2016 on-the-ground restoration
McCraken Woodland Health and Habitat Improvement Project

This project is part of the larger McCracken Forest Restoration project, which encompasses over 17,000 acres of the Coconino National Forest. The long-term goals of the overall McCracken project include forest-thinning activities on approximately 15,000 acres and prescribed burning over about 17,000 acres. The NAFF’s McCracken Woodland Health and Habitat Improvement Project is a particularly important component of the larger McCracken project, which the USFS lacks the resources to implement. The project is designed to reduce the threat of unnaturally severe wildfire, increase ecosystem diversity, and improve wildlife habitat in an area that serves as an important wildlife travel corridor.

In 2016, the NAFF will support forest-thinning activities on approximately 200 acres of difficult terrain. Treatments for these woodlands reduce unnatural fuel loads that present severe wildfire risks in the upper Verde River watershed. Additionally, these treatments improve elk and mule deer habitat by restoring open spaces that support the return of native plant forage species.

Oak Creek Erosion Control Project

In 2016, the NAFF will support the road improvement and road drainage features along popular, high-traffic access roads. This work will reduce erosion and sediment transport into Oak Creek, while also improving recreational access onto the Coconino National Forest. This project contributes to larger efforts to reduce sedimentation into Oak Creek.

Black River Stream and Riparian Protection Project

The Black River Stream and Riparian Protection Project extends along the north-south border between the Apache-Sitgreaves National Forest and the Fort Apache Reservation, approximately 20 miles south of Greer, Arizona. The project will protect sensitive riparian and stream habitat that Apache Trout and other wildlife species depend upon. The reconstructed fencing will improve the protection of the stream and riparian area from unintended trampling, reduce vegetation impacts and water quality degradation, and enhance aquatic stream function.

In 2016, the NAFF will work in partnership with the Apache-Sitgreaves National Forest, members of the White Mountain Apache Tribe, and a local contractor to support the reconstruction of four and a half miles of fencing that was severely damaged during the 2011 Wallow Fire, protecting streams and nearly 2,000 acres of vital riparian habitat within the Salt River watershed.

Apache Trout. Photo courtesy White Mountain Apache Tribe. CooperativeConservation.org

2,000 Acres of vital riparian habitat will be protected in 2016
Red Flat Meadow Restoration and Sediment Reduction Project

The Red Flat Meadow Restoration and Sediment Reduction Project sits approximately 10 miles northwest of Cottonwood, Arizona on the lower north slope of Mingus Mountain, just four miles south of the Verde River. The project includes a comprehensive suite of watershed improvement activities that are designed to restore a natural meadow and reduce severe erosion in the headwaters of the Verde River. Tree encroachment and erosion caused by the construction and design of a historic road that once served as the main route between Jerome and Perkinsville plague this portion of the Verde River watershed.

In 2016, the NAFF will support a number of watershed improvement activities in the Red Flat area, including forest-thinning activities to remove juniper trees encroaching on approximately 100 acres of the natural meadow, treatment of noxious weeds, and implementation of erosion control measures that will reduce soil and sediment movement into the nearby Verde River.

West Pinto Trail Rehabilitation and Erosion Control Project

West Pinto Creek, just east of Superior, Arizona, is a popular recreation destination on the Tonto National Forest. Miles of hiking and equestrian trails in this area allow access to beautiful scenery and the Eastern Superstition Wilderness. Years of increasing recreational use, deferred maintenance, and significant erosion have impaired this watershed. The West Pinto Creek project is designed to rehabilitate and improve drainage characteristics and restore ecosystems damaged by numerous unauthorized, user-created trails in the area. This project is part of an important effort to reduce erosion from degraded trail networks throughout the Tonto National Forest. Sediment deposits from these trails flow into West Pinto Creek and Haunted Creek, direct tributaries of Pinto Creek, which drains directly into Roosevelt Lake Reservoir. In 2016, the NAFF will support the implementation of activities that will reduce erosion and sediment runoff along approximately 15 miles of trails in the West Pinto Creek area of the Salt River watershed.

“The strategic vision for these six projects integrates their value into a larger framework of landscape-based restoration. This means their geographic placement and project type enhances and facilitates improved forest and watershed conditions at a larger scale.”

—Bruce Hallin, SRP, Director of Water Rights & Contracts.