

Sustainable Economic Benefits of Human-Powered Recreation to the State of Arizona

Prepared by

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Executive Summary

- Human-Powered Recreation¹ is vital to Arizona's economy
 - Supports an estimated 86,920 annual jobs
 - Generates nearly \$371 million in annual state tax revenue
 - Produces almost \$5.3 billion annually in retail sales and services across Arizona
 - Responsible for 12% of Arizona's retail economy
- Preserving and creating jobs
 - Active outdoor recreation supports nearly 6.7 million jobs across the U.S.
 - One out of 20 U.S. workers is employed as a result of active outdoor recreation
 - May 2010 labor force statistics show 298,493 Arizonans were unemployed, reflecting an unemployment rate of 9.4 for the state
 - Increasing outdoor recreation employment opportunities, would significantly stimulate Arizona's economy
 - Using a conservative modeling,² jobs within the recreation and affiliated industries generate additional employment opportunities to sustain 100,802 jobs for Arizonans
- That generate significant income streams
 - Active outdoor recreation contributes an estimated \$760 billion annually to the U.S. economy
 - National Parks, Monuments, Historic Sites visitor spending
 - Gear manufacturing
 - Retail revenue
 - Human-Powered Recreation often requires a variety of gear
 - Enthusiasts are dedicated to purchasing quality equipment
 - The recreation economy generates an estimated \$301 billion annually in retail sales and services across the U.S.
 - Outfitters
 - Accommodations, Food Services and other amenities
 - Grassroots Organizations
 - Conferences and Trade Shows
- By building on a rapidly growing job market
 - Approximately 4,266,667 Arizonans annually partake in outdoor recreation activities
 - Two of the largest population segments participating in outdoor recreation are the Baby Boomers and Millennials, representing 60.6% of Arizona's population
 - Arizona's census data indicates population at 6,392,017 in 2010

- Resulting in significant tax revenues
 - Human-Powered Recreation, as the foundation of the active outdoor recreation economy, generates an estimated \$91 billion annually in annual state and federal tax revenue
 - Enough to cover Department of the Interior budget (\$12.1 billion in 2010) for seven and a half years
- Especially in rural communities
 - Much of Human-Powered Recreation occurs in rural communities that rely on recreation tourism
 - Accelerates employment growth rates, sustains earnings and income levels, lowers local poverty rates, and propels improvements in local health and education services
- Human-Powered Recreation helps create a sustainable economy
 - Active outdoor recreation is part of an integrative strategy to enhance existing capital and create new assets that generate significant jobs, income streams and taxes now and into the future
- Which strengthens economic benefits of real estate and open-space land values
 - Human-Powered Recreation thrives when conservation measures are in place
 - Proven measures which promote sensible land use and environmental stewardship to help protect natural resources
 - Quality of life variable inherent within land adjacent to open space
 - Correll study found a 32% premium in land value comparing land 3200 feet away from a park to land that was immediately adjacent, all else being equal
 - In 1999, 80% of Phoenix voters approved a 10-year dedicated sales tax for the Parks and Preserve Initiative
 - 60% of revenue to purchase Trust Lands for a new desert Preserve in northern Phoenix
 - 30% to develop and improve nine regional parks
 - 10% allocated to improve existing neighborhoods and community parks
 - In 2008, the Parks and Preserve Initiative was renewed for 30 years with an 83% voter approval
 - Phoenix Sonoran Preserve has grown to nearly 7,000 acres of preserved open space
- Resulting in the development of significant “Community Capital” (i.e., quality of life attributes)
 - The desire to connect with the outdoors to Financial, Social and Human capital
 - Including the improved health and well-being of Arizonans
 - Largely depends on conservation of Natural capital, instead of its non-renewable harvesting
 - Jobs dependent upon non-renewable resources will expire, whereas jobs maintained through sustainable resources provide employment longevity

Executive Narrative Summary

A future-oriented investment and jobs strategy grounded in the present would leverage the best of Arizona's multi-use open spaces strategies, while conserving the natural capital that provides the environmental services associated with a human-powered, outdoor active lifestyle. Such a strategy will support the ongoing transition of the West from a harvest-extraction economy to a services-based economy that works well with the conservation of natural capital, and would be in sync with the growing population and sophisticated consumption patterns of the West. Arizonans have clearly expressed their desire for a future in which they can continue to experience vast open spaces in a variety of ways. Human-powered recreation is central to a sustainable future in which 9-10 million people will occupy the Sun Corridor, drawn by Arizona's outdoor active lifestyle. Without Human-Powered Recreation and the affiliated tourism dollars, Arizona's economy would take a hard hit. Supporting these industries strengthens our economy. The outdoor active lifestyle preserves critical natural capital and developing a new age of built, social, human and financial capital. Human-Powered Recreation, a substantial element of the larger outdoor active lifestyle market enhances existing capital and creates new assets that generate significant jobs, income streams and taxes. Human-Powered Recreation is an integrative strategy to support a sustainable economy now and into the future.

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Introduction

The purpose of this study is to gather documented data in an effort to provide established and projected economic benefits of Human-Powered Recreation to the state of Arizona. Human-Powered Recreation, also referred to as “quiet recreation,” requires no motorized equipment, nor any fuel source other than the personal energy expended by the participant, and includes popular activities such as rock climbing, backcountry skiing, mountain biking, hiking, kayaking, rafting and canoeing. This report addresses the sustainable economic benefits of Human-Powered Recreation, including the preservation and creation of jobs for Arizona citizens, and tax revenue gains to the state.

■ Human-Powered Recreation is vital to Arizona’s economy

The Arizona Active Outdoor (human-powered) Recreation Economy supports an estimated 86,920 annual jobs, generates nearly \$371 million in annual state tax revenue, and produces almost \$5.3 billion annually in retail sales and services across Arizona.³ This popular industry is responsible for 12% of Arizona’s retail economy each year.⁴

■ Preserving and creating jobs

Active outdoor recreation supports nearly 6.7 million jobs across the U.S.⁵ One out of 20 U.S. workers are employed as a result of active outdoor recreation.⁶ This figure includes not only the direct jobs, such as seasonal employment to maintain campgrounds or retail sales in a gear store, but the indirect and induced jobs (e.g., manufacturing, leisure and hospitality, transportation, and wholesale and retail trade).

May 2010 labor force statistics show 298,493 Arizonans were unemployed, reflecting an unemployment rate of 9.4 for the state.⁷ By sustaining and increasing our outdoor recreation employment opportunities, we not only meet the needs of a populace interested in a healthier lifestyle, we stimulate Arizona’s economy. Amenity-driven economic growth is strong in Arizona with 16.4% of Arizona’s economy attributable to travel and tourism.⁸

Table 1: 2008 Arizona Travel & Tourism Employment

| Travel and Tourism Related Industries | Employees |
|---------------------------------------|----------------|
| Arts, Entertainment, and Recreation | 46,668 |
| Travel & Tourism Related Retail Trade | 66,451 |
| Accommodation and Food Services | 259,521 |
| Total | 372,640 |

Data source: Headwaters Economics⁹

The affiliated industries of retail trade, accommodations and food services support recreational activities. Sustaining outdoor recreation activities strengthens employment opportunities for these affiliated industries, as often exemplified through modeling systems. The Regional Input-Output Modeling System (RIMS-II) ¹⁰ Input-output model, developed by the U.S. Department of Commerce, Bureau of Economic Analysis, demonstrates how sales in one industry impact other industries. As an example, each time a human-powered outdoor recreationist makes a purchase, the retailer buys more merchandise from wholesalers, who then buy more from manufacturers, who then purchase new supplies. Salaries and wages paid by these businesses stimulate more benefits. Through RIMS-II Input-output analyses, we can estimate how the correlating rounds of purchasing benefit other industries and generate economic benefits.

Job multipliers represent exponential job-creation impact including direct jobs (actually employed within the business), indirect jobs (e.g., suppliers, construction firms) and induced jobs (needed to fulfill new-employee household demands such as retail, medical, banking, waste management, realty). Using a conservative RIMS-II job multiplier of 2.16 for Table 1, we can illustrate jobs within recreation industries generate additional employment opportunities to sustain 100,802 jobs for Arizonans (46,668 employees multiplied by 2.16). These numbers are conservative estimates, as demonstrated by actual data in Table 1 which illustrates 66,451 employees working in travel and tourism retail jobs, as well as 259,521 employees to meet the accommodations and food services needs of recreation and affiliated industries. The higher statistics in Table 1 reflect a broad census coding category which includes all accommodations and food services employees, not deconstructed to isolate only those accommodations and food services employees supporting outdoor recreation employees. The North American Industry Classification System (NAICS) is the standard method by which Federal agencies classify business entities, and broad categories simplify coding through more collective categories.

Human-Powered Recreation activities include touring and hiking National Park Service units. In an interactive webpage created by Headwaters Economics, the job multiplier effect is actualized with data combining National Park Service jobs with supporting private sector jobs. Table 2 represents the local jobs supported by parks within Arizona, as well as recreation visits and visitor spending. The dollar breakdown of activities, as well as the expenditures of out-of-state visitors versus in-state residents, is usually accounted through private research studies. Visitor spending at National Parks, Monuments and Historic Sites in Arizona, in 2009, amounted to more than \$932 million. "In today's economy, the greatest value of natural amenities and recreation opportunities often lies in the land's ability to attract and retain people, entrepreneurs, their businesses, and the growing number of retirees who locate for quality of life reasons."¹¹

Table 2: 2009 Economic Impacts of Visitation and Expenditures

| National Park Service Unit in Arizona | Local Jobs Supported by Park | Recreation Visits | Visitor Spending |
|---|------------------------------|-------------------|----------------------|
| Canyon De Chelly National Monument | 553 | 826,425 | \$39,881,503 |
| Casa Grande Ruins National Monument | 37 | 76,350 | \$2,168,998 |
| Chiricahua National Monument | 61 | 60,851 | \$3,077,659 |
| Coronado National Memorial | 68 | 106,409 | \$3,642,778 |
| Fort Bowie National Historic Site | 14 | 9,641 | \$471,610 |
| Grand Canyon National Park | 6,192 | 4,348,068 | \$411,871,706 |
| Horseshoe Bend National Military Park | 67 | 72,232 | \$3,533,006 |
| Hubbell Trading Post National Historic Site | 75 | 99,267 | \$4,855,343 |
| Lake Mead National Recreation Area | 2,819 | 7,668,689 | \$270,029,021 |
| Lake Roosevelt National Recreation Area | 587 | 1,382,663 | \$40,272,817 |
| Montezuma Castle National Monument | 452 | 601,465 | \$29,416,649 |
| Navajo National Monument | 64 | 77,901 | \$3,833,861 |
| Organ Pipe Cactus National Monument | 292 | 330,064 | \$16,345,745 |
| Petrified Forest National Park | 655 | 631,613 | \$42,290,371 |
| Pipe Spring National Monument | 51 | 49,433 | \$2,418,016 |
| Saguaro National Park | 299 | 665,234 | \$21,962,371 |
| Sunset Crater Volcano National Monument | 109 | 187,397 | \$9,164,879 |
| Tonto National Monument | 60 | 60,534 | \$2,960,773 |
| Tumacacori National Historic Park | 43 | 40,637 | \$1,391,452 |
| Tuzigoot National Monument | 74 | 106,250 | \$5,196,853 |
| Walnut Canyon National Monument | 75 | 128,299 | \$6,275,254 |
| Wupatki National Monument | 196 | 233,284 | \$11,409,090 |
| TOTALS | 12,843 | 17,762,706 | \$932,469,755 |

Data source: Headwaters Economics¹²

■ That generate significant income streams

Active outdoor recreation contributes an estimated \$760 billion annually to the U.S. economy.¹³ Some of the many affiliated industries of active outdoor recreation, both upstream and integrated into Human-Powered Recreation, include:

- National Parks, Monuments and Historic Sites visitor spending
- Gear manufacturing
- Retail revenue
 - Human-Powered Recreation often requires a variety of gear
 - Enthusiasts are dedicated to purchasing quality equipment
 - The recreation economy generates an estimated \$301 billion annually in retail sales and services across the U.S.¹⁴
- Outfitters

- Accommodations, Food Services, Tradeshows and other amenities
- Grassroots Organizations

Table 3 presents sample income streams collected in 2006¹⁵ for Census Division 8, which includes Arizona as well as Colorado, Idaho, New Mexico, Montana, Utah, Nevada and Wyoming.

Table 3: Economic Contribution

| Economic Contribution of Active Outdoor Recreation | |
|---|------------------|
| Total Contribution | \$61,496 million |
| Jobs Generated | 617,186 |
| Gear Retail Sales | \$4,790 million |
| Trip-related Sales | \$34,940 million |
| Taxes (federal, state) | \$8,906 million |

Human-Powered Recreation often requires a variety of gear, and enthusiasts are dedicated to purchasing quality equipment (e.g., gear for biking, hiking, mountaineering, river-based recreation, snow-based recreation). In a 2008 Retailer Intelligence report,¹⁶ a typical outdoor recreation firm produced sales of \$2,461,835 and a pre-tax profit of 2 percent. Higher profit firms generated sales of \$1,927,339, and profit of 8.2 percent.

Human-Powered Recreation is well associated with tourism. Not only does Arizona benefit from out-of-state tourists, but Arizona residents' in-state travel to recreational sites adds to the tourism economy through purchases of gasoline and other transportation expenses. It is estimated 38% of participants stay overnight during each outdoor-recreation experience, adding significant revenue through accommodation and food service sales.¹⁷

In addition to revenue, many Human-Powered Recreational activities provide avoided-costs that save the state of Arizona money. The American Canoe Association built and maintains an information based network for volunteer-led waterway cleanups. Through the use of volunteers, Arizona reaps the benefits of helping to keep our lands and water systems clean without spending state dollars which could be used elsewhere. The U.S. Department of the Interior Bureau of Land Management encourages outdoor sports enthusiasts to participate in volunteer clean-up events, to help meet its stated mission to ‘ “sustain the health and productivity of the public lands for the use and enjoyment of present and future generations.”¹⁸ Numerous organizations carry out volunteer-led efforts dedicated to clean-up, maintain and enhance our Arizona lands.

Grassroots organizations are those stakeholders, such as human-powered outdoor recreationists and the many associated volunteers across Arizona, who value our lands enough to donate valuable labor-hours. Organizations in Arizona coordinating these efforts include, but are not limited to, the Northern Arizona Climbers Coalition, the American Conservation Experience, and Arizona Clean and Beautiful. More organizations are listed in Table 4.

■ By building on a rapidly growing job market

It is estimated two-thirds of Americans participate in outdoor activities each year,¹⁹ which correlates to approximately 4,266,667 Arizonans²⁰ engaging in outdoor activities. This estimate does not include the out-of-state tourists who travel to Arizona for outdoor recreation. Outdoor recreation and affiliated industry jobs are much needed to meet Arizona's growing population, indicated as 6,392,017 in 2010.²¹

Two of the largest population segments participating in outdoor recreation are the Baby Boomers and Millennials. As stated by Tilly (2006), "Boomers know the thrill of summiting a mountain, the solace of canoeing pristine lakes and the excitement of having new experiences. Millennials thrive on action, speed, and adrenaline. But both groups find common ground in the active outdoor lifestyle."²² Approximately 60.6% of Arizona's population is comprised of Baby Boomers and Millennials.²³ Table 4 below lists some, but not all, of the many industries that provide services and/or products to the Human-Powered Recreation market in Arizona.

Table 4: Sampling of Human-Powered Recreation Organizations in Arizona

| Human-Powered Activity | # of Arizona Participants | % of Arizona Population | Arizona Organizations and Chapters |
|---|------------------------------------|-------------------------|--|
| Snow-based (backcountry skiers, snowshoers, snowboarders) | 284,229 | 7% | Alpine Ski Club, Arizona Outdoor Travel Club, Arizona State University Snowdevils, Boeing Adventure Club, East Valley Ski Club, Party Time Sports, Phoenix Ski Club, Scottsdale Sea and Ski Club, Sun Runners Ski Club, University of Arizona Snow Cats, Winter Wildlands Alliance |
| River/lake-based (canoe, rafting, tubing, kayaking, whitewater) | 320,680 | 7% | Grand Canyon River Rafting, Arizona Raft Adventures, Rocky Mountain Kayak Club, American Whitewater, Arizona River Outfitter's Association, Central Arizona Paddlers Club, High Country River Rafters, Arizona Monsoon Warriors, Desert Paddlers, Southwest Outdoor Club, Grand Canyon Private Boaters Association, Salt River Tubing, Phoenix Sailing, Desert Voyagers Guided Raft Tours, American Canoe Association, Prescott Paddle America Club, Tempe Town Lake Outrigger Regatta, Arizona Rivers, Lake Pleasant Regional Park, Master Watershed Steward, Prescott Creeks Preservation Association, Verde Watershed Association |
| Camping | 1,067,921 | 25% | Friends Outdoor Camping Club, Arizona Camping Club, Outdoor Adventure Group, Arizona Association of Campgrounds, Arizona Boating and Watersports / Western Outdoor Times |
| Climbing, Hiking, Canyoneering | 1,164,256 | 27% | Concerned Climbers of Arizona, Arizona Mountaineering Club, Northern Arizona Climbers Coalition, Prescott Climbers Coalition, Queen Creek Coalition, Rock Out AZ, Arizona Climbing and Adventure School, Arizona Rock Climbing Club, Climb Arizona, Arizona Bouldering, Historic COD Ranch, Pangaea Mountain Guides, Access FundAZventure Hiking, Southern Arizona Hiking Club, American Hiking Society, Backcountry Hiking Club, Ramblers Hiking Club, The Wandering Club, Friends Outdoor Hiking Club, Desert Adventures, Arizona Outdoors, Arizona Trailblazers, Arizona Adventurers, Wandering Soles, Arizona Outing Club, American Canyoneering Association, Canyoneers, Inc., Canyoneers, Arizona Parks and Recreation Association, Anza Trail Coalition, Arizona Trail Association, Black Canyon Trail Coalition, Grand Canyon Association, McDowell Sonoran Conservancy, Southern Arizona Hiking Club, Wilderness Volunteers, Climbmax Indoor Rock Climbing Gym, Phoenix Rock Gym, Arizona State Parks, Arizona Trail Association, Arizona Wilderness Coalition, Dolan Springs Trail System, Friends of Northern Arizona Forests, Friends of Pinnacle Peak Park, Friends of the Sonoran Desert National Monument – Anza Trail Coalition, VOAz/ATA Trail Training, Volunteers for Outdoor Arizona, Wild by Nature, and Young Volunteers for Outdoor Arizona |
| Spelunking | n/a | n/a | National Speleological Society, National Caves Association, Colossal Cave Mountain Park, Kartchner Caverns State Park, Lava River Cave, Redwall Cavern, Coronado Cave, Grand Canyon Caverns |
| (Mountain) Biking | 1,151,671 | 27% | Dawn to Dust Mountain Bike Club, Sonoran Desert Mountain Bicyclists, Flagstaff Biking Organization, Southern Arizona Mountain Biking Association, The Arizona Bicycle Club, Paragon Cycling, Historic COD Ranch, Bicycle Ranch, Rage Cycles, Triple Sports, Tempe Bicycle Action Group, The Urban Commuter, Ordinary Bike Shop, Scoot Over, Arizona Parks and Recreation Association, International Mountain Bicycling Association |
| Running, Races, Triathlons | (3.87 billion outings, nationwide) | n/a | Sole Sports, Easy Fitness Solutions, Runners Den, Go Girl Sport LLC, The Mile Club Challenge LLC, Racelab, Triple Sports, The Running Shop, PF Chang's, Lost Dutchman, Arizona Road Racers, Quail Creek Run, The Turkey Trot, Ragnar Relay Del Sol, Payson Sprint Triathlon, Powell3 Triathlon Challenge Olympic and Sprint |

Table 5: Sampling of Human-Powered Activity Support Organizations in Arizona

| | Support Organizations for Human-Powered Activity |
|------------------------|---|
| Arizona Gear Retailers | Arizona Cliff Hanger, Arizona Hiking Shack, Camping World, Canyon Outfitters, Manzanita Outdoor, REI (Recreational Equipment, Inc.), Wired Bliss |
| Arizona Outfitters | Adventure/Discovery Tours, Aramark/Wilderness River Adventures, Arizona Climbing and Adventure School, Arizona Raft Adventures, Inc., Arizona River Outfitter's Association, Arizona River Runners, Blue Sky Whitewater Rafting, Canon Outfitters, Canyon Expeditions, Canyon Explorations, Canyon R.E.O/Desert Whitewater, Canyoneers, Inc., CEIBA Adventures, Cimmaron Raft Adventures, Circle Z Ranch, Inc., Crazy Canyon Tours, Desert Voyagers, Jerkwater Canoe & Kayak Co., Outdoors Unlimited, Professional River Outfitters, River Proof Outfitters, Rubicon Outdoors, Sky Island Treks, Western Arizona Canoe and Kayak Outfitters, White Stallion Ranch, Yuma River Tours |

Tables 4 and 5 represent some of the organizations which support Human-Powered Recreation. Participant data, as compiled by the Outdoor Industry Foundation,²⁴ includes percentage indicators of how many Arizonans enjoy these select human-powered activities.

■ Resulting in significant tax revenues

Human-Powered Recreation, serving as the foundation of the active outdoor recreation economy, generates an estimated \$91 billion annually in annual state and federal tax revenue,²⁵ an amount which could cover the Department of the Interior budget (\$12.1 billion in 2010) for seven and a half years.²⁶ The Arizona active outdoor recreation economy generates nearly \$371 million in annual state tax revenue.²⁷

■ Especially in rural communities

The Human-Powered Recreation economy stimulates rural communities that increasingly rely on recreation tourism as a major source of income. According to the U.S. Department of Agriculture, rural tourism and recreational development:

- Accelerates employment growth rates
- Sustains earnings and income levels
- Lowers local poverty rates
- Propels improvements in local health and education services²⁸

Arizona's economic heritage of the "5 C's" (copper, cattle, cotton, citrus and climate) is still represented on the state seal; however, three of the "5 C's" continue to disappear from the Arizona economy. These three (cattle, cotton, citrus) must be replaced by future income-generating services to serve the needs of Arizona's growing population.

The ravaged topography of mining towns affects Arizona's economy, either negatively through neglect or positively through income-generating services that do not mar the aesthetics of Arizona

countryside. The dead zone of Morenci continues to voraciously eat landscape, while Jerome has become a highly desired artist community based on tourism. As an historic community and gateway to beautiful hiking, Globe accommodates both mining and tourism. The Greer-Springerville/Eagar-Alpine corridor continues to expand in homes and services, bringing new entrepreneurial opportunities to the rural population that are based on conservation, more than extraction.

■ Which strengthens economic benefits of real estate and open-space land values

Real estate is often marketed emphasizing quality of life. The higher economic value of land adjacent to open space meets the quality of life appeal and results in increased tax revenue. The quantity of Arizona open space and conservancy organizations, many of which are referenced throughout this report, demonstrate this desire for open lands. These organizations are founded upon mission statements which acknowledge the aesthetic value of open space lands towards the quality of human life. Human-Powered Recreation thrives when conservation measures are in place, including decades of proven measures which promote sensible land use and environmental stewardship to help protect natural resources. More than four decades ago, Congress established the Land and Water Conservation Fund in an effort to satisfy America's growing demand for outdoor recreation and open space. Arizona's open space initiatives, and public support for parks and preservation, are the foundation of Human-Powered Recreation opportunities.

Numerous studies have found direct correlations between land value premiums and proximity to parks and open space. As stated by Crompton (2005), the positive impact on proximate property values has been documented since the early nineteenth century. Social scientists have proven with modern-day analytical methodologies a "positive impact of 20% on property values abutting or fronting a passive park is a reasonable starting point guideline for estimating such a park's impact."²⁹ One often cited study (Correll et al, 1978), conducted in Boulder, Colorado, found a 32% premium in land value comparing land 3200 feet away from the park to land that was immediately adjacent, all else being equal.³⁰

Cities and counties within Arizona recognize this quality of life variable and seek to acquire and allocate land for open space use within their local areas. In 1999, 80% of Phoenix voters approved the Parks and Preserve Initiative. Phoenix voters agreed to a 10-year dedicated sales tax allocating 60% of its revenue to purchase Trust Lands for a new desert Preserve in northern Phoenix, 30% to develop and improve nine regional parks, and the remaining 10% allocated to improve existing neighborhoods and community parks. In 2008, this program was renewed for 30 years with an 83% voter approval.³¹ This voter-approved program creates jobs, including labor needed for park improvements, renovation of existing facilities, title and realtor services for land acquisitions for future parks, and continued park developments to include building and maintaining trails, trailheads and signage. A 2006 Bond program approved by voters has funded numerous parks and recreation facilities.

In 2007, Phoenix purchased 945 acres of land from the Arizona State Land Department in an effort to increase the size of the Sonoran Preserve, which has grown to nearly 7,000 acres of preserved open space.³² Cities throughout the state of Arizona have made similar purchases, in cooperation with

conservancy groups, to preserve open space for aesthetic and Human-Powered Recreation purposes. Arizona voters created a \$23 million fund in 1998 to preserve open spaces.³³

The Pinal County Open Space and Trails Master Plan, approved in 2007, clearly reveals that the leaders and citizens of Pinal County have sustainable objectives for the future that include preserving open desert and recreational areas. Pinal County proposed in this plan to utilize 477,965 acres of State Trust Land for open space and recreational areas.

■ Resulting in the development of significant “Community Capital” (i.e., quality of life attributes)

Human and social capital are built from the escalating trend to engage in more outdoor activities, which is often credited to media coverage of health concerns from obesity and inactive lifestyles. Arizona reaps financial gains as even a five percent increase in activity within its workforce can greatly decrease the costs of medical care, workers’ compensation and lost productivity.³⁴

The last few decades have been a time of transition for many communities, especially those rural communities situated in open space. Globalization, regulation, a desire on the part of Americans to preserve open and wild spaces, fundamental economics, the transition from an agricultural/manufacturing economy to a service economy, and a variety of other local, national, regional and international forces have caused many of our traditional harvest and extractive industries to wane.

Arizona is a prime example. Not the least of these forces in Arizona is the ongoing population growth that is projected to result in the “Sun Corridor” Megapolitan area that will consist of 9-10 million people spread from Payson to the border with Mexico. Growth in this corridor puts additional development pressure on rural areas, such as Flagstaff and the White Mountains. As Phoenix and the Sun Corridor population expands, so does the desire to “get away from it all” in the cool north and east countries above the Mogollon Rim. Prior to the housing downturn, as many as 10,000 homes were on the drawing board along a corridor running from Greer to Springerville to Alpine. The vast majority of these homes were likely to be second vacation homes or retirement homes, largely a result of the desire for an active outdoor lifestyle. Despite the downturn, this development will surely return to Arizona, as it always has. Every Western state has experienced similar phenomena.

The major component of a sustainable future is the development of “Total Community Capital” in rural areas that will result in providing the types of products and services that the urban population will pay for, especially those based on an outdoor active life style with the development, housing and wide variety of services that accompany this lifestyle. A Total Community Capital perspective recognizes that communities make decisions on how to invest their public and private genuine savings into capital stocks that will be used to generate desired flows of products and services.

A future-oriented Total Community Capital strategy would include connecting the desire to experience the outdoors to the development of financial, built, social and human capital stocks to meet that desire. Such a strategy must be based largely on the conservation of critical natural capital, in

particular the open, wild spaces that support an outdoor active lifestyle. The improved health and well-being of Arizonans largely depends on a successful implementation of an investment strategy based on conservation of natural capital, instead of its non-renewable harvesting. Without doubt, the “lands of many uses” policy and traditions of our past have a prominent place in our present and future. However, conservation of natural capital is critical to a future that is sustainable from an economic, as well as social and environmental perspective. In Arizona, the enjoyment of nature and the outdoors is critical to that future, as it is a driving environmental service, right next to the provision of clean water from Arizona’s mountain watersheds.

Summary

A future-oriented investment and jobs strategy grounded in the present would leverage the best of Arizona’s multi-use open spaces strategies, while conserving the natural capital that provides the environmental services associated with a human-powered, outdoor active lifestyle. Investment should concentrate on building the human, social and built capital to serve this high-income consumer sector.

Such a strategy will support the ongoing transition of the West from a harvest-extraction economy to a services-based economy that works well with the conservation of natural capital. Such a strategy is in sync with the growing population and sophisticated consumption patterns of the West. Arizonans have clearly expressed their desire for a future in which they can continue to experience our vast open spaces in a variety of ways. Human-powered activity is central to a sustainable future in which 9-10 million people will occupy the Sun Corridor, drawn by Arizona’s outdoor active lifestyle.

Without Human-Powered Recreation and the affiliated tourism dollars, Arizona’s economy would take a hard hit. Supporting these industries strengthens our economy. The outdoor active lifestyle preserves critical natural capital and developing a new age of built, social, human and financial capital. Human-Powered Recreation, a substantial element of the larger outdoor active lifestyle market, enhances existing capital and creates new assets that generate significant jobs, income streams and taxes. Human-Powered Recreation is an integrative strategy to support a sustainable economy now and into the future.

Brigitte Bavousett works as an independent Sustainability Consultant, as well as an Adjunct Faculty member at Mesa Community College, serving as the Professor of Sustainable Cities. Brigitte is the 'first-ever' graduate in the nation with a Masters degree in Sustainability, earned at Arizona State University's School of Sustainability in 2008. Selected graduate studies included Quantitative Methodologies of Statistical Modeling, Sustainability and Enterprise, Experiential Media Systems for Modeling Complexity, Human Dimensions of Sustainability, and International Development and Sustainability. Practical applications of Brigitte's coursework include working as a carbon-offset program manager, conducting sustainability audits, and designing custom sustainability action plans for businesses. She is an accomplished public speaker, recently presenting "Inherent Tradeoffs within Sustainability" for the EUEC (Energy and Utilities Environmental Conference) at the Phoenix Convention Center, and "Corporate Sustainability" for the Shelf-Stable Food Processors Association 88th Annual Meeting at the Wild Horse Pass Resort.

Gerald D. O'Neill, Jr. (Dan) is the CEO of DJT Enterprises, a sustainability innovation consulting firm. In addition to being accepted into Arizona State University's School of Sustainability in the elite inaugural class, he has completed the requirements for his Masters in Passing and is presently working toward the dissertation for his PhD in Sustainability. Dan consults to a wide range of business, with a focus on start-up and emerging companies in a wide range of sustainability and technology industries. He teaches business and sustainability courses at universities and business schools. He is an engaging speaker, and has been asked to present at conferences around the globe. Dan is best known for his work coaching entrepreneurs and developing community capital. An Arizona native, Dan is committed to working towards a sustainable Arizona.

References

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- ¹ Human-Powered Recreation, also referred to as “quiet recreation,” requires no motorized equipment, nor any fuel source other than the personal energy expended by the participant, and includes popular activities such as rock climbing, backcountry skiing, mountain biking, hiking, kayaking, rafting, and canoeing.
- ² Regional Input-Output Modeling System (RIMS II) job multiplier of 2.16.
- ³ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation’s Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 Arizona census data demonstrating a population increase of 6% from 2005 until 2010. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> March 5, 2011.
- ⁴ Arizona Department of Revenue Annual Report (2010). Retail figure of \$42,912,931,049 retrieved from [Arizona Dept Revenue](#) March 8, 2011. Percentage driven from Arizona outdoor recreation retail sales of \$5.3bln retrieved from above endnote.
- ⁵ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation’s Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 U.S. census data demonstrating a population increase of 4% from 2005 until 2010. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> March 5, 2011.
- ⁶ The Active Outdoor Recreation Economy (2006). Outdoor Industry Foundation. Retrieved from [Outdoor Industry](#) January 25, 2011.
- ⁷ Unemployment Rates and Labor Force Statistics. *Arizona Workforce Informer*. Retrieved February 12, 2011 from [Workforce AZ](#).
- ⁸ Headwaters Economics. Economic Profile System-Human Dimensions Toolkit. Retrieved from <http://headwaterseconomics.org/apps-public/nps/impacts/> March 30, 2011.
- ⁹ Headwaters Economics. Economic Profile System-Human Dimensions Toolkit. Retrieved from <http://headwaterseconomics.org/apps-public/nps/impacts/> March 30, 2011.
- ¹⁰ Daly, W.M. (March 1997). “Regional Multipliers: U.S. Department of Commerce”. *U.S. Department of Commerce Bureau of Economic Analysis*. Retrieved February 7, 2011 from [Bureau Economic Analysis](#).
- ¹¹ Headwaters Economics Land and Communities. Retrieved from <http://headwaterseconomics.org/headwaters/economic-impact-of-national-parks/> March 30, 2011.
- ¹² Headwaters Economics Land and Communities. Retrieved from <http://headwaterseconomics.org/apps-public/nps/impacts/> March 30, 2011.
- ¹³ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation’s Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 U.S. census data demonstrating a population increase of 4% from 2005 until 2010. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> March 5, 2011.
- ¹⁴ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation’s Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 U.S. census data demonstrating a population increase of 4% from 2005 until 2010. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> March 5, 2011.
- ¹⁵ The Active Outdoor Recreation Economy (2006). Outdoor Industry Foundation. Retrieved from [Outdoor Industry](#) January 21, 2011.
- ¹⁶ OIA Retail Financial and Operations Benchmarking Report (2008). Outdoor Industry Association. Retrieved from [Retailer Intelligence Report](#) March 6, 2011.
- ¹⁷ National Forest Recreation Association 62nd Annual Conference (2010). “How Recreation is Important to Local Economies” presentation by Keynote Speaker Lyle Laverty, CEO National Association of Gateway Communities, retrieved from [NFRA](#) March 7, 2011.
- ¹⁸ Mathis, Pamela. (2010) U.S. Department of the Interior, “Hundreds Volunteer to Clean Table Mesa Recreation Area” October 28, 2010. Retrieved from <http://www.blm.gov/az/st/en/info/newsroom/2010/october/table-mesa-cleanup.html> January 31, 2011.
- ¹⁹ Tilly, J. (2006). *State of the Industry Report; Outdoor Industry Association*. Retrieved from [Outdoor Industry](#) January 21, 2011.
- ²⁰ U.S. Census Bureau State and County QuickFacts. Retrieved from [Census Bureau](#) January 19, 2011.

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- ²¹ U.S. Census data retrieved from [Census Data](#) March 6, 2011.
- ²² Tilly, J. (2006) *State of the Industry Report; Outdoor Industry Association*. Retrieved from [Outdoor Industry](#) January 21, 2011.
- ²³ U.S. Census Bureau State and County QuickFacts. Retrieved from [Census Bureau](#) January 27, 2011
- ²⁴ "The Active Outdoor Recreation Economy: Arizona" (2006) Outdoor Industry Foundation. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> February 1, 2011.
- ²⁵ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation's Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 U.S. census data demonstrating a population increase of 4% from 2005 until 2010. Retrieved from [Outdoor Industry](#) January 21, 2011.
- ²⁶ "The Active Outdoor Recreation Economy: Arizona" (2006) Outdoor Industry Foundation. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> February 1, 2011.
- ²⁷ Estimates were calculated based upon 2005 data from the Outdoor Industry Foundation's Arizona Active Outdoor Recreation Economy (2006) report, data updated to denote 2010 Arizona census data demonstrating a population increase of 6% from 2005 until 2010. Retrieved from <http://www.outdoorindustry.org/pdf/ArizonaRecEconomy.pdf> January 31, 2011.
- ²⁸ U.S. Department of Agriculture, Economic Research Service, August 2005, "Recreation, Tourism, and Rural Well-Being," Richard J. Reeder, and Dennis M. Brown.
- ²⁹ Crompton, J. (2005) the Impact of Parks on Property Values: Empirical Evidence from the Past Two Decades in the U.S.. *Managing Leisure*, Vol. 10, pp.203-218.
- ³⁰ Correll, M., Lillydahl, J. and Singell, L. (1978). The Effect of Greenbelts on Residential Property Values: Some findings on the political economy of open space. *Land Economics*, 54(2), 207-217.
- ³¹ All voter data retrieved from [City of Phoenix Official Website](#).
- ³² Urbinato, D. (2010). Phoenix Sonoran Preserve Purchase Pushes Total to 7,000 Acres. Retrieved from [City of Phoenix Official Website](#) January 27, 2011.
- ³³ Arizona Heritage Alliance. Retrieved from [Arizona Heritage Alliance](#) January 31, 2011.
- ³⁴ Cost Calculator [East Carolina University Universal Health Care Cost Calculator](#). Retrieved January 31, 2011.