Funding Stewardship of Natural Resources in New Mexico

Findings and Background Information

Prepared for the Marshall L. and Perrine D. McCune Charitable Foundation

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Stewardship of Natural Resources *– As a primarily arid state and one in which meaningful portions of revenue are derived from outdoor and adventure tourism, New Mexico relies heavily upon its natural resources to support its economy and quality of life. Key natural resources (including water, air, wildlife, pristine landscapes and well-managed rangeland, among others) should be protected, managed and utilized in ways that support their viability in perpetuity. The Foundation supports organizations and initiatives focused on these objectives.*
—from the McCune Charitable Foundation Strategic Plan 2014 - 2016

Background and Objectives

Background
As part of a new strategic plan, the McCune Charitable Foundation enlisted my help to develop a grantmaking strategy for its Stewardship of Natural Resources funding priority. McCune recognizes that it must identify and prioritize the most important natural resource issues affecting New Mexico and its residents, particularly in this time of climate change, extended drought, and shifting environmental imperatives. Foundation staff identified water as the overarching concern in our arid state, which was borne out to some extent in the research, but the story is more complicated than that and the issues inescapably interconnected. Staff also recognize that stewardship of natural resources overlaps with most, if not all, of its other identified funding priorities, which is discussed under Survey Results below. The land and its resources figure in to almost every sector of life in our largely rural state with very old land-based traditions.

Previously under "Environment" funding, Stewardship of Natural Resources currently comprises the second largest percentage of McCune's funding, reflecting the importance of natural resources in New Mexico. With the exception of one year in the last decade, that ranking has fluctuated between second and third, accounting for between 15.24% and 22.84% of total grantmaking. As a baseline, a somewhat arbitrary breakdown of 2013-2014 McCune Environment grantees showed the following types of organizations and issues being funded (note that agriculture/food would now fall under Local Food Industry Development as a separate funding priority under the new strategic plan):

Agriculture/food	21%
Water/rivers	13%
Land conservation/restoration	10%
Renewable/alternative energy	10%
Wilderness/public lands/wildlife	9%
Mining/oil & gas	8%
Public education & outreach	5%
Tribal programs	5%
Environmental justice	4%
Political/policy advocacy	4%
Environmental education	4%

Forest issues	2%
Public health/toxics	2%
Community empowerment/legal	2%
Other	2%

Research Objectives

The goal of the research described below was to identify current priority natural resource issues in New Mexico and to determine the most effective approaches and leverage points to facilitate both short-term and long-term positive change regarding those priorities. With that in mind, objectives included:

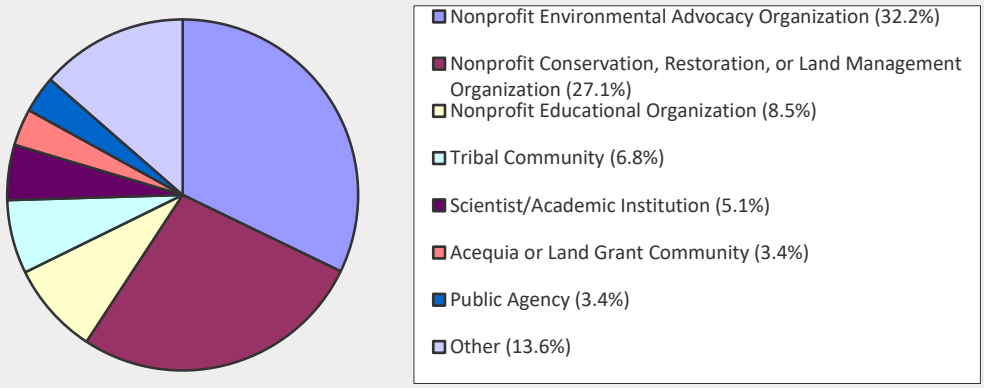
1. Cast a wide net beyond the "usual suspects" to elicit a representative quantitative sample of responses from people working on a spectrum of natural resource issues throughout the state, including:
   - McCune grantees
   - Non-grantee nonprofits
   - Tribal natural resource practitioners
   - Land grant and acequia interests
   - Independent scientists and other experts
2. Identify priority issues of concern for the long term
3. Identify short-term priorities or strategic opportunities
4. Identify short-term policy or regulatory issues
5. Identify points of overlap with other McCune funding priorities
6. Learn about successful alliances and coalitions
7. Determine a preference for lots of small grants versus fewer strategic large grants
8. Learn about strategies for engaging diversity
9. Identify other ways McCune can support natural resource issues
10. Gain deeper perspective on priority issues and a variety of sectors and areas of expertise through qualitative targeted interviews with natural resource leaders and experts throughout the state

These objectives were accomplished and the results provide important, informed guidance for the McCune Foundation's Stewardship of Natural Resources grantmaking strategy.

Survey Results

In consultation with McCune staff I prepared and circulated an online survey to a total of 134 individuals working on natural resource issues throughout the state. The list included 73 McCune grantees, 15 non-grantee nonprofits, 27 tribal natural resource managers, and 18 other experts in natural resource fields, including land grant and acequia interests (see Appendix A). Sixty-four people completed the survey, a respectable response rate of 48%. Respondents included a broad spectrum of New Mexico natural resource organizations, managers, and scientists, which we presume will give us more representative and objective results (see Figure 1).

Figure 1: *Which of the following best describes your affiliation regarding stewardship of natural resources?*



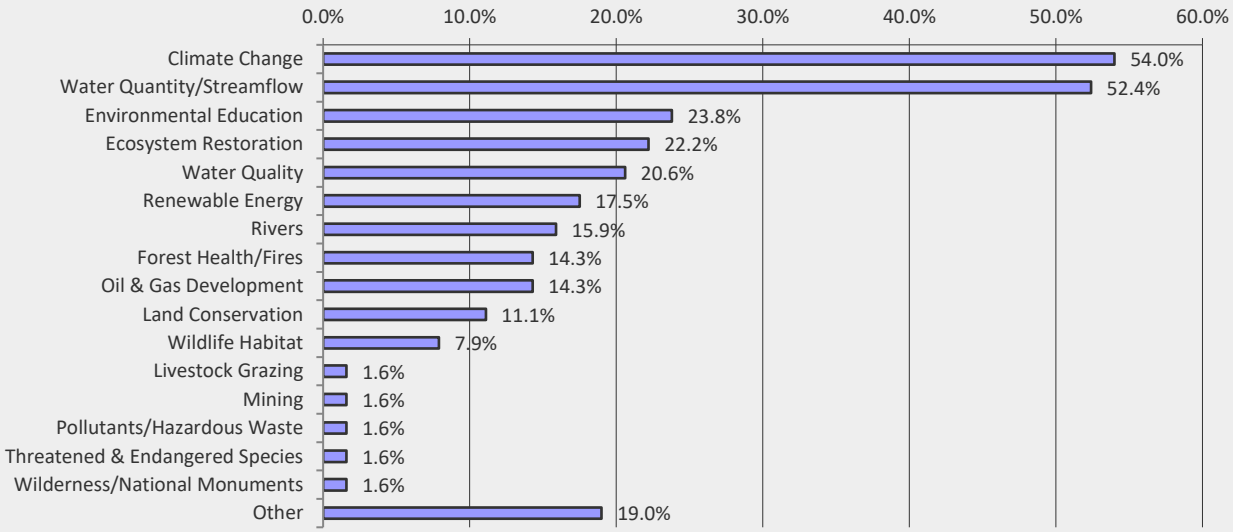
Long-Term Priorities

Respondents were asked to select the three most important long-term environmental concerns in New Mexico from among 16 general items listed. Climate change ranked highest at 54%, with water quantity/streamflow close behind at 52.4%. These are not surprising results as by far the most important priorities in the state. Unexpectedly, however, environmental education was ranked third at 23.8%, followed by ecosystem restoration at 22.2%, water quality at 20.6%, and the rest below that (see Figure 2). Water quality is arguably directly connected to water quantity, and rivers, as a separate general category, was 15.9%. Combining all the water and river-related categories, then, makes that easily the top priority in the state. However, there is a clear and undeniable connection between water issues, climate change, and ecosystem restoration, which is discussed below. You can't address any one of these issues in isolation from the rest.

The overall biggest surprise in these results was that the priorities have shifted dramatically in the last 15 to 20 years. In the mid to late 90s, big legal and PR environmental battles were being waged across the West around livestock grazing, logging, and threatened and endangered species protection. These issues were very polarizing, the rhetoric acrimonious, divisive, and at

times racist. Ranchers and loggers and some community-based interests were vilified while environmentalists were threatened and hung in effigy. The divides on these issues often fell along ethnic lines in New Mexico, between "the green and the brown." Many of the organizations responding to this survey were in fact at odds with each other on some of these issues. But times have changed. Livestock grazing and threatened and endangered species each received only one response, while forest health/fires (including the threat of catastrophic fire as a result of drought and climate change) was the eighth ranked priority at 14.3%.

Figure 2: *What are the most important long-term environmental concerns to focus on in New Mexico? (choose no more than three)*



In a time of clear priorities around climate change and water issues, the community of natural resource organizations from across the spectrum has come together behind these inescapable imperatives. One interviewee said, "reason has won." Another, referring to the pragmatic middle ground where people come together around shared values and things get done, said, "the Radical Center won." But on a different level, it is simply the gorilla in the room that can no longer be ignored. "We're surrounded," as another interviewee put it.

Short-Term Priorities

Responses to questions about short-term (three to five years) environmental issues and short-term policy issues tended to overlap and merge, so are combined here. Many of the issues respondents listed as short-term priorities are already addressed under the long-term priorities described above, but are obvious priorities under any time horizon. As one interviewee described the constant struggle of conservation work, "Every defeat is permanent and every victory temporary." With that perspective in mind, these are the issues that floated to the top as the most important short-term priorities:

1. Save the Gila River: A clear short-term priority for organizations and individuals throughout the entire state is protecting the Gila River from a proposed dam and diversion system. The Gila is the last "free-flowing" river in the state and, with a priority focus on water, symbolically very meaningful. The Gila is also associated with the Gila Wilderness Area, the first designated wilderness area in the United States, created in 1924 by Aldo Leopold, considered by many to be the father of the modern conservation movement. In addition to the symbolism of saving the last wild, free-flowing river in the state, the project has been soundly criticized by credible professionals as a financial and technical boondoggle, motivated more by partisan politics and dogma than reason, and plagued by a lack of transparency and democratic participation. It will almost certainly run over the projected budget and will not yield the state any more water than other more-affordable conservation and restoration projects. This statewide priority also holds the potential of bringing together a broad range of organizations and interests and strengthening a sense of community around a common cause, which can then be spun out into other statewide river and water protection efforts.

2. Protect State Environmental Rules: Other short-term priorities that emerged in the survey have to do with resisting the Martinez administration's efforts to dismantle existing environmental protection rules. Conservationists already lost one struggle on the so called "pit rule"—requiring that chemical waste pits from gas and oil drilling are properly lined to protect groundwater—which was weakened by the administration in favor of industry, but at the expense of precious groundwater. The next issues on the block, which will also affect groundwater quality, are the "copper rule," which addresses heavy-metals contamination from mining activities, and the "dairy rule," which addresses contamination from concentrated dairy cattle operations, often near surface waterways. Conservation organizations watch-dogging the development of these technical rules and regulations say that allowing the administration's proposals to go forward will directly impact the quality of our groundwater, which nine out of ten New Mexicans rely on for drinking, and will set dangerous legal precedents.

3. Prohibit Water Speculation: A related concern and another dangerous legal precedent is a current test-case attempt to allow groundwater speculation—acquiring private permits for groundwater for the express intent of selling to the highest bidder, essentially privatizing a scarce public resource. There is one permit application for the Plains of San Augustin currently pending with the State Engineer's Office and rumblings of other similar applications. State law is ambiguous on this issue.

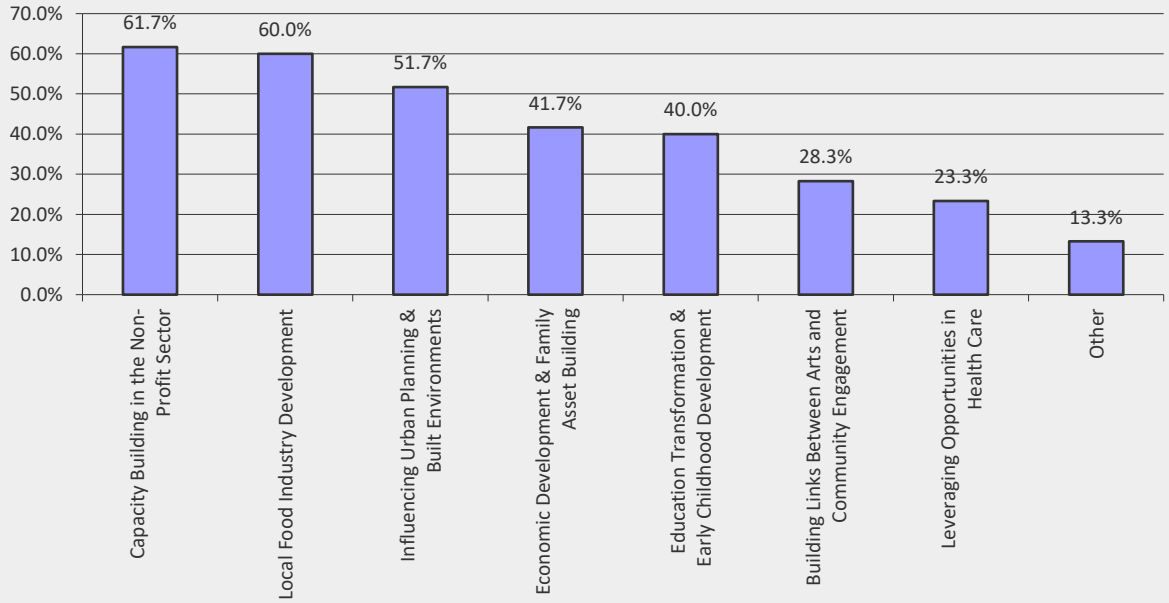
4. Reduce Coal Pollution Impacts: In addition to greenhouse gas emissions that fuel climate change, coal-burning power plants in the Four Corners area are implicated in one of the highest rates of childhood asthma in the country and various neurological disorders related to mercury emissions. This inordinately affects impoverished Navajo kids and communities, who in some cases do not even have access to the electricity being generated. As one Native activist put it, quality of life for the "haves" of mainstream America is carried on the backs of the "have-nots" on Indian land. This can be addressed through various regulatory

processes underway under the New Mexico Public Regulations Commission, the U.S. EPA, and NEPA.

Overlap with Other Funding Priorities

In response to a question about how stewardship of natural resources intersects or overlaps with McCune's other funding priorities, the short answer is: it's all connected. You can't separate natural resources from rural development or other economic development, successful natural resource campaigns from nonprofit capacity building, land and water conservation from local food development, sound natural resource stewardship from environmental education, or environmental health from human health (see Figure 3). This makes sense, of course, though in terms of grantmaking, few grantee organizations are engaged in multi-sector projects that integrate these interconnected issues. There is strong interest, however, in identifying and connecting with complementary organization working in other sectors (see Networking below).

Figure 3: *In your work, do any of the issues you identified in question number 1 above intersect or overlap with McCune's other funding priorities listed below?*



Capacity building is an ongoing concern for most nonprofit organizations, and not surprisingly is the funding priority that respondents felt had the greatest overlap (surveying any other funding sector might show the same result). Beyond that, the most obvious direct intersection that respondents identified was with local food systems. This was previously part of McCune's "environment" funding and the case for that connection remains strong. As one very rough index of that connection, 40% of our land base is in some kind of agriculture where people are directly engaged in stewardship of natural resources, whether irrigated farming or public lands livestock grazing, while only 5% is designated as protected wilderness. With that level of activity and engagement, agriculture is a sector where we can really leverage positive change in stewardship of natural resources. Whether combined under a single funding priority or not, it

will be difficult and somewhat artificial to separate grants for stewardship of natural resources from grants for local food systems.

Alliances and Coalitions

A number of examples were cited as successful alliances and coalitions New Mexico. First, for these purposes, a distinction between an "alliance," which means a group of like-minded organizations or individuals working strategically toward a common specific goal, and a "coalition," which is a more diverse group of organizations or individuals with overlapping interests working together toward broader common-ground goals. One point made clear by a number of interviewees is that the most successful alliances or coalitions have developed organically around a specific campaign, critical need, or clearly identified common ground—people and organizations find each other when they need to. McCune can and should play a key role in supporting open-ended networking opportunities to create those relationships, but should not play a matchmaker role (see *Other Kinds of Assistance*, below). A few specific elements of successful alliances or coalitions that stand out include:

- Engaging local community interests and cultural diversity
- Engaging a diversity of expertise and knowledge
- Collaboration with ranchers and farmers who manage natural resources
- Integrating a related economic development component, such as food production or small-diameter forest thinning
- Groups that go beyond the short-term opportunistic and build authentic long-term relationships

Size of Grants

We felt compelled to ask this perpetual question as part of the survey, but the response is not completely clearcut. A majority of respondents, 57.4%, felt that fewer strategic large grants were preferable to lots of small grants. However, from the survey comments and subsequent interviews, it's clear that a mix of both is valued and important to New Mexico nonprofits. Some respondents made the point that small annual grants can make all the difference for small organizations or fledgling projects just getting started (interestingly, this point was made strongest by representatives of larger organizations). A little can go a long way with some organizations and initiatives. In this vein, everyone who commented said that they appreciate McCune's open and relatively easy application process, which makes it accessible to nonprofits of any size and capacity and allows the foundation to support a broad range of organizations. In addition, the short-and-sweet application process forces organizations to focus their thinking and proposals succinctly and frees up important nonprofit time and resources to concentrate on mission rather than fundraising.

Specific situations where strategic large grants and/or multiyear grants might be more appropriate include successful and healthy existing alliances or coalitions and McCune-identified priorities. Several people also made the point that multiyear funding is critical for long-term projects and campaigns, where the unpredictability of year-to-year grantmaking can be an obstacle to success. Policy-level change or a typical campaign for wilderness or national monument designation, for instance, can take five to ten years. Addressing the toxic legacy of

Los Alamos National Laboratories will take a lifetime. A Native activist explained that some of the issues being addressed on Indian lands have been in the making for generations and will take many years to resolve.

Engaging Diversity

Everyone who responded agreed that it is important to engage communities of color and others who are not normally part of the discussion about environmental issues. We live in a politically correct age where no one would openly disagree with this statement, but it was not that long ago that many mainstream environmental organizations did not behave or communicate in ways that were consistent with engaging diversity. In fact, many campaigns openly ignored the concerns and voices of land-based Hispano communities, which only served to polarize issues and widen the historic rift between "outsider" environmentalists and local communities. Diversity is appropriately one of McCune's core values, and all agree on the importance of engaging diversity, but there are still questions about intention and challenges regarding how to engage authentically and successfully. The following is a summary of thoughts from numerous survey and interview comments:

Successfully engaging diversity has to be based on an authentic relationship, more than strategic opportunism just when you want something. Some organizations identify the need for engaging diversity as simply expanding their constituency and influence. Recognizing demographic realities they imagine that it is just about recruiting new members from ethnic communities and swaying them to support existing organizational missions and positions. But an authentic integration of diversity will and should expand the perspective, priorities, and positions of the conservation movement, not just its constituency.

Local land-based communities are obvious allies on natural resource issues: they are often most directly affected by natural resource or public lands issues; they have a close and deeply rooted relationship with the natural resource base; though possibly not a conventional mainstream environmental ethic, they have a strong land ethic and a sense of stewardship; they hold a wealth of wisdom and traditional knowledge about local ecosystems. Among other values, engaging those communities will help sustain core values that are fundamental to New Mexico's unique character and natural and cultural landscape. Underprivileged communities of color are also typically the most directly affected by the toxic impacts of mining, power generation, and other industry.

There is no more effective way of "walking the talk" and genuinely engaging diversity than to diversify the staff and board of an organization to reflect the local community. This goes beyond the tokenism of hiring quotas and requires putting people in high-profile positions of leadership where they can make a real difference and affect cultural change within an organization, which inspires the trust of the community and creates role models for other minorities.

Conservation work needs to engage communities more deeply through issues that local communities care about. It should be relevant, accessible, and responsive to local community

needs, an approach which requires more upfront investment in outreach and relationship building. In many cases this might mean recognizing and prioritizing a local environmental justice issue or other community concern before your own organizational mission and priorities in order to establish trust and a collaborative working relationship. And this axiom is just as true for a conservative rural Anglo community as for a land-based Hispano or tribal community. It may be a slower and messier process than a conventional conservation campaign or a lawsuit, but over the long term it will build longer-lasting relationships and a stronger core of support for conservation initiatives and positive change.

There is a need to level the playing field financially so that underfunded environmental justice organizations, groups representing disenfranchised communities of color, and community members themselves can sit at the table as equals with well-funded national or statewide organizations. In particular, there is great benefit to having members of affected communities personally participate in public hearings, regulatory processes, the legislature, and public protests—they are the most directly affected and they have the greatest local knowledge of the issues—but they often do not have the means or the time to travel away from work or home to have a voice. Living-wage stipends for time and travel would increase meaningful local participation, would be an important statement about the value of local community knowledge and experience, and would probably make a difference in outcomes.

Finally, engaging diversity and being genuinely inclusive are simply the right thing to do. Most of us are on the same side when it comes to protecting natural resources and we need to strengthen that broad network of grassroots for positive change. As one respondent said, "We're all in this together."

Other Kinds of Assistance

In response to a question about assets other than funding or other kinds of assistance the McCune Foundation could provide, respondents had a long list of suggestions. The most practical and potentially most effective ideas revolve around themes of networking, communications, and leveraging additional funding.

1. Networking: Many people feel that there is great need and potential to create strategic alliances or coalitions, or at least coordinate to become more effective in their work, but there is not enough knowledge about other issues and organizations and not enough opportunity to network. The progressive community is too fragmented and, even within the natural resources sector, people are so focused on their own work that they often don't know what other organizations are doing. A number of respondents suggested that McCune sponsor a series of networking sessions, from highly structured to unstructured, including:
    - Focused strategic forums on identified priority topics
    - Roundtable presentations of current projects and sharing of ideas
    - Facilitated conversations among diverse potential partners across multiple sectors
    - Open-ended social gatherings where individuals can informally network and build relationships—potlucks, drinks, "SLI-lite," "barbeque diplomacy"

- A Native activist made the case for a quarterly gathering of tribal organizers to strategize and share ideas, because the legal and cultural issues they deal with are unique to tribal lands

All this is important investment in social capital, in reducing counterproductive competition, and in building alliances or coalitions for more efficient and effective work in the natural resources field. It is important to note the comment under *Alliances and Coalitions*, above, that these kinds of relationships build organically without being forced, given a little fertile ground of networking to build on.

2. Communications: Assistance with media, messaging, marketing, and general communications is another need that many mentioned. This appears to be a strategic weak spot for many organizations, even some with a high level of organizational capacity in other regards. As is often the case, nonprofit organizations are driven by a passion for their mission, but don't always have the range of expertise needed for successful campaigns, media relations, and public education. Respondents suggested:
    - A subsidized or no-cost media relations firm available to nonprofits
    - Media trainings for sophisticated, strategic communications (specifically how to get the most out of New Mexico media)
    - Learning to relate specific conservation activities to core public values
    - Learning to tell their story in language that resonates with people, rather than policy jargon
    - Bring groups together to figure out jointly how to message
    - Targeted support for newsletters and other publications
    - Technology assistance for more effective use of social media
    - Support for independent environmental journalism as in important component in addition to advocacy communications and traditional environmental education

    How we tell the story is a key component of engaging the public and influencing decision makers regarding stewardship of natural resources—arguably a more important component of natural resource issues than some of McCune's other funding priorities—and some investment in this area is important for McCune to consider. As a start, McCune is already a sponsor of MediaDesk NM, which can provide some of these services for a fee. Many organizations might take advantage of that service if it were better publicized, and the service could be expanded and made more affordable.

3. Leveraging Funding: As a charitable foundation, respondents of course see McCune's most important role as helping to provide the money organizations need to get their work done. Beyond McCune's own grantmaking, suggestions included:
    - Play an active leadership role in bringing other local funders together with nonprofits (this is one kind of matchmaking nonprofits appreciate)
    - Actively seek and leverage national funding for important local initiatives
    - Sponsor a national media campaign or bring funders to New Mexico for a conference on an identified priority

The sense is that there is plenty of philanthropic money out there, but not enough of it comes directly to New Mexico organizations. If there is a way for McCune to help leverage more funding to local organizations, it would be an invaluable service. McCune already has existing relationships with other local and national foundations that it might expand. The Lor Foundation is a relatively new foundation operating in New Mexico with a natural resource focus and interest in collaboration that McCune could and should explore.

Targeted Interviews

In order to gain more background and a deeper understanding of the priority issues and key leverage points to facilitate change, I conducted additional research and interviewed 17 individuals who are leaders in a variety of sectors and areas of expertise. Ten were interviewed in person, the rest by phone. Interviewees included:

1. Charitable foundation program officer
2. Climate change/alternative energy activist
3. Climate scientist
4. Environmental attorney
5. Environmental educator
6. Gila River activist
7. Land trust director
8. Landscape/forest ecologist
9. Conservation magazine publisher
10. Native environmental advocacy and justice activist
11. River activist
12. Two sustainable ranching/land restoration activists
13. Water attorney
14. Wilderness activist
15. Wildlands/habitat activist
16. Writer and conservationist

Interviews covered a lot of territory but are summarized below into the most relevant and important categories for the purposes of this report.

Climate Change

Everyone interviewed mentioned climate change as an issue of critical importance that trumps other issues on its own, but it is also a major influence on a range of natural resource issues that organizations are addressing in New Mexico. We cannot address many of the other issues people care about—most importantly including water quantity and streamflow, forest health and fires, ecosystem resilience, and wildlife habitat—without taking climate change into account. There is no escaping it. Dave Gutzler, the preeminent climate scientist in the state, says, “There is effectively no scientific debate arguing against the likelihood of continued warming,” and the arid Southwest will be more impacted than other regions.

Even under the most conservative scenarios, Gutzler’s models project decreasing winter snowpack and increasing evaporation over the next 100 years. By the end of this century, there will be no appreciable snowpack in the southern Rockies (which will have a separate but equally harsh impact on the ski and winter recreation industry), with spring runoff occurring earlier and weaker and with an overall reduction in annual streamflow of 8% to 29%. With the most southerly snowfed rivers in North America flowing through our state, New Mexico will feel these effects of climate change sooner and more extremely than other areas of the West. We are the “canary in the coal mine.” This means, one way or another, that New Mexico will have

to adapt and work to mitigate the causes and effects of climate change. It also means that we have the potential of becoming a model of adaptation and mitigation for others.

Landscape ecologist Craig Allen is already documenting some of the impacts of climate change on New Mexico forests. Up to 18% of the Southwest's forests were lost to wildfire and bark beetle infestations between 1984 and 2006, and that trend will only worsen as trees are increasingly stressed and vulnerable due to hotter and drier conditions. Fires are a natural and integral part of forest ecosystems and important for healthy reproduction in many conifer species. It is not necessarily a bad thing, but in an age of climate change, those forests may not rebound after a catastrophic fire. Ponderosa forests burned in the late 1990s in the Jemez Mountains around Los Alamos are showing no sign of recovering, leaving behind a desert-mountain landscape. Even without catastrophic fires, hotter and drier conditions will stress many forests to a breaking point. One of Allen's recent papers explains that by the 2050s under projected climate models, increasing temperatures and drought will exceed the most severe droughts the Southwest has experienced in the last 1,000 years. This will stress forests by increasing the "vapour-pressure deficit," which dictates the ability of trees to transpire and photosynthesize—it will shutdown the ability for trees to "breathe" and to convert sunlight into the basic compounds needed for survival. Which will lead to "changes in forest structures and compositions, with transition of forests in the southwestern United States . . . towards distributions unfamiliar to modern civilization." Within the next few decades, ponderosa forests we see today could be replaced by desert shrub land, which will be accompanied by other huge ecological shifts.

Water

Water is a perpetual concern in an arid state like New Mexico, and it will only get worse as the climate gets warmer and drier in the coming decades. Gutzler and Allen both explained that according to reliable tree-ring records, the late 20th Century was one of the wettest periods in the last 1,000 years. This is significant because it is part of the basis for the 30-year rolling average water planners still refer to and what most people think of as "normal" precipitation. The driest spell in recent New Mexico memory that many still talk about was a drought in the 1950s, but the tree-ring records show even more severe droughts over the over the past few centuries. Climate models predict a drought worse than the 1950s sometime during this century, which will be a greater challenge due to increased populations and water needs throughout the state.

Groundwater, which is now the primary drinking water source for nine out of ten New Mexicans, has already been significantly depleted and, among the other climate change impacts, will receive diminished recharge in a drier climate. And now this scarce resource is also under attack by private speculation, as described under *Short-Term Priorities* above. Also described in the same section above, groundwater is threatened by various contamination, including hydraulic fracturing (or "fracking") in oil and gas production.

There is also a direct relationship between upstream watershed health and downstream river flows not always recognized or incorporated by water planners. Many of the watersheds that

produce our surface water are in poor ecological condition. Even without the climate-change variable, watersheds in poor health diminish runoff, reduce groundwater infiltration, and have negative water quality impacts. Allen feels this is so important that he advocates "buying a little resilience" by redirecting some water to irrigate forests in the coming decades, which will mitigate some of the climate change impacts and sustain basic watershed function.

With all this in mind, many respondents and interviewees expressed strong concern about the need for rational, long-term water policy planning. This will require a radical, big-picture rethinking that includes the uncertainties of climate change and other climate variability, protecting the quality of our remaining groundwater resources, and ecological health for more productive watersheds. It must go beyond simple conservation measures, which, as conservationist and writer Bill deBuys explained, simply creates "demand hardening" in which conserved water just ends up going downstream for some other use but does not increase resiliency in the system for times of drought. Taking all these considerations together it is a daunting challenge, but an absolute imperative for a sustainable future.

As deBuys boiled it down: We need to play defense by protecting groundwater and play offense by building water resilience to be able to respond to future challenges on a community or municipality level.

Environmental Education

As mentioned above, it was surprising to see environmental education ranked as the third-highest priority among natural resource concerns, however, it makes perfectly logical sense as a key leverage point for affecting positive change regarding stewardship of natural resources. There is a well-documented problem known as "nature deficit disorder"—a suite of childhood development problems related to a lack of connection with the natural world, including the fact that kids will know and care less about nature and natural resources as adults. With that in mind, it is important to engage the next generation in environmental education programs and create opportunities for a meaningful and emotional connection to nature before they are fixed in their ideas. In a state with a strong and very old land-based tradition there is also a tremendous opportunity to build on traditional ecological knowledge and land ethics, to validate that cultural history rather than try to replace it, and make environmental education place based and directly relevant to the culture and lives of Hispano and Indian communities.

A key leverage point for environmental education is the adoption by the state of a comprehensive Environmental Literacy Plan for public school students from kindergarten through 12th grade, which has been developed by the Environmental Education Association of New Mexico, along with several other nonprofit and government partners. The plan is consistent with state requirements and incorporates Common Core State Standards, Next Generation Science Standards, and STEM (Science, Technology, Engineering, and Math) learning. But it teaches in a more engaging way using experiential, hands-on methods.

Several respondents suggested the very worthy and practical idea of enlisting schools to collect ecological data in service-learning projects that provide both critical information for research as

well as hands-on education about natural resources. The Bosque School in Albuquerque was mentioned as the best current example of such a program. Other respondents emphasized the fact that agricultural education is also important hands-on environmental education for the next generation.

However, it is clear from interviews and survey comments that what we are talking about here is environmental education in the broadest sense that goes well beyond teaching children about nature. It also includes the pivotal role of accessible outdoor recreation, public education, and quality, independent journalism about natural resource issues to create a well-informed electorate to elect officials and advocate for policies that can make a difference in the stewardship of natural resources. From part of a definition of environmental education from the North American Association for Environmental Education: "Environmental education (EE) teaches children *and adults* how to learn about and investigate their environment, and *to make intelligent, informed decisions* about how they can take care of it" (emphasis added).

Ecosystem Restoration

The restoration of ecosystems has to do in part with restoring forests, riparian areas, streams, habitat, and wildlife populations for their own sake. But it also concerns restoring the ecological services that natural systems provide for humans, including watershed health and more robust runoff, food production, carbon sequestration to mitigate climate change, and just the beauty of healthy, open lands.

There are a number of approaches for ecosystem restoration, but the most successful appear to be those that 1) tackle a landscape-scale (such as a watershed or bioregion), 2) focus on a local level, 3) work on a collaborative basis to engage a broad diversity of community and stakeholders, and 4) integrate an economic development component (such as small-diameter tree thinning and marketing). There is also great potential to leverage significant federal funding and resources for restoration on the federal lands that comprise the majority of our upper watersheds, and one proposal currently underway in the state to develop a National Restoration Lands Initiative.

This report is not intended to promote specific organizations or projects, but one that fits all of the criteria above is worth mentioning, at least as a model. Two professionals who are highly respected in their fields, landscape ecologist Craig Allen and water attorney Adrian Oglesby, both singled out The Nature Conservancy's Rio Grande Water Fund as "the most promising thing out there." The Water Fund is a beautifully big-picture "comprehensive plan for wildfire and water source protection," that will develop a sustainable small-diameter timber harvest and markets by thinning a glut of overgrown stands throughout the upper Rio Grande watershed in north-central New Mexico. This is all toward the goal of restoring forests, watershed health, and watershed function to reduce the threat of wildfire and to increase downstream water yields, but importantly emphasizes traditional land uses, local stewardship-forestry jobs, and economic development.

Fostering Innovation

Risk-taking and innovation are another one of McCune's core values, and a number of interviewees talked about the importance of not only supporting existing innovation and successful change agents, but also fostering fresh innovation to solve evolving natural resource challenges. New Mexico has a wealth of innovative thinkers and doers and is home to some of the most innovative organizations, programs, and individuals working in the West, and we need to actively stimulate and harness that spirit. Two primary ideas emerged:

1. A New Mexico Think Tank: For all the good work taking place around the state, New Mexico lacks a well-funded, independent, interdisciplinary think tank that can comprehensively research, problem solve, and propose solutions on specific natural resource issues. This approach can integrate multiple disciplines and sectors and perspectives in a way that the typical disconnected silos of organizational work cannot. New Mexico has the talent and, as the "canary in the coal mine," the potential to have a significant influence across the West, and beyond. McCune could consider startup funding in partnership with other foundations to create a New Mexico Think Tank.

2. The New Mexico Prize: Based on the recent model of the Arizona Prize sponsored by the Arizona Community Foundation, this idea resonated with many interviewees. The Arizona Prize involves a competition for multi-disciplinary teams to develop innovative solutions to addressing water consumption needs in that state, funded by a partnership of philanthropic and private-sector sponsors. The team that wins the competition receives a $100,000 grant to implement their proposal. Interviewees generally liked this idea, but in this particular example felt that it was a little too narrowly defined to foster genuine, free-thinking innovation. There was also a concern expressed that these kinds of competitions tend to favor short-term technological fixes and gadgets, rather than genuine innovative thinking about a new and different way of addressing a problem for the long term. McCune could sponsor such a competition, leveraging other philanthropic and private-sector partners, possibly with an annual theme to problem solve around one of the identified priorities listed above, or possibly as an open-ended invitation for any great innovation to address an important natural resource issue. Specific suggestions included 1) addressing the nexus between water and climate change, 2) developing a comprehensive "land-link" program to connect eager but landless young farmers and ranchers to fallow lands and elder mentors, and 3) anything that fosters the next generation of natural resource stewards.

Under the general category of fostering innovation and building capacity in New Mexico, a number of interviewees had additional thoughts about McCune's grantmaking approach:

- Identify successful change agents, give them money, and get out of their way
- Respect the perspective of those on the front lines
- Trust local knowledge and support strategies you may not understand (particularly regarding tribal lands and the politics of sovereignty)
- Prioritize New Mexico-based organizations concentrating on local work, over organizations based outside the state

Intersection and Overlap

It is beyond the scope of this report but worth mentioning the perspective that natural resource issues will continue to be a challenge in New Mexico until we can build a stronger economic base and greater opportunity in our impoverished state. In the hierarchy of needs and interests, natural resource stewardship falls lower on the priority list for people and communities chronically plagued by poverty. With that in mind, some of the most salient potential overlap is with economic development and rural development. In a rural state, the natural resources of our land, water, farms and ranches, open spaces, and distinctive cultural landscape constitute our economic base. In addition to the obvious overlap of stewardship of natural resources with local food industry development, and the potential for economic development related to stewardship forestry, there is strong interest and potential to explore the intersection of the protection of public lands and job creation related to outdoor or "eco" tourism. McCune explicitly recognizes "revenue . . . derived from outdoor and adventure tourism" as an important value related to stewardship of natural resources, and such economic development and local jobs are often part of the rationale for wilderness, national monument or national conservation area campaigns. However, once the designation occurs, there is seldom any integrated follow up to develop those jobs and opportunities. Moving in this direction would require new partnerships between conservation organizations and economic development entities, and would forge stronger links with local communities and stronger support for protection of public lands.

Environmental justice is not identified by McCune as a specific funding priority, but in a majority-minority state with a large population that is impoverished and disenfranchised, it looms large as a potential dimension of every issue or project having to do with the stewardship of natural resources and should be routinely assessed and taken into consideration.

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Appendices

Appendix A
Survey Contact Lists

Appendix B
Complete Survey Responses