

1% for the Tetons – Grant Application Form

Please use this form to apply for funding from **1% for the Tetons**. Submit via email to: grants@1PercentTetons.org. Please put your organization's name in the subject line.

Application deadline is 5:00 pm (MDT), June 12, 2009. **Late applications will not be considered.**

Please complete this form and submit your completed application as a Microsoft Word document.

Organization Name: InterConnections 21
501(c)3 number (if applicable): 84-1379499

Address: P.O Box 960 Wilson, WY 83014

Contact person & title: Emily Moyer, Program Coordinator

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307.690.5029

Title of Application: Jackson Community Tree-Planting Initiative: Phase 1: Expanding Urban Forestry

Amount Requested: \$14,750

Summary statement describing your proposal (75 words or fewer)

InterConnections 21 is initiating a project to plant 350 trees around Teton County over the next several years that will not only enhance the natural beauty of the area and involve local community members and businesses, but will positively affect the local ecosystem by reducing carbon dioxide in the atmosphere. The first phase of the project is in partnership with Teton County Parks and Recreation, local volunteers, and Teton Heritage Landscaping.

Please use the questions below to fully describe your program. While there is no word limit for your responses, the grants committee deeply appreciates clarity and conciseness.

- A. Fully describe the program for which funding is requested. If this is a collaborative project with several entities, explain the role of each. Indicate the date range of the program.

InterConnections 21 (IC 21) is planning a long-term initiative over the course of the next few years to plant 350 trees in and around Teton County. Not only would 350 trees be a significant contribution to the health of the greater Teton ecosystem, but the number 350 is symbolic of Teton County's participation in a larger global effort to reduce carbon emissions. According to leading scientists, the level of carbon dioxide in the atmosphere must be reduced from 387 parts per million (ppm) to 350 ppm in order for earth's inhabitants to live healthy lives, and it must be done before the damage is irreversible. 350.org is an international non-governmental organization committed to raising awareness about climate issues; influencing global leaders to commit to reducing carbon emissions; and getting youth around the world involved. IC 21 has been working with 350.org in preparation for an International Day of Climate Action on October 24, 2009, and the proposed tree planting project is IC 21's call to action to the Jackson community to get involved in this important global initiative.

Due to the sheer magnitude of 350 trees, IC 21 is extending the tree-planting process over a period of 2-4 years. We are initially partnering with Teton Country Parks and Recreation; Teton Heritage Landscaping; and 10-15 local student, teacher and community volunteers. For the first

phase of this project, we aim to plant 50 hearty trees this fall in Jackson's public spaces as a means to benefit the community, environmentally as well as aesthetically. Our hope is that by planting in public-use spaces, we will increase the visibility of this project and garner local support that will help us in getting the next phases off the ground. We would also use this as an opportunity to publicly thank our partners/sponsors on a plaque. If funded by 1% for the Tetons, we would like include a "thanks" on the plaque for contributing to this program.

For the proposed phase 1 of the tree-planting project, Teton County Parks and Recreation will survey public spaces and locate appropriate areas for planting with an aim to plant the trees in low-maintenance areas (for instance by already installed sprinkler systems). They will then decide the types of species that are suitable for each space. IC 21's role will be to contract out required labor and equipment from Teton Heritage Landscaping, to prepare the land for tree-planting, and to coordinate volunteers to help with the program. Teton County Parks and Recreation will then take on responsibility to maintain and care for the trees from there.

It is expected that the tree-planting process will take one to two days depending on the number of volunteers and the location of the spaces. There is a very active group of 20-30 Jackson Hole High School and Jackson Hole Community School students committed to climate issues called the Alliance Against Climate Change (AACC, formerly known as the Global Warming Heroes League), that IC 21 works with on a regular basis. Given their interest in climate issues, this group of students expressed a lot of enthusiasm when asked if they would like to participate in this project and they have offered to contribute much of the volunteer time necessary to plant the trees. IC 21 has also approached faculty from the Journeys School and the Jackson Hole Community School to participate in the project, and was received with positive responses. If funded, IC 21 will firm up commitments from volunteers.

Over the next few years, IC 21 plans to reach out to other partner organizations with the goals of addressing environmental restoration, rehabilitation, and replenishment in addition to carbon dioxide sequestration.

Plans for future tree-planting projects and potential partners include:

1. working with the Wyoming Game and Fish to find areas in Teton County in which vegetation is needed for habitat restoration;
 2. collaborating with the Teton Soil Conservation District to identify tree species that can stabilize eroding stream banks, particularly on Flat Creek;
 3. working with the Wyoming State Forestry Division to address highway needs and create "living snow fences" made up of trees, which serve as barriers to control drifting snow along public travel roads;
 4. setting up a Remove and Replenish Program with Teton County Parks and Recreation and the Town of Jackson to remove half-dying trees that are in the right-of-way of streets (located in both the public and private domain) and replenish these areas with new trees. This will improve the overall aesthetics of the county and will provide a good to the public as well as to private homeowners;
 5. approaching the National Parks Service to find appropriate areas in need of reforestation.
- B. What need or trend does this program address? What data support this? Include citations &/or web links.

Observed changes in global climate have already impacted a variety of worldwide physical and biological systems, particularly seen on the large scale by the rising sea levels and shrinking of the polar ice caps. However, climate change also creates many serious consequences at the local level, such as species extinction and reduced stream flows. The projected disruptions in

the natural balance of our region due to climate change, greatly threaten the inherent character of the Teton ecosystem, which makes it such a unique and special place.

The West is especially vulnerable to climate change, but western states continue to be top producers of greenhouse gas emissions. According to the Carbon Dioxide Information Analysis Center, in 2000 the state of Wyoming alone exceeded the carbon dioxide emissions of 170 nations.¹ The Intergovernmental Panel on Climate Change describes how “substantial changes in structure and functioning of terrestrial ecosystems are very likely to occur with a global warming of more than 2-3 degrees Celsius above pre-industrial levels (high confidence).”² Increases in annual temperatures have been greater in the West, than in other regions of the contiguous states, according to National Weather Service Data.³ Climate change causes many harmful consequences to living systems in our own region. Evidence shows that climate disruption has reduced snow-packs in the west over the past few years, thus threatening the water supply that is delivered to the greater Teton ecosystem and increasing the risk for drought and wildfires. A new study confirms that “at more than two-thirds of 200 western mountain sites, less winter precipitation is falling as snow and more as rain.”⁴ Reduced mountain snow cover also implies that there will be less reflection of the sun’s rays, and more absorption, thus leading to even more heating. As stated by a Rocky Mountain Climate Organization report, “the projected combination of earlier snowmelt, more heating, and increased soil dryness could lead to less summer-time evaporation, recycled moisture, and precipitation, and so is a recipe for increased intensity, frequency, and duration of drought.”⁵

Reducing the impact of climate change on our world, and specifically on the Teton ecosystem is a commitment IC 21 is ready to make. Reforestation and tree planting are crucial ways to help slow down the trend of climate change in our area. The importance of trees cannot be stressed enough. The U.S Forest Service estimates that all the forests in the United States combined sequestered a net of approximately 309 million tons of carbon per year from 1952 to 1992, offsetting approximately 25% of U.S. human-caused emissions of carbon during that period.⁶ According to a recent rapid assessment report from the UNEP, “the maintenance of existing reservoirs is among the highest priorities in striving for climate change mitigation.”⁷ Natural carbon removal through photosynthesis has proven effective since it has been “doing the job in a tried and tested way for millennia.”⁸

The UNEP report focused on the vital role that living systems play to avoid dangerous climate change, but it also demonstrated how such carbon management measures “have great potential for offering multiple benefits, such as the maintenance of bio-diverse areas and enhancement of ecosystem services such as soil fertility”⁹, demonstrating the multi-functional role of trees.

¹ Saunders, Stephen and Maureen Maxwell. “Less Snow, Less Water: Climate Disruption in the West.” The Rocky Mountain Climate Organization. Sept 2005. 27

² Fischlin, A., G.F. Midgley, J.T. Price, R. Leemans, B. Gopal, C. Turley, M.D.A. Rounsevell, O.P. Dube, J. Tarazona, A.A. Velichko, 2007: Ecosystems, their properties, goods, and services. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 213

³ Climate Prediction Center, National Weather Service, National Oceanic and Atmospheric Administration, U.S. Temperature and Precipitation Trends: Annual, <http://www.cpc.ncep.noaa.gov/anltrend.gif>.

⁴ Saunders, Stephen and Maureen Maxwell. “Less Snow, Less Water: Climate Disruption in the West.” The Rocky Mountain Climate Organization. Sept 2005. 9.

⁵ Saunders, 7.

⁶ <http://www.coloradotrees.org/benefits.htm#economic>

⁷ “The Natural Fix?: The Role of Ecosystems in Climate Mitigation,” 14.

⁸ “The Natural Fix?: The Role of Ecosystems in Climate Mitigation,” 4.

⁹ “The Natural Fix?: The Role of Ecosystems in Climate Mitigation,” 52.

C. How does this program further the mission of **1% for the Tetons**?

“One obvious effect [of climate change] would be less skiing and other snow sports. The season for skiing, snowboarding, and other snow-dependent winter recreation could be shorter and the snow slushier – reducing enjoyment for skiers, profits for skiing dependent businesses, and tax revenues for state and local governments. If the changes are extreme, skiing could be eliminated at lower elevation resorts.”¹⁰

1% for the Tetons recognizes the importance of maintaining the environment to ensure the economic stability and the overall well-being of the community. As a tourist destination, businesses surrounding the Tetons rely heavily on the natural beauty of the area. The ski area is particularly vulnerable to climate change as changes in snowfall and a shortened winter season could drastically affect the number of skier dollars brought into the community. That is not to say that all of us should not be concerned about climate change. As described above decreases in snow pack will ultimately decrease water supplies from spring run-off, which not only threatens the local water supply, but the resulting drought in late summer increases risk of forest fires in the Tetons. Of course, these changes will have a dramatic effect on the environment as well as the livelihood and overall health and safety of people living in the area. As mentioned above, climate change has had the most dramatic effect on the Western states, which have shown increased temperatures of up to 70% higher than the lower 48 states.¹¹ It is clear that those of us living in the West must take action now to guarantee our current quality of life.

Carbon emissions are, of course, one of the big contributors to climate change. A tree-planting initiative is a simple, straightforward way to reduce carbon dioxide in the atmosphere, but the benefits extend far beyond just carbon emissions. In 2004, Wangari Maatthai won the Nobel Peace Prize for her community-based, tree-planting movement across Kenya, called the Green Belt Movement. As stated in the Green Belt Movement’s mission, tree cover “affects the availability of rain, availability of underground water, soil fertility, and clean air, prevention of soil erosion, and the beauty of the landscape. . .” Green Belt Movement participants therefore plant “indigenous trees in forest catchment areas, private farms and public spaces to preserve local biological diversity.”¹² InterConnections 21’s proposed tree-planting program aims to follow a similar model, which not only benefits the environment and involves the community, but also further enhances the natural beauty of the surrounding area. The benefits do not stop there. Beautiful, healthy trees will increase the aesthetic appeal of the area, making it more enticing to tourists as well as inhabitants, and should therefore have a positive effect on real estate values.

InterConnections 21 and Teton County Parks and Recreation believe the proposed tree-planting initiative is an ideal proposal for 1% for the Tetons. Not only is it a program that positively affects the environment and the overall health and well-being of community members, but it is a step in the right direction towards sustaining the local ecosystem and therefore protecting the livelihoods of Teton County residents.

D. How does this proposal address each of the 8 Criteria?

- a. Focus on sustaining the greater Teton ecosystem’s essential qualities – particularly its extraordinary natural resources – for future generations;

¹⁰ F. H. Wagner, ed. and principal author, *Rocky Mountain/Great Basin Regional Climate-Change Assessment*, report for the U.S. Global Change Research Program (Logan, Utah: Utah State University, 2003), 138-141.

¹¹ Climate Prediction Center, National Weather Service, National Oceanic and Atmospheric Administration, U.S. Temperature and Precipitation Trends: Annual, <http://www.cpc.ncep.noaa.gov/anltrend.gif>.

¹² www.greenbeltmovement.org

IC 21's tree planting project's primary objective is to replenish an important natural resource in Teton County. Trees provide a number of vital functions to an ecosystem's health, including increased biodiversity, soil fertility, shelter for wildlife, removal of soil pollutants, and oxygen production. Focusing on the community's public spaces also optimizes carbon sequestration, since air pollutant concentrations are most often always higher in more densely populated spaces (i.e. within town and city limits). Given the long lives of trees and Teton County Parks and Recreation's commitment to ensuring the trees' long-term maintenance, this is a sustainable program that has a positive effect on the health of Jackson community members for generations to come.

- b. Address the critical linkages between the area's essential economic, social, and environmental qualities;

The damaging effects of climate change initially produce environmental consequences that are then often translated to socio-economic repercussions. Reduced snowpacks and snowfall result in many implications for the backbone of Teton County's economy: tourism. The potential for the ski and snowboard industry to be adversely affected due to shorter winter seasons and reduced precipitation is likely. Other local businesses geared towards winter activities will suffer, resulting in lower tax revenues for the state as well.

Social linkages to IC 21's tree planting project include increased aesthetics and recreational benefits for the community. Adding and replenishing trees to Jackson's public spaces creates an elevated enjoyment of these areas, generates a cooling effect amidst asphalt and concrete structures, and enhances the natural scenery within the town of Jackson.

- c. Emphasize forward-looking solutions, i.e. preventing future problems or turning today's possibilities into tomorrow's realities;

Our project addresses a critical environmental concern and a solution through biological means. Deforestation is continuing at an alarming rate across the globe, limiting the number of natural carbon sinks and contributing to greenhouse gas emissions. Reforestation is a progressive solution that helps mitigate the increasing rate of deforestation, while also improving the ecosystem's capacity for carbon capture and storage. As mentioned before, IC 21 has a long-term commitment to the tree-planting program, as well as to 350.org's global initiative to reduce carbon in the atmosphere. We will continue to collaborate with informed and dedicated partners in the future to do our part in coming up with creative ways to combat climate change and to enhance this tree-planting program.

- d. Start a new program, or modify an existing program in ways which *significantly* expand and/or increase its measurable results;

Funding from **1% for the Tetons** will get this project off the ground, by providing the necessary funds to purchase trees and carry out the first phase of IC 21's tree-planting initiative.

IC 21 will also be eager to continue the momentum of the first phase of this project and develop partnerships with other potential partners (listed above) to expand the wide-ranging benefits of strategic tree-planting such as rehabilitation, erosion control, reforestation, and habitat restoration.

Finally, we hope this initiative will increase the visibility of the climate change crisis and hopefully inspire and motivate community members to undertake their own action(s) to reduce carbon emissions and to urge global leaders to commit to doing the same.

- e. Produce significant effects with the funds invested;

The proposed tree-planting project is a local, community effort to do our part to help reverse the trend of climate change through a sustainable form of carbon removal. Perhaps more importantly, however, it represents Jackson's commitment to a global effort to raise awareness about the need to drastically cut carbon in the atmosphere and to find ways to do so in our daily lives. The 50 planted trees will also noticeably increase the urban forestry of Teton County and will improve the overall public enjoyment of the parks and communal spaces.

- f. Offer unambiguous, measurable criteria for evaluating success; what are the specific, measurable objectives of this program? How will you measure success against each of your objectives? Is there baseline information against which to measure success? What objective methodology will you use to evaluate the performance of the program?

The main criterion for success of our project is measuring the lifespan of the newly planted trees. Immediate success of the tree would be its survival after two winters in the public setting. Long-term success will be measured by whether the tree lives to its full maturity, or typical, average lifespan. An average lifespan for a deciduous tree is typically 60 years, whereas the lifespan for a spruce is about 80 years. The survival of the trees will determine their impact on the health of the environment and its inhabitants. A single mature tree can absorb carbon dioxide at a rate of 48 lbs./year and release enough oxygen back into the atmosphere to support 2 human beings.¹³ Over a 50-year lifetime, a tree generates \$31,250 worth of oxygen, provides \$62,000 worth of air pollution control, recycles \$37,500 worth of water, and controls \$31,250 worth of soil erosion.¹⁴ With steadfast care and maintenance, we anticipate successful planting and trees with long, healthy lifespans so that each tree can live up to its full potential and provide the needed benefits to the community and ecosystem.

- g. Demonstrate collaboration by multiple organizations in addressing issues cutting across jurisdictions and disciplines;

This project will include strategic support from the Teton County Parks and Recreation in identifying the appropriate locations and tree species for the urban forestry, as well as the long-term care and maintenance of the planted trees. This project is also dependent on labor from Teton Heritage Landscaping and on the voluntary commitment of students from the Alliance Against Climate Change as well as teachers and community members.

As mentioned above, IC 21 plans to continue building relationships with other organizations (both governmental and non-governmental) as well as local businesses to fully maximize the potential of this program and the overall benefit to the Teton ecosystem.

[Letters of support from Teton County Parks and Recreation, the student-run Alliance Against Climate Change and Teton Heritage Landscaping are attached]

¹³ McAliney, Mike. Arguments for Land Conservation: Documentation and Information Sources for Land Resources Protection, Trust for Public Land, Sacramento, CA, December, 1993

¹⁴ USDA Forest Service Pamphlet #R1-92-100

- h. Look to **1% for the Tetons** for matching funds, rather than complete funding.

As shown in the attached budget, Teton Heritage Landscaping, IC 21 and Teton County Parks and Recreation all intend to contribute staff-time to the proposed tree-planting initiative. We are also relying on volunteer time to keep costs down when possible. IC 21 is asking for funding from 1% for the Tetons to purchase the necessary trees for this program and to help defray some of the labor costs.

Future funding for the project's multiple stages will be explored through various grants, individual donors, contributions from other organizations, and organized fundraisers.

- E. Provide a project budget, including revenue and expense. Add narrative explanations as necessary.

[see attached]

- F. Has applicant received a **1% for the Tetons** grant before? If so, has **1% for the Tetons** received and approved a final report for each grant given?

InterConnections 21 has never received nor applied for the **1% for the Tetons** grant before.

- G. Is there additional information you would like to provide?

InterConnections 21 was founded on belief that youth are our future, and that they have the energy, the desire and ingenuity to combat the biggest problems facing our planet. We organize events, presentations, and programs that inform students, teachers, and community members about pressing global issues facing our world, with the hopes of inspiring them to take action and make a difference. Our ultimate goal is to foster a younger generation of effective global citizens through in-school and out-of school activities and leadership training.

There is a clear interest in and a commitment to working to reverse the effects of climate change by the student group the Alliance Against Climate Change (AACC). One of the primary goals of the initial phase of InterConnections 21's tree-planting program in Teton County is to get AACC students involved in a tangible, local project linked to a larger global initiative, so that they can then go on to combat climate change in their own ways. This program is therefore not just about planting trees, but preparing our students to become their own advocates and maybe someday become future world leaders.

By submitting this proposal, InterConnections 21 agrees that **1% for the Tetons** has the right to utilize the supporting data however it sees fit, including publishing it.

Further, if this application is funded, InterConnections 21 agrees that **1% for the Tetons** may:

- publish the application in its entirety, including the follow-up evaluation and outcomes report;
- report on, photograph, videograph, and/or otherwise publicize the funded project, and use such information as it sees fit.

Submitted by:

Name & Title: Emily Moyer, Program Coordinator Organization: InterConnections 21 Date: 6/12/09

Signature: Emily Moyer