

# 2006 Leadership Academy Action Learning Team – Community Service



## “Sowing the Seeds of Science in the Community”

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## I. INTRODUCTION

The UCAR Leadership Academy is a five-month professional development program offered annually to approximately 25 employees. It is designed to provide knowledge and skills for current and/or future leaders consistent with competencies needed to be a successful manager. The program consists of 13 workshop or seminar modules which address specific supervisor/manager competencies<sup>1</sup>, individual time with a personal executive coach, and action learning projects conducted in small groups facilitated by a team coach. The purpose of the action-learning project is to “provide participants a safe environment to practice the skills and knowledge gained in the program, while working on real work issues.”<sup>2</sup> The President’s Council supplied topics for the 2006 Leadership Academy to use in these projects. The topics included leadership, diversity, metrics and measurements, collaboration, community service, and the future of UCAR/NCAR/UOP. A process of iterative ranking narrowed the topics to metrics, diversity, and community service. This report describes the activities, group processes, and findings of the team focused on community service.

The Action Learning Team – Community Service (ALT-Community Service) comprises nine members from seven divisions of UCAR/NCAR/UOP plus a facilitator from Chain Reaction. The members are: John Braun (UOP/COSMIC), Holly Devaul (UOP/DLESE), Susan Foster (UCAR/EO), Lisa Gardiner (UCAR/EO), Steve Massie (NCAR/ACD), Susan Montgomery-Hodge (UCAR President’s Office), Mark Moore (NCAR/CGD), John Weatherley (UOP/DLESE), Jeff Weber (UOP/Unidata), and Carle Churgin (Chain Reaction, Facilitator). As will be described in more detail, the team worked together in meetings, corresponded through vigorous email exchanges, undertook independent tasks, and gathered data from a variety of stakeholder groups interested in this topic. This report summarizes the findings and recommendations of this inquiry into the community service role of the organization while attempting to document the skills acquired through academy training.

The President’s Council included three subtopics within the community service theme. The team chose to focus on “How can we promote NCAR in our local community (Boulder, Colorado etc.)? What impact do we have in the community? What responsibilities do we have to our community?” The team then set about delineating the issue. This included clarifying what these questions meant, determining what community to target, who the stakeholders are, and defining who “we” refers to (e.g. all or only part of UCAR/NCAR/UOP). The ensuing discussion revealed several strong themes to pursue in our research. A summary statement emerged: “Sowing the seeds of science in the community.” Themes that underlie this include:

- There is a strong desire within our team to communicate to the local community (City and County of Boulder) the importance and relevance of the work done at UCAR/NCAR/UOP.
- Although there are many diverse outreach efforts institution-wide at all levels (e.g. formal education and outreach programs as well as activities of individual employees), there is a lack of central coordination and tracking of these efforts.

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<sup>1</sup> [https://www.fin.ucar.edu/hr/leadership\\_academy/competencies.html](https://www.fin.ucar.edu/hr/leadership_academy/competencies.html)

<sup>2</sup> Definition provided from the team project topic sheet distributed at an early LA class.

- Answering the question: “Where do you work?” clearly, concisely, and consistently is a challenge. The broad range of work conducted here and the tripartite nature of the UCAR/NCAR/UOP institution is difficult to explain succinctly.
- The existence of multiple science labs in various locations within the City of Boulder contributes to public confusion in distinguishing one from the other.

In order to address these broad themes in the context of the action-learning project, the team adopted the following vision statement:

*We strive to produce achievable recommendations that include specific, appropriate implementation efforts to sow the seeds of science in our community.*

This report summarizes the approach and procedures used during this project. It includes information about development of the team vision, the processes that facilitated progress, the research strategy involving interviews with stakeholders, and the synthesis of these ideas into an understanding of and appreciation for the current efforts already in place. The team offers recommendations to improve efficiency and impact in the areas of: (1) internal coordination, (2) public and K-12 education and outreach, (3) business community interaction, and (4) publications and communications. Additionally, the upcoming Celebrating Science at Twenty Ninth Street project, the unique, open-air science education installation<sup>3</sup>, presents an unprecedented opportunity to highlight the work of UCAR/NCAR/UOP in the community while incorporating many of the recommended strategies.

## **II. APPROACH AND PROCEDURE**

### **A. Project Planning**

ALT-Community Service members worked together to guide and shape the project throughout its life cycle. By consensus, the team developed a timeline and set milestones that would be required to complete the project. The team collectively identified the steps and associated tasks necessary to reach these milestones including interviewing, note taking, compiling data, writing, editing, presentation building, and presenting. Team members volunteered for tasks that aligned with their personal skill sets. A supportive atmosphere was developed early in the process that facilitated the matching of the appropriate team member with each project task.

### **B. Identifying Project Direction**

The team acknowledged the value of listening to diverse voices in the community to ensure the broad applicability of the resulting recommendations. Three representative stakeholder groups were identified for interviews: a select but diverse group of UCAR/NCAR/UOP employees; President’s Council members, and members of the local community. Reflection on the ideas and insights expressed in the stakeholder interviews generated four areas of focus:

- Internal coordination of education and outreach activities
- Public education resources and strategies

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<sup>3</sup> The Celebrating Science at Twenty Ninth Street NCAR Science Plaza, consisting of an exhibit, a computer kiosk, and a digital docent audio tour, is located at the former Crossroads Shopping Mall

- Business community involvement
- Publications and communications strategies

### **C. Useful Team Process Tools**

*Group brainstorming:* A vocal minority is common in many meetings, which can limit or exclude full participation of other members. The use of “sticky notes” is one way to quickly gather ideas from all members of the group. Each individual articulates ideas by writing them down, avoiding possible problems of thought interruption and shyness created by verbal exchanges. The advantage of this process is that everyone participates equally. Additionally, the notes can be easily moved around as the group discusses options or categorizes ideas by theme. The disadvantage is that a word or two on a small sticky note can be very cryptic with the full intention unclear. Clarifications were easily obtained, however, and the advantages of this technique clearly outweighed the disadvantages.

*Team voting or priority analysis:* The ideas generated were categorized by themes, ranked, and then prioritized. There was a great deal of animated discussion (at which the team excelled) and brainstorming, which resulted in several possible directions for the project. Many of these were quite promising. The team found itself at a crossroads twice in the process. At each of these decision points, the team used the affinity process (i.e., individual idea generation as described above, reviewing each suggestion, and grouping and prioritizing them by theme), combined with voting to provide a clear picture of the possible direction. Then, collectively, the project’s course was determined. It was decided that the other ideas and potential routes would be captured in the appendix section of this project report.

### **D. Team Meetings**

The cornerstone of the group project was team meetings. The first meeting established norms for working together. Consensus building was the preferred style of decision-making. It was agreed that if consensus could not be reached, a two-thirds majority vote would be used. The group also established logistical norms including the use of pre-determined meeting agendas; rotating leaders, scribes, and timekeepers for each meeting; and the use of a group email list and the Meeting Maker calendaring system to facilitate communication between meetings. The group also frequently utilized a Leadership Academy tool called “clearing the decks.” This three-part process was typically used in the first fifteen minutes of the meeting enabling group members to first voice their concerns, fears, irritations, etc.; then identify their individual responsibilities related to the concerns; and finally express how they believed the team would succeed in spite of the concern.

### **E. Community Interviews**

The ALT-Community Service team decided to initially address the current understanding of UCAR/NCAR/UOP’s presence in the local community and assess the needs of both the institution and the community. This required input from stakeholder groups. A list of potential target audiences and collaborators was developed to gather their perspective about our role in the local community. The groups identified included internal UCAR stakeholders, both from within the President’s Council and throughout the institution, and external stakeholders, including local business leaders, science lab personnel, community activists, and educators from universities and

school districts. Individuals from each stakeholder group were identified as possible interviewees.

The team brainstormed appropriate suites of questions to ask each stakeholder. Different sets of questions were used depending on whether the individual was internal or external to the organization. The baseline questions that were posed to each group are summarized in Table 1.

|                                     |   |
|-------------------------------------|---|
| <b>Internal Interview Questions</b> | <i>What responsibility does UCAR/NCAR/UOP have to promote science in the community?</i>                               |
|                                     | <i>How well do you perceive UCAR/NCAR/UOP to be doing this and how could we be doing it better?</i>                   |
| <b>External Interview Questions</b> | <i>What do you know about UCAR/NCAR/UOP?</i>  |
|                                     | <i>How is UCAR/NCAR/UOP perceived in terms of our project goal of “Sowing the seeds of science in the community?”</i> |
|                                     | <i>How is this goal relevant to your institution/group’s interests?</i>   |
|                                     | <i>Is there anything that UCAR/NCAR/UOP can do to help you or your group reach these goals?</i>                       |
|                                     | <i>What responsibilities does UCAR/NCAR/UOP have to the local community?</i>  |

**Table 1: Stakeholder interview questions.**

Team members volunteered to interview two or three stakeholders and one other team member within a three-week period. The team shared synopses of the interviews via email and summarized the perspectives of stakeholder groups using a “stakeholder identification and planning worksheet.” This provided a mechanism to clarify the characteristics of each stakeholder group; distill the key suggestions from the interviews; and describe the impacts, perceptions, and potential issues they perceived. The team then applied the affinity and voting process (described in Useful Team Process Tools) to brainstorm and define ideas for local outreach based on these results.

## **F. Building Project Vision**

At an early stage, the group developed a unified vision to focus and guide the project direction. Again, team members interviewed one another to gather information about individual strengths and blind spots and identify the characteristics of successful teams. After the interviews, the team summarized the individual strengths and weaknesses on sticky notes and grouped them to identify a list of collective team strengths and blind spots.

Each member wrote a personal statement describing his or her ideal vision for what the project would look like at its completion. To do this, members were presented with a list of seven guiding questions, which included envisioning “What has made the team successful?” “What

specific changes have been made?” and “What specific outcomes have been achieved?” Members also used the suggestions and input gathered during the stakeholder interviews to help form their vision. Members wrote their personal vision statements, partnered up for reciprocal interviews, and identified the common themes. These themes were gathered and grouped using the sticky note process and resulted in the following project vision:

*We strive to produce achievable recommendations that include specific, appropriate implementation efforts to sow the seeds of science in our community.*

The process of building a team vision illustrates the learning cycle, a four-part model for how individuals or teams evolve. The model includes awareness, choice, action, and reflection. Awareness is a process of identifying one’s personal values and ideals, then evaluating the degree to which one is living in alignment with these values. Choice is a matter of identifying the options that are available to help bring the individual or group into alignment with its ideals. Action is the process of committing to specific action items and adhering to specific timeframes for completion. Reflection is the process of reviewing how well the change met expectations and what was learned from the experience.

### **III. EDUCATION AND OUTREACH: A BRIEF SURVEY OF PROGRAMS, ACTIVITIES, AND RESOURCES**

#### **A. Background**

There are currently many education programs, or programs with a strong education component, within various parts of UCAR/NCAR/UOP. These focus on K-12, undergraduate, and graduate education as well as their resources and educational products. They are utilized by local, national, and international audiences. Due to the complex and dispersed nature of the education programs within this institution, the team found it helpful to review their evolution and current status. A brief history and present standing of institution-wide education and outreach within UCAR/NCAR/UOP is listed below and provides a framework for further recommendations and actions.

The roots of the local community education and outreach program began over twenty years ago with the establishment of the Mesa Lab Public Visitor Program. The original program of an educational nature, the Advanced Studies Program (ASP) started in 1964, was joined by additional programs in the ensuing years through the advocacy and grant writing successes of individuals in various divisions/programs across the institution. Examples include the Mesa Lab Exhibits, Project LEARN, the Program for the Advancement of Geosciences Education (PAGE) (which gave rise to DLESE), Unidata, and COMET.

In 2000, UCAR established an Office of Education and Outreach (UCAR EO) to provide an institution-wide focus for outreach activities. UCAR EO consolidated some pre-existing educational programs (and staff) including the Mesa Lab Public Visitor Program and the Significant Opportunities in Atmospheric Research and Science program (SOARS). Others remained independent programs within UOP and NCAR. Today, our institution’s primary coordinated effort to sow the seeds of science in our local community is managed by the Community and Public Services team within UCAR EO. This group’s local efforts, including

tours, outreach, exhibits, and the NCAR Science Store, connect the local community with our institution.

The first five-year *UCAR EO Strategic Plan 2001-2006* was developed with the participation of science and education leaders from divisions/programs throughout the organization. Since 2000, education and outreach programs have grown substantially to better serve both the local community (general public, students, and teachers) as well as national and international educational audiences. The goals and objectives of the plan are currently being revised and extended through another five years (2007 – 2011) to better integrate current and emerging programs. This anticipates new opportunities and challenges to serve external communities, education systems, and workforce development efforts.

If the local community is to be positively impacted by our scientific research, it is imperative that relevant strategic goals and objectives be translated into specific, appropriate implementations that will successfully impact Boulder County and are scalable to broader audiences.

**B. Current Education and Outreach Programs**

An impressive collection of high-quality education and outreach resources from UCAR/NCAR/UOP has evolved over the years. Unfortunately, most staff and the public do not know where or how to access them. In order to adequately address this void, a highly coordinated in-reach and outreach campaign is needed to ensure that our staff and people of all ages in neighboring communities frequently encounter and can easily access information about the institution’s mission and its educational programs and services.

The strategic planning committee is forming a directory of UCAR/NCAR/UOP programs and resources focused on education and outreach. The following entries have been submitted:

|   | <b>Programs and Resources</b>  | <b>Entity</b>   |
|---|--|-----------------|
| 1 | Advanced Studies Program (ASP)   | NCAR            |
| 2 | Cooperative Program for Operational Meteorology, Education and Training (COMET)                        | UOP             |
| 3 | Communications   | UCAR            |
| 4 | Digital Library for Earth System Education (DLESE)   | UOP             |
| 5 | EOL Engineering Summer Interns   | NCAR            |
| 6 | EO Partnerships with Scientists: various K-12, exhibits, and web-based resource development activities | UCAR EO         |
| 7 | Exhibits Program   | UCAR EO         |
| 8 | Global Learning and Observations to Benefit the Environment (GLOBE)                                    | UOP and UCAR EO |
| 9 | Geophysical Statistics Project   | NCAR            |

|    | <b>Programs and Resources</b>   | <b>Entity</b> |
|----|---|---------------|
| 10 | HIAPER Education and Outreach   | UCAR EO       |
| 11 | Informal Science Education Program (Super Science Saturday, Wild Bear Saturday) | UCAR EO       |
| 12 | NCAR Science Store  | UCAR EO       |
| 13 | NCAR Undergraduate Leadership Program   | UCAR EO       |
| 14 | National Science Digital Library (NSDL)   | UOP           |
| 15 | Office of Government Affairs (OGA)  | UCAR          |
| 16 | Online Professional Development Courses for Educators                           | UCAR EO       |
| 17 | Public Visitor Program  | UCAR EO       |
| 18 | Significant Opportunities for Atmospheric Research and Science (SOARS)          | UCAR EO       |
| 19 | UCAR EO Website   | UCAR EO       |
| 20 | Unidata   | UOP           |
| 21 | Teacher Professional Development Workshops                                      | UCAR EO       |
| 22 | Windows to the Universe   | UCAR EO       |

A number of other programs should be considered for inclusion in the directory, including:

- Skymath
- Friends of UCAR
- Hurricane Strike!
- LEARN, Atmospheric Science Explorers
- EXPLORE Newsletter
- Web Weather for Kids
- Global Change Instruction Program
- Classroom Grant Program
- HAO Newkirk Graduate Research Fellowships
- HAO Summer Undergraduate Student Visitor Program
- Digital Image Library

This directory should become a “living document,” changing over time and representing the institution’s catalogue of educational resources to both internal and external audiences.

### **C. Public Access to UCAR/NCAR/UOP Information via the Internet**

The Education tab on the main UCAR “umbrella site”<sup>4</sup> is easily accessed and allows visitors to find many educational resources. These resources range in scope and are embedded throughout the pages. The website should also be able to identify the goals of various programs, their target audiences, and information about who to contact for assistance. There is a need for the UCAR Education website<sup>5</sup> to be expanded to describe the full breadth of these programs and materials. This would help educators more easily incorporate UCAR resources into their learning plans. Spanish translation of web-based content on Windows to the Universe and the UCAR Education portal sites is also important in providing access to science information for our increasingly diverse and national audiences.

UCAR EO is planning to update the “Visit Us” section of the website to better serve those who physically visit the facilities. All of the institution’s educational programs have a web presence of some kind, though they are not all up-to-date, and the depth of information found on these websites varies greatly. With additional support for website revisions, the EO Directory could be further developed to provide descriptions of programs that vary in size and scope. Creating a search tool on the UCAR Education website would assist remote and local visitors in accessing resources that match their needs and interests. The information and search technology developed by DLESE should be leveraged to support this function.

Website link exchanges with other agencies/organizations can also provide avenues of accessibility to the Internet community. UCAR EO and UCAR Communications collaborate to maintain Internet links with organizations such as the Denver Visitor and Convention Bureau, the Boulder Chamber of Commerce, Boulder County, and the City of Boulder. It is important that the UCAR Education website also be linked to and from other sites to which members of the regional community turn for information about education, recreation, and science.

### **D. Public Access to UCAR/NCAR/UOP Information via Print**

Printed literature is an important method for communicating the institution’s mission and educational assets. UCAR Communications spearheads this area by writing and publishing the UCAR Quarterly and UCAR Highlights primarily for the university community. UCAR EO has developed a brochure for the neighboring community entitled “NCAR – National Center for Atmospheric Research – Visitor Center.” It describes the Mesa Lab tour program, exhibits, art galleries, science store, events, teacher workshops, Visualization Lab programs, cafeteria, library, weather trail, picnic areas, and adjoining hiking trails. This brochure is distributed at the traditional outlets such as the Mesa Lab, the Chamber of Commerce, hotel lobbies, the Pearl Street mall, and during community outreach activities. Distributing brochures and keeping them stocked is a time-consuming activity and is performed by UCAR EO staff when time permits. Funding should be available to produce adequate numbers of these brochures especially after Twenty Ninth Street opens. An external printing service that would keep these various outlets stocked may be better suited to perform this task. All brochures and modules should be in downloadable formats on the UCAR EO website.

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<sup>4</sup> <http://www.ucar.edu>

<sup>5</sup> <http://eo.ucar.edu>

## **E. Public Access to UCAR/NCAR/UOP Information via New Technologies**

New communications technologies are investigated for educational use as they are developed. This is a specialty of Unidata, COMET, Windows to the Universe, and the digital libraries (DLESE and NSDL). The audio tour at the Mesa Lab, funded by NSF, is an example. This program serves several thousand visitors each year with self-guided English and Spanish narratives. Twenty Ninth Street will explore innovations in communicating with the public. One of these is a cell phone based technology that will provide audio tours for use by visitors at the Science Plazas. Another is podcasting, an increasingly popular method to distribute information on demand. These and other technologies should be made available through the UCAR Education website.

## **F. Internal Reports and Metrics**

The NCAR Annual Report<sup>6</sup> and the UCAR President's Annual Report to the Board of Trustees<sup>7</sup> both capture education and outreach metrics on an annual basis. NCAR has just published "Collection and Reporting Guidelines to its Annual Metrics Report"<sup>8</sup> in an effort to improve the tracking and reporting of its staff's participation in publications, field programs, community services, and education and outreach. The new guidelines explicitly describe what is meant by education and outreach activities. Staff members are asked to report hours, locations, and audiences reached during the past year. This reporting procedure should not be limited to scientists but should include all staff regardless of their position or program affiliation.

## **G. Employee Participation**

Each March UCAR EO sends thank you letters to over 100 staff members who are known to have supported programs and activities in the past year. This does not take into account the unknown number of staff who have gone to, for example, their child's school and given a science presentation. Most of these activities are performed on donated time and are not officially recognized or coordinated by the institution. The number of staff requesting education and outreach materials for school presentations from UCAR EO and our team's own research leads to the conclusion that there is a significant amount of "underground" outreach being performed.

The Communicating Science Program (Comm Sci)<sup>9</sup> emerged several years ago as a result of discussions among employees who wish to equip UCAR/NCAR/UOP scientific and technical staff to be world-class communicators. This can be accomplished by engaging them in identifying and developing learning opportunities, experiences, and resources to enhance their skills in oral and written communication. CommSci is an unfunded program coordinated collaboratively by UCAR Communications, UCAR EO, UCAR Human Resources, and the NCAR ASP. Its current activities are primarily addressing the needs of staff with interest in English as a Second Language. Language translations and interpretation assistance are needed more frequently by the Mesa Lab tour and classroom programs, as well as in the community outreach efforts. UCAR/NCAR/UOP staff, who are fluent in foreign languages and interested in education and outreach, can be of great assistance as translators.

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<sup>6</sup> <http://www.nar.ucar.edu/>

<sup>7</sup> [http://www.ucar.edu/governance/meetings/oct05/ucar\\_report.pdf](http://www.ucar.edu/governance/meetings/oct05/ucar_report.pdf)

<sup>8</sup> <http://www.nar.ucar.edu/metrics/eo.jsp>

<sup>9</sup> [www.eo.ucar.edu/commsci](http://www.eo.ucar.edu/commsci)

A more coordinated cross-program approach to employee participation would ensure that activities are not only encouraged and authorized by leadership, but they are also duly acknowledged for their efforts. A secondary benefit of this would ensure that the message delivered is presented in a consistent, appropriate, and coherent manner; and participants are informed and trained to use educational resources to enhance their efforts to conduct education and outreach activities in the community.

## **IV. RECOMMENDATIONS**

Previous sections of this report outlined the mechanics and tools used through this action learning project as well as current community service efforts underway at UCAR/NCAR/UOP. The focus of this report now shifts towards the findings and recommendations of this project.

A summary of stakeholder interviews provides a meaningful look at what is expected and needed with regard to community service. As mentioned earlier, stakeholders were identified and interviewed by ALT-Community Service members. They can be divided into three broad categories.

- Internal – These people work directly for UCAR/NCAR/UOP. There were 20 internal stakeholders, including the nine members of the ALT-Community Service team.
- President’s Council – Three members of the President’s Council were interviewed.
- External – There were five people interviewed who were not officially affiliated with the institution. This group included a teacher, leaders of youth and education boards, a member of another research lab’s education and outreach program, and a citizen with a technical background.

The group acknowledges that the identified stakeholders are a small subset of the community and corporation. However, these individuals were perceived to be very closely aligned with the theme of “sowing the seeds of science.” It was also interesting to discover that the four “themes” originating out of the team’s discussions (Page 1 and 2 of the Introduction) resonated strongly with many stakeholders.

Recommendations with an asterisk (\*) indicate outreach activities that currently exist in some form. Inclusion of these activities is meant to recognize their importance and the need to grant additional resources for continued operation and/or expansion. Streamlining existing processes for decreasing cost/increasing value was not a focal point of this report. Implementation of any/all will require some level of additional resources, whether it is staff, time, equipment, or direct funding. An attempt was made to coarsely define the level of effort required by each recommendation as small, medium, or large. It is hoped that this will allow for implementation of some small-effort recommendations while recognizing the need for deliberation on others. Again, the estimation of effort on each recommendation is coarse and based on available information at the time and not in-depth studies.

### **A. Internal Coordination**

Interviews with internal stakeholders revealed a significant amount of outreach that was already recognized and supported by UCAR EO. This does not necessarily imply that these efforts are

organized by UCAR EO. There are numerous anecdotal stories of UCAR/NCAR/UOP employees visiting the UCAR EO offices requesting materials for science demonstrations at local area schools. It can be assumed from this that there are also employees who, as parents, are taking this outreach initiative to their children's schools without contacting UCAR EO.

**Scale: Small**

- Maintain and advertise the “Invitation to Partner in Education and Outreach” website<sup>10</sup> (\*)

By visiting this website, staff can learn about helpful roles they can play and download a sign-up form for training and activities.

**Scale: Medium**

- Issue parking Decals

An inexpensive way to increase visibility of UCAR/NCAR/UOP in the local community is to have employees (if they so desire) place decals on their vehicles. An example of the suggested decal is shown below.

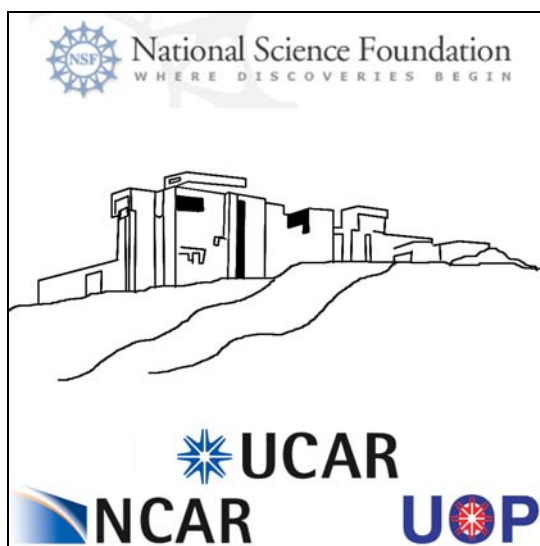


Figure 1 Example of suggested decal design.

- Recruit and train UCAR/NCAR/UOP staff to serve at local events (\*)

Volunteers who give presentations to public and school groups, whether on or off campus, should be given a “briefing packet” that gives an overview of what NCAR/UCAR/UOP does. Volunteers should be encouraged to briefly discuss the overall focus of our institution before jumping into a focused talk or activity. Instruction (either written or in a classroom setting) on how best to interact with school-age children of different levels and adults would be helpful. The Windows to the Universe (UCAR EO) “Scientist in the Schools”<sup>11</sup> instructional resource is a good example.

<sup>10</sup> [http://www.ucar.edu/educ\\_outreach/volunteer/](http://www.ucar.edu/educ_outreach/volunteer/)

<sup>11</sup> [http://www.windows.ucar.edu/tour/link=/teacher\\_resources/sci\\_schools/ss\\_home.html](http://www.windows.ucar.edu/tour/link=/teacher_resources/sci_schools/ss_home.html)

In our discussions the issue of “employee identity” came up. There are so many different organizational groups within UCAR/NCAR/UOP, that many employees are not aware of what other groups do, or for that matter, have a clear understanding of the overall goal of our organization. A briefing packet would help spell out the “bigger picture,” produce a more cohesive work force, and prepare employees to communicate our institution’s goals and aspirations to the public. It could also provide the necessary support to expand employee participation in outreach to include those not formally engaged in science or education.

**Scale: Large**

- Coordinate volunteer interpreters at the Twenty Ninth Street Exhibits

The team felt that the most important opportunity in the near future is to ensure there are sufficient volunteer staff available to interact with the public during events at the Twenty Ninth Street NCAR Exhibit. The most effective outreach is on a face-to-face, one-on-one basis. Careful front-end planning; specific job descriptions for volunteer educators; and adequate training, tips, and “best practices” would all help make the public interaction experience for volunteers a positive one.

- Design a revised or new UCAR/NCAR/UOP position to coordinate outreach efforts

There is currently no dedicated position that coordinates and integrates local education and outreach activities institution-wide. Whether conducted by individuals or programs, these activities need to be better connected, tracked, and supported. Though there are staff who take on parts of this role, in addition to many other responsibilities, their efforts would benefit from a more integrated, global, and programmatic approach.

**B. Public and K-12 Education and Outreach**

Given the scope and vision of this project, it should be no surprise that stakeholders thought it was entirely appropriate and necessary for the institution to promote public education within the community. There were at least eight individual suggestions for some type of program where atmospheric research and science is made accessible to the general public in a “lay” fashion. The majority of these suggestions included lectures that summarized current research being conducted within the organization.

Stakeholders also thought that an increased interaction with local schools and teachers should be pursued. Four stakeholders thought we should be assisting teachers in developing new curriculum. Three thought that we should increase the number of lectures that we provide to local schools. There were two more general suggestions to promote scientific careers to students and a single suggestion to promote science in general.

There were also some comments emphasizing the need to increase interaction with community members of different social, ethnic, and cultural backgrounds. Three suggestions were made to increase the number of bilingual lectures and displays. Others commented that we should be promoting scientific careers to non-traditional students including minorities, females, and lower

income students. Expansion of our Spanish language educational resources is especially important as the demographics of our country continue to change. The bilingual education workshops sponsored by UCAR EO should be encouraged.

### **Scale: Small**

- Develop targeted free email list for upcoming events and announcements

Send out email alerts on our educational outreach activities to local educators who subscribe to this service.

- Encourage and coordinate staff interactions with local school districts (\*)

Matching volunteer staff with the needs of local schools' science programs (in-class and after-school activities) will help to enrich the students' experience with science. Stakeholder interviews indicate that there is a need at the K-12 level for volunteer classroom presenters. For example, an after-school science club in Lafayette turns away children due to the lack of volunteers. One-on-one interactions are the best way to link us to students and other stakeholders in the community. Efforts to match volunteers from UCAR/NCAR/UOP with classrooms that can most benefit from our services will definitely make a positive impact on local classrooms.

### **Scale: Medium**

- Inventory what is currently being done for the neighboring K-12 community by UCAR EO, the Mesa Lab tour program, and staff from across the institution (\*)

We should continue to assess the variety of outreach efforts that are already being done and see if we are meeting the needs of stakeholders outside of the organization. A simple means of accomplishing this would be a short questionnaire completed by teachers who visit UCAR and take the EO tours and by staff who conduct outreach to local schools.

### **Scale: Large**

- Recruit and train volunteer staff in K-12 outreach (\*)

The quality of outreach will be enhanced if volunteer staff can attend internal workshops at which helpful advice is given on how best to interact with school children and adults, as well as how to utilize UCAR EO resources in classrooms, at special events, and within the community.

## **C. Business Community Interactions**

Interactions with local business organizations were generally thought to be valuable and necessary. Most of the findings related to participation in the CU Leeds School of Business "50 for Colorado"<sup>12</sup> and "Leadership Boulder County,"<sup>13</sup> and continued participation in the Chamber of Commerce. Many UCAR/NCAR/UOP staff members are already active in these and other

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<sup>12</sup> <http://www.colorado.edu/ContinuingEducation/50forcolorado.htm>

<sup>13</sup> <http://www.boulderchamber.com/lbco/>

organizations, and the findings and recommendations related to this topic were more in support of existing interactions rather than suggesting new or different interactions. There was one suggestion to support local vendors whenever possible.

**Scale: Small**

- Encourage employee outreach to and participation in the business community (\*)

Employees should be encouraged to seek other opportunities for partnership and recognition in the business community. For example, UCAR/NCAR/UOP is currently a member of the Boulder Chamber of Commerce and should continue this membership. Additionally, a current UCAR employee is the Chair-elect of the Boulder Chamber of Commerce. A third example is that NCAR, with support from UCAR EO, recently hosted a visit to the Mesa Lab by the Denver Hispanic Chamber of Commerce.

**Scale: Large**

- Continue participation in the Boulder Chamber Expo (\*)

The Boulder Chamber Expo (held on April 26 in 2006) is a day-long event in which business leaders attend seminars, visit exhibits, and network with others. This is a good way for several of our managers to sense the pulse of business activity in Colorado and determine how NCAR can connect to this sector. For the past two years, UCAR EO has coordinated outreach from our corporate booth at the Expo.

- Continue to participate in the CU Leeds School of Business “50 for Colorado” program (\*)

The “50 for Colorado” program attracts current and emerging Colorado leaders who wish to study, discuss, and evaluate issues involving the business, government, and economic environment of Colorado. The “50 for Colorado” program commences each year in January. Participation in this program increases our visibility and understanding of Colorado issues and how NCAR’s research can be communicated to inform business leaders. This group will visit UCAR/NCAR/UOP in October 2006 for the third year in a row.

**D. Publications and Communications**

The importance of communicating with the public via various media outlets and journal publications was a persistent theme among the stakeholders interviewed. Internal stakeholders mentioned that the responsibility to promote science is part of our mission statement and bringing science to the community via local media is both effective and informative. It is also important to understand the types of articles and information various media outlets desire to receive in order to increase our effectiveness and the publication of our articles and news releases. To facilitate the articles being read and enjoyed, many stakeholders thought that targeting specific economic sectors and indicating how our research impacts those sectors may be useful. Additionally, local applications of our weather and climate research would likely be appreciated by the local community and give context to UCAR/NCAR/UOP’s work.

Publications in journals and other scientific outlets are another way to describe in detail the work and accomplishments at UCAR/NCAR/UOP. Highlights of these journal publications get introduced back into the community via local media. Again, stakeholders felt that targeting specific sectors of the community brings our research and science home and creates relevance for the individual and the community. An additional, consistent theme heard from our stakeholders was the need to be able to reach all age groups and not solely focus on educating the young.

### **Scale: Medium**

- Enhance media training for scientists doing TV and radio interviews (\*)

The quality of our communication with newspapers, periodicals, radio, and TV will be improved if staff can be instructed on how to present scientific data in an effective, engaging manner. Continuation and enhancement of UCAR Communications media training efforts is suggested.

- Support a “science corner” in local papers

The Daily Camera in the past has featured articles by NCAR staff (e.g. Mickey Glantz’s column). If there are NCAR staff who would like to create such a column, then NCAR’s visibility and educational impact would increase. This column could go out to papers on a regional and/or national basis. UCAR Communications would be the logical facilitator for this recommendation.

- Hold periodic public seminars about our science

Public seminars on topics of interest (e.g. global warming, hurricanes, drought, etc.) could be held at either the Mesa Laboratory Main Seminar Room or the Center Green Auditorium on a periodic basis.<sup>14</sup>

### **Scale: High**

- Conduct a science and technology day at NCAR for the public

While “Super Science Saturday” provides excellent outreach to school-age children, a middle school through adult level science and technology day could address more sophisticated aspects of NCAR science and research.

- Host a media day that reviews our science

Regional and/or national science writers could be invited to NCAR to attend a day-long review of the state of scientific understanding on numerous issues of societal importance (e.g. global warming, hurricanes, drought, etc). UCAR Communications would be the appropriate lead on this activity as well.

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<sup>14</sup> Consideration needs to be given to the location of these talks. The ML Main Seminar Room has proven to be too small for some of these public functions but does have a significant draw due to its mountain location and unique architecture.

## V. IMPLEMENTATION OPPORTUNITY – CELEBRATING SCIENCE AT TWENTY NINTH STREET

The discussion above identifies four themes derived from stakeholder group interviews (Section 1) and presents our general recommendations (Section IV). We would now like to discuss, in more detail, the implementation opportunity, Celebrating Science at Twenty Ninth Street. This opportunity is new, unique, and timely and will greatly increase contact between the public and our institution.

On October 12, 2006, the UCAR Board of Trustees will join dignitaries from other labs and the local community for the gala opening of the Twenty Ninth Street shopping mall. This unique, open-air science education installation of exhibits, computer kiosks, and a digital docent audio tour will celebrate the important, ongoing contributions of Boulder’s scientific institutions in the local community. The “Celebrating Science” plazas are designated to recognize NCAR, as well as the National Oceanic and Atmospheric Administration (NOAA), the National Institute of Standards and Technology (NIST), the National Renewable Energy Laboratory (NREL), the Laboratory for Atmospheric and Space Physics (LASP), Ball Aerospace, the Space Science Institute (SSI), and JILA.<sup>15</sup>

Developing and sustaining education and outreach activities at the site will be both a new opportunity and a challenge. The team proposes that UCAR leverage this opportunity to “sow the seeds of science in the local community,” while also anticipating and preparing for the challenges of staffing increased requests for outreach and managing the amplification of interest that will be generated. Our institution has an opportunity to be an exemplary leader by designing outreach opportunities to extend our involvement within the community through the Twenty Ninth Street project. These efforts will be of interest to formal and informal science education specialists across the nation, from museums and science centers to other Federally Funded Research and Development Centers as well as to professional societies such as the National Science Teachers Association, AAAS, AMS, AGU, and others. What is learned and demonstrated to be of value here will be useful in many other venues and for a much broader audience.

The team suggests that UCAR designate a single new or existing staff person to be responsible for coordinating activities with the Twenty Ninth Street project and also for recruiting, training, and sustaining a more extensive “volunteer corps” from within our organization. UCAR EO already has a volunteer recruitment website,<sup>16</sup> and staff participate in everything from vetting content on websites and exhibits to speaking publicly, going out to schools, giving science demonstrations, and staffing the booth at public events. If our institution could expand staff participation from those who are loyal and repeat contributors, to all who are interested and willing, we would make a powerful impact on our local community.

The UCAR Twenty Ninth Street coordinator is needed to bring focus to this opportunity because the NCAR Science Plaza will surprise, intrigue, and motivate a new wave of UCAR “volunteer

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<sup>15</sup> <http://jilawww.colorado.edu/jilameans.html>

<sup>16</sup> [www.ucar.edu/educ\\_outreach/volunteer](http://www.ucar.edu/educ_outreach/volunteer)

science interpreters.” Brief and concise training is needed for staff, in whatever role they wish to play, so that they will understand how to describe our institution’s mission to the public, know what educational resources are available to them, and feel confident in communicating to their audience. Consistent with the goals of the Communicating Science Program, employees who wish to enhance their oral and written communication skills should be encouraged to do so through Human Resources’ course offerings. Others could assist with developing and maintaining the digital docent tour content and web-based information available on the NCAR Twenty Ninth Street computer kiosks and the UCAR Education website. There is confusion within the community about the identities and locations of the government labs represented at Twenty Ninth Street. NCAR/UCAR/UOP staff can be trained to clarify how our institution’s mission is unique from the others.

In the final analysis, the expertise with which we integrate and coordinate the cadre of internal programs and staff “volunteers” will dictate the effectiveness with which we promote UCAR/NCAR/UOP to the local community. The team also suggests that a “Briefings Packet” be developed that would help volunteers present a unified message about who we are and what we do to the community.

The UCAR Twenty Ninth Street Coordinator could also be responsible for reviewing all other requests for outreach in the local community. Currently, more requests are received than can be served, and events at Twenty Ninth Street will further stretch staff resources. Thus, enhanced internal coordination, leading to more volunteers who are equipped and proud to represent the institution at events in the community, would improve our efficiency and effectiveness in public education. New educational resources are always in development, hence coordination across programs and divisions would help ensure that the status of available modules, websites, and lesson plans is current. A higher investment in coordination could provide outreach to classrooms across Boulder County and the region. UCAR and UOP education programs have numerous resources that could be packaged in kits and loaned to staff who are trained to use them at the various grade levels they are comfortable visiting.

Events celebrating science at Twenty Ninth Street could dovetail with an annual Science and Technology Day at NCAR. Super Science Saturday is an outstanding success, drawing up to 4,000 family members with small children. Another event targeting the middle school through adult age groups could be equally successful. NIST has an exemplary program of this kind at which scientists present talks and give demonstrations of interest to all ages.

A public seminar series has often been suggested as a logical public education strategy. Two impediments stand in the way of its implementation. The first is the lack of staffing required to organize and promote the lectures. The second is the Mesa Lab’s seminar room, which is too small to contain audiences that would turn out if our leading scientists gave public talks about severe weather, global change, and societal impacts. With the potential of Twenty Ninth Street generating more curiosity about research in the local community, the Center Green meeting space should be considered as a venue, with the potential to draw several hundred people to each lecture.

Strategies must be developed to track the number of people reached in all public education venues in the community, including new ones at Twenty Ninth Street, to complement the metrics reported for the Mesa Lab-based and other education and outreach programs. Annual reports on staff participation could be expanded from NCAR employees, scientists in particular, to include all staff across UCAR and UOP.

ISSE might become engaged to help design survey instruments through which we could learn more about the local public's attitudes toward science, climate research, and NCAR. Evaluation methodologies could help us to understand what is effective in reaching different audiences and indicate how public education efforts could be improved. With full recognition of the need for proper Human Subject Review protocols recognized, Twenty Ninth Street could be an excellent place to learn more about the audiences we serve.

UCAR Communications is responsible for interactions with the media on behalf of all programs in our institution. Press releases are distributed globally, and special efforts are made to interest the local media in NCAR's scientific research and discoveries. Events at Twenty Ninth Street will require frequent interactions between the shopping mall and UCAR Communications. A stronger local identity for NCAR and the others labs could increase the interest of the Daily Camera in a "science corner" newspaper column through which research interests and discoveries are shared with the public. NCAR's high exposure to the local public will result in more requests for interviews with scientists from the media. UCAR Communications' media training programs for scientists should continue to have support.

## **VI. CONCLUSION**

The ALT-Community Service team, after gathering information from stakeholders, has arrived at these conclusions via processes and skills obtained through the Leadership Academy. As an organization that functions with employees distributed across multiple labs and diverse divisions and programs, it was a challenge to define our identity within the UCAR/NCAR/UOP context. It would be useful to develop a concise way to identify and communicate what UCAR/NCAR/UOP is so that employees are better equipped to effectively describe our institution's mission to the public and school children. It was decided that although disparate, these labs, divisions, and programs share much in common that could be of interest to the local public. Issues that deal with the well being and sustainability of the entire Earth system drive a large share of the research being done at UCAR/NCAR/UOP. For this reason, the work that we do has great societal significance. The education and outreach activities we engage in at the local level provide opportunities for stewardship that can have a high impact on policies and practices close to home. Activities focused locally can also be useful at the national and international levels.

One point was quickly apparent; UCAR/NCAR/UOP currently does an exemplary job of promotion (outreach) within the local community. These current avenues of outreach include, but are not limited to, the UCAR Office of Education and Outreach (UCAR EO) programs, UCAR Communications, and the education and outreach components of the individual divisions and programs in NCAR and UOP. This broad collection of education and outreach activities suggests the need for facilitating and maintaining an inventory to fully encompass past and current activities as well as making clear what resources are available to our staff and the public. With

more efficient coordination and encouragement, employees from all parts of UCAR/NCAR/UOP can be effective ambassadors in communicating to our neighbors in the community the importance and relevance of the work we do. These compelling reasons for additional effort regarding coordination and training may require the addition of a full time staff member.

Targeting information, particularly relevant to public and K-12 audiences, can be a very powerful approach. With this in mind, it is hoped that briefing “packets” and short training workshops could be made available to staff that would accommodate this need. The “packets” could have Powerpoint slides and hand-out materials to satisfy the desire to clearly represent the current work being done at UCAR/NCAR/UOP and explain simply how it relates to and impacts the citizenry. The workshops would allow employees to practice the use of educational resources prior to going out in the community and could expand the number of employees comfortable with, and willing, to take on this role.

We have a unique opportunity to promote NCAR to the local community as a partner in Celebrating Science at Twenty Ninth Street. The Twenty Ninth Street collaboration, with other local laboratories, should be leveraged to interest, coordinate, and prepare employees to serve as science and technology career role models and education and outreach ambassadors to the local community. The science themes dominating the exterior displays, the computer kiosk, the digital docent tour, and public events planned at Twenty Ninth Street will provide excellent vehicles for sowing the seeds of science in the local community and implementing the recommendations outlined in this report.

## **VII. APPENDIX**

In section IV we discussed the suggestions that received our highest rankings. In this Appendix, we list suggestions that received lower rankings but are worthy of inclusion in our report. As in the main body of this report, items marked by an (\*) already exist in some form and could be enhanced with additional human and funding resources. And, as noted in the Recommendations section, an attempt was made to coarsely define the level of effort required by each recommendation as small, medium, or large, with the understanding that this is just an estimation of required effort and resources to implement.

### **Internal Coordination**

#### **Scale: Low**

- A uniform set of metrics needs to be developed for UCAR/NCAR/UOP employees to report their contributions to education and outreach

At present there is no method for employees of this institution, other than those in NCAR,<sup>17</sup> to report or record their outreach contributions. The lack of a designated system available across the institution implies that there is limited support for these activities. It also misses the opportunity to record, recognize, and expand efforts already underway by individual employees.

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<sup>17</sup> <http://www.nar.ucar.edu/metrics/eo.jsp>

## Scale: Medium

- Host a yearly invitational meeting with business, political, educational leaders at the Mesa Laboratory

An annual meeting of community leaders would provide an opportunity to showcase UCAR/NCAR/UOP facilities that can be of service to the community and introduce our research. This also provides a setting to continue asking how UCAR/NCAR/UOP can better assist these groups by making science resources available.

- The UCAR Education website should also be linked to other sites that maintain regional community information about education, recreation, and science (\*)

Link exchanges help directly guide visitors to the UCAR/NCAR/UOP website for information regarding the institution. Links from other websites are also a metrics gauge by major web search engines (i.e., Google) for ranking sites. Both of these would help further promote UCAR/NCAR/UOP in the community.

- Adequate funding should be available to produce and distribute the visitor brochure entitled “NCAR – National Center for Atmospheric Research – Visitor Center” (\*)

UCAR EO designed this very important brochure which describes the visitor Mesa Lab-based tour program, exhibits, art galleries, science store, events, teacher workshops, Visualization Lab programs, cafeteria, library, weather trail, picnic areas, and adjoining hiking trails. Distributing the brochures and keeping them stocked is a time-consuming activity performed by UCAR EO staff as time permits. An external printing service should be considered for publication and distribution of these brochures in areas frequented by the local community and tourists. These include the Chamber of Commerce, hotel lobbies, community outreach activities, and the new Celebrating Science at Twenty Ninth Street.

- UCAR/NCAR/UOP employees in all positions need to be able to explain very simply who they work for and the importance of the institution’s mission to society

Answering the question: “Where do you work?” clearly, concisely, and consistently is a challenge. The broad range of work conducted here and the tripartite nature of the NCAR/UCAR/UOP institution is difficult to explain quickly and clearly to the uninitiated. Development of an “elevator speech” for staff to use would be very helpful.

- UCAR/NCAR/UOP should develop an official, unified policy that states a positive position on employee participation in education and outreach

Employee participation in education and outreach is voluntary and at best informally encouraged within the institution. A definitive statement recognizing the value of employee community service with rewards would promote staff participation.

### **Scale: High**

- Host special events for the local community (\*)

Super Science Saturday is the single most attended event hosted by UCAR/NCAR/UOP. Other events focusing on specific segments of the community (age or interest) provide an opportunity for more community members to visit the institution. Examples of these include the “Globe at Night” program; “Weather and Climate - The Two Go Together: Girl Scouts at the National Center for Atmospheric Research”; Wild Bear Saturday; and the annual Egg Drop contest.

- A highly coordinated in-reach campaign is needed to ensure that staff are aware of the institution’s mission and educational resources available to the community (\*)

A significant majority of staff members are not directly involved in education and outreach for the institution but are involved in their communities. Interactions at neighborhood picnics or children’s events provide opportunities to introduce UCAR/NCAR/UOP to the local community. Staff members need to know where to direct inquiries regarding the educational resources and be prepared to follow up with appropriate internal personnel to ensure delivery of information.

- The UCAR Education website (<http://eo.ucar.edu/>) needs to be expanded, better organized, and provided with a search tool that will assist visitors in finding resources that match their needs and interests (\*)

The UCAR Education site contains an enormous amount of information that is not categorized well or easily searched. (Searching for “events” leads to numerous seminars, reports, and internal meetings, but **not**, for example, to “Super Science Saturday.”) This lack of an appropriate search function could lead to frustration on the part of educators looking for information or the general public looking for resources.

### **Public K-12 Education and Outreach**

#### **Scale: Low**

- Invite specific science teachers to visit NCAR and participate in the tours (\*)

“Word of mouth” was mentioned by multiple stakeholders (internal and external) as the primary source of information regarding tours and events at UCAR/NCAR/UOP. Specific tours could be developed in cooperation with BVSD science educators/organizers to inform local teachers of resources available to them based on our research.

#### **Scale: Medium**

- Create a newsletter for local science coordinators and educators (\*)

A newsletter provides an easy means for communicating available resources to local science educators as well as spotlighting current research. UCAR EO created the

*Explore*<sup>18</sup> newsletter for this purpose but it needs to be made more widely known and disseminated.

### **Scale: High**

- Expansion of outreach capabilities to reach the local audience that is not visiting the Mesa Lab (\*)

Annually, UCAR EO collaborates with the Colorado Climate Center at CSU and NOAA on the Community Collaborative Snow, Hail, and Rain network Volunteer Weather Observers Workshop. This, as well as other opportunities, should be continued. Many more requests could be accommodated with additional staff time, supplies, and transportation.

- Coordinate with the CU School of Music to host recitals and/or help sponsor a concert at the Mesa Lab

Musical events have been hosted at the NCAR Mesa Lab in previous years. The most memorable were the Takacs String Quartet performances. Cooperation with CU School of Music and other local groups could be mutually beneficial. Venues could be provided by UCAR/NCAR/UOP which would present a unique environment for both performers and guests.

- Work with KRMA-Channel 6 to prepare a half hour summary documentary on the 2007 IPCC report, explaining the science behind the report and its main conclusions

The IPCC report and its findings provide a unique opportunity for public education and community service. A broadcast focusing on this one subject would heighten awareness of climate research and the participation of UCAR/NCAR/UOP in this research.

- Research the needs of the community

If the local community is to be positively impacted by our scientific research, it is imperative that relevant strategic goals and objectives be translated into specific, appropriate implementations that will successfully impact Boulder County and are scalable to broader audiences.

### **Business Community**

#### **Scale: Medium**

- Actively seek out and attend activities in which discussions with politicians can be carried out in an informal setting (\*)

Anecdotal evidence suggests that the benefits of knowing community leaders on an informal basis cannot be measured or underestimated.

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<sup>18</sup> <http://www.ucar.edu/outreach/explore/>

**Scale: High**

- Inventory current outreach activities by UCAR/NCAR/UOP and identify new opportunities with the Boulder business community

Numerous accounts of employee outreach were related during the interview process. Outreach to the Boulder business community was no exception. An example of this is the Leadership Boulder County Program. After our initial assessment, it was discovered that in the past six years, three UCAR/NCAR/UOP staff have participated in the program. Knowledge of these activities and providing active support for the employee participants could provide beneficial contacts and recognition within the business community.

**Publications and Communications****Scale: Low**

- Conduct press briefings for new science discoveries (\*)

Press briefings, interviews, and informal media contacts are excellent methods for conveying the message of our institution. More information can be given than in a press release. The press conference itself will provide an opportunity to announce unprecedented research and answer questions.

- Generate Podcasts

Podcasting is a relatively new technology developed specifically around the Apple iPod portable music and now video devices. Other manufacturers have adopted this technology. Applicable areas of interest for UCAR/NCAR/UOP include the Mesa Lab audio tour; updated schedules at the Twenty Ninth Street NCAR Science Plaza; a virtual tour of UCAR/NCAR/UOP facilities and/or research, science lessons; and regularly scheduled science broadcasts.

**Scale: Medium**

- Network with other organizations in the local community and co-sponsor events (\*)

There are countless community events that range in size from local school science clubs to the Boulder Bolder. Each of these presents an opportunity to promote the UCAR/NCAR/UOP name while furthering ties with the community. The amount of effort obviously varies tremendously based on the size and type of the event. Smaller events (local group/club meetings) would require less investment but may produce stronger bonds due to the personal interaction. One external stakeholder suggested that the contribution of meeting space for youth leadership programs or providing a speaker for a breakfast meeting would be excellent ways to help promote ties within the community.