Introduction: Today I'm very pleased to introduce Walt Schafer, Emeritus Professor in Sociology. Received his PhD out of University of Michigan but that's been a while ago. He put in his time here at Chico in the Department of Sociology for about 30 years of teaching, also served as the Chair of the department and even filled in as interim Dean. He has published several books on stress management and always emphasized physical activity and that's what I associate with Dr. Schafer. Running, whether it be track or cross country marathons, cycling, I know I've seen pictures of him rowing, always stressing physical activity. In fact when I was looking him up and I don't know if he knows this now but there is a Walt Schafer who spells his name the same way who is currently a track star at Notre Dame. And so there's no holding him down. He's still very engaged and today he's going to be talking about a project through the Rotary Club on Clean Water and Sanitation near Mt. Kilimanjaro, A Story of Cross Cultural Collaboration. So let's welcome Dr. Schafer.

Walt Schafer: Thank you, I appreciate the invitation to come back. I taught in this room for 30 years. I have many fond memories and as I was walking here as I saw past a lot of students, I realized some of these students were ten years old when I retired ten years ago and then retired fully seven years ago, so it's an honor to be back. And I'm very privileged to talk with you about really an extraordinary story of cross cultural collaboration, generosity and commitment. I'm here to talk to you not as an academic but as a citizen, really a citizen of the world as you'll see. And this has been my primary interest for the last several years, so here we go. This is Mt. Kilimanjaro taken from the courtyard of a hotel where I stayed in March. It's the take off point for climbing Mt. Kilimanjaro which I didn't do.
I'd like to begin by putting this in context, what is Rotary? How many have a father or mother in Rotary, any of you back home? A handful of you. And so you know what we're talking about.
And Rotary is, you can read it here, a volunteer organization, world wide, committed to providing humanitarian service and building goodwill.
There are 1.2 million Rotarians around the world in 34,000 clubs. Here in north central California there are 70 clubs including two in Chico. I belong to the Noon Rotary Club, we have 220 members of business professional people including President Zingg and some Vice Presidents and Deans here on the campus. And also I might point out there are two organizations that are kind of pre-rotary. One is called Rotaract and we have a chapter here in Chico, age 18 to 30. People who are not yet ready to be in Rotary but are interested in service and fellowship and if any of you are interested in exploring that I'll be happy to talk with you about it. And Interact is a high school club. Any of you had Interacts in your high school? Several of you do, and that's a high school service organization.
And I mention service, making a difference world wide and the Rotary has these six priorities in our international work. There are grants available through the Rotary Foundation. I'm going to tell you about several of those that we have received and we're continuing on from this point forward.
And if any of you're interested in more information go to rotary.org, there's a very good four minute video right on the home page that you can look at. I mean, it's not often that an academic like me is a Rotarian and it was kind of a fluke by which I was nominated to get in and but what is really fine about Rotary is that we're a collection of people with a diverse range of political views and religious views and ethnicities but we overlook our differences by focusing on our common missions both here in this community and abroad.
So I’d like to tell you about work that we have been doing through our local Rotary Club, Chico Noon Rotary Club in collaboration with a number of others. We’ve made a commitment in 2005, a small group of us, to do water projects in Africa. And we didn’t know where that would take us and we ended up through a number of steps in northern Tanzania. Tanzania is located here, see the arrow, south of Kenya just north of Malawi and next to Ruanda, Burundi, Congo. It is a stable democracy, still a third world country with lots going for it.
Where we worked is right at the top by the arrow, right near the Kenyan border a city called Moshi and by the way, this is going to be on the Web, do you all know about that, probably on Monday. And so if you can't keep up with me taking notes you can get it on the Web. In fact, I'll have my email address here at the very end and if any of you are interested I could also send you a PDF copy of all these slides, okay? So go with me, don't worry about taking a lot of detailed notes and that way we can keep moving along. So northern Tanzania, right up near the border.
My wife and I traveled to Tanzania after making telephone contact and email contact with the leaders of the Moshi Rotary Club in March 2008 for the first time. We went to explore needs and opportunities. We went out into the hinterland with Rotarians, the main guy then was a civil engineer, and to look at a serious water problem near Mt. Kilimanjaro, This is surprisingly given all the snow on the mountain but there's a shortage of water. Most of the water from the villages around Mt. Kilimanjaro come from springs high on the mountain. And they are irregular, they lose about 50% of the water in the old pipelines that are coming down to the villages. If you're far down the pipeline you may go for several days without having any water simply because there's not enough. So it's, you know, it's important in an effort like this for us not to go there with preconceived notions of what they need buy to depend on residents to identify what the needs are and to develop local solutions. And that's what we did.
And here one of the places we identified is a village next to a reservoir where people had been drinking for years out of the reservoir directly. Bad water, we had it tested, a lot of water borne diseases in this village of about 4,500 people, crocodiles, hippopotamuses and it was scary for them. And a lot of sickness. One of our Rotarian partners owns land right next to this village on the lake, he was our link.
The first time we were there we walked down to this spot and people were swimming, washing dishes, taking drinking water, washing clothes all in the same water which is a real problem.
This is a family I visited who are next to a single faucet on that pipeline coming down from the springs.
Water needs to be carried half mile, mile, three miles. It’s not easy.
And women as you probably know in many developing countries spend a great deal of their time and energy carrying water.
And we saw water being transported on bicycles a lot, these are five of the five gallon containers of water. You can image the weight, not easy.
In addition to that, wood is a problem. Fire wood specifically because water needs to be heated for cooking so tremendous environmental problems.
Since 2008, I have traveled there four times and my partners, our primary hosts and the leaders of that club, I'll show you their picture in a moment, have been to Chico twice including again this summer. We have a very strong partnership. My wife has gone three times, I'll show you her here in a little bit.
So we have gone through now four phases and we’re about to enter our fifth phase. And phase four which we were just completing involved contributions of these dollar amounts from Rotary Clubs in northern California. Some of you may be from some of these towns. And you can see that Rotarians are generous. I mean the Mt. Shasta Rotary Club, a Rotary Club of about 50 members, you know, average giving us a hundred dollars. Our club, $17,200 which included $4,200 of direct individual gifts from individual Rotarians and the other come from various ways that we collect money from our members and the community. So what happens is money is gathered by clubs, it is then matched by our district and matched again by Rotary Foundation in Evansville, Illinois and that way we leverage our local money. So we started out with $17,000, we're the moving club in this, the primary club, we started out with $17,000, we ended up with $127,000 this past year. And what we have done is projects that I'll tell you about.
This is Mt. Kilimanjaro in the green area, Kilimanjaro National Park and we have done projects at all these different locations.
We have also done projects down here at Lake Nyumba ya Mumgu.
So what we have done since 2008 is five large rainwater harvesting systems on schools, they have two rainy seasons with adequate rainfall, I mean rained once this time when we were there, we've been going right at the border between their summer and fall in March and it rained so hard in 15 minutes that it takes just a couple rains like that to fill a fifty thousand liter tank. And each of these tanks is also connected to the pipeline coming down from the mountain so that it's a storage tank during the time when it's not raining. And so this has been a great contribution to these schools which range from 200 students up to about 6 or 700.
Here are some of them. And we were very welcomed.
In addition to that we have supported and when I say supported I mean help plan as well, we have a very good collaborative relationship. I've consulted here with an expert in the civil engineering department about some of these things. One of our Rotarian partner is a water and engineer. So we have funded and planned and help fund three large rainwater harvesting systems at a rural teachers college. These are underground.
And we went over and helped build gutters in 2010 joining in with a contracting company. The guy in the dark on the far ladder is my ten year old grandson. I'll come back to him in a little bit. He went with us on this trip and what an experience he had.
So this is how these underground tanks are built.
And here is a little ceremony, the fellow on the far right is Dr. Kimaro who’s our partner Rotarian and the other two guys on the left are the contractors, the third from the left is the president of the college. And the keys to lock the meter on this tank is being transmitted from the contractors to Dr. Kimaro and onto the president of the college. And the college now owns these. It's a college of about 600 students and they had a serious water problem with periods of not having any water at all, inadequate water. So now they have these three large 65,000 liter underwater tanks that are also connected to the pipeline coming down from the mountain and they have an adequate supply of water.
So here we are visiting and celebrating the completion of this part of our project.
The largest part of our projects is this community water system at Nyumba ya Mumgu right next to that polluted lake. And what we did is the Rotary Club there hired a water engineer to plan this system where a large pump is submersed off the dam. The villagers following a meeting we had with the villagers out in open trees in 2009, they agreed to dig a trench a half a mile, hard rocky soil, half a mile from the dam up to a little knoll just above the village through which a pipe was laid from a pump up to these tanks which were built. And the right hand tank is a gravity tank, the middle tank is a treatment tank, biosand filter and a bit of chlorine, the left hand tank is a large 50,000 liter storage tank. And out of that comes another trench into the village, another about a half a mile, with water to seven outlets.
Here's that trench being dug into the village.
What happens here is that there is a meter, a lock and a meter on each of these seven outlets. Someone is hired by the elected water committee to manage that outlet. And she comes every morning for two or three hours, unlocks it and people draw water into their containers and take it home just, you know, a block or two away. And people pay a tiny amount of money for each bucket of water and that money goes into a fund that helps maintain that system. And that's all under the supervision of the town executive who is like a city manager who oversees the committee and liaison with a larger district government.
And when I went in 2009, no 2010, it was the day that the faucets were turned on for the first time at these outlets in the village. And Dr. Kimaro and I were able to turn on these faucets for the first time. It was quite a celebration and the people had clean water for the first time and they are thrilled.
This past year our main project was bringing water and sanitation to 31 schools in another village, the village where that campus is, and again Dr. Kimaro lives, his second home is right here in this village, he grew up in this village and now has moved back to help develop the area. And these schools generally had no or little water. And so what we did is financed and help plan side pipes coming out of the main trunk line coming down from the mountain to these 31 schools and then built the gravity tanks you see here. And then 12 faucets outside each latrine and 12 faucets outside each kitchen area plus water into the kitchens for the first time.
And these water bottles have a hole punched in them at the top and they contain a little bit of soap, something these kids had never done before and so it was quite a deal to see these.
And again this past March there were a couple cases where these were completed just about the time we got there.
So it was pretty thrilling to again help reduce the incidence of water borne diseases by bringing clean water and improve sanitation habits.
We are also financing water filters to families. These are family sized biosand filters through a local microfinance program that we've also helped fund. Here is the kind of biosand filter that we're using. And you poor bad water in the top and it goes down through a layer of sand and some bio material and out of it comes clean water.
Now what this is really about is building partnerships. I happen to be the lead person in our club. Our club happens to be the lead club but this doesn't happen by one individual. It happens through a series of very important and effective partnerships that we've been building over the years as we've been doing this. And you can see here what some of these partnerships are. Just today I got an email from out staff person at the Rotary Foundation about our next global grant application that I'll tell you about in a bit. We have partnerships with the contractors who are hired by the Rotary Club in Tanzania, with the Rotary Foundation and with the local communities there. We've spent time visiting the community leaders in various ways.
These are our partners. And let me just tell you briefly. Young Kimaro was South Korean originally, came to the United States right out of college to do graduate work at State University New York Binghamton in economics. She has a masters in economics, worked for the World Bank for 28 years in Washington, DC. Her husband, Sadikiel, came right out of high school to a college in Minnesota in 1963 and he was a very good student back in Tanzania who came on a Kennedy era scholarship, took a bachelors degree in economics, a masters degree in economics at Syracuse University, a PhD at State University in New York in economics and he worked for the International Monetary Fund in Washington, DC for 28 years. So you can imagine the skills that they have as partners in moving this along. It's really remarkable. They're great friends, great people. She's a Tanzanian citizen now and he moved back to Tanzania in 2005 after retiring to become economic advisor to the president of the country. And then come back to Mweka and Moshi to help develop the area where he grew up. And his second home where he spends about half his time is in the home he was in until he was 12 years old and went away to boarding school. Great friends.
We went again this March.
This is my wife Teresa who has also been a great partner through all this.
This is my former graduate student I was telling you about, who now works at the Center for Economic Development here on campus and is an IT computer guy and he went with us and was a great help in planning some new computerization there.
These are two of our local Rotarians in a work day at one of the sites.
These are some of the recipients.
And we also took from the local Rotaract club, we took five laptop computers. We just put them in our bags, in our suitcases and donated them to one of the elementary schools where we've brought water and which were we've developed some relationships over these past three and a half years. It was quite a gift.
We visited the Moshi Club.
We also helped with training of seven brand new Rotary clubs up near Mt. Kilimanjaro. This was one of those meetings and these are very high level professional people, engineers, doctors and various professions represented.
It's a brand new club and they don't have a bell, you know, ring the bell to convene the meeting, they had an empty soft drink bottle with a gavel and it worked just as well.
We met with a variety of the community leaders there.
But I want to tell you just briefly about several individuals that I met this last time. This is a woman, 45 years old, mother of five children, she lives not far from Kimaro's but a whole different standard of living. She's very poor, she is an Aids widow, lost her husband just two years ago. She has a couple cows, a bunch of chickens, she grows a little bit of corn and that's about it. A few bananas that she sells at the market on Tuesday and Thursdays and the margin between her, what she has and not having anything at all is very small. I mean they're not starving but it's a very precarious existence with very little margin for the unexpected. This was a neighbor, a 71 year old man and his wife, nine children and ten of whom are still alive who help support this couple. And again, they raise a little bit of corn, have a few animals and that's about it. We had a very nice visit in Swahili, an interpreter was with me and he asked me two very interesting questions. He asked, what percent of Americans live on farms? And I said, probably about two percent, that's my guess. And he said, how can they feed everybody? So I gave the example of rice and I told him what it's like in northern California to have an airplane, one pilot, do the seeding. Airplane comes back later and fertilizes. Another person in a tractor about as big as your house harvests. Somebody else comes in a truck to drive it to a processing plant and somebody else in a big tractor comes and digs up the soil. One of the thing's Kimaro's remarked in driving though the valley is what an incredible agricultural area and nobody out there. And what a different scene it is in Tanzania.
The second question was, how does the internet work? I, well I don't remember what I said but I just said basically electronic impulses go up somewhere and they come back down to somebody else and the messages travel on those electric impulses, how's that. And but what a mystery to somebody living out in a rural area. How does the internet work? So it was a great experience. And this fellow, the fellow on the left who is a retired teacher who was my interpreter. The fellow on the right is an occasional house painter and a very small farmer and they again have just a couple animals and a bunch of corn and that's it.
Here's another story. This fellow on the right was my interpreter out there at the lake, at Nyumba ya Mumgu three different times, in his late 30s, has three children and I've become good friends with him. He speaks very good English despite the fact he has only a primary education and he has basically no work out in this rural area. And it is a wasted talent. So I had conversations with him especially this time about how, what he could do to better his life. And what he came to is that he is now going to a computer school in Arusha about two hours away, goes home on the weekends. And my wife and I are supporting him going to computer school. He has learned, he spent six weeks on a micro computer applications course, he's now doing Microsoft Publisher and a couple more advanced programs, Photoshop. And by the end of this time, you know, six months from the time he started, he's going to be employable. And it's a good thing because he's very skilled, very bright and it's a shame to see him waste it.
Just one other kind of personal story. This is my grandson Connor, this was a year and a half ago, he was ten at the time. The fellow next to him in the white shirt was 15 and the children in Tanzania tend to be small. And I think it’s not just genetics. I think it is nutrition. And we spent an afternoon at this elementary school, we took soccer balls as gifts and they pumped up the soccer ball and Connor went out and played soccer with them and out on the field for half hour.
It was great fun. I have some videos of that and they became good friends and have had contact since.
We’re hoping to arrange, you know, Rotary also brings exchange students from around the world and we send out exchange students and we’re working on a possibility of Steven coming to Chico here in another year or two. I hope we can make that happen.
And this is Steven just this past trip, that previous trip was 2010, I met him again two, three times this time and he had grown some and is just a really bright kid.
And this is another story. We took a soccer ball to this rural school where we’re going to be bringing water and this woman who was the teacher said, can I go back to America with you? So I called my wife over and I said, what do you think? Two wives? But it didn’t happen. So she’s still there waiting for me to come back. It was a good moment.
Well there have been a number of indirect effects of what we have done in addition to the water projects. And here are just a few of them. Government engagement, the president of the country came and looked at that community water system during his most recent presidential campaign and he said, we need to do this same thing all the way from here down to the coast. Hasn't happened yet but we're hoping that it may plant a seed. But at the local level and the regional level there have been a number of positive spinoffs from the work that we're doing.
Community empowerment in a variety of ways and here are some examples. We're going to be, talk about it in a little bit, we're going to be bringing computers to a community library and to a school, another school. So there are a variety of other spinoffs as well.
And we have a new global grant that we're just waiting to hear for approval, it has to go up through our district in northern California, has to go up through the district in Tanzania and all of east Africa. It's all online now, Kimaro and I are the only ones who have access to it, we work on it together, we draft, we make modifications, we just submitted it last week to the Rotary Foundation. And the staff person there who came to Chico, came to Sacramento a year ago to our district conference and I know well now, is looking at it and they've raised some questions, we've responded. So we're doing, in fact we submitted it about three weeks ago and they've already gotten back to us and some revisions that they've requested.
So what we're doing here now is a variety of things. We're doing water storage tanks and 24 water outlets at five new schools, we're doing small household rainwater harvesting systems at somewhere between 50 and 70 households, five public toilets along major roads and now we're getting into other areas having to do with health, education and poverty alleviation, deworming medications for schools in all those 31 schools. Tree nurseries and tree planting at schools, small farms, roadsides and around Kilimanjaro where the springs are to preserve that soil and enhance rainfall, administrative and pedagogic mentoring of weak schools by stronger schools in Mwika, we're actually launching a farm extension service where higher productive farmers are going to be mentoring less productive farmers and we're establishing, we're bringing solar power to a secondary school which had no water before and no electricity and they've got water and now by the end of next summer they're going to have a total solar system at their school. And then as I mentioned we're bringing new computer lab to a community school in Mwika.
Now this last trip we were privileged to have filmmakers go with us. There's a local studio in Chico, local film producers called Interstellar Studios. Have any of you seen a video called, I mean a PBS documentary called 400 years of the telescope? I don't know if any of you've seen it. And it's been on three times on national PBS. It's done by a local Chico guy and Anita his assistant, they went with us and they're doing a full length documentary on our work. It's going to be a PBS documentary coming out here very soon.
And meanwhile, they did a ten minute video that I'd like to show right now about our work. So here we go. By the way as I'm bringing it up, let me just mention a couple things. One is that the, got to click it, one is that my wife you'll see is one of the first people interviewed. The music was recorded at that private teachers college on a Sunday when we happened to be there and put microphones up through the window. And you'll get a charge out of that. All right, here we go.

**Video:** How does providing clean water liberate an African woman? I mean, first of all you hope that it brings better health to people and I think out of just kind of common decency and humanity like to think that people drink clean water throughout the world. And so by having clean water you'd like to think there'd be less illness, certainly there'd be a little less time spent boiling water. Hopefully, much less time spent hauling water so that it open them up for some additional entrepreneurship or ability to be thinking of something other than just existence living which is really what you have out here. In 2005, Chico Rotary Club made a commitment to do water projects in Africa. I was involved in the international project committee at that time. We made contact with this region because we'd heard that they had a serious water problem in the Mt. Kilimanjaro region. That led Walt to come here four years ago. He was working with the Moshi Rotary Club and they had ideas about things they wanted to do in the community and obviously there's plenty of need here for various projects. There's educational, there's health, there's food, there's water.
The first phase of our work involved rainwater harvesting on six schools, large cisterns and gutter systems and also in phase one was a community water system in a village next to a lake where people had been drinking polluted water. The next phase involved rainwater harvesting here in the community of Moshi in a private campus, college campus that trains teachers. Phase three involved more rainwater harvesting systems here on this campus and phase four which is now in progress involves bringing clean water and sanitation to 31 primary and secondary schools here in the Mt. Kilimanjaro region. This is series of projects is partnership of the Rotary Club of Moshi Tanzania and Chico Rotary Club and 14 other Rotary Clubs in northern California. Basically the projects that we are doing in this region, we feel the Rotary is a priority for the foundation. The focus is on water and sanitation, education and basic literacy, health and economic development of the people. Now so far we have focused mostly on education but the things that hold back education are the disease, water borne diseases. We are also trying to make sure that together with availability of water that there are facilities so children can wash their hands after using toilets, they can wash their plates and utensils after eating and that in the kitchens the cooks have availability of water. We think this will go a long way toward our improving health standards industries but we are also focusing on other areas of rainwater harvesting. This is to address the emerging shortage in the availability of water.
Before we even had a problem with it and we would wash children's clothes in the river which was very, very hard for us to do that. The Rotary Club supplied us with two times 50,000 liters in each tank and we have two tanks. We really appreciate it because now we don't have any problem of water. We conserve rainwater in those big tanks and always now we have enough water for ourselves. Because we have enough water, we can wash, they can wash themselves and know when the body's clean, it's healthy. And so they don't get sick with diseases. We don't have that because they wash themselves every day in the morning to the evening they take shower and wash their clothes twice a week. But every day they have to wash their like underwear and so they put on clean clothes and so they'll be healthy. Also we have the ability to drink clean water because that was dirty water and we used the clothing to clean the water so we always have clean water so they don't get sick.

In my view, maybe it's a part of human nature, you get to certain points in your life and you realize that you can do something to help others. One of the benefits that we've seen with this project over the years is by visiting the country the follow through that we have, you know exactly what's getting done and you see that the project is actually getting completed. And in this case Rotary has accounting system, they come through, they're very independent auditors, check the projects and make sure that every check that gets written has actually gone wherever it's supposed to. And they have a rule that you cannot provide money or funding for overhead, for administrative fees. So everything has to go to labor or projects.
If you had a hundred dollars and you wanted to help out with this versus something else, this would be a good choice. If you give a hundred dollars to Chico Rotary Foundation for example, our local foundation, that money will then be matched by our district in northern California, by Rotary International in such a way that the money is leverage three and a half times and that money goes 100% for the projects intended. Rotary International audits our projects and we have full confidence that the money is wisely managed, it is a very solid system of stewardship.

I don’t know how to thank these people from Rotary Club. They’re so kind to us. And they have been so, they have been a blessing to us as you can see the tanks behind me. I thank God, I say, and I thank God too. I thank the Rotary Chico USA. I thank them much and I say, yes, there is Lord in this world because I was not believing myself that the others can get water. I was not believing that because since I was born I’ve never seen stuff like that in this area. So that’s very nice. We started to use that water and I am proving to you we are going to create much. I say thank you very much Rotary, Chico, thank you.

Because water here is scarce and very important, if someone gives you a drop in a glass of water, you appreciate it. Because in some cases you might not have water in your home or for drinking, you can really, really miss water and you can die with thirst. And so for us water means a lot. That’s why we say thank you Rotary Club.

This was sung to us at a ceremony at one of the schools where water had just arrived. So this video is online and again you can copy it now or get it with all the slides on the Web. Okay, now let me just conclude with this.
These are some of the women in the village by the lake near the village, Masai people. And I'd like to conclude by quoting a former president of Rotary International who lives here in the Bay area. I just heard him speak this weekend at a district meeting. He said, shortly after I was selected President of Rotary International, a newspaper reporter from New York called me. He said, I understand that Rotary International is an organization which works for peace, goodwill and international understanding. I said, yes peace and understanding is one of our missions. Then he said, well then what do you intend to do about the situation in the Middle East? I replied that Rotary does not have the weapons of war, tanks, rockets, planes and battleships. Rotary uses the instruments of peace, food, water, medicines, education, shelters and those basic things which improve the quality of life. You see there is more to seeking peace then the mere cessation of hostilities, that is seeking a peace which is measured by the quality of life in which people live. So that’s what we’re engaged in. And it's a privilege to be connected with Rotary to do this work.
If any of you are interested in more information about today's program or anything else, here's my email address. Thank you for the honor of being here and we have three or four minutes, I'll be happy to take questions.