

Water Resources and Policy Initiatives

Strategic Plan

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Article I. EXECUTIVE SUMMARY

California depends on water, now more than ever. With a growing population, climate uncertainty, and an aging infrastructure, the state faces problems that threaten our future. Issues surrounding water resources and policy in California cannot be ignored.

The Water Resources and Policy Initiatives (WRPI) represents the resources of all 23 campuses of the California State University (CSU) system and their joint efforts to address the water challenges faced by the State of California including, but not limited to water research, education, economic development, infrastructure, community assistance and preservation. This strategic plan looks at the current efforts of WRPI and suggests strategies and new approaches to better position the WRPI for success.

This strategic plan identifies six compelling key goals:

- Create a Culture Centered Around Water
- Increase and Take Advantage of Funding Opportunities
- Position the WRPI as a Credible Resource
- Develop Career Awareness
- Foster Communication and Increased Collaboration
- Increase Website Functionality and Utilization

In order to fully succeed, it is important that the multiple CSU campuses work together towards a shared goal of commitment towards the advancement of good science providing the foundation for a better California.

Article II. INTRODUCTION

Section 2.01 California's Water Landscape

The California State University (CSU) system is in a unique position to strongly influence California's water future. The CSU is the largest public education system of its kind in the western hemisphere encompassing 48,000 faculty and staff members and an annual student population of almost 500,000. The backdrop to CSU operations and existence is a state, that among other things, is an internationally known agricultural epicenter. According to a 2008 economic study "...California produces more than 90 percent of all U.S. organic sales for 14 different commodities, including 99 percent of the nation's organic walnuts, lemons, figs and artichokes and 100 percent of its organic almonds and dates. California is also the top producer of organic livestock and livestock products...", (www.westernfarmpress.com/management/california-leads-us-organic-agriculture-production). Furthermore, both crop production and support activities for agriculture and forestry were in the top ten sub-sectors possessing the greatest competitive advantage compared to the rest of the nation (California 2010 Economic Profile; www.labor.ca.gov/panel/pdf/2010_California_Economic_Profile.pdf). This concurrent economic reliance on and competitive advantage within the agriculture industry clearly emphasizes that water must play a central role in ensuring California's long-term vitality. In fact, without water for irrigation, agriculture in California would not exist in its current form.

In addition to the agricultural water needs are those of the environment. The long-standing delicate balance between human's water needs and those of California's ecosystem has been the subject of much debate. California has, and must continue, to invest in the science and technology required to protect non-human species, reduce reliance on the Delta, restore and protect habitat, enforce and improve upon water pollution control laws - without jeopardizing the well-being of water-based

industries. Needless to say, this is a tremendous undertaking that requires high levels of involvement from those with expertise in these areas.

Urban water use is also critical to the state. According to the California Department of Water Resources legislation was passed in 2009 that will necessitate the reduction of per capita water use by 20% by the year 2020 (<http://www.water.ca.gov/urbanwatermanagement/>). While this is a worthy goal, it will require more than simple conservation efforts to accomplish. WRPI can play a key role in providing the necessary expertise in ensuring that California is prepared to meet its 2020 goal, but future ones as well. Strategies and proposals will need to be based on sound science and have the support of numerous stakeholders.

Section 2.02 WRPI's ROLE

The CSU offers a vast pool of faculty and staff expertise; diversity; and engaged, motivated students that have been largely underutilized to date. California lawmakers, industry leaders and investors alike stand to benefit from the CSU. A portion of this disconnect is due to the lack of a historic, system wide focus by the CSU system and partially due to the fact that likely CSU partners are unaware of the great resources at their disposal. In recognition of this, the Chancellor's Office of the CSU system created the Water Resources and Policy Initiatives (WRPI) in July 2008. According to the Initiative's organizational charter, "The goal of this effort is to organize the vast and wide-ranging knowledge and expertise of the CSU's 23 campuses to concentrate on addressing California's water challenges." Chancellor Reed tasked the WRPI with providing practical leadership in helping to solve immediate and long term water management issues facing California (see Appendix A - WRPI Draft Organizational Charter).

Since its inception, WRPI has worked to unify the efforts and resources of the CSU's water experts. Being a part of the largest public university system in the nation, WRPI has the potential to transform not only the legislation surrounding water, but also to prepare tomorrow's professionals and capitalize on the existing knowledge and capabilities in this field.

Article III. WRPI VISION

The Water Resources and Policy Initiatives will help achieve a long-term, sustainable water supply for California through education, research and policy development while balancing the needs of urban, agricultural and environmental concerns.

Article IV. WRPI MISSION

The Water Resources and Policy Initiatives (WRPI) is designed to target the capabilities and resources within the twenty-three California State University campuses to provide academic preparation, applied research and policy development that addresses all aspects of water use. WRPI serves to focus synergistically with the many centers and programs of excellence within the CSU on water issues. The scope of WRPI activities include:

- Provide critical faculty and staff based expertise to support California's need for appropriate and sustainable water resources in the 21st century;
- Promote the need for education, training and professional capacity development with the water industry, governmental agencies, and the wider community to support leadership needs;
- Support the development of new and advanced water technologies and services that will help drive economic development and job creation.

Article V. WRPI Goals

Section 5.01 Overview

The Water Resources and Policy Initiatives represents the resources of all 23 campuses of the California State University system and their joint efforts to address the water challenges faced by the State of California including, but not limited to water use and research, education, economic development, community assistance and preservation. This strategic plan details the strategy and major goals WRPI will embrace to establish itself as California's leader in water.

This plan covers four broad areas designed to maximize WRPI's long-term impact:

- Create a culture centered on water
- Increase and take advantage of funding opportunities
- Position the WRPI as a credible resource
- Develop career awareness

In order to fully succeed, it is important that WRPI and the 23 member campuses cohesively advance good science and coordinated efforts to provide the foundation for a better California.

Section 5.02 Foster organic idea sharing and collaboration

Action

The WRPI has an established email user group consisting over approximately 250 CSU staff members. This email group will be utilized to encourage discussion among the faculty for idea sharing, communication of best practices, assistance with grant writing and the like. Additionally, this type of communication tool is readily available to participants and can be a valuable asset when troubleshooting obstacles common to many of the members.

Performance Measurement

Successfully idea sharing and collaboration will be evidenced by campus participation in the email group, the amount of email traffic sparked by individuals outside of WRPI's main headquarters and the relationships either created or solidified due to the increased communication among faculty.

Section 5.03 Increase network opportunities and build external awareness

Action

WRPI will be a catalyst for networking and learning opportunities for both CSU staff and the community at large by hosting workshops and water-related seminars at the university sites. Increasing the number of articles published in magazines and newsletters will also continue to build awareness of California's water needs and how WRPI seeks to address them.

Performance Measurement

Attendance levels at workshops, seminars and networking events will be a key indicator of success. Key stakeholders and decision makers will increasingly look to WRPI as the go-to expert in water issues due its demonstration of knowledge and the broad applicability of discussion topics.

Section 5.04 Create a fellowship program

Action

A faculty fellowship program will be created to allow faculty the flexibility to participate in critical research needed. The program will facilitate the completion of important work in water and create prestige for active WRPI members.

Performance Measurement

Performance will be measured by enrollment levels in the fellowship program and the number of grants received due to WRPI's internal capacity building.

Section 5.05 Secure multi-campus grants to increase funding

Action

WRPI will identify campuses with complementary expertise and resources that can jointly apply for grants by area or type of knowledge and expertise they possess. Contacts will also be made at regional and state conferences attended by the multi-campus WRPI members.

Performance Measurement

This will be measured by tracking the grant funding received by multi-campus applications and compared to previous years' multi-campus grant funding amounts. Progress has been made in this area with the submission of the Hispanic Serving Institution grant applications, Master Grants and Federal Earmarks and the 14 campuses that participated in the process.

Section 5.06 Create opportunities to obtain private funding

Action

Consulting, training and research are all areas that the WRPI has experts in and will provide these on a fee-for-service basis to create additional revenue streams. There is an increased need for information in the water industry and the WRPI holds a wealth of knowledge between its 23 campuses that can provide the necessary information at any given time. Subject matter experts will be identified for a number of areas to build system-wide knowledge database to easily pinpoint an expert in the field of focus being sought. The WRPI will market itself as the leading expert in providing scientifically based water information and testing services.

Performance Measurement

Create a knowledge database of all WRPI members, their focus areas, knowledge level and experiences. From this, an individual expert or team of experts can be pulled to provide the needed information/expertise, at any given time. This will be measured by the number of requests proposed and funding received.

Section 5.07 Encourage and increase utilization of FRESKA and external memberships

Action

WRPI will utilize FRESKA to showcase the numerous member accomplishments such as advanced degrees, publications, awards, certifications held, detailed biographies, relevant experiences and the like. FRESKA is a web-based database of the research expertise, scholarship, and creative activities of

faculty and affinity groups across the 23 campuses of the CSU. There is already a WRPI group registered on FRESKA with 68 members. Members will actively participate in other technical committees and trade associations to propagate the mission of WRPI and act as local ambassadors of the Initiative by representing water interests throughout California via a multitude of channels.

Performance Measurement

The utilization level and quality of information posted on FRESKA will be one measure of success. Others include the number of external memberships held by WRPI members and the organic growth in the Initiative's sphere of influence as a result of these activities.

Section 5.08 Create Advisory Board

Action

WRPI will formalize the creation of an Advisory Board that consists of a recognized and diverse group of leaders with the willingness to assist the CSU in reaching WRPI goals and objectives. The Advisory Board will be a key component in providing directional leadership and ensuring policy setters and decision makers are informed in water matters to ensure California legislation is based on good science and aligns itself with critical needs.

Performance Measurement

The level of diversity and expertise within the Board and involvement above and beyond the semi-annual meetings will be a prime determinant in the success of this goal.

Section 5.09 Develop and implement a system wide multi-disciplinary and coordinated water curriculum program.

Action

Curriculum programs will be developed to meet the existing and emerging water needs throughout California by preparing students for careers in water. The programs will be designed to meet the educational needs of both current and future students while also augmenting the skill sets of existing professionals through advanced degrees and certificated programs. Upon creation of the enhanced program(s) a searchable database will be made available on the WRPI website so that students and faculty alike can search by campus, major, curriculum emphasis or other factors.

Performance Measurement

Curriculum programs will align with market needs and produce engaged water professionals. Both enrollment and number of successful graduates will increase and programs will cross departmental boundaries to have the support of the broad spectrum of disciplines present in the CSU system.

Section 5.10 Increase internships and student involvement in research projects

Action

It is the goal of WRPI that students enter the workforce prepared with relevant hands-on experience that both supplements and enhances their educational preparation. WRPI will take a two-pronged approach towards equipping students in this nature: expanding current internship opportunities by creating more relationships with external agencies and marketing the opportunities via the WRPI

website, and providing graduate students the occasion to participate in research projects in order to fulfill graduate-level requirements.

Performance Measurement

The success of this goal will be measured by the enrollment numbers in both programs and the number of opportunities obtained via the WRPI website.

Section 5.11 Create a members-only section for the WRPI website

Action

To encourage use of the WRPI website and provide a “one-stop shop” for critical information, a members-only section will be created within the existing website. Available features will include a message board, a detailed contact list for each campus, internship opportunities, Notice of Funding Availabilities (NOFAs), an RSS feed providing links to pertinent water related articles and an FAQ for a number of related topics.

Performance Measurement

This goal will be measured by the number of listed items that are added to the website, and the usage of those items by CSU campuses and WRPI members.

Section 5.12 Create and formalize the WRPI management structure

WRPI will obtain approval from the Chancellor’s Office to implement an organizational structure that allows for the greatest amount of flexibility and engages faculty throughout the CSU system to ensure local spheres of influence are capitalized upon.

Article VI. SUPPLEMENT to the STRATEGIC PLAN – Contextual Analysis

Section 6.01 Overview

Throughout the strategic planning process, the team conducted a significant amount of contextual analysis to arrive at the aforementioned goals. Although what follows will not be contained within the published Strategic Plan, the reasoning behind the goals is supported by the discoveries of this process and will assist in future strategy and goal setting.

Section 6.02 Successes to Date

Although the WRPI is still a relatively new affinity group, the organization has already enjoyed a number of noteworthy early successes. In its first year of operation the WRPI organized a conference in Long Beach that was attended by 74 faculty and staff representing 20 of 23 campuses. Annual conferences have subsequently been held during the following two years, continuing to attract faculty system wide. Awareness of WRPI capabilities has proceeded through conversations with policy makers, agency personnel, and the creation of a WRPI website. Furthermore, the leadership team has personally visited with key decision makers and faculty at approximately half of the campuses to educate them about WRPI's role and learn about campus based interests and faculty research.. Articles by WRPI members have been regularly published in the popular magazine "Water Efficiency" and there is now a byline for the group in each issue. The Chancellor's Office has recognized the activities and progress of the WRPI and continues to provide critical baseline support (see Appendix B - WRPI 2008/2009 Operational Budget, Appendix C - WRPI 2009/2010 Operational Budget, and Appendix D - WRPI 2010/2011 Operational Budget). Management is motivated and looking for further ways to accomplish its mission and create long-terms water solutions for the citizens and businesses of California.

Section 6.03 Stakeholders

From Business and Manufacturing to Agriculture and Environmentalists, numerous stakeholder interests claim water resources. These interested parties may sometime have goals and strategies that conflict with those of WRPI but they can also serve as partners with diverse areas of expertise. The below table lists the major stakeholders present in California's water management, resources and conservation landscape.

Entity	Needs
Cities/Counties/Municipalities	Water quality and supply Education Technology Water resource protection
Agriculture	Water supply Water resource protection Technology advancement Education Irrigation
Power/Utilities	Technology advancement Water quality and supply Research and planning
California Department of Water Resources	Research Technology advancement
Native American Tribes	Education Water quality and supply Water resource protection
Environmental groups	Water resource protection Water quality and supply Research
Watershed groups	Water resource protection Water management Technology advancement Research
Food Industry	Water quality and supply Technology
Colleges and Universities	Education Job creation Technology advancement
Business	Water supply Technology advancement Research and planning Job creation
Manufacturing	Water supply Technology advancement Water resource protection

Figure 1- Stakeholder Needs Analysis

Section 6.04 SWOT

Strengths

Location: Water, as a finite natural resource is important everywhere, but its importance takes on new meaning in California. The combination of population density, agriculture and water scarcity makes California the ideal location for water based organizations. The greatest strength the WRPI has at its disposal is its location. The CSU is based right in the hub of agricultural, environmental, urban and economic development. The amount of agricultural reliance in the Central Valley is a catalyst for

technological development and has set California apart as a leader in water technology. This location provides the opportunity to work directly with policy setters in the private forum and entrepreneurs in the public forum to shape the water industry. No other location in the United States provides these type of resources and places this much importance on water.

Support: The WRPI has the support of the CSU Chancellor's Office. Not many efforts have such a strong foundation from which to build. The creation of WRPI by the Chancellor himself highlights how serious this issue is to our state and the level of commitment the CSU has to being a part of the innovative solutions water conservation and technology will require.

Talent: Lastly, as is clear from the "CSU Water Experts" listing WRPI staff compiled, the Initiative has a membership base of undeniably talented individuals. The majority of those involved hold advanced degrees that span across all areas of science and water technology. This level of commitment to their respective areas of expertise provides a deep well for WRPI to draw from. WRPI members have expertise in every pertinent field from storm water treatment systems, to flood control, to fishery management to irrigation and sprinkler design. This breadth of knowledge allows the WRPI to lead any water related study or project that is needed.

Weaknesses

Branding and Affinity Recognition: Some weaknesses WRPI will need to overcome include a lack of branding and strong presence outside the CSU system. There seems to be recognition within the university system of WRPI's existence, but so far not many outside entities have been made aware of the benefits that can be derived through partnering with the Initiative. The WRPI management team has taken measures to open up dialogue with both policy makers and private industry individuals, but will need to continue efforts in this area and adopt a more systematic approach to building awareness. At this time, the staffing levels supported by the annual appropriations from the Chancellor's office are only sufficient enough to maintain current activities. If WRPI is to grow and expand its influence, additional funding will need to be identified to support the required staff, administrative, and other related expenditures that accompany expansion.

Communication Infrastructure: With a system as geographically dispersed as that of the CSU, appropriate and effective communication channels are imperative. Staff throughout the system is currently disconnected from one another and the Initiative lacks the appropriate communication channels to address this disconnect. Additionally, the collaboration necessary for obtaining multi-campus funding necessitates a network of connected individuals who are sharing ideas and have an understanding of the overall capabilities and strengths of the system and faculty members at other campuses. Over 93% of survey respondents felt WRPI should help support additional research funding as one of the services it provides to the CSU (see Appendix E - WRPI 2011 Survey and Appendix F - WRPI 2011 Survey Results, question 15). The ability to attract funding increases significantly when proposals integrate resources and expertise from multiple campuses. In order to accomplish this integration, communication will need to improve.

Directional Focus: As every organization knows, one of the first steps towards success is determining what success looks like. At this point in time, WRPI has not yet defined what exactly entails successful fulfillment of its core purpose. This weakness, however, is being addressed via the development of a strategic plan. We believe that having a roadmap and performance measurements will assist WRPI with having a more focused approach in its activities.

Breadth of Participation: Lastly, participation in WRPI has been predominantly from the field of academia. Most of the participants are faculty members. Consequently, WRPI may suffer from a homogenous perspective on issues and problem-solving ideas. Other entities such as the Department of Water Resources, the State Water Resources Control, and Association of California Water Agencies and the American Ground Water Trust have been represented at WRPI conferences but this team would like to see outside agency involvement increase to ensure a balanced approach.

Opportunities

Regional Organization: WRPI possesses numerous opportunities for future success. Most notably, there is inherent support of entrepreneurial endeavors throughout the water community on both a local and statewide level. Faculty dedication to water issues seems to be very high, offering a promising outlook. While the WRPI encompasses the state of California as a whole, there lies great opportunity in forming regional groups that would have the opportunity to come together more often to gain funding and implement research, plans and ideas much at a faster pace. Additionally, focused regional groups will have better leverage in gaining local support of the Initiative. We feel there is ample room for growth and acceptance on a regional and ultimately, statewide level.

Regional focus would also benefit the WRPI conference. There is a definite increase in momentum of activity right around and after the time of the annual WRPI conference, directly related to the members physically coming together. While this is a great thing, the momentum dies off and communication struggles again until the next annual conference. Holding of periodic regional conferences to carry the momentum throughout the year, poses a huge benefit to the overall success of ideas and connections stemming from the annual conference.

Partnerships: Partnerships with state and federal agencies are a lucrative opportunity for the WRPI. These agencies offer a great deal of funding and information sharing. Not only can the agencies and the WRPI duly benefit from each other, their partnerships can also benefit the status of the water crisis so that more entities are working together. Additionally, creating partnerships with University of California and Community College systems can only increase the success of WRPI. The knowledge sharing and benefits of collaboration between multiple entities can only strengthen the support for water initiatives as a whole in the state of California.

Networking and Virtual Learning: The existing WRPI annual conference is a great success on a statewide level and has proven to be a tremendous networking opportunity. For those unable to attend the conference, we see benefit in holding the conference virtually as well as hosting webinars on the various topics discussed during the conference. This would enable additional collaboration and a feeling of cohesion among the member group in addition to expanding the attendance, whether it is physical or virtual.

Social Networking and Media: Social Networking is a high-potential communication tool in the present day and has proven to be successful for many organizations. Networking sites such as Facebook and LinkedIn would create a central depository for information sharing of best practices; grant/funding information, opportunities, lessons learned and ultimately a place to virtually network with fellow members that one would not regularly have interaction with. If Facebook or LinkedIn are not attractive sites to the organization, simply adding a social networking section or “members only” section to the existing WRPI website would be sufficient, assuming it would be continually updated.

Innovation: With the increasing speed of technological development, we believe there is an increased opportunity to attract more innovative thinkers to the industry as the membership pool grows. With more innovative thinkers comes more innovative approaches and technology advances, leading to more private investors and less reliance on government funding and all of its uncertainty.

2012 Water Bond: The right marketing and messaging of anything can make all the difference. It is evident that those within the water industry are aware of WRPI, but it seems that most others are not. A marketing effort to inform the community and stakeholders of WRPI and all that it has to offer could have a positive effect on the efforts of the initiative. With the November 2012 election just 18 months away, there will be a significant push in messaging and marketing, specifically to increase the support of the Water Bond 2012. WRPI has the chance to receive significant funds should this bond pass, so it is in their best interest to promote it to the best of their ability.

Threats

Cohesion: There is clearly a strong representation of members from the science field, yet there seems to be low diversity in members from other backgrounds that would highly benefit the success of WRPI, such as business and engineering. Within the member group, there also seems to be a lack of communication between campuses which could ultimately be the difference in being granted funding or gaining a technological edge. Cohesion between all members and campuses is critical to the success of WRPI. Reviewing our survey responses, there also seems to be a lack of engagement from several universities. Of the 23 member universities, only 12 had respondents, and of those 12, only six had more than one member respond (see Appendix F - WRPI 2011 Survey Results, question 20). Also, a review of prior year WRPI conference attendance and responses to a survey on curriculum showed that only a handful of campuses seem regularly represented in contact with WRPI. These results show that there a number of member campuses exhibiting a low level of interest in the Initiative (see Appendix G - Contacts with WRPI by Campus).

Funding: Federal and State budgets are in crisis mode and discretionary spending levels are looking especially grim for the next five years. Considering WRPI depends heavily on federal and state funds to operate, alternate modes of funding are crucial. The wants and needs for funding within WRPI continues to grow, but without a means to it, the additional research and projects could come to a halt, ultimately damaging the success of the Initiative.

Competition: WRPI is in competition with other agencies, such as the University of California, at times for limited state and federal funding. These organizations have similar goals and it seems that leveraging resources by coordinating endeavors and creating joint solutions to shared problems would be highly beneficial to all organizations involved, rather than splitting efforts and resources. There seems to be a lack of visibility of the water crisis. With all involved organizations coming together to form a strong bond, it would create a sense of urgency among stakeholders and the general population, which is greatly needed.

Article VII. SUPPLEMENT to the STRATEGIC PLAN - Supportive Action Items and Recommendations

Section 7.01 Overview

Although the Strategic Plan outlined a number of goals for the Initiative, the team has identified other actions that will also facilitate the advancement of WRPI's success. These action items are excluded from the Plan due to the fact that they are not missional, but more supportive and operational in

nature. However, they assist with providing the necessary infrastructure for accomplishing the overriding missional goals and ensuring maximum impact.

At the outset of this project, the team, in conjunction with WRPI, defined four key goals that are currently the most pressing to encourage success. While there are additional factors to address in the long run, the immediate overarching needs are as follows:

- Foster communication and increased collaboration,
- Create a culture centered on water,
- Increase and take advantage of funding opportunities,
- Position the WRPI as a credible resource, and
- Develop career awareness

During the course of the project, several other needs became apparent and, consequently, are also included in the recommended action items:

- Increase website functionality and utilization
- Modify the Vision and Mission Statements
- Improve and solidify the organizational structure

Section 7.02 Foster Communication and Increased Collaboration

As with any organization, communication and collaboration are crucial for success of the WRPI. Linking the WRPI and the 23 CSU campuses should be a top priority for facilitating growth opportunities for all parties involved. With today's advanced technology, geographic problems should be easily overcome and ideas and communication should flow freely between campuses and the WRPI. The WRPI website, message boards, Skype and email mailing lists should all be utilized to maximize the organic exchange of ideas. The WRPI is in the somewhat precarious position of asking but not being able to tell the CSU campuses that they would like their participation. Some campuses are more interested in collaboration and communication than others. While it may be impossible for the WRPI to receive consistent communication and participation with every campus, the WRPI should focus on using technology to make the process as easy as possible. That will help assure the most growth and collaboration for the WRPI.

The WRPI communication and collaboration efforts should focus on:

- Facilitating multi-campus projects
- Provide ideas for joint research projects
- Develop a WRPI organizational structure for distribution
- Promoting campus participation for water related events
- Retaining the momentum created by the WRPI annual conference

The cooperation of multiple CSU campuses for project collaboration is an important consideration for the WRPI. Larger multi-campus projects provide greater returns for campuses and the WRPI. Right now there is no formal structure or protocol in place for the organization and facilitation of these projects. The WRPI and the CSU campuses often find it difficult to organize and execute these projects. These projects are comprised of multiple parties who all have different interests and concerns. Each campus may have a different agenda and some campuses may be unsure about collaborating and sharing funds from these projects with other campuses. The WRPI must take the lead in these situations, helping to involve members who have a strong knowledge base with the issues concerning the project. The WRPI must make a clear case that all projects should have a lead campus that can be the "go to" for all major questions regarding the project. Identifying a lead campus helps to organize the resources and

maximize the return on the WRPI's assets for the project. It helps make everyone's role clearly defined, simplifying the process.

The WRPI should also attempt to provide ideas for joint research projects. The WRPI has a more global view of water and multi campus projects than individual campuses have. The WRPI also has industry partners and contacts that some individual's campuses do not. The WRPI has resources and contacts that individual campuses can use when partnering together. Joint research projects can be difficult to coordinate and execute. The WRPI has expertise in this area that they can provide to the campuses. Their ideas and suggestions can be used to create real research projects and funding with the cooperation of the individual campuses. Several campuses mentioned on their surveys that they would like help coordinating joint research projects, so this is an area of interest for some members (see [Appendix H - WRPI 2009 Post-Conference Survey Results - Appendix G - Contacts with WRPI by Campus](#))

Campus	2009 # of Conf. Attendees	2010 # of Conf. Attendees	2011 Survey Responses	Total	Curriculum Survey Response
Bakersfield	2	1	1	4	Yes
Channel Islands	1	-	1	2	No
Chico	6	7	2	15	Yes
Dominguez Hills	-	-	-	-	Yes
East Bay	4	3	-	7	Yes
Fresno	10	9	9	28	Yes
Fullerton	4	2	1	7	Yes
Humboldt	3	4	4	11	Yes
Long Beach	8	6	-	14	Yes
Los Angeles	-	2	-	2	Yes
Maritime Acad.	-	-	-	-	No
Monterey Bay	2	3	1	6	Yes
Northridge	1	-	-	1	No
Pomona	3	1	-	4	Yes
Sacramento	10	12	-	22	Yes
San Bernardino	4	3	2	9	Yes
San Diego	3	1	1	5	Yes
San Francisco	1	2	-	3	Yes
San Jose	2	1	1	4	Yes
San Luis Obispo	5	4	4	13	Yes
San Marcos	2	1	-	3	No
Sonoma	1	2	-	3	No
Stanislaus	2	4	2	8	Yes
Total	74	68	29	171	

Appendix H - WRPI 2009 Post-Conference Survey Results, open ended responses).

WRPI leadership should develop an organizational structure that can be distributed to members and featured on the WRPI website. An organizational structure that is accurate and stays current is a valuable tool for communication within the campuses. Having a current list of all contact information, expertise, and skills for the individuals of each campus will assist collaboration between the campuses. When a campus has an opportunity that requires an expertise that no one at their own university has, a contact list where someone could find the exact individuals at nearby campuses who possess the skills and knowledge needed is very valuable. The WRPI should also be sure to consider where the advisory board will fit in with this structure, which will help to define its purpose. For the WRPI advisory board to be successful, the WRPI must clearly outline its role, and communicate that role to the CSU campuses. Once the campuses are clear about the advisory boards role they will be more likely to solicit assistance. Anything that the WRPI can do to promote collaboration and communication between campuses is a positive for the campuses, the WRPI and California's water industry.

The WRPI should also make sure they are promoting campus participation for all water related events. The WRPI should use email blasts, and put announcements on their website message board to promote water related events that individual campuses are involved in. When other CSU campuses have advanced knowledge and the details of future conferences, events and meetings they will be more likely to attend. CSU campus members attending industry related events helps to promote the WRPI, facilitate teamwork and collaboration between the universities, and promote teamwork. It increases the culture around water and results in additional networking opportunities. The faculty teams that are able to attend these events should record the video, audio, or provide written summaries of the events. The recording or the written summaries could be posted on the WRPI website for those individuals that were not able to attend the meeting. Writing summaries of meeting and events also provides those who attended with a way to recap what was discussed, and highlights any issues that require follow up. While geographic barriers and lack of time may keep WRPI members from attending events, there is no reason they cannot learn through those who were able to attend.

The WRPI feels that its annual conference provides a great opportunity for collaboration, networking and idea exchange between the campuses. They also feel that if the momentum from that conference could be captured and continued throughout the rest of the year the WRPI and its members would be much more successful achieving their goals. It is clearly not feasible that all the WRPI members meet more than once a year as a whole. The cost of the conference and the logistics make it impossible. There are however a number of options that the WRPI should consider utilizing to continue the momentum of the annual conference.

One possible option to continue the annual conference momentum is having a regional conference opposite the annual conference. Having a northern and southern conference once a year could help campuses build regional relationships and further collaboration efforts. Any face-to-face time where the campuses can come together and collaborate will be positive for the WRPI. The two conferences could be centrally held in Northern and Southern California so that they could be completed in one day. This would reduce the travel time for the parties involved and greatly reduce the costs. A smaller, more intimate regional conference could also provide closely geographically located campuses with time to work together and possibly form action or regional committees. These committees would help define individual's roles in the WRPI and as water related resource for other campuses.

A second option that the WRPI should consider to continue the momentum from the annual conference is the use of Skype for quarterly “face-to-face” video chats. The use of Skype would allow campuses to view each other and communicate as if they are face-to-face without any of the time, expense or effort required to actually meet face-to-face. Skype requires little or no capital investment to utilize; each campus could be set up for under \$50. If the campuses prefer not to Skype they may also want to consider using Go to Meeting or some other form of conferencing software. This software is usually fairly inexpensive and allows advanced levels of communication beyond the simple conference call. Using this type of software allows other individuals to view the computer screen of another user while chatting or conferencing.

The WRPI’s immediate goal for communication and collaboration should be the buy in and participation of every CSU member. Looking into the future the WRPI should strive for the participation of the local communities and agencies of each university. While this may be a goal several years in the future it is an important next step for the WRPI. Each additional public or private entity the WRPI can involve builds credibility for the WRPI, provides additional marketing through visibility and word of mouth, and helps to build a culture around water.

Section 7.03 Create a Culture Centered on Water

Increasing collaboration necessitates creating a culture centered on water. Everyone involved with WRPI thus far views the organization as a great idea, but there needs to be an incentive to become truly engaged and contribute to the overall mission of the Initiative. Building awareness and a water-centered mindset within each community is a large step towards this goal.

At this time, WRPI has the unenviable task of needing to build both internal and external positioning strategies. One way to keep water issues at the forefront of public consciousness is to create networking and learning opportunities for the faculty, students, related agencies and even the general public. On a periodic basis, each campus could host classes or workshops on the latest trends in water technology, discussions on events, and seminars aimed at increasing awareness, knowledge and building on existing skill sets. It is important to adequately market these gatherings to ensure they do not end up becoming professor gatherings, but rather community-wide events and opportunities for involvement.

The aforementioned events will go a long way towards building external awareness but WRPI leadership will also want to continue with its current marketing activities in order to maximize the impact. The newsletter is an excellent tool, and hopefully, as momentum builds there will be more to report and the audience base will grow. We recommend including the newsletter on the website and looking into other opportunities to increase readership. Additionally, the current format is primarily a report-based approach but there are other functions that can be built into the newsletter. It is an opportunity to communicate the importance of water-related issues and showcase WRPI’s ability to be a key resource in finding innovative solutions.

A major marketing achievement for the Initiative was its ongoing inclusion in the popular magazine Water Efficiency. As much as possible, this inclusion should be expanded – perhaps a permanent section for WRPI to discuss recent accomplishments and updates alongside an editorial piece. At this time, there are regular articles included in the bi-monthly publication and WRPI is listed as part of the authors’ background.

Another avenue for increasing involvement and building a water-centered culture is a strong internal positioning strategy. At this time, the universities are members of WRPI simply by default. Faculty and

staff, however, are not technically considered “members”. It would be a great opportunity to build some prestige around the Initiative by putting a membership plan in place. A nominal membership price would not be a material deterrent to involvement and would create a sense of value inherent in WRPI membership and involvement. This would also help to defray the administrative costs of the organization by providing an additional, albeit small, revenue stream. Some of the membership benefits could include access to the “members only” section of the website (discussed in detail under “**Error! eference source not found.**”). Additionally, it creates an opportunity for WRPI leadership to remind members of the numerous support activities provided by management such as assistance with research, identifying and obtaining funding, providing contact with others in the industry, and facilitation of multi-campus efforts. This is also something participants can list on their resumes along with other professional memberships.

Other schools have been successful in implementing fellowship programs. These arrangements involve a “buy-out” of staff time where the sponsoring agency purchases a portion of a faculty member’s time to allow that professor to focus more on research and projects that interest them and also align with the agency’s mission. This creates a pool of qualified staff readily available to work on grant proposals and execution thereof, and may also enhance the likelihood of WRPI being awarded more funds since it can show it has capacity. This sort of arrangement also involves a level of prestige and another “resume booster” for others to aspire towards and emulate.

Section 7.04 Increase and Take Advantage of Funding Opportunities

If WRPI is going to successfully spearhead addressing California’s water challenges, it must identify ways to expand its financial capacity and flexibility. Additional funds can be obtained through research grants, commercialization of expertise and services and increased appropriations requests from the Chancellor’s office. To date, all of WRPI’s financial support has come through the CSU but the team proposes diversifying the funding streams to simultaneously minimize risk and maximize opportunity.

With the need for more water related research and information, comes the need for more funding. There is great need for more grant funding, in addition to more state and federal funding, as well as funding from private sources. While funding is received by the WRPI, it is limited and not sufficient to meet the needs of the expanding initiative. 93% of our survey respondents listed “Help support additional research funding” as a service the CSU should be providing through the WRPI (see Appendix F - WRPI 2011 Survey Results). It is essential for the success of the WRPI to be proactive in identifying and securing multiple funding opportunities.

The main source of current funding comes from state or federal governments and current economic conditions cast a shadow of uncertainty as to the viability of those future funds. Thus leading us to the conclusion that not only is there a need to apply for significantly more grants and additional funding, but also seek out community partners as funding sources and better utilize the other CSU campuses to share resources and jointly apply for grants to be used between multiple campuses. The CSU WRPI organizational charter draft, made mention of working closely with federal, state and other agencies to identify areas of common interest and grant opportunities linking programs or projects to the CSU (see Appendix A - WRPI Draft Organizational Charter). This type of cooperation between WRPI and government agencies is highly advisable

Currently, WRPI has requested more funding than ever from the Chancellor’s office. While this should help to bring in more funding, there continues to be a need for more throughout the year for additional

and special projects. The only way to fully satisfy the WRPI budget funding needs is to have numerous sources.

Multi-campus grant application seems to be a lucrative choice in securing additional funding that a single campus or faculty member may not otherwise receive on their own. There is a clear divide between different campuses and the area or type of knowledge and expertise they possess. At the same time, there is also a lot of overlap in shared knowledge and information. While single campus funding is an option and currently the most widely used approach for grant funding, multi-campus funding would offer an increased opportunity to apply for and receive funding, not otherwise attainable.

The WRPI directors would be the facilitators in linking the applicants together and assisting in any application needs. The multi-campus grant application would not only promote collaboration between campuses, but also showcase the volume of knowledge the CSU system holds and in turn bring more funding as well as expertise requests from outside agencies. Additionally, if one school is consistently obtaining funding from a specific grant source, adding more campuses could potentially increase the amount of funding given the increased knowledge base. Shared knowledge brings more opportunity. This practice would also promote information sharing between campuses to identify which schools are using which grants and agencies. Once a campus or campuses have been successful in obtaining a grant, it is imperative to consistently renew them to continue that source of funding as a mainstay in the WRPI.

Consulting, training and research are all areas that the WRPI has experts in and could provide these functions at a cost to pull in additional funding. There is an increased need for information in the water industry and the WRPI holds a wealth of knowledge between its 23 campuses that could provide the necessary information at any given time. Identifying experts in specific focuses and keeping an updated system-wide knowledge database would be highly beneficial to the WRPI in that it could easily pinpoint an expert in the field of focus being sought. While there is constantly a need for information, the WRPI could market itself as the leading source for whatever that information need may be and increase requests coming in to beef up their funding.

The above mentioned knowledge database could also be used to form a team of experts to be the WRPI's advocate on legislation affecting the initiative and other water-related issues on the legislative table. Thus there will always be a team in place that can quickly respond to questions from policy makers and regulators.

Utilization of the Department of Water Resources Integrated Water Resources Information System (IWRIS) is recommended to discover additional funding opportunities for the WRPI. A statewide needs analysis should be conducted to identify where WRPI can provide specialized services. COAST has an agreement with the Chancellor to obtain a match for all tithing made to the program. We suggest mirroring this agreement with the Chancellor to further enhance funding opportunities. Currently, the WRPI is proposing a modified approach here. They hope to provide 20 to 25, quarter time releases for faculty to work on WRPI proposals and activities. The hope is to require an equivalent match of release time from any campus that accepts WRPI funds, thus they will be able to leverage, perhaps \$100,000 of release time into \$200,000. The advantage to the campus is they know the match will stay on their campus. Tithing funds may go elsewhere (off-campus) in the other model.

The National Science Foundation provides approximately 20% of federal support to academic institutions for basic research in the areas of science and engineering. With their 2011 budget request at \$7.424 Billion and 2010 appropriations of \$6.926 Billion, NSF Grants should be a high priority for

funding opportunities. While the CSU is not a land grant system and may struggle to gain success in obtaining these grants, there is also suggestion for a dual track of seeking to embed the CSU/WRPI in state agency plans and funding decisions.

Finally, the November 2012 election is only 18 months away and on the ballot will be the Water Bond, which would significantly increase funding for WRPI and water-related issues. If the bond is approved, it will allow for \$11.1 Billion for funding of the state's water system.

Section 7.05 Position the WRPI as a Credible Resource

One of the key success factors for WRPI will be whether the organization can effectively educate partners about the depth of knowledge and expertise within the Initiative's membership. Potential funding sources and the general public need to feel that the WRPI offers solutions no other entity can provide. This is in fact the case, but that sense of credibility needs to be further built up through demonstrations of superior knowledge and performance. Although WRPI has so far done a great job at starting to position their selves, there is still much more work to be done. They have started building report with local, state, and federal agencies and the relationship needs to continue to grow. Clearly, superior performance first requires an opportunity to perform, so this section focuses on steps WRPI leadership can take to begin the transformation of the Initiative as a means to that end.

Perhaps this recommendation, above all others, requires the highest level of engagement from WRPI membership. Only through continued demonstrations and reminders of the WRPI skill base will funding partners begin to view the Initiative as the "go-to" organization for all water-related issues. Some steps membership can take include continued involvement in technical committees and trade associations. The opportunity for faculty to share WRPI successes and information about its impressive knowledge base will further solidify the Initiative's reputation in the community's eyes. Also, certification and testing services should be expanded as much as is reasonably possible. Not only does this increase revenue for WRPI, but it also sets the organization apart from others and shows that it is capable of providing specialized services. This could go so far as to provide training to businesses and creating "Train the Trainer" type programs for companies to implement WRPI's best practices. Requiring an exam at the end of the courses would also help to position the Initiative's work as founded in what many refer to as "good science".

FRESCA will once again be a valuable resource in this endeavor as it allows for the showcasing of member accomplishments such as advanced degrees, publications, awards, certifications held, detailed biographies, relevant experiences and the like. Efforts on inventorying the CSU assets and resources should continue as the results can provide users with the ability to maximize resources to expand and improve on services provided.

Lastly, the yet-to-be-formed advisory board will be instrumental in educating policy setters and legislative decision makers about the importance of WRPI's work and its credentials. Furthermore, the composition of this board will speak volumes to the general public – if the leadership team is successful in recruiting members such as Lieutenant Governor Newsome and others of that caliber, it will send a clear message regarding the level of importance assigned to the Initiative. Additionally, the advisory board is an opportunity to further augment the WRPI skill set with experience from financial and political experts.

Section 7.06 Develop Career Awareness

WRPI should play a leading role in preparing the best and brightest students for careers in water and while there are numerous water-related courses and majors offered throughout the CSU system, there seems to be a lack of cohesion among the campuses. There is limited general awareness of the great impact that water will have on our state in the near and distant future. Promoting careers in the water industry can be beneficial in recruiting students who may not otherwise express an interest in the water field. Additionally, with the growing water crisis and demand for knowledge in this area, the need for current and future students to focus their interests in water has become more important than ever before. Grooming water-knowledgeable students will also promote long-term sustainability efforts as these students can fill positions in agencies such as the California Department of Water Resources to ensure that WRPI's objectives are represented and increase opportunities for leveraging resources.

Developing career awareness in water will facilitate a long-term vested interest in water issues by creating the next generation workforce and providing both public and private sectors with the knowledge required to make informed and responsible decisions. The Arizona Water Institute (AWI) provided a compelling a model of integration that also emphasized the need for career awareness; one of the focus areas outlined in AWI's business plan was that of "Education, Training and Professional Capacity Building" (AWI plan, page 14). Through conversations with WRPI staff and identification of existing strengths in the CSU system, we have developed several recommendations designed to promote careers in water and increase awareness of the variety of career paths available to students. These recommendations do not preclude the existing workforce; they are also tools that can create ongoing educational opportunities for professionals.

The first step in this process involves determining whether or not the CSU system is preparing students for a successful future in water. A number of steps can be taken to make this determination, but perhaps the ideal action would be an audit of vacant positions in the public and private sectors (local, regional, and statewide). The audit results will need to be compared to the current curriculum offered in the CSU educational system. Several questions that will need to be asked include:

- Do our courses prepare students with the skills, knowledge and abilities to meet the requirements of today's workforce?
- Will students be able to enter a field that offers growth and exciting, new challenges?
- Given the students' preparation and newly developed skill sets, will they be able to acquire jobs here in California that will provide with them sufficient earning power?

The answers to these questions (and many more) are necessary to put plans in place to retain the workforce that the CSU system has so deeply invested in. Self sufficiency and earning power are paramount to a sustainable workforce in the Central Valley and throughout California. If students are unable to earn adequate incomes, they will relocate to areas offering more financial opportunity. This has been a key issue in Valley economic development in recent years and speaks to the need of close alignment between curriculum and current to future market requirements. Some tools that may be helpful in this endeavor are market studies conducted by other universities, the annual Occupational Outlook Handbook published by the Bureau of Labor Statistics and information available from workforce development agencies throughout the State (i.e. similar to Fresno's Workforce Investment Board).

Further discussions will need to center around finding the right product mix. Just as manufacturing companies determine what products should be offered and in what quantities, WRPI will need to identify CSU's ideal product mix in terms of majors, minors, and certificate programs. WRPI has already inventoried the campuses to learn what courses and programs are offered. The next step of this process is to start the dialogue among faculty and staff to determine what the action plan should be.

- Who are the specialists in each area?
- Do any universities lend themselves to certain curriculum because of their geographic location?
- Do some universities have a higher dropout rate within their degree programs?
- Should each university strive to adopt a uniform program that matches all others across the system? Or, should each university aim to create a niche within the water industry and seek to become the go-to for that particular subject matter?
- How are these efforts impacted by the CSU's budget position?

This is most certainly a discussion that needs to take place outside of WRPI management offices to encourage the input of key stakeholders. Based on results from the strategic survey, faculty shows an overwhelming support for multi-disciplinary programs; 74% of respondents feel this is the best approach to preparing students for careers in water (question 6). Unfortunately, only 39% of respondents feel their university has actually implemented this approach (question 7). Even more dismaying is that in a close second at 32% of the responses, are those who feel their university does not even have an actual water program in place (also question 7). This is not to say that creating water-based programs is a lost battle; over 82% of respondents feel their campus currently has the commitment and desire required to create a successful culture in water careers/degrees (question 18). We hypothesize that the lack of implementation to date is not due to an absence of interest or commitment, but rather the lack of a focused and integrated approach to this dilemma. WRPI aims to address this issue in order to equip the current and future workforces and to set itself apart as a strategic resource for numerous industries throughout California. (see Appendix F - WRPI 2011 Survey Results for strategic survey results referenced).

Internships have the potential to play a pivotal role in creating the necessary linkages between academia and the workforce. There needs to be a constant feedback loop between industry and university to ensure adequate preparation for students' future professional roles. Incorporating that feedback while students are still attending school allows for faster implementation of necessary adaptation to teaching approaches or curriculum and also assists the labor market in identifying high potential individuals before they have even graduated. Furthermore, it allows students to fine-tune their education to fit the strengths they can only identify via firsthand "on the job" experience. Lastly, faculty can be more attune to the ever-changing external environment and form long-term partnerships to provide more opportunities for students to augment their classroom experiences. With such a long list of benefits that can be derived from such a program, we recommend the creation of a centralized internship program. Much like the Council on Ocean Affairs, Science and Technology (COAST) does, we envision positioning WRPI as a marketing tool for these opportunities via the expanded website. It may work better to have one coordinator at each campus, rather than one person or group of staff coordinating for the entire system but the approach can be fine-tuned based on staff availability and the logistical requirements of the program. The benefit to both employers and students would need to be

communicated as part of WRPI's overall marketing and communication plan and should be one of the priorities in the revamping of the website.

An offshoot of the internship program proposal is to increase the WRPI and water industry presence at campus job fairs. While we recognize it is not logistically possible for WRPI management to physically attend each fair and solicit companies to participate, we do see this as an opportunity to engage faculty on each campus while also increasing job opportunities. WRPI may want to survey faculty in order to identify those that would be interested in acting as the lead for their respective campus to bring in more companies and agencies from water-related industries. This will increase the job and internship opportunities for students and continue to create the linkages from the classroom to the office. Furthermore, it may also spark interest in those students not currently enrolled in water programs. If students are made aware of the job prospects and have the opportunity to speak one on one with company representatives, it may increase enrollment in related courses.

Thus far, we have dedicated much of the career awareness discussion to tomorrow's workforce. That is not to imply today's professionals are to be excluded from the equation. Preparing and better equipping today's labor force allows for instant payoff from efforts and also builds a strong pool of professional mentors for future graduates. We recommend developing a number of certificate programs that will allow these full time employees to build upon their existing education and also add to their resumes to enable career growth and salary progression. Perhaps the best tool for this is an online program – this will allow experts from multiple universities to be involved since geographic location would not be a deterrent. Furthermore, the pool of potential students multiplies exponentially once geographic obstacles are removed. Also, it will allow these working professionals to remain active at work while simultaneously enhancing their educational backgrounds.

Lastly, let us focus on one of the American cornerstones and what indisputably promotes ongoing economic growth: entrepreneurship. As WRPI's sphere of influence and accessible expertise grows, it may want to consider providing consulting assistance to both existing and start up businesses. For a nominal fee, experts within WRPI could assist with feasibility studies, testing of new technology, and other areas of specialization. Just as the International Center for Water Technology (ICWT) recognized this unmet need and sought to address in the San Joaquin Valley, WRPI can strive to address in a statewide manner. California is an international leader in industries that rely on water technology and the companies that serve them. As capacity within the Initiative grows, it would be wise to build on WRPI's reputation as an industry expert and capture a part of this seemingly limitless market. Furthermore, proceeds from consulting work could be directed back into the less profitable activities that are core to WRPI's mission but sometimes lack adequate funding.

Section 7.07 Increase Website Functionality and Utilization

Although the WRPI website was not initially one of the key goals identified, the need for action items in this area became evident over the duration of the project. As such, the team has dedicated a section to recommendations for the website in order to fully utilize its capabilities.

The WRPI website currently provides a strong starting point for people who want basic knowledge about the WRPI, its goals and contact information. Expanding the website to include a "member only" section could provide a number of additional resources for CSU campuses.

The WRPI website should include:

- A Frequently Asked Questions section for member information
- A RSS feed that updates with pertinent water related articles

- A list of faculty members research and publication articles

The FAQ utilized could outline answer to a number of common questions that campuses have. They could provide insight for a number of topics like filling out grant applications, soliciting internship and consulting opportunities from private businesses, and tips on published writing. These FAQ's could act as a wiki, with the ability to be updated by any WRPI member with new knowledge. This would allow these FAQ documents to be updated in real time, reflecting the current concerns of the CSU campuses. A RSS feed could provide links to water related articles as they are published. The WRPI website could easily set up an RSS feed for articles with key words that are pertinent to water and the WRPI's interest. This would help to make the WRPI website a "one stop" website where members could go to learn about new water issues and technology advances. This would help facilitate learning and should teach the CSU campuses a few useful things. The water related articles could then be placed in a database, where they could be queried by key word, subject or author.

The faculty websites of many of the WRPI's members provide complete and current lists of research and publications that members have completed. Those lists should be combined from the individual websites to the WRPI website. WRPI leadership feels that once some faculty see the published works of other members showcased, they will be very likely to offer their own work to the WRPI. These articles could also be placed in a database where they could be queried. The WRPI website could become a strong resource for water related articles and information. Featuring these articles on the WRPI website showcases the talent of the WRPI members, helps the WRPI gain credibility and provides resources for anyone interested in the water industry.

The WRPI has a member email group that is currently underutilized. This email group could be used to collaborate between campuses without prompting from the leaders of WRPI. This type of organic growth could provide knowledge and collaboration, letting members of different campuses know about current events and news from other campuses. It is important that all campuses have current contact information available for the WRPI. This is obviously a crucial criterion for strong communication. WRPI should stress to their administration that all campuses should be solicited often to make sure that contact information for all campuses stays current and accurate.

The WRPI website should also contain a section that showcases some of the success stories, best practices, and lessons learned that members can share. This section could provide members with ideas and tips that have worked for others in their markets. This section of the website would provide a knowledge resource for all WRPI members and yet another place for collaboration between the campuses. A wiki could be utilized so that it could be easily updated by any WRPI members. Once members begin sharing their successes and providing others with tips the sharing would likely snowball as other individuals will want their chance to discuss their successes.

In addition to the website improvements the WRPI should consider some basic social networking. The creation of a Facebook page and Twitter account would provide the WRPI with additional marketing for little or no cost. Social networking could provide WRPI members with another place where communication can take place and ideas can be exchanged. Most individuals are probably somewhat comfortable with the software as many people currently utilize some sort of social networking in their personal lives. Marketing through social networking is extremely inexpensive and provides an avenue for additional collaboration between WRPI members.

Section 7.08 Modify the Vision and Mission Statements

The team has only a small number of recommendations regarding the vision and mission statements. First and foremost, these are guiding statements for organizational action, and as such should be concise so that participants in WRPI can easily remember the leading principles. Additionally, when faculty is asked what WRPI's purpose is, communicating it is more easily done via concise statements that can quickly convey the message without the risk of losing the audience's attention. This would require the mission statement to be shortened quite a bit. In addition to assisting with recollection and conveying purpose, another reason for making the mission more succinct is to assist with branding efforts and external communications. It would be difficult to include the existing mission on WRPI letterhead or other materials. Lastly, the existing vision and mission statements closely mirror that of the Arizona Water Institute (AWI). While AWI provided a strong example of addressing water issues through the educational system, it is the team's belief that WRPI is shortchanging itself by not creating statements that are uniquely reflective of its members, their strengths and the issues specific to California.

Based on input from members and the advisory board, the current vision and mission statements should be reviewed to determine if the current status of the WRPI is being represented thoroughly. While the current Vision and Mission statements are representative of the WRPI goals, several survey respondents provided input that may help to define the organization's purpose to better encompass the interests of all stakeholders (see Appendix E - WRPI 2011 Survey and Appendix F - WRPI 2011 Survey Results). Portions of the member input have been included under each applicable section below.

Revamping of Vision

Some recommendations from the survey responses include (some have been edited to correct minor spelling and/ or grammatical errors):

- Scope of "urban, agricultural and environmental" is too narrow. Need to also consider rural, tribal, environmental, social and economic concerns.
- Add an education component focused on preparing the next generation of water professionals.
- Focus less on "water supply" and more on water managers/users, education, research and help in developing policies.
- Include a statement about the needs of non-human organisms.
- The term "water supply" is too narrow.
- Focus on what CSU can bring to the table that other organizations cannot.

Revamping of Mission

Some recommendations from the survey responses include (some have been edited to correct minor spelling and/ or grammatical errors):

- Establish the CSU as the go-to entity for water research and information in the state of California.
- Promote social awareness of water issues.
- Research and policy recommendations will take into account all human and non-human living beings.
- Develop educational and career opportunities.
- Leverage geographical and interdisciplinary expertise of CSU personnel.
- Address pragmatic issues in water resources and policy to ensure a sustainable future.
- Bring together faculty in the CSU system.

Section 7.09 Improve and Solidify the Organizational Structure

The organizational structure, although it lends itself to a certain amount of flexibility, needs more definition and dispersion. Currently, the success of WRPI rests squarely on the shoulders of the Executive and Assistant Directors. This is an unnecessary concentration of duty that detracts from their ability to focus on the higher level decisions and directional efforts, while discouraging other individuals from embracing an active role in ensuring WRPI's success. Faculty is able to rely on the leaders to set the tone and do all the "leg work" per se. This was not the envisioned role of the Initiative or its Directors. Via the Strategic Plan, the team proposed that a structure be formalized and adopted. One proposed manner of organization involves the creation of regional groups in order to create closer collaboration and improve communication while also soliciting more statewide participation. The proposed structure below is one that is designed to maintain flexibility and the roles defined as the Directors and Advisory Board deem most beneficial.

Additionally, this organizational structure will bring clarity to the roles the leadership team plays, disperse responsibility to allow for a broader range of insight, encourage increased participation among faculty, and maximize the untapped networks faculty have developed within their respective communities. It should be noted that although the revised structure does add layers within the Initiative, the team does not see this as creating bureaucracy. The new roles are not intended to be levels of authorization or approval, but rather an inclusive approach to growing WRPI and spreading the missionary movement of the Initiative among a variety of players.

The following figure represents one proposal set forth by the team but WRPI may wish to further tailor it to meet and accommodate local, regional, and statewide strengths and weaknesses.

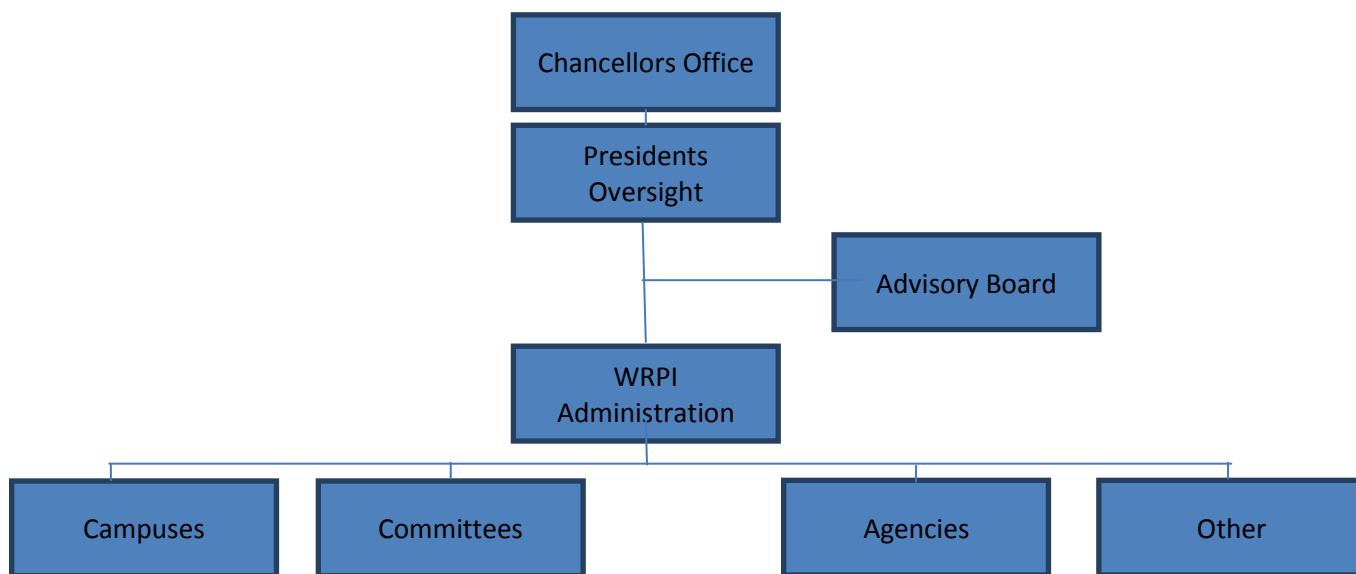


Figure 2 - Proposed Organizational Structure

Section 7.10 Long Term Performance Measurements

As WRPI grows and gains more momentum, management will want to ensure funds and efforts are being directed towards activities that facilitate the accomplishment of the Initiative's mission and core goals. The team has prepared a list of qualitative and quantitative items that should be tracked to measure impact and success. The specific numbers that define successful implementation is something that management will want to discuss and set based on their experiences, past performance, and the input of the Advisory Board. Additionally, as activities increase in both quantity and scope, management may wish to update the list by adding or removing areas to keep the performance monitoring current.

Qualitative Performance Measures for Consideration

Level of Advisory Board involvement beyond the semi-annual meetings
Diversity of expertise in the Advisory Board
Support generated for the 2012 Water Bond due to WRPI efforts
Closer alignment between curriculum and market demands
Thoughtful and strategic curriculum organization throughout the CSU that maximize opportunities and unique advantages
Policy setters are aware of WRPI and the water crisis in California
Continued and expanded support from the Chancellor's Office
Multiple and diverse group of stakeholders are engaged in WRPI activities (conference, funding pursuits, partnerships, etc.)
Faculty promotion consideration values involvement in WRPI

Figure 3 - Qualitative Performance Measures

Quantitative Performance Measures for Consideration

Conference turnout (WRPI members)
Conference turnout (outside entities)
Workshop and training session turnout (if implemented)
Multi-campus grants submitted (effort originated from the "top")
Multi-campus grants submitted (effort originated "organically")
Multi-campus grants awarded (effort originated from the "top")
Multi-campus grants awarded (effort originated "organically")
Consulting and testing services are successfully commercialized
Membership (if implemented)
Fellowship program participation
Size of the internship program
Enrollment in water related majors
User activity on the WRPI website
Increased readership of the WRPI Newsletter
Members take full advantage of FRESKA capabilities
Leverage ratio of the CSU Chancellor's Office see funding

Figure 4 - Quantitative Performance Measures

Article VIII. NEXT STEPS

This plan includes a number of recommendations covering a period of three to five years, but certain items will need to be implemented within the next six months in order to set the stage for future progress. First and foremost is the need to improve communication among the campuses. We believe a combination of enhancing the WRPI website and investing available resources in expediting the FRESKA

database development will have the greatest short-term impact. Also, these actions are well-timed with the annual conference that was just recently held. Using the website for post-conference organization and communication may be a great catalyst for renewed interest in the site.

WRPI leadership will also want to continue meeting with the campuses to encourage the participation of key contacts within the CSU and building the personal connections that are so valuable.

Furthermore, although the Advisory Board formation process is already underway and management has given it high priority, we want to reiterate the enormous benefits that can be derived from expediting the formation. That is not to encourage settling for less than stellar members, but rather increase recruiting efforts for the ideal candidates already identified by the leadership team. In conjunction with the creation of the Advisory Board, or shortly thereafter, we recommend implementing a new organizational structure that is better suited to the needs of WRPI.

In terms of career awareness progress, the team encourages moving forward with an audit of California job markets as this has the potential to be a time-consuming step. If possible, WRPI should consider evaluating its internship programs at this time to evaluate the utilization levels and benefits derived from participation - for both the students and the organizations they work with.

WRPI has already expressed its intention to request an increase in next fiscal year's operating budget appropriation. This is exactly on point with their expansion efforts and we encourage taking this even further and begin identifying concrete ways to support passage of the 2012 Water Bond to secure vastly more financial resources down the road.

Lastly, continue to capitalize on the post-conference communication and strive to maintain the momentum generated by this networking opportunity.

Article IX. CONCLUSION

The importance of water, our most valuable natural resource, cannot be overstated. It is the lifeblood for California and the Central Valley's agricultural industry. Water policy, technology and education will only continue to gain importance as water becomes less plentiful and the population continues to increase.

The Water Resources and Policy Initiative is currently a successful organization, organizing and guiding the CSU campuses with their water policies and culture. By continuing their vision, to achieve a long-term sustainable water supply for California through education, research and policy development while balancing the needs of urban, agricultural and environmental concerns, the WRPI can assure itself that it will be a leader in the water industry for years to come.

The WRPI must continue striving towards their mission, to target the capabilities and resources within the twenty-three California State University campuses to provide academic preparation, applied research and policy development that address all aspects of water use.

The development and expansion of the WRPI moving forward will depend on the focus, organization, and execution of WRPI management. In the next 3-5 years the WRPI should focus on gaining additional influence and resources by executing the objectives outlined in this plan. By continuing to create a culture around water, increasing career awareness, increasing funding opportunities, and positioning