



# Water Center of Excellence

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## Quarterly Progress Report

Reporting Period: July 1st to September 30th, 2015

October 29, 2015

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## Project Purpose

The Nevada Center of Excellence (NvCOE) in Water aims to make Nevada a global water innovation hub and portal for investment by leveraging the state's leadership and expertise in water. The NvCOE business model involves a joint venture between academic, public, and private sectors. Each partner brings critical resources to create a mechanism to accelerate the economic cycle through applied research. These resources will lead to technology commercialization that will bring high-value, shared services to a broad range of public and private sector clients as well as an advanced workforce with core technology skills and domain expertise to meet employers' needs and attract technology-focused companies to Nevada. At the same time the NvCOE's efforts will enhance Nevada System of Higher Education's goal of strengthening public private partnerships to generate additional sources of nonfederal grants and contracts. By combining the domain expertise of the NSHE institutions, SNWA, and the LVGEA, the NvCOE will:

- Act as a portal for attracting, partnering with, and servicing national and international business in the water domain.
- Deliver high-value, shared services to public and private sector clients while building job skills and assisting DETR to grow Nevada's future workforce.
- Assist with commercializing and distributing the collective domain expertise in water sciences, technology, and management areas with NSHE & Water Utility Partners (SNWA, TMWA, etc).
- Provide additional sources of grants and contracts to NSHE faculty members

## Section I: Proposal Progress

During the reporting quarter, the NvCOE has made significant progress toward meeting proposed metrics. Major accomplishments for the current reporting period include:

- 1. Major Accomplishment 1: Trade Mission to Ireland and United Kingdom** - NvCOE organized the following three significant events as part of the Governor's trade mission to Europe in July 2015.
  - IBM Smart Water (Dublin) – this meeting between NvCOE and the IBM Smart Water R&D team focused on potential opportunities to collaborate on the commercialization of an integrated energy and water quality management optimization software. This meeting has resulted in a proposal from IBM to the NvCOE. The terms of this proposal are currently under review with NvCOE stakeholders.
  - British Water (London) – this meeting hosted by British Water (the leading drinking water trade association in the UK) brought together leadership from two water technology cluster initiatives and a number of technology companies interested in opportunities to collaborate with NvCOE (see more details in sections 2.2 and 2.5).
  - Nevada's Gateway to the U.S. Water Market (London) – this presentation hosted by the Nevada delegation at the London Arch Marriot attracted 17 water technology companies, 5 investor companies, and 5 utilities. The two hour presentation was followed by an hour of Q&A and a networking lunch with companies remaining in the hall until 4pm networking.
- 2. Major Accomplishment 2: Round 1 Commercialization Fund Request for Proposals** – based on the interest demonstrated on the trade mission, GOED and NvCOE distributed a request for information to those participants from events in the UK inviting them to propose collaborations including requests for funding from the NvCOE's commercialization fund. Responses to the RFI were received from 13 companies interested in establishing business activities in Nevada. We are currently in active negotiations with 4 of these companies.

**3. Major Accomplishment 3: SWITCH Effluent Study** – the NVCOE was contracted by SWITCH to conduct a preliminary study on the quality of effluent generated from the Sparks wastewater facilities in order to better understand the requirement for the use of effluent in cooling and other industrial purposes as part of planning for the SWITCH datacenter outside Reno.

**4. Additional Accomplishments**

- a. Testing / Demonstration of Ayyeka “Wavelett” System – after being introduced to Ayyeka on the NVCOE’s recruitment trip to Israel in November 2014, the “Wavelett” system was recognized to have value to NVCOE stakeholders in providing remote monitoring of drinking water utility infrastructure. An initial purchase and installation of the system was made in August/September in a variety of locations with SNWA for testing and evaluation of the systems performance.
- b. Linear Modeling – NVCOE facilitated the contracting of DRI faculty to conduct a \$50,000 linear modeling study for Truckee Meadows Water Utility.

**5. Commercialization / Partnering**

The Water Cluster & WE@EU International Cooperation Agreement - As a follow up on introductions made as part of the Trade Mission, the NvCOE has signed an International Cooperation Agreement with the The Water Cluster based in the UK. The agreement will foster collaboration, development, and innovation in water efficient technologies and urban water management among Nevada and the United Kingdom. The UK Water Cluster unites and coordinates both regional efforts in the UK and across the European Unions through the Water Efficiency in European Urban areas (WE@EU). Therefore, this agreement connects the NVCOE to a group of 6 European water clusters.

Isle Utilities - In an effort to expand the recruitment efforts of water technology companies from abroad, the NvCOE has initiated a month-by-month contract with Isle Utilities to ensure the NvCOE’s continual exposure to water technology companies that might benefit from the NvCOE’s services. Isle Utilities is a consulting company specializing in facilitating relationships to support innovative technology development, strategy, growth, and investment.

**6. Intellectual Property**

NA

**7. Programmatic & Project Changes**

NA this quarter

**8. Looking Forward**

In the Fourth Quarter of 2015 is expecting to accomplish the following:

- Round 1 Commercialization Fund Awards – fund technology demonstration and testing projects after receiving commitments from water technology companies

- Round 2 Commercialization Fund Posting – post a new request for proposals from companies participating in NVCOE activities in Israel in October.
- New Members – currently three membership proposals are pending at the end of the 3<sup>rd</sup> quarter leading into the beginning of the 4<sup>th</sup> quarter. These proposals include request for involvement from a gaming and an agriculture company interested in identifying, evaluation, testing and demonstrating technologies relevant to those sectors. The third proposal is to a technology company specializing in treating cooling tower water.
- Israeli Partnership – a final meeting with the Chief Scientist of the Israeli Ministry of Economy is scheduled for the week of October 12. The partnership agreement to be signed will provide opportunities for Israeli water technology companies to receive matching support from the Israeli government as a match to NVCOE funds awarded for technology innovation projects.

Section II: Performance

Table 2: Progress Toward Metrics



**Nevada Center of Excellence Progress Dashboard**

Metrics as defined by Knowledge Fund	Current Status/Target Status		
	Actual Q3 2015	Estimated By June 30, 2016	Estimated By June 30, 2017
Companies Moved to Nevada	-	10	15
Start-up Companies	-	-	-
Jobs Created	-	90	180
IP Licenses	-	-	-
IP Revenue	-	-	-
Grants Received	-	\$530,000	\$890,000
Sponsored Research:			
# of Contracts	2		
Total \$ Committed	\$100,000	\$210,000	\$250,000
Patents:			
Filed	-		
Awarded	-	4	6
Students placed with Companies	1		
Faculty Hired	-	4	2
Gifts/Donations/Memberships	\$85,000	\$725,000	\$1.025M
Student Internships	-		

Notes: **Began 1 new testing and demonstration project with a start-up company.**

**Color Key:** n/a or target of Too early to Goal not met Close to Goal

## Project Scorecard Narrative

Companies Moved to Nevada:

Start-up Companies:

Jobs Created:

IP Licenses:

IP Revenue:

Grants Received:

Sponsored Research:

- The NVCOE was contracted by SWITCH to conduct a \$50,000 preliminary study on the quality of effluent generated from the Sparks wastewater facilities in order to better understand the requirement for the use of effluent in cooling and other industrial purposes as part of planning for the SWITCH datacenter outside Reno.
- The NVCOE facilitated the contracting of DRI faculty to conduct a \$50,000 linear modeling study for Truckee Meadows Water Utility.

Patents:

Students Placed with Companies: A recent UNLV graduate has been hired by a NVCOE member company.

Impact Faculty Hired:

Gifts/Donations: Received 3 new memberships from companies and utilities (Echologics, Water Shark Systems, and Truckee Meadows Water Authority). Also received a donation from the Economic Development Authority of Northern Nevada).

Student Internships:

### Section III: Budget

In the third quarter of 2015, the first quarter of the Phase 2 grant from the Knowledge Fund, the total expenses of the Water Center of Excellence were under the projected budget. Total Salary & Benefits expenses were under the projected amount primarily due to the time needed for filling the Program Manager and Administrative Assistant positions. The Admin position remains unfilled but the hiring process is underway. Primarily due to the level of participation in the Governor’s trade mission in July, Travel expenses were significantly over the projected levels. Other Direct Costs were slightly over budget due to the contracting of consultants to support both the completion of the Center’s strategic planning and international recruitment. No significant purchases were made or are projected to be made. The Water Center of Excellence does not anticipate directly funding Graduate Tuition.

<b>Water Center of Excellence Expenditures</b>			
For Reporting Period			
Jul 1 – Sep 30, 2015			
	<b>Q3 Actuals</b>	<b>Q3 Budget</b>	<b>Year to Date</b> Jul 1-Sep 30, 2015
<b>Total Salary &amp; Benefits</b>	\$ 89,269.42	\$ 126,500.00	\$ 89,269.42
<b>Equipment</b>	\$	\$	\$
<b>Travel</b>	\$ 18,423.40	\$ 7,500.00	\$ 18,423.40
<b>Other Direct Costs</b>	\$ 28,925.77	\$ 36,000.00	\$ 28,925.77
<b>Graduate Tuition</b>	\$	\$ -	\$
<b>Total</b>	<b>\$ 136,619.59</b>	<b>\$ 170,000.00</b>	<b>\$ 136,619.59</b>

In the third quarter of 2015, the first quarter of the Phase 2 grant from the Knowledge Fund, the total income of the Water Center of Excellence was slightly under budget. The total grants & contracts awarded equaled \$81,080. This was a combination of two industry funded contracted research projects. No funds from gifts or Cont. ED/Outreach was projected and no income was received. Other contributions made through membership dues to the Water Center of Excellence were under what was budgeted. Three additional membership proposals are currently under negotiation. The total to be billed to the Knowledge Fund for this past quarter is just under the projected funding amount for this past quarter.

<b>Water Center of Excellence Income</b>			
For Reporting Period			
Jul 1 – Sep 30, 2015			
	<b>Actuals</b>	<b>Budget</b>	<b>Year to Date</b> Jul 1-Sep 30, 2015
<b>Grants / Contracts*</b>	\$ 81,080.00	\$ 100,000.00	\$ 81,080.00
<b>Gifts</b>	\$	\$	\$ -
<b>Cont. ED/ Outreach</b>	\$	\$	\$ -
<b>Other Contributions*</b>	\$ 55,000.00	\$ 75,000.00	\$ 55,000.00
<b>Knowledge Fund</b>	\$ 136,619.59	\$ 170,000.00	\$ 136,619.59
<b>Total</b>	<b>\$ 272,699.59</b>	<b>\$ 327,000.00</b>	<b>\$ 272,699.59</b>

## Section IV: Weekly/Monthly Logs of [Project] Activities for Reporting Quarter

July 2015
Progress on NvCOE project
<p>The following activities were undertaken during the month of July;</p> <ul style="list-style-type: none"><li>- Attended the Drought Forum</li><li>- Attended the California Governor's Water and Technology Summit</li><li>- Completed SNWA monthly update call</li><li>- Met with Water Shark Systems</li><li>- Participated in a variety of trade mission planning meetings</li><li>- Participated in Governor's trade mission to the United Kingdom</li><li>- Hosted two NvCOE meet and greets with technology companies, investors, and utilities while in London</li><li>- Met with IBM while in Dublin</li><li>- Met with Hi-Core Technologies</li><li>- Met with, via teleconference, Aquaback</li><li>- Met with, via teleconference, Water Security Corp.</li><li>- Held weekly update meetings with NvCOE staff</li></ul>
August 2015
Progress on NvCOE project
<p>The following activities were undertaken during the month of Aug;</p> <ul style="list-style-type: none"><li>- Attended the Clean Energy Summit</li><li>- Met with SWITCH</li><li>- Met with SNWA, UNLV, and microLan</li><li>- Met with, via teleconference, Tersus</li><li>- Held WATEC planning meeting</li><li>- Participated in Trade Mission follow-up meeting</li><li>- Met with LVGEA to discuss branding and marketing/communications position</li><li>- Released Request-for-Information</li><li>- Met with Isle Utilities, via several conference calls</li><li>- Completed SNWA monthly update call</li><li>- Held weekly update meetings with NvCOE staff</li></ul>

September 2015

Progress on NvCOE project

The following activities were undertaken during the month of Sept;

- Conducted interview for the LVSun
- Completed SNWA monthly update call
- Met with Ayyeka and SNWA
- Met with a local incubator called The Mill
- Met with the MGM International Sustainability Team
- Presented to a Russian Delegation hosted at DRI
- Hosted call with Mike Bonner of GTLaw
- Met with Echologics
- Attended Drought Summit
- Hosted a Get-to-Know the NvCOE luncheon for DRI faculty
- Hosted the NvCOE Drinkubator
- Attended WEFTEC
- Met with Industrial Phycology
- Worked on KF Reporting
- Participated in Water Cluster Leaders conference call
- Met with Isle Utilities
- Met with SWITCH and SilverBullet
- Presented to the Board of LVGEA on NvCOE activities
- Met with the Dutch Water Alliance
- Met with Singapore's Public Utility Board
- Coordinated WATECH planning meetings
- Met with U.S. Commerce Dept.
- Met with microLan's distributor
- Met with Irrigo
- Met with grant writer to discuss EDA grant opportunity
- Held weekly update meetings with NvCOE staff

## **Section V: Appendix**

### Appendix 1 – Sales Pipeline

See Attached table