

Academic Coordinator III
III. Program Summary Narrative

Introduction

As an Academic Coordinator III, in UC ANR Nutrition Policy Institute, I am seeking a merit. Within the Nutrition Policy Institute, I serve as Senior Policy Advisor. I engage in cutting edge **applied research**, followed by **extension and outreach** efforts, and use research findings **to inform or strengthen policy** related to my thematic areas. I also provide leadership to academics within and beyond the UC system, and to others such as advocates and community organizations, in order to advance my thematic goals. My primary focus has been promotion of healthy beverage consumption, and specifically, plain water. In the most recent year, I pivoted to work on food insecurity, a crisis area during the COVID-19 pandemic. Given the pandemic and changes in how I've spent my time since March 2020, I have re-organized and streamlined my reporting. In this review of my activities, outcomes and impacts from **October 1, 2017 to September 30, 2020**, I have re-organized my reporting and will describe my work under two themes: 1) **Increasing Consumption of Drinking Water** and 2) **Building Food Security**.

My work addresses UC ANR's public values of promoting healthy people and communities and developing an inclusive and equitable society. It is cross-cutting with strategic initiatives to safeguard sufficient, safe, and healthy food for all Californians and water quality and security. The condition changes that my work seeks to improve are complementary throughout and include: 1) improved community health and wellness, 2) improved health for all, 3) improved food security, 4) improved water quality, 5) increased civic engagement, and 6) increased effective public leaders. I strive to meet the specific intent of Nutrition Policy Institute (NPI), which is to use research to inform or strengthen policy that bears on our mission areas.

Until the most recent reporting year, **Increasing Consumption of Drinking Water** constituted nearly all my effort. Broadly speaking, my drinking water work relates to tap water safety, access to safe and appealing drinking water, and drinking water education and promotion, with each supported by policy. In brief, the major rationale for specific attention to drinking water is to enable its consumption in place of sugary beverages, the #1 source of added sugars in the American diet and a top source of calories. I actively engage with a variety of partners to perform research and other creative activities, and to extend knowledge to a wide variety of stakeholders.

In the second half of the most recent reporting year, **Building Food Security** constituted the most of my efforts. Immediately after California went into lockdown in March 2020, the NPI policy team received a request for help from community organizations in the San Joaquin Valley, concerned about the future of school nutrition programs. This request generated a tremendous amount of work and new engagements. I participated in quick turn-around research, led development of informational resources and was honored to play leadership roles in a new national working group on COVID-19 nutrition responses formed by the Centers for Disease Control. I am proud of having found constructive ways to contribute to the country's COVID-19 response.

Administratively, I supervise, support, coach and evaluate one full-time Policy Analyst who works on our drinking water projects. The Policy Analyst assists with project management, stakeholder communications, developing written content for resources, and educational outreach.

Programmatic Themes

Theme: Increasing Consumption of Drinking Water

Background, Rational, Problem: It is estimated that only 12% of the US population is metabolically healthy while only a quarter are at a healthy weight. Diet-related chronic diseases, including type 2 diabetes and other metabolic diseases, a range of cardio-vascular diseases, and dental caries, exact a toll on Americans' health and well-being as well as on budgets, and adult and child obesity is a public health crisis in California and the nation. In California about half of all adults have diabetes or prediabetes and it is estimated that by 2030 41.5% of adults age will have obesity and 18.3% will have severe obesity (BMI \geq 35) if current trends continue. The cost burden to our state for health care is in the tens of billions annually and overweight is the leading disqualifier for fitness to serve in the military.

Extensive science links consumption of sugar-sweetened beverages (SSBs) to increased risk for these conditions; SSBs are the largest single source of added sugars in the American diet and are a top source of calories; further, these calories have little to no nutritional value. Research shows that reducing sugar intake can begin to improve health within weeks. Therefore, reduction of SSB consumption, and the need to enable an alternate and healthy source of hydration is a paramount public health strategy, especially as it is one that can be undertaken reasonably easily and at little cost by individuals.

Goal: I work to improve the health of people and communities by enabling consumption of water, preferably tap water, to provide an accessible and appealing alternative to SSBs. Although public health is the primary motivator for my work, the work offers **co-benefits/condition changes** beyond the nutrition-related:

- *Improved health and COVID-19.* Water access is needed for hygiene, but also, SSBs are a risk factor for the top conditions associated with severity of COVID infection, namely, type 2 diabetes, obesity and cardiovascular conditions.
- *An inclusive and equitable society.* Water affordability and utility water shutoffs, crumbling infrastructure and sourcewater degradation are increasingly critical social justice issues that impact ability to choose tap water. Further, the added sugars in SSBs are a top component of poor diets and poor diet is a driver of health disparities.
- *Climate change.* A healthy population will have more *resilience to climate change* events (heat, weather emergencies). Green infrastructure and smart water use address *water security, water quality* and other problems.
- *Economic development.* Infrastructure investment in tap water safety/access generates jobs.
- *Unity.* Enacted legislation demonstrates that drinking water is a bipartisan concern.

Clientele: I focus my efforts on strategies that will serve “the least among us;” in serving them it will surely “trickle up” to serve all. In marginalized populations, a safe alternative to SSBs is commonly neither obvious nor accessible. To serve “the least among us” effectively, I also need to build strong relationships with a variety of stakeholders, including elected representatives and agency staff, public health, oral health and advocacy organizations, and school- and childcare-related organizations.

Activities: In this 3-year review period I engaged in **15 projects involving applied research and creative activity** (please see Supporting Documentation, Table A, and Project Board). I extended knowledge and information from my research through **13 presentations at academic meetings, 19 presentations for professional organizations, and 3 state/federal sessions**. I work towards increased civic engagement and increased effective public leaders by providing specific, trustworthy and evidence-based information to stakeholders and decision-makers at all levels.

Outputs (10/1/17 – 9/30/20): My research was described in:

- 8 peer-reviewed papers published in this reporting period (Please see Bibliography)
 - In a highlight, I co-authored an invited paper for the high-impact journal Annual Review of Nutrition, “[Drinking Water in the United States: Implications of Water Safety, Access and Consumption](#),” published September 2020.
- I also co-authored a first-of-its-kind report, “[Early Adopters: State Approaches to Testing School Drinking Water for Lead in the United States](#)” released nationally in January 2019. We investigated state policies and programs and analyzed all available state data.

My scholarship supported my development of educational resources:

- I developed the content for “Roadmap to Healthy Beverages” for Native American communities
- I developed **7 factsheets/briefs** (Bibliography),
 - [Healthy Hydration: Ensuring access to safe water in schools](#), was developed to complement Centers for Disease Control’s new micro-module trainings

Outcomes: My research findings in tandem with my stakeholder relationships allowed me to share data-driven information and best practices at all levels, for example,

- I provided evidence-based information and, when asked, recommendations on drinking water issues for multiple US Representatives.

At their request, I met 3 times (5/16/18; 11/1/18; 8/27/19) and corresponded multiple times

- with U.S. Environmental Protection Agency Office of Drinking Water to provide information related to development of guidance for the Lead Testing in School and Child Care Drinking Water Grant Program and provide review of EPA’s 2019 update of the “3Ts” guidance for reducing lead in school drinking water.
- I provided recommendations for tap water safety during COVID-19 for Centers for Disease Control and connected water scientists to CDC’s guidance team.
- I provided testimony on lead in childcare drinking water for CA legislative committee hearing and reviewed bill language for AB 2370.
- I served on the State Water Resources Control Board Technical Advisory Committee and the Dept. of Social Services Center Task Force, for development and implementation of AB 2370 regulatory language; I also provided study findings relevant to implementation of AB 746 for school drinking water.
- I authored articles and news posts for organizations including CA School Board Association as well as for the National Drinking Water Alliance and ANR publications such as NPI’s Research to Action News Brief.

Impacts: My policy engagement activities improved drinking water safety, access, and education in the US and contributed to the growing movement for drinking water instead of sugary drinks in the U.S.

- Selected impacts:

- CA AB 2370 was enacted, requiring tap water testing for lead in all CA licensed childcare centers; AB 2370 implementation is expected to begin in early 2021
- 69 US House of Representatives members sent a [letter](#) to the secretaries of USDA and HHS requesting the addition of a water icon to the MyPlate nutritional graphic in the upcoming 2020-2025 DGAs; 32 Republicans and 37 Democrats signed the letter, co-led by Reps Marshall (R), Pingree (D) with Walorski (R), McGovern (D), Bera (D) and Roe (R)
- 172 leaders in nutrition and public health signed one or both of comments I wrote regarding healthy beverage recommendations in the 2020 DGAs
- CDC incorporated my recommended language in an update of their COVID-19 [Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation](#)
- While it is not feasible to measure change in tap water consumption, bottled water consumption has increased from 40.6 gallons/capita in 2017 to 43.7 gallons/capita in 2019 (from 33.6 gals/capita in 2013 when I started my work on drinking water) while SSB consumption is declining
- In the long term, Californians and Americans will benefit from improved health, including reduced obesity, diabetes type 2, dental caries, when they reduce consumption of sugary drinks and substitute plain water as a beverage of choice.

Theme: Building Food Security

Background, Rational, Problem. Poverty is a leading cause of food insecurity. The evidence is out on duration of the current pandemic and of its total impact on the U.S. and global economies, yet the likelihood is of many years of impact. Hurricanes and other weather events including wildfire, drought and flooding appear likely to become more intense, exacerbating drivers of food insecurity. The recent Report of the 50th Anniversary of the White House Conference on Food, Nutrition and Health describes a U.S. population where the *minority* are metabolically healthy and where obesity alone affects 42% of US adults. The above are drivers and symptoms of food insecurity in the U.S. **COVID-19 Engagement.** With food insecurity a risk factor for poor nutrition and obesity, in response to COVID-19 I pivoted to work on child nutrition responses to the pandemic, with a focus on the school meal programs and the Women, Infants and Children Supplemental Nutrition Program (WIC).

Goals: To improve food security and health by leveraging and improving federally funded school nutrition programs' potential to serve meals to children. To understand the impact of COVID-19 on WIC agencies and clients. To provide evidence-based recommendations to inform or strengthen policy for food security in the U.S., including to explore how pandemic responses may inform nutrition program policies post-pandemic.

Clientele: Children and families at risk of food insecurity; stakeholders and decision-makers who can make change.

Methods: In my 8 months of work in this theme, I engaged in **3 projects involving applied research and creative activity** (descriptions in Project Board):

- COVID-19 food security through federal school nutrition programs. In 6 San Joaquin Valley school districts, our team ran focus groups (n=29 parents) and interviews (n=11) to understand barriers and facilitators to accessing and providing school meals; initiated a PhotoVoice project to document school meal offerings and empower parent voices, and provided information. We also performed CA-wide school district website and social media data "scraping" for information on meal programs and Pandemic-EBT outreach for a random sample of CA districts by geo-type

- COVID-19: Documenting Challenges Faced by California Families with Children 0-5 Years Old on WIC (description in Project Board). Our WIC research team developed methods for qualitative data collection and analyses for WIC participant and WIC agency experiences in California during COVID; I serve as a research assistant.
- Centers for Disease Control Nutrition and Obesity Policy Research and Evaluation Network COVID-19 Nutrition Response ad hoc Working Group; I lead two subcommittees.

Outputs: I led development of **5 factsheets** (Bibliography). I also extended knowledge and information from my research through **1 presentation for community members** and **engagement with national networks**. Two manuscripts are in preparation.

Outcomes:

- The NOPREN COVID-19 Nutrition Response work groups have been a striking response to the pandemic, allowing us to lean on each other, across the nation, for mutual assistance for everything from partnership formation to co-branded product dissemination, e.g., the factsheets developed in the San Joaquin Valley work.

Impacts: Much of this work is too new to have impacts yet there have been some. In response to issues our research uncovered, we were able to achieve program and policy change in San Joaquin Valley school districts, often with parental civic engagement. Please see Project Board for examples. Three members of the COVID-19 School Nutrition Implications Working Group were just named to positions at USDA and our group work will have been very informative for them in development of nutrition policy/regulation moving forward, for COVID-19 response and for federal child nutrition program policy.

Professional competence and activity

I believe my professional competence and activity are amply demonstrated in Supporting Documentation. For example, during this 3-year review period I gave **13 presentations at academic meetings and 21 presentations for professional organizations**. Notably, I provided concepts, resources and review for CA Department of Public Health’s new SNAP-Ed theme, to be required of every SNAP-Ed Local Implementing Agency in CA, on “drink water, not SSBs” and CA Department of Public Health invited me to give two sessions educating our state’s project directors on policy, system and environmental strategies to increase drinking water consumption. **I increased our civic leaders’ effectiveness through presentations at 1 federal agency listening session and 2 state hearings.**

University and Public Service

My University service starts with my service to NPI, where I have served on our Strategic Planning Committee, with monthly meetings over the entire 3-year period. I’ve performed University service through my participation in an Ad Hoc committee and Strategic Initiative webinar presentation. Further, my workgroup, advisory group and other involvements are important means for me to support UC and ANR’s visibility and effectiveness and foster an increased understanding of UC and ANR’s research and education programs for clientele, the public and policy makers. Presentations given are other visible demonstrations of ANR’s effectiveness. Informational meetings with elected representatives and their staff are always an opportunity to highlight the University of California Division of Agriculture and Natural Resources and promote UC ANR NPI as a trusted source of information.

I provided a variety of public service (please see Supporting Documentation). Perhaps most important at state level, I’ve been involved in the process that will result in safer drinking water in CA licensed childcare centers, starting with providing review of Assemblymember Holden’s bill language and

testimony at a hearing (both on request), then serving on 2 state-wide committees to develop regulatory language for bill implementation. My service was informed by my own research on school lead testing programs. At the federal level I've been able to provide information based on my expertise to Congressional offices and the Environmental Protection Agency, as well as the Centers for Disease Control.

During this 3-year review period I mentored a UC Davis doctoral student, guiding her through decision-making on her dissertation topic, as well as in a literature review project and in development of a research brief. I also served on Master's thesis committees for two graduate students at Stanford.

Affirmative action activities

As described above, I seek to make condition change for "the least among us." I'm particularly proud of my successful ongoing research and extension work with Native American community groups in the Southwest, in particular because building a trusting and respectful partnership is needed to be successful. I've been honored to be invited to present at three annual summits of the Notah Begay III Foundation, where I've been among very few white participants. (I had to hand off one presentation to my NPI partner owing to a death in my family). I have successfully supported Community Outreach and Patient Empowerment of Navajo Nation in obtaining Robert Wood Johnson Healthy Eating Research funds for a project for which I'm a co-PI and, during the 3-year reporting period, have been consistently available to provide information and technical assistance. I was also asked to present to USDA Region 9 on building successful partnerships for healthy beverage work in tribal communities.

Closing Summary

In my most recent 3 years at NPI I have been a leader in a national movement to promote consumption of water instead of sugar-sweetened beverages. I believe deeply in the importance of this public health strategy. It is a change that may be undertaken by individuals at low cost and with ease, if only it is supported through policy, access and education – which I and my partners work to build. I have been very productive – not only in the tangibles that I have represented in text and tables in this report -- but also in less-tangibles that can only be hinted at by, for example, the variety of stakeholders with whom I engage, by "hits" to the National Drinking Water Alliance website,² or by the number of emails I write connecting one stakeholder with another who can be helpful. When COVID-19 hit, I found ways of being actively responsive, not only by engaging in research but also by finding ways to extend those learnings to audiences who can use the information. I did this regardless of whether I was supported with funding. I have a successful track record of disseminating my research, not only to fellow academics through peer-reviewed literature, but also to professional and lay audiences via presentations and "popular press" outlets including factsheets, briefs, webinars, and blog/news articles. On a personal level, I am responsible, hard-working, and respectful of others. I care about doing the very best job I can. Finally, I actively promote NPI, ANR and UC, notably to elected representatives at the state and federal level (where I notice the bi-partisan appeal of my statement "I'm from the UC Division of Agriculture and Natural Resources"), and I represent UC ANR and NPI through presentations and at meetings. I collaborate with researchers, professionals and advocates from a wide variety of universities, governmental agencies and organizations. Finally, I love what I'm working on and I'm proud to be able to do it under the UC banner.

² From 10/1/17 – 9/30/20, 25,961 unique users collectively visited 32,808 times with 62,022 page views