

Fulfilling the Land Grant University Mission at State Agricultural Experiment Stations in Urban Interfaces of the West

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How have western state Agricultural Experiment Stations or Research and Extension Centers pivoted to meet the needs of agricultural producers and the emerging stakeholder communities in urbanizing areas?



Since the Hatch Act of 1887, which established agriculture experimental stations for Land Grant institutions, much has changed, especially in areas of urbanization. This deep dive explored Agricultural Experiment Stations (AESs) and Research and Extension Centers (RECs) that are in a rapidly developing, peri-urban setting, with prime agricultural soils and a strong commitment to continued agriculture. These centers have been transformed by the complexities of urbanization such as rising land prices, immediate access to high volume direct markets, human impacts on the natural landscape, rapidly changing natural environments and other features of urbanizing regions. This deep dive revealed insights into funding, staffing and content shifts as a result of urbanization.

Context

Washington State University (WSU) Puyallup, located in the Puget Sound region of western Washington State, and situated between the urban centers of Seattle and Tacoma, was established as WSU's agriculture experimental station in 1894, shortly after Washington State College (now Washington State University) broke ground on the main campus in 1890. WSU deployed multiple branch stations, or RECs, specializing in research and extension programs specific to the significant agricultural and natural resource markets and opportunities in their locale.

Since the 1900s, WSU Puyallup REC's agricultural focus has changed as land uses have evolved in the rapidly urbanizing Puget Sound region. Historically, agriculture in the Puyallup and Puget Sound region included hops, small fruits, vegetables, poultry, cut flowers, ornamental nursery production, forestry and dairy. As a result of urbanization, WSU Puyallup REC's research focus has shifted to meet the needs of the region's stakeholders: from agricultural operations and production to specific *issues* impacting agricultural land and producers. Current issues addressed by the WSU Puyallup REC revolve around invasive species, urban agriculture land utilization, soil quality and conservation, water quality, stormwater runoff, soil health, ecotoxicology, urban integrated pest management, green industry workforce development and food safety. WSU Puyallup REC differs from other REC's in Washington State in that it no longer has close partnerships with agricultural commodity groups that help guide investment and programmatic work back into the REC.

Issue

Funding and partnerships for RECs have changed in urbanizing areas because of the fundamental shift from agricultural commodity or industry supported research and extension, to issue-based research and extension. Long-term agricultural commission relationships have been a cornerstone of WSU's agricultural research and extension successes, but with this shift towards urbanization of RECs and loss of adjacent farmland and the network of farming communities, the relationships are changing rapidly.

In urban areas, funding is increasingly based on shorter term relationships as issues evolve. In the urbanizing Puget Sound region, land parcels continue to shrink as prices per acre rise due to land development, and agricultural producers adapt to new market opportunities and an increasing interest in local food. Other ecological issues add complications such as the loss of critical habitat, impacts of development, and endangered species mitigation. Climate change makes water management (e.g., too much or too little) more challenging, adding to the complexity of managing land according to regulations around preserving terrestrial and aquatic endangered species.

The shift away from direct partnership and support of commodity crops has created space for new partnerships, with a unique set of opportunities and challenges. The urban farming community is increasingly diverse, with varying interests and goals, but generally without a financial conduit to fund research initiatives in ways similar to those around which agricultural commodities are able to coalesce.

County, municipality, regional USDA, and Conservation District partners are rapidly pivoting and developing new programs to meet the new needs but rely on research and extension productivity and outputs. Urban REC's need a clearer understanding of what and how to meet the needs of changing communities as urbanization continues to diversify community groups, economic outlets and landscape level environmental issues. The authors suspect other regions throughout the West may have similar experiences to learn from, which is the premise of this Deep Dive.

Goal

The goal of this Deep Dive is to gain insight into the experience of experimental agricultural stations established from the Hatch Act of 1887; understand the current needs of urban agricultural stakeholders, including the Tribes, and urban communities; and understand how the Land Grant mission can be sustained (or adapted) in peri-urban regions. The ultimate goal is to develop financial, programmatic and partnership recommendations for an urban REC/AEC model that continues the Land Grant University mission.

This Deep Dive augments the [Leading Edge Dialogue Series - Fulfilling the Land Grant University Mission](#), by providing an understanding of how AESs and RECs have adapted (or struggled to adapt) to urbanization. This work will also help inform actions identified in the Leading Edge Dialogue, such as including applied research categories in faculty expectations, incentivizing tenured faculty to conduct applied research to increase promotion potential, and communicating research priorities of urban stakeholders to the greater LGU community. AESs and RECs embedded in urban fringe (peri-urban) or urban central communities are key conduits for engaging students from cities to develop applied research that directly impacts their communities.

Methods

We considered different formats to glean information from Western State AES/RECs to accomplish the following:

- Learn which AES/RECs in the West self-identify as serving, or as impacted by a shift towards, urban stakeholders (by developing multiple surveys to both identify AES/RECs urban identities and topics via Qualtrics).
- Identify existing urban research and extension programs, disciplines and issues, understand successful funding mechanisms and partnerships; identify common challenges and opportunities (by interviewing station directors or key staff: interview data will be

characterized for themes and quantified to aggregate and report back to NUREC and disseminate more broadly). While urban focused research and extension work will be captured to the extent possible, particular attention will be given to urban agriculture needs, opportunities, resources and research.

- Develop a means of understanding current agricultural producer needs in the Puget Sound region that are presently unmet by counties, municipalities (e.g. cities and ports) and Conservation Districts, which could be met by adapted AES/REC programming in Washington State.

During 2022, we interviewed four REC/AEC directors and administrative leads at length to gain insight into the types of challenges their center's face in urbanizing areas and to inform a subsequent survey.

We then developed and deployed a Qualtrics survey (see Appendix A) which focused on seven thematic areas that emerged from the interviews.

- Demographics and characteristics of their REC/AES
- Facilities (including leasing and land sales, and housing)
- Staffing of faculty and personnel
- Programs and programming
- Funding
- Partnerships: stakeholders and communities served (including agriculture)
- Planning and strategy

The lengthy yet targeted questionnaire could be completed in 20-40 minutes depending on the detail provided by the participants. Results incorporate the input from the four 1:1 interviews, 9 survey responses totaling 12 unique respondents across eight Western States: Alaska, Arizona, California, Montana, New Mexico, Oregon, Washington, and Wyoming. However, since several respondents administer multiple REC/AEC's, the input represents over 25 centers in the west. Results have been organized into the seven thematic areas of our survey. Going forward, RECs and AESs are referred to collectively as "Centers" for simplicity.

Results

Demographics and characteristics of the Centers

While each Center represented is fairly unique in terms of geography (some are located within large cities, and some are 30 miles from the nearest town of 4,000 people), all report some impact of urbanization or changing demographics on most of the issues explored. Only one center characterized their area's population as "small and stable". Most described the populations of neighboring towns or cities as increased or increasing, and the surrounding communities as looking quite different, demographically, from when their Center was first established. While acreage for the Centers ranges from 29 to 2000+ acres, the majority are in the range of 200-600 acres which is a significant farmland resource for a peri-urban location, as many are.

Facilities (including leasing and land sales, and housing)

Most Centers rely on direct allocations, built-in revenue cost centers and/or grants to support their facilities and operations. Urbanization was seen as mostly negatively affecting (or in some cases, not affecting) the costs of operating the center. All centers reported a level of deferred maintenance, from not manageable to extremely significant deferred maintenance. Many Directors report spending extensive time addressing maintenance issues, meaning they have less time to address income generation, strategy development, or other leadership activities.

Urbanization has increased values, leading some to see it as a way to obtain funding for their university. During interviews respondents said that interest in selling parcels of their Center's land to fund for the university increases as land values increase, noting also that the proceeds from these sales would benefit the university and not necessarily help stabilize the Center's financial condition. One respondent said that their university has sold three of their AESs due to encroachment of urbanization. With increasing land prices in urban areas, Center land sales are of concern for the lifespan of urban Centers.

Leasing/land sales

Some, but not all, locations utilize leasing options to generate revenue. For those that do, private renters, along with government and community partners, were identified as leasing partners. One common lease agreement is with faculty researchers from the main campus who utilize Center land for their research. This is funded as part of the faculty member's research grants. The WSU Puyallup REC leases some land to the local Conservation District for their urban farming incubator and training programming. While not a large source of income, it is a valuable way to develop partnerships between local agricultural organizations and the community, while keeping the land in agriculture instead of lying fallow. Other respondents reported leasing land or facilities to:

- USDA Agricultural Research Stations
- NRCS
- local non-profit organizations needing greenhouse space
- contracted private research
- local farm businesses (rentals of land, greenhouses, processing facilities, and cold storage facilities)

Urbanization was seen as increasing leasing options along with land lease values.

Water

Water was identified as a major issue when considering external leasing agreements. Because of the competition for water, especially in states in the dry Southwest US, land value is directly tied to the availability of water for irrigation. Irrigation costs are high, and without adequate water the use of the land is limited, potentially eliminating leasing options. Water access and water rights add to the complexity when deciding whether it is best to utilize the Center's land as a financial asset or a continued research and Extension asset.

Housing

Issues with increased cost of living, declining housing affordability and compressed salaries were highlighted as challenges. Most locations identified nearby housing as unaffordable to faculty, staff and (especially) students affiliated with the Center (e.g., graduate students). Not all locations are able to offer or subsidize housing for faculty, staff or students. Housing costs have outpaced salaries and student support.

One rural Center provides 'temporary' (6 month+) housing for staff because no affordable housing is available in nearby communities. Though this Center is very rural, housing is very limited and prices for homes, including rentals, are very high. The respondent says, "...this is driven largely by those from out-of-state relocating to [our area]. Indirectly, urbanization is a driver since people are relocating to [our area] because, though housing/rentals are limited and expensive, they are lower than in (...) urban areas in the state."

One peri-urban Center shared a similar comment, despite their more urban location: “Prices have skyrocketed, with out-of-state people moving into [our state’s] urban areas, driving the prices of family dwelling. Currently a single family housing unit of approximately 1800 sq. ft. dwelling runs for an average of \$1500/month and an average staff employee at the center makes \$38,000.00 salary per year.” Their Center does not provide housing for faculty, staff, or students.

The peri-urban WSU Puyallup REC has similar challenges for graduate students working on campus for 2-5 years. Affordable housing is nearly impossible to find in the adjacent cities, and on-campus housing for graduate students is limited and in high demand. Deferred maintenance on campus means that there are other priorities for capital improvements, but there is a constant demand for more affordable housing options. This can limit the number of graduate students that the faculty can host at the Centers.

Staffing of faculty and personnel

Trends in staffing were diverse. Most respondents reported a downward trend of resources available for program faculty, staff and extension programs yet, interestingly, faculty numbers and other employees (measured as FTEs) increased for most Centers over the past 10 years.

Urbanization was noted as a negative impact to those in more rural conditions as people tend to move towards urban centers. Urbanization was also attributed to an increased cost of living, making recruitment a challenge and most respondents consider recruitment and retention more difficult due to urbanization. However, several pointed out that faculty and staff are generally interested in nearby amenities generally associated with more urban areas (e.g., shopping, entertainment, dining), making recruitment at rural Centers a challenge. One key challenge many respondents indicated is the mismatch between housing costs and (lower) salaries offered at the Centers relative to the surrounding cost of living needs, making it difficult to recruit personnel to areas with higher housing costs.

Urbanization is not all negative: most respondents noted that faculty located at, or otherwise utilizing their Center has increased in the last 10 years. Many attribute this to new opportunities for programming and research related to urbanization and changing demographics and, in some cases, the appeal of urban amenities.

Programs and programming

Academic programming and services (e.g., Plant Pathology, Horticulture Entomology, Soil Sciences, Weed Sciences, Agronomy, Integrated Pest Management) are still central offerings at many Centers, depending on the needs of the surrounding agricultural industry. However, most Centers have adopted new programming to meet emerging community needs such as urban agriculture, climate change, sustainable living and urban pest management. About half of those responding co-locate with county-based extension programs, but almost all keep programs separate from Center functions. Nearly all Centers report having research and extension programs specifically targeting underserved audiences, including tribal and Hispanic/Latinx audiences.

Extramural funding

Most report a decrease in state and federal funds. Those that reported static funding levels from federal and state did not adjust for inflation, causing a functional decrease. However, almost all report an increase in grant and contract funding levels along with increases in gift donations. It is unlikely that these increases offset the federal and state decreases in allocations. One respondent noted that grants and gifts do not help the financial condition of the Centers.

Some Centers have become more creative and entrepreneurial in their approach to funding. One urban Center reports their success obtaining funding from external industry clients as generating “70 to 75% of our annual operating budget, an annual figure of \$1,700,000.00 dollars per year by different entrepreneurial means.”

Partnerships: stakeholders and communities served (including agriculture)

Almost all respondents describe partnerships with USDA agencies and some state agencies as they relate to agriculture. They reported farmers/producers as the most common stakeholder group engaged, but also reported meaningful levels of engagement with K-12 schools. Gardeners, such as Master Gardeners, were also identified as a common audience.

Most respondents felt aware of community needs and felt they met those needs. Interestingly, the communities near the Centers are most aware of them, however some adjacent communities are unaware of Center activities and mission. Respondents also noted common challenges in unifying stakeholder needs in urbanized areas.

One Center reported a partnership with the Farm Bureau, which funds an endowment for agricultural education at the Center. The university matches this with approximately \$1,000,000. Their education efforts focus on 4-H and FFA youth at transition points in their education and getting them interested in agricultural careers (e.g., soil science, plant pathology). They host field days for students, connecting them with researchers and graduate students, bringing secondary students to the Center and showcasing career and research opportunities. This partnership has expanded beyond 4-H and FFA and is leading to other workforce development trainings and opportunities to encourage students from the nearby underserved school district to consider STEM careers, environmental engineering, or culinary training.

A farm at one Center is part of their university’s 4-H program, and has been successfully generating revenue for the program through camps, field trips, and events.

All respondents state that agriculture has had a large economic impact in their region and that the communities still put a high social value in local farms. All identified small scale food production as a growing need in association with increased urbanization. One respondent in a semi-rural area stated, “The main challenge with population growth has been loss of farmland by development and increasing land prices, making it more difficult for new farmers to get access to farmland.”

Planning and strategy

Overall, respondents felt that strategic plans were good guiding documents that accounted for urbanization and valued urban focused research and extension.

Recommendations

It is clear that Center administrators are a wealth of history and exploratory knowledge; they have a lot to say and share. Throughout the conversations with Center administrators, several common threads emerged that form the basis of the recommendations below, but it was also apparent that many of these administrators felt that they would benefit from frank conversations with others in similar roles to explore approaches and potential pathways to shared challenges. We recommend further opportunities for shared discussion among such leaders so that more opportunities for collaboration, problem-solving, and idea-generation are available. The challenges faced by Centers in increasingly urbanized areas are only going to get more complicated and expensive to resolve.

Strong, innovative leadership, adequate resources and support from university administrators, and strong, cohesive ties to the surrounding communities will support Centers at LGUs as we pivot from our traditional stakeholders and programming to new programs and collaborations that meet the needs of our current, peri-urban situation.

Centers that have successfully undergone a “pivot” in strategy, whether it is a change in funding mechanism, land management, or programming, can help other Directors visualize what is possible and anticipate challenges or barriers along the way. A follow-up series of conversations featuring some of these early successes would help engage, inspire, and support Directors whose Centers are headed toward a similar pivot. The authors collected examples during the interviews including:

- Explore the relationship between state and local government, NGO’s and the REC, a clear example of how programming, research, and services at the center are changing to address challenges of urbanization (stormwater).
- Partnerships across the Center have changed with urbanization leading to new opportunities and research areas, leading to a central learning demonstration to how to live in an urban environment that addresses everything from food security to pest management. This project is an example of a REC using strategic planning and partnerships to develop a new approach to work with urban stakeholders in a city with intense land use pressures and challenges.
- REC strategic planning process led to increased community buy-in and engagement, revitalized the campus, and provided a clearer vision and path forward for the use of their land and facilities.
- Utilizing varied income generation streams and source of funding, this entrepreneurial campus has multiple projects which provide community engagement, youth programming, and workforce development opportunities on their urban Center.

In addition to the successes above, many of our respondents suggested considering several common challenges they are regularly required to address:

- Needing a plan for water access: several respondents urged other Directors to “not immediately sell a water right on your land”, think strategically and long term about how your land will need irrigation and water rights.
- Needing a plan for deferred maintenance, whether this is a result of increased state funding, better communication with the main university, or addition of income streams which can fund these maintenance needs for the Center.
- Planning for changes in community engagement: most Centers are going through a unique and distinct shift in the surrounding community - whether it is an increase in the diversity of the surrounding population and accompanying unique needs, changes in environmental conditions due to the impacts of climate change, land use pressures and changes, or a shift in the type of agricultural industry that the Center typically served. Faculty and staff at Centers need to be prepared to re-engage with the community and assess whether their programming and research addresses current needs.
- Planning for increasing costs: re-engage federal funding specifically to re-invest in Hatch Act facilities in addition to developing new, local funding partnerships with local governments that benefit from the landscape scale research and outreach from Centers.

Outreach and dissemination

In addition to [National Urban Research & Extension Center](#) networks, findings will be reported back to western leadership groups including Western Association of Agricultural Experiment Station Directors, Western Extension Directors Association and other national opportunities such as the

Research Center Administrators Society. Additionally, publication of findings will be submitted to document the effort in the Journal of Extension. Locally in Washington State, findings will be used to continue to build and support existing relationships with counties, municipal partners and Conservation Districts.

About the authors

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Todd A. Murray leads a team of faculty and programs that focus on urban issues as the Director of the Puyallup Research and Extension Center, located in a farming valley just outside of Tacoma city limits in the metropolitan Seattle-Tacoma region. He is an endowed chair in Urban Entomology.

About NUREC

The National Urban Research & Extension Center (NUREC) bridges the gap between community and research by applying the unparalleled power and reach of the land-grant university system, rooted in Extension's community-centered approach, to address our nation's urban challenges.

This project was funded, in part by a [Deep Dive Fellowship](#) from the [National Urban Research and Extension Center](#).



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Appendix A- Survey Questions

Your email:

Your center's name/location:

In addition to taking this survey, are you willing to discuss your thoughts on urbanization and its impact on your center/station in greater detail with Todd Murray and Jordan Jobe (survey authors) in a 60 minute phone call?

Demographics of REC/AES

The following section relates to the demographics, background, and planning/context of your center or station.

What is your position in relation to your station/center (select best match to your position title)?

- Center or station director
- Center superintendent or manager
- Associate Dean or Assistant Dean of Research and/or Extension
- Administrative leader of your institute's Agriculture Experiment Station or Research and Experiment Center
- Other

In what year was your station/center established?

How many acres does your station/center own, maintain, and/or manage?

What is the largest, closest city? What is the approximate size of this city?

How would you describe your station/center (select all that apply):

- Located in a rural area
- Located in/near a small town
- Located in/near a suburb
- Located near a large city
- Located in a large city
- In an area with increasing growth
- In an area with decreasing growth
- In an area with a stable population
- My own description:

Please (briefly) describe the historic research and extension focus of your station, since its beginning. What were the major agricultural and natural resource systems addressed in your history? Has it changed or remained consistent? (if this is best summarized in an existing document or a website, please provide a link or send the survey authors relevant materials).

Please indicate your agreement with the following statements:

	Completely disagree	Somewhat disagree	Neutral	Somewhat agree	Completely Agree	Unknown	In progress
My center/station has a strategic plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

and vision for our center/station.
 My center/station's plan is regularly reviewed and updated.
 My center/station is included in my institution/college's vision, mission and strategic goals.
 A strategic plan/vision is critical for our center/station to function in the coming years.
 Past decisions and investments were made because of plans and visions for my center.
 My center's vision/strategic plan accounts for changes due to urbanization.
 My institution values urban-focused research and extension.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are your biggest strategic planning challenges being in an urbanized area? Do you have any successes to share? (Feel free to share relevant links if helpful.)

How supported (financially and with other resources) is your center/station by your institution, in the following ways:

	Very supported (1)	Somewhat supported (2)	Neutral (3)	Somewhat unsupported (4)	Very unsupported (5)
Facility maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facility Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operational Funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business and Finance Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Facilities

The following section relates to the facilities and operations of your center or station.

How do you fund your facilities and operations (please select all that apply)?

- Direct allocation from college or central institute
- Percentage of indirect costs charged to grants and contracts
- Costs are built into land and facility charges to faculty and principal investigators
- Gifts or endowment payments
- Other (please define)
- I don't know

How has urbanization affected facility (i.e. operational funds and maintenance) support at your center/station?

- Increased operational and maintenance funding and support
- Decreased operational and maintenance funding and support
- Has not impacted operational and maintenance funding and support
- I don't know

Rate your challenges with deferred maintenance (on a scale of 1-5, with 1 being “insignificant deferred maintenance” and 5 being “extreme need”?)

- 1 Insignificant deferred maintenance
- 2
- 3
- 4
- 5 Unmanageable deferred maintenance

What are the biggest challenges related to your center or station facilities that you attribute to urbanization in your region? Do you have any successes to share?

Do you lease land and/or building space to any other entities?

If you do lease, who do you lease to (private, government, non-profit)? (Select all that apply.)

- Private
- Government and/or municipality
- Non-profit/community partner
- Not applicable

Please list the names or general types of lease partnerships you host (you can be as specific or as general as you wish. For example: farmer, USDA ARS, faculty research, Master Gardeners, food banks, state agencies, etc.).

Has urbanization changed your land leasing options?

- Increased leasing options
- Decreased leasing options
- Urbanization has not affected leasing options

- I don't know

Has urbanization changed your lab/office space leasing options?

- Increased leasing options
- Decreased leasing options
- Urbanization has not affected leasing options
- I don't know

Has urbanization changed your lease values?

- Increased leasing values
- Decreased leasing values
- Urbanization has not affected leasing values
- I don't know
- Other

Has your institute sold land associated with your center or station?

If land sales are part of your center or station's history, how did the institute benefit from the land sale? (please skip if you did not answer yes in the previous question). Please check all that apply.

- The central institute benefited financially from the sales proceeds
- The College, Division or Central Unit benefitted financially from the sale proceeds
- My center/station benefited financially from the land sale
- I don't know

Please provide a brief narration describing your land sale history, if applicable.

Is water access a limiting factor for your operations?

If you answered yes to the previous question, how has urbanization impacted your ability to utilize water resources?

Is housing affordable in your community for your personnel (faculty, staff, students, farm workers)?

How has urbanization affected housing access and affordability near your center or station?

Do you provide housing for:

	Yes	No
Staff	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>
Students	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

Faculty and Personnel

The following questions relate to the faculty and personnel at your center/station.

Approximately how many of the following FTEs do you have at your center? (Using 2021, in your busiest season, as an example year.)

- Academic/departmental faculty
- County Extension Agents and Extension Coordinators
- Technical Staff
- Farmworkers or temporary field crew
- Facility Managers
- Land Managers
- Administrative Staff
- Post docs
- Graduate Students
- Undergraduate Students
- Support staff
- Other (specify):

In the past 10 years, the number of faculty located or otherwise utilizing your center or station has:

- Increased
- Decreased
- Stayed the same
- I don't know

How has urbanization affected the number of faculty members located or otherwise utilizing your center or station?

Does your center have a Diversity, Equity and Inclusion (DEI) initiative for hiring personnel?

How has urbanization impacted the need for DEI hiring initiatives at your center/station?

What are the biggest challenges that urbanization has brought had when it comes to faculty, staffing, and personnel at your center/station? Do you have any successes to share?

Programs

The following questions relate to the programming at your center/station.

Please briefly describe the current programs at your center/station. For your ease, you can provide a link to a website that summarizes your programs, if available.

Which disciplines are represented by your research and extension personnel (mark all that apply)?

- Horticulture
- Forestry
- Plant Pathology
- Entomology
- Soil Sciences
- Weed Sciences
- Agronomy

- Animal Sciences
- Rangeland management
- Urban Agriculture
- Sustainable living
- Water resources
- Engineering
- Climate change
- Urban Integrated Pest Management
- Economic Sciences
- Social Sciences
- Other

Do you have research or extension programs that address the community needs of underserved and/or under-represented populations of your community?

If you answered yes to the previous question, do you have examples/successes/highlights to share?

Do county-based faculty/program staff run local programming such as Master Gardeners, 4-H, SNAP-Ed, etc. from your center/station (as opposed to regional/statewide program management)?

If you answered yes to the previous question, what county/local programs do you host at your center/station (you can provide an internet link if that is the easiest way to summarize)?

What other academic disciplines, not listed above, are represented at your research and extension center?

Urbanization has made faculty and staff recruitment/retention:

- easier (4)
- more difficult (5)
- no noticeable effect (6)

Please explain your previous answer of how urbanization has affected faculty/staff recruitment and retention:

How has urbanization challenged research and extension programming at your center/station? Do you have any successes to share?

Funding

The following questions relate to funding at your center/station.

Funding by source/type for my center/station has:

	Increased in the past five years (1)	Decreased in the past five years (2)	Remained static in the past five years (3)	I am unsure of the funding trend in the past five years (4)
Federal/state allocations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grants/contracts

☐☐☐☐

Gifts/donations

☐☐☐☐

What other funding sources have helped your center/station?

How has urbanization affected federal/state funding, grant funds and gifts?

Stakeholders

The following questions relate to stakeholders and/or partners of your center/station.

Do you have partnerships with any of the following agencies/organizations? (select all that apply)

- USDA NRCS offices
- USDA ARS
- County Conservation Districts
- Farm Bureau
- Water Bureau/Board/District
- Other USDA Offices (describe)
- Other State Agencies (describe)
- Other community partners (describe)

What other types of stakeholders/partners does your center/station typically work with?

- Farmers/Producers
- gardeners
- green industry
- Tribes
- schools (K-12)
- municipalities
- ports
- Other (please list)

Please indicate below how well you agree or disagree with the following statements (with 100 indicating full agreement):

0 10 20 30 40 50 60 70 80 90 100

We are aware of the needs of the communities that we serve.



We are actively working to meet those needs.



The communities that live near our center/station are aware of our programs and are engaged with them.



The programming that we offer meets the environmental (ecological, agricultural, etc.) needs of the area in which we are situated.



Do you conduct research and extension programs with Tribes, specifically?

If you answered yes to the previous question, please describe your research and extension programs that engage the Tribes?

Are there other partnerships that have urban interests that are not fully realized by your center/station? If yes, which partnerships would you like to make?

How has urbanization made it challenging, or increased opportunities, to engage stakeholders/communities and other partners? Do you have any successes to share?

The following questions specifically relate to agriculture, including agricultural partnerships.

Please describe the kind of agriculture your center supports (i.e. small fruit, diversified crops, livestock, dairy, etc.).

How economically important is agriculture to your region?

- Agriculture has a large economic impact in my region
- Agriculture has a moderate economic impact in my region
- Agriculture has a low economic impact in my region

How valuable does your community perceive local agriculture to be in your region?

- My community highly values local farms and agriculture
- My community somewhat values local farms and agriculture
- My community has minimal value of local farms and agriculture

In what ways has urbanization impacted your center/stations relationship with local agriculture, including local producers/growers?

Conclusion

If you were sending this survey out to your colleagues, what other questions might you have included? What else do you want to know from other western REC/AESs?

If we held a meeting/workshop in 2023 to discuss the challenges that REC and AES face in urbanizing areas, would you be interested in participating? (Please select all that apply.)

- Yes, I'd absolutely attend, in person
- Yes, I'd absolutely attend, but only virtually
- I would encourage my staff or colleagues to attend
- Unsure
- No, I would not participate or find this helpful

Do you have any suggestions for how to make a meeting/workshop on this topic effective and productive?

Thank you so much for taking the time to complete this survey! We are looking forward to reviewing, collating, and analyzing the responses, and to sharing the responses with you and our colleagues working to support our AES and RECs.

