National Urban
Research & Extension Center

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

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About NUREC

The National Urban Research and Extension Center (NUREC) is a collaborative membership-based nationwide organization for land grant universities that facilitates the co-creation and application of knowledge; enabling urban communities to improve the health and wellbeing of all residents, achieve equitable economic growth, and steward their natural environments. 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.

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For more information visit www.nurec.extension.org.

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

How western state agricultural experiment stations and research & extension centers have pivoted to meet the needs of agricultural producers and 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. For a National Urban Research & Extension Center (NUREC) Deep Dive Fellowship, we explored agricultural experiment stations (AESs) and research and extension centers (RECs) that are in rapidly developing, peri-urban settings, 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, budgets, staffing, and programming 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 Agricultural Experiment Station in 1894, shortly after Washington State College (now Washington State University) broke ground on the main campus in 1890. WSU subsequently 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.

Historically, agriculture in the Puyallup and Puget Sound region included hops, small fruits, vegetables, poultry, cut flowers, ornamental nursery production, forestry, and dairy. Now, in response to rapid urbanization and evolving land uses, the WSU Puyallup REC's research focus has pivoted from agricultural operations and production to specific issues impacting agricultural land and producers. Currently, these issues 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. Unlike other RECs elsewhere in Washington State, the WSU Puyallup REC no longer has close partnerships with agricultural commodity groups which typically guide investment and programmatic work back into the RECs. Instead, funding is increasingly based on shorter-term, issue-focused relationships. Relationships with agricultural commissions, long a cornerstone of WSU's agricultural research and extension successes, are also changing as adjacent farmland is lost and the network of farming communities decreases in urban areas.

Land parcels in the Puget Sound region continue to shrink while prices per acre rise due to land development pressure and as agricultural producers embrace new market opportunities, including consumers' increasing interest in local food. Ecological concerns such as the loss of critical habitat, impacts of development, and endangered-species mitigation complicate land issues. 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 urban farming community is increasingly diverse, with varying interests and goals, but generally without a financial conduit to fund research initiatives around which agricultural commodities are able to coalesce. The shift away from direct support for commodity crops has created space for new partnerships, along with a set of unique opportunities and challenges.

Counties, municipalities, and Conservation District partners across the country, along with regional offices of the United States Department of Agriculture (USDA), are rapidly developing new programs to meet these new needs. However, these entities still rely on research and extension productivity and outputs to support their farming communities. Urban RECs need a clearer understanding of how to meet the needs of changing communities as urbanization continues to diversify community groups, economic outlets, and landscape-level environmental issues. Our suspicion that other regions throughout the West may have similar experiences we could all learn from formed the premise of this Deep Dive.

Goal

The goal of this Deep Dive was to gain insight into the experience of AESs established by the Hatch Act of 1887; understand the current needs of urban agricultural communities, including the Tribes, and the surrounding urban communities; and understand how the land grant mission can be sustained (or adapted) in peri-urban regions. From this, we aim to develop financial, programmatic, and partnership recommendations for an urban AES/REC model that continues the land grant university mission.

This Deep Dive builds on discussion in the Leading Edge Dialogue Series—Fulfilling the Land Grant University Mission, (https://nurec.extension.org/publications/) by providing an understanding of how AESs and RECs have adapted (or struggled to adapt) to urbanization. Our work may also help inform recommendations identified in the Leading Edge Dialogue, such as including applied research categories in faculty performance expectations, incentivizing tenured faculty to conduct applied research to increase promotion potential, and communicating research priorities of urban groups to the greater land grant university (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 used different formats to:

- Learn which AES/RECs in the West self-identify as serving, or as impacted by, a shift towards urban communities (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; and identify common challenges and opportunities (by interviewing station directors or key staff; interview data was characterized for themes and quantified to aggregate for this report and to disseminate broadly). While urban-focused research and extension work was captured to the extent possible, particular attention was 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, but that could be met by adapted AES/REC programming in Washington state.

To develop a meaningful survey tool, during 2022 we interviewed four active AES/REC directors and administrative leads in urbanizing regions to gain insight into the types of challenges their centers face. Interviews were structured by predetermined prompts but were allowed to develop into conversations that helped inform the proceeding survey. Interviews lasted between one and two hours and were conducted using Zoom.

After assessing notes from interviews, we developed a Qualtrics survey (see Appendix A) focusing on seven thematic areas that had emerged:

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

The survey was completed in 20–40 minutes, depending on the level of detail provided by the participants.

Results

The results incorporate the input from the four initial interviews and nine 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 AES/RECs, 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.

Demographics and characteristics of the centers

Survey respondents identified themselves as a center or station director (*n* = 5), center superintendent or manager (*n* = 4), or administrative leader (*n* = 3). Most respondents represented centers established in the early to mid-1900s; however, one center is relatively new, established in 2015. While each survey respondent represented unique geography (some are located within large cities, and some are 30 miles from the nearest town of 4,000 people), all reported 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. No one characterized their service area as decreasing in growth. Acreage for the centers ranges from 29 to 2,000+ acres; the majority are in the range of 200–600 acres, which is a significant farmland resource for peri-urban areas, where many are located.

Facilities (including leasing and land sales, as well as 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 respondents reported a high level of deferred maintenance needed for facilities that support RECs and AESs, with most selecting "not manageable," to "extremely significant" deferred maintenance (89%). Many respondents report spending extensive time addressing maintenance issues, meaning they have less time to address income generation, strategy development, or other leadership activities. Most respondents (*n* = 8) felt somewhat supported (financially and with other resources) by their institution with regard to facility maintenance, facility staff, operational funds, business and finance staff, and faculty. One third of the respondents classified operational funds and technical staff support as areas that were very unsupported by their corresponding institution.

Leasing/land sales

Two thirds of respondents lease land and/or building space to private parties, governments/municipalities, and non-profits/community partners to generate revenue. Private and non-profit/community partners accounted for 89% of respondents' sources of revenue from leasing. Faculty from the main campus who utilize center land for their research were commonly listed as lessees. This is typically funded by the faculty member's research grant budget.

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
- Natural Resources Conservation Service
- 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.

Most respondents did not report land sales associated with their center, however, those that did, reported that the proceeds benefited the college or the greater institution and not the center. Land sales are a potential risk for centers. As land prices escalate in urbanizing areas, the land they occupy is increasingly seen as a potential revenue source. During interviews, this was highlighted in all circumstances. One respondent said their university has sold three of their AESs due to encroaching urbanization. Land acquisitions through agricultural partnerships and donations are also happening, but mostly in rural areas.

Water

Water was identified as a major issue when considering external leasing agreements. Because of the competition for water, especially in the dry Southwestern states, 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 complexity when deciding whether it is best to utilize a center's land as a financial asset or a continued research and extension asset. A majority of respondents identified water as a limiting factor for their operations. Many noted that their institutions have historical water rights, which are valuable for leasing and selling. However, when water shortfalls occur, this becomes a point of friction with local municipalities and water districts.

Housing

Issues with the increased cost of living, declining housing affordability, and compressed salaries were highlighted as challenges. Most locations (75%) identified nearby housing as unaffordable for 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 quite rural, housing is still greatly limited and prices for homes, including rentals, are very high. One respondent said, "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 [up] the prices of family dwellings. Currently a single-family housing unit of approximately 1,800 sq. ft.…runs for an average of $1,500/month and an average staff employee at the center makes $38,000 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. These common challenges 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. Most respondents consider recruitment and retention more difficult due to urbanization. However, several pointed out that faculty and staff are attracted to amenities generally associated with more urban areas (e.g., shopping, entertainment, dining), making recruitment at *rural* centers a challenge. Still, the mismatch between the cost of living and housing, and (lower) salaries offered at the centers, makes it difficult to recruit personnel to urban areas.

Urbanization is not all negative: most respondents noted that faculty located at, or otherwise utilizing their center, have 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 core 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. Approximately half of those responding colocate with county-based extension programs, but almost all keep these programs separate from center functions. Nearly all centers report having research and extension programs specifically targeting underserved audiences, including tribal and Hispanic/Latinx audiences. Workforce development and training offerings were mentioned multiple times in open-ended opportunities of the survey and interview sessions. One center specifically leveraged its (increasingly) urban location by seeking external input to incorporate into their strategic planning, develop new partnerships, and create an entirely new focus on stormwater and “green living” in urban areas. The Puyallup REC hosts the Washington Stormwater Center, which works in urban areas statewide to support municipal stormwater management—a relatively new opportunity brought about, and successful, specifically because of the center’s proximity to several large urban areas.

Extramural funding

Most centers report a decrease in state and federal funds. Those that reported static funding levels from federal and state sources did not adjust for inflation, causing a functional decrease. Almost all report an increase in grant and contract funding levels (75%) along with increases in gift donations (62%) in the past five years, however, it is unlikely that these increases offset the federal and state decreases in allocations. One respondent noted that grants and gifts do not significantly help the financial condition of the centers that they manage.

Some centers have become more creative and entrepreneurial in their approach to funding. One urban center reports their successful acquisition of funding from external industry clients generates 70%–75% of their annual operating budget—approximately $1.7 million per year—using different entrepreneurial means.

Partnerships 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 urban 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 tend to be most aware of the centers’ resources, however, some adjacent communities are unaware of centers’ activities and mission. Respondents also noted common challenges in unifying community 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 million annually. Their education efforts focus on getting 4-H and FFA youth at transition points in their education interested in agricultural careers (e.g., soil science, plant pathology). They host field days for students, connecting them with researchers and graduate

students, and they bring secondary students to the center to showcase career and research opportunities. This partnership has expanded beyond 4-H and FFA to students from the nearby underserved school district, providing them with workforce-development trainings, opportunities, and encouragement to consider STEM careers, environmental engineering, or culinary training.

A farm at another 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 place a high social value in local farms. All identified small-scale food production as a growing need in urbanizing areas. One respondent in a semirural area stated, "The main challenge with population growth has been loss of farmland to 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. This perception was clear at the local center level, and the institutions' priorities, mission, and vision were of central importance to most respondents. However, they also noted that urban centers are underutilized as resources to help advance the LGU mission and increase knowledge and access to healthy food and ecological systems.

Despite agreement on the utility and importance of strategic planning, only one respondent mentioned extensive and impactful planning efforts to develop a strategic plan for their center. This respondent's significant efforts to engage stakeholders (with center staff, university on-campus faculty, agencies, and local partners) yielded a comprehensive, agreed-upon, and thorough plan for the next 5–20 years of their center. While challenging, the process they underwent resulted in a higher awareness of the resources at the center, a clear path forward for prioritized maintenance, community input on programming, and greater local participation in center programs and activities. This respondent reports more community investment and, importantly, university investment, in their center as a result of engaging in the strategic planning process.

Recommendations

It is clear that center administrators are a wealth of history and exploratory knowledge; they have a lot to say and share. Throughout our conversations and survey analysis, several common threads emerged that form the basis of the recommendations below. Additionally, 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 creating further opportunities for shared discussion among these and other center administrators to increase collaboration, problem-solving, and idea-generation. 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 industry collaborators and programming to new programs and collaborations that meet the needs of our current, peri-urban situation.

Centers that have successfully pivoted, whether it be a change in funding mechanism, land management, or programming, can help other administrators 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 administrators whose centers are headed toward a similar pivot. Some examples of these successful center pivots include:

- A center whose relationships with state and local government, nongovernmental organizations, and nonprofits illustrate how programming, research, and services at the center can transform to address challenges of urbanization (e.g., stormwater, in this case).
- A center with partnerships that have changed with urbanization, leading to new opportunities and research areas, addressing everything from food security to pest management and creating a central example/demonstration on how to live in an urban environment. This project is an example of a center using strategic planning and partnerships to develop a new approach to work with urban communities in a city with intense land-use pressures and challenges.
- A center with a strategic planning process, leading to increased community buy-in and engagement, revitalization of the campus, and a clearer vision and path forward for the use of their land and facilities.
- A center within a center which utilizes entrepreneurial means to create varied income generation streams and sources of funding, with multiple projects providing community engagement, youth programming, and workforce-development opportunities.

In addition to the successes above, many respondents suggested having conversations about common challenges they have been required to address:

- Needing a plan for water access: several respondents urged other administrators to "not immediately sell a water right on your land," and to think strategically and long term about how your land will need irrigation and water rights.
- Needing a plan for deferred maintenance, whether this is addressed as a result of increased state funding, better communication with the main university, or the 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 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 reengage with the community and assess whether their programming and research addresses current needs.
- Planning for increasing costs: reengage with federal funding partners, specifically, to reinvest in Hatch Act facilities, in addition to developing new local-funding partnerships with governments that benefit from the landscape-scale research and outreach from centers.

Outreach and dissemination

In addition to NUREC networks, these findings will be reported back to western leadership groups including the Western Association of Agricultural Experiment Station Directors, the Western Extension Directors Association, and other national opportunities such as the Research Center Administrators Society. Locally in Washington state, these findings will be used to continue to build and support existing relationships with counties, municipal partners, and conservation districts.

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 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.	○	○	○	○	○	○	○

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	○	○	○	○	○
Facility Staff	○	○	○	○	○
Operational Funds	○	○	○	○	○
Business and Finance Staff	○	○	○	○	○
Technical Staff	○	○	○	○	○
Faculty	○	○	○	○	○
Extension Programs	○	○	○	○	○

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:

Staff (y/n)

Faculty (y/n)

Students (y/n)

Other (y/n)

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
- ☐ more difficult
- ☐ no noticeable effect

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	○	○	○	○
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.