

ASU Climate Resilience Enterprise Planning Framework

V 1.2, Last Updated September 2020

The ASU Climate Resilience Enterprise Planning Framework is a living document outlining indicators, metrics, and targets for informing and integrating campus climate resilience into ASU enterprise planning. This document was created with input from 64 ASU Administrators, Staff, and Directors, 28 Faculty members and Deans, 18 community leaders, residents, partner organizations, and community college representatives, 4 City Managers and representatives, and 14 ASU students.

Introduction

To continue its mission, Arizona State University will take the lead to anticipate climate related impacts and manage resources and risks to ensure resilience without interruption of operations. In 2016, President Crow signed the Second Nature Climate Commitment, which reaffirmed ASU's commitment to carbon neutrality and also committed ASU to developing a Climate Resilience Plan. Resilience can be defined as increasing the ability to survive disruption and to anticipate, adapt, and flourish in the face of climate change. ASU intends to build resilience across its university-enterprise to continue its operations in serving students, staff, faculty and the broader community.

The ASU Climate Resilience Plan will consist of two key documents:

1. Climate Resilience Emergency Management Plan: specific actions, indicators, metrics and targets in case of need to address immediate, acute climate impacts
2. Climate Resilience Enterprise Planning Framework: an outline of indicators, metrics, and targets to overtime inform, evolve, and be integrated into enterprise planning

This document will serve as the Climate Resilience Enterprise Planning Framework. The plan will use the following structure:

- **Sectors:** a key strategic area
- **Planning Areas:** aspect of campus function
- **Indicators:** demonstrates achievement of climate resilience in a given planning area for mitigation and management of climate impacts
- **Metrics:** measures indicator progress
- **Targets:** sets a time frame and goal for achieving an indicator (have not been established)

Notes:

- **Implementing:** indicator, metric, and data are adequate and data will be tracked
- **In-Revision:** seeking additional feedback
- **Missing Data:** data either not currently tracked or has not been created

Society & Equity

Society and Equity refers to campus systems designated to meeting the basic needs of the ASU campus-community, supporting justice, equity, diversity, and inclusion principles. Universities often function as community hubs where the lives of students, faculty, and staff are brought together. As a community hub ASU campuses must include access to climate resilient housing, food, water, and healthcare and basic access to ASU for the well-being and safety of all students, faculty, and staff.

Indicator	Metric	Data	Status
Planning Area: Housing (SDGs 1, 7, 11)			
Safe and affordable housing	1. Percent of population that is homeless	0.5 of Maricopa County population homeless <u>Source</u>	Implementing
	2. Percent of residents that feel safe	Residents' overall feeling of safety in Tempe increased from 68% in 2018 to 74% in 2019 among those who had an opinion <u>Source</u>	Implementing
	3. Percent of campus members' income spent on utilities	Students: Incomplete Faculty: Incomplete Staff: Incomplete	Missing Data
Planning Area: Food (2, 15)			
Secure, nutritious, and accessible food supply	1. Percent of ASU population who report patterns indicating food insecurity	39.6% of ASU students surveyed indicated they often or sometimes worried whether their food would run out before they got more (during the past 30 days). <u>USDA Economic Research Service</u>	Implementing

ASU Climate Resilience Enterprise Planning Framework

	2. Percent of food procured that meets AASHE STARS definition of locally sourced or that meets AASHE STARS definition of sustainably/ethically produced	12.99% as of 2020 <u>Source</u>	Implementing
Planning Area: Health (SDG 3)			
Accessible and quality health services	1. Percent of appointments with ASU health resources for climate/heat related issues	Incomplete	Missing Data
	2. Adequate mental health resources available to campus-community	ASU Counseling Services: <ul style="list-style-type: none"> ● <u>Consultation Services</u> ● <u>Crisis Services</u> ● <u>Group Counseling</u> ● <u>Individual Counseling</u> ● <u>Outreach Services</u> ● <u>Center: Mindfulness, Compassion and Resilience</u> 	Implementing
Planning Area: Basic Needs and Services (SDGs 3, 4, 6, 10, 11)			
Accessible and safe drinking water	1. Adequate initiatives to provide the campus-community drinking water during extreme events	Incomplete	Missing Data
	2. Number of drinking fountains and water bottle filling stations in campus-community	631 drinking fountains across ASU facilities	Implementing
Accessible and affordable transit	1. Average fares of public transit options	Bus: Neighborhood Circuit = \$0 Bus and Light Rail: Daily	Implementing

ASU Climate Resilience Enterprise Planning Framework

		<p>Rate (One-Way) = \$2 Bus and Light Rail: Daily Rate = \$4</p> <p><u>Source</u></p>	
	<p>2. Percent of community members satisfied with public transit</p>	<p>81% of Valley Metro customers and non-riders are satisfied or very satisfied with Valley Metro services</p> <p><u>Source</u></p>	<p>Implementing</p>
<p>Accessible and affordable education</p>	<p>1. Average amount of unmet financial need for attendance</p>	<p>The average tuition Arizona residents pay after gifts, grants, financial aid (which do not need to be paid back), work-study and on-campus employment is \$2,200</p> <p><u>Source</u></p>	<p>Implementing</p>

Mission Services

Mission Services refers to continuing to meet ASU’s fundamental goals as a comprehensive public research university in the face of climate change. To further its university mission ASU must build resilience research discovery, financial planning, academic excellence, university accessibility, social fabric, and sustainability literacy within ASU’s campus-community.

Indicator	Metric	Data	Status
Planning Area: Research (SDGs 4, 9, 13)			
Research Competitiveness	1. Number of research programs, grants, and dollars that generate findings of public value	2018 Research Expenditure = \$617,000,000 <u>Source</u>	Implementing
	2. Number of publications on climate resilience and adaptation topics published in top level journals annually (with an emphasis on climate impacts that affect ASU)	724 Publications for 2020 THE SDGs Survey <u>Source</u>	Missing Data
	3. Percentage of faculty researching climate resilience and adaptation topics	16.56% <u>Source</u>	Implementing
Planning Area: Recruitment and Retention (SDG 4)			
Student, faculty, and staff recruitment and retention	1. Annual student enrollment	2019 ~ 75,000 students <u>Source</u>	Implementing
	2. Average graduation rates	2017 4-year graduation rate = 86.8% <u>Source</u>	Implementing
	3. Percent of students retained Percent of students not retained due to	Incomplete	Missing Data

ASU Climate Resilience Enterprise Planning Framework

	climate related issues		
	4. Percent enrolled minority students	53.4% <u>Source</u>	Implementing
Planning Area: Academic Budget (SDG 8)			
A sustainable enterprise budget	1. Diversity of income sources	1. Revenue Sources 12% State 51% Tuition & Fees 24% Gifts, Grants, Contracts 12% Other	Implementing
	2. Cash on hand and/or debt ratio and/or reserves	2. Spendable Cash & Investments/Operating Expenses = 0.76 Days Cash on Hand = 147 Debt Service Coverage Ratio = 2.24 <u>Source</u>	Implementing
Planning Area: Academic Delivery (SDG 4)			
Effective learning environments	1. Average student: faculty ratio	20:1 <u>Source</u>	Missing Data
	2. Adequate classroom supply	Incomplete	Missing Data
	3. Percent of students satisfied with faculty interactions	Incomplete	Missing Data
	Percentage of students who report that ASU provides very good academic support services	Incomplete	Missing Data
	Percent of students who would still choose to attend ASU if they started	Incomplete	Missing Data

ASU Climate Resilience Enterprise Planning Framework

	the college selection process over again		
	4. Adequate internet capability	Incomplete	Missing Data
Planning Area: Community (SDG 4, 17)			
Social cohesion and inclusive campus community	1. Adequate resources, offices, and trainings for creating an inclusive campus community culture	Office of Diversity, Equity, and Inclusion trainings, workshops Mandatory trainings for Preventing Harassment and Sexual Violence and Title IX Duty to Report Sun Devil Civility Community of Care <u>Source</u>	Missing Data
	2. Adequate resources, offices, and outlets for community incident reporting and response	ASU Police Office of University Rights and Responsibilities ASU Sun Devils Against Sexual Assault <u>Source</u>	Missing Data
	3. Transparency and accountability in improving campus climate related to diversity, equity and success	Information related to diversity, equity and success is not currently publicized <u>Source</u>	Missing Data
	4. Net Promoter Score (Post-collaboration, ask community partners on a 1-10 scale if they would work with ASU again in the future)	Net-promoter score	Missing Data
Planning Area: Sustainability and Resilience Literacy (SDG 4)			
Comprehensive sustainability and	1. Percent of campus-community	33.9%	Implementing

ASU Climate Resilience Enterprise Planning Framework

resilience literacy	members considered sustainability and/or resilience literate	USP sustainability survey	
	2. Number of colleges within the university that incorporate sustainability into new student and transfer student orientation	100% <u>Source</u>	Implementing

Infrastructure

Infrastructure refers to the physical systems and facilities of ASU including energy, water, waste, buildings, landscaping, and transportation within the campus-community. Ensuring climate resilient infrastructure is vital for the future of ASU to continue as climate change presents greater extreme environmental conditions that these structures must withstand.

Indicator	Metric	Data	Status
Planning Area: Energy (SDG 7, 9)			
A climate neutral and secure energy system	1. Percent of clean and renewable energy procured by ASU annually	50.92% Generated/Purchased <u>Source</u>	Implementing
	2. Total energy consumption per unit of floor area	0.15 MMBtu / GSF FSY2019 Imported Electricity 0.22 MMBtu / GSF Baseline Imported Electricity <u>Source</u>	Implementing
	3. Capacity of on-site generation systems to cover campus electricity needs (e.g. CHP)	CHP = 8.8MW <u>Source</u>	In Revision
	4. Number of facilities in need of backup power that have access to adequate backup power (e.g. residence halls, research buildings)	Incomplete	In Revision
	5. Total campus emissions	Scope 1 & 2: 0 MTCDE <u>Source</u>	In Revision
Planning Area: Water (SDG 6)			
Optimized water	1. Percent of	5% Non-potable water out	Implementing

ASU Climate Resilience Enterprise Planning Framework

	non-potable water use for irrigation	of total water use (West) <u>Source</u>	
	2. Percent of total potable water use per campus user that comes from storm water captured and recharged or reused annually	(76,000 gallons recaptured water and rainwater/13,838.94gallons total potable water use per campus user) = 5.49% <u>Source</u>	Implementing
	3. Water use per campus user	13,838.94 Gallons per user <u>Source</u>	Implementing
Planning Area: Waste (SDG 12)			
A circular resource system	1. Percent Waste Diversion	41.8% waste diversion 2019 --> Goal = 90% by 2025 <u>Source</u>	Implementing
	2. Waste per campus user	0.13 Tons per user FSY2019 <u>Source</u>	Implementing
Planning Area: Buildings (SDGs 7, 9, 11, 12)			
Climate adapted buildings and systems that meet or exceed leading green building standards	1. Operations and maintenance continuously meeting building best practices and standards	14.47% building space certified on green rating system focused on operations and maintenance of existing buildings <u>Source</u>	Implementing
	2. Percent of buildings certified under green building rating system and percent of those buildings that have the highest	99.83% new construction/renovations on green rating system 5 platinum projects 1,152,432 GSF / 26,683,278 GSF = 4.3% Platinum	Implementing

ASU Climate Resilience Enterprise Planning Framework

	achievable certification	<u>Source</u>	
Planning Area: Landscaping and Grounds (SDGs 3, 11, 13, 14)			
Climate adapted landscaping and grounds that emphasize effective water management and thermal comfort	1. Percent of shade canopy	Incomplete (Due August 2020)	Missing Data
	2. Average campus outdoor temperatures	Shade = 109 degrees Peak median temperature = 168 degrees <u>Source</u>	Implementing
Planning Area: Transportation (SDG 11)			
Comprehensive public transportation system	1. Average walk score (Considers distance to amenities, population density, road block length and intersection density)	Current Walk Score = 53 <u>Source</u>	Implementing
	2. Average transit score (Considers transit route frequency, type, and distance to nearest stop)	Current Transit Score = 47 <u>Source</u>	Implementing
	3. Average bike score (Considers bike lanes, hills, destinations & road connectivity, and bike commuting mode share)	Current Bike Score = 74 <u>Source</u>	Implementing
	4. Adequate community paratransit services for commuting to campus	- 100% of local transit wheelchair accessible - ASU shuttles wheelchair accessible - No mention of	In Revision

ASU Climate Resilience Enterprise Planning Framework

		intercampus paratransit	
		<u>Source</u>	

Environment

Environment refers to the campus-community ecosystem. This includes ensuring responsible water use, robust biodiversity, and natural landscaping is used across ASU's campuses to create naturally resilient systems in every campus environment.

Indicator	Metric	Data	Status
Planning Area: Hydrology (SDG 6)			
Responsible use of water in landscaping	1. Total water withdrawal per unit of vegetated grounds	1,854,037.76 Gallons / Acre <u>Source</u>	Implementing
Planning Area: Biodiversity (SDG 15)			
Biodiversity of landscapes	1. Number of programs in place to protect or positively affect the species, habitats, and/or ecosystems identified on University owned properties	AASHE Stars score = 0/1 <u>Source</u>	Implementing
	2. Adequate pollinator support on campus	Abundance of insect, bird, and bat species found on campus during routine annual campus surveys	In Revision
Planning Area: Ecology (SDG 15)			
Responsible management of landscapes	1. Percent of vegetated grounds	35% <u>Source</u>	Implementing
	2. Percent of landscaping that meets the AMWUA Landscape Plants for the Arizona Desert plant and tree list	Incomplete	In Revision
	3. Percent of grass that is multi-purpose	Incomplete	Missing Data

ASU Climate Resilience Enterprise Planning Framework

	4. Percentage of grounds managed organically or in accordance with an Integrated Pest Management program	95.50% <u>Source</u>	Implementing
--	--	-------------------------	--------------