



# University of Nevada Reno Extension Statewide SNAP-Ed Needs Assessment, 2020-2021

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The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) is a federal grant used to provide nutrition education and obesity prevention programming to SNAP-eligible people. This report includes background information, an inventory of Extension and SNAP-Ed partner nutrition and obesity prevention programming by counties, and a compilation of secondary data such as demographics and health indicators. This information may be used as a starting point to help determine eligibility and justify the implementation or expansion of health and nutrition programming to support health-related needs pertaining to nutrition, physical activity and obesity prevention using SNAP-Ed funding throughout Nevada's counties.

A partnership of Nevada counties; University of Nevada, Reno; and U.S. Department of Agriculture

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#### Background

"The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) is a federally funded grant program that supports evidence-based nutrition education and obesity prevention interventions and projects for persons eligible for the Supplemental Nutrition Assistance Program (SNAP) through complementary direct education, multi-level interventions, and community and public health approaches to improve nutrition" (U.S. Department of Agriculture [USDA], 2019a). These federal funds are available to all states, and in 2020 Nevada was allocated \$3,237,498, which is administered through the Nevada Division of Welfare and Social Services (DWSS) (USDA, 2019b). As the state agency, DWSS is responsible for all SNAP-Ed activities that take place within Nevada, and it may use sub grantees, known as implementing agencies, to deliver programming at the local level. University of Nevada, Reno Extension was the first implementing agency to participate in Nevada SNAP-Ed, starting in 1999, and has since been counted on to contribute a large portion of the state's SNAP-Ed programming (Nevada Division of Welfare and Supportive Services, 2016).

Extension is ideally poised to provide multi-level obesity prevention programs in the state, as it has Extension educators, staff and offices located in every county; a Health and Nutrition team with public health, nutrition and exercise physiology expertise; and a state mandate under NRS 549.010 to provide "...continued educational, research, outreach and service programs pertaining to agriculture, community development, health and nutrition, horticulture, personal and family development, and natural resources in the rural and urban communities." Extension is organized to provide programming in all of these areas. However, there are several instances of programs outside of the health and nutrition section that incorporate health and nutrition education, such as the 4-H Program and the Little Books and Little Cooks Program. Inventories of state Extension health-related programming conducted in spring 2020 showed that 11 of the 16 counties plus Carson City had health and nutrition programming (Table 1). In 2020, all counties had a SNAP-Ed program, though they did not all receive individual funding, and 9 had programs, delivered by Extension (Table 2). Figure 1 shows many counties lack health and nutrition programs with the exception of a beverage campaign.



Figure 1 – Health and Nutrition Programming in Nevada, 2020.

Program Name	County Offered	Funding Source
Child Care Provider Training <sup>1</sup>	Clark	<b>3 3 3 4 4</b>
Choose Health: Food, Fun, and Fitness	Clark	Expanded Food and Nutrition Education Program (EFNEP)
Eating Smart, Being Active	Northeast Clark, Clark	County, EFNEP
Food Safety Project <sup>1</sup>	Washoe	
Grow Yourself Healthy	Washoe	SNAP-Ed
Preschool Garden Program	Clark	County
FoodSpan Food System Education	Clark	County
Healthy Aging	Churchill <sup>2</sup> , Clark <sup>3</sup> ,	SNAP-Ed
Nutrition Education - Seniors Eating Well	Carson/Storey,	
<ul> <li>Physical Activity - Stay Strong, Stay</li> </ul>	Lyon <sup>2</sup> , Mineral <sup>2</sup> ,	
Healthy	Reservations,	
<ul> <li>Development of environmental scan for</li> </ul>	White Pine,	
Senior center PSE efforts	Washoe <sup>2</sup>	
Healthy Eating Active Living: Mapping <sup>1</sup>	Elko	
Healthy Food Systems	Clark, Washoe	SNAP-Ed
<ul> <li>Farmers Market Education</li> </ul>		
SNAP Electronic Benefit Transfer Technical		
Assistance		
Healthy Eating on a Budget (Eating Smart,		
Being Active)		
Healthy Kids, Early Start	Clark, Lincoln,	SNAP-Ed
<ul> <li>Direct Education - All 4 Kids</li> </ul>	Nye <sup>2</sup>	
<ul> <li>Professional Development – Healthy Kids,</li> </ul>		
Be Active Series		
Center Development – Nutrition and		
Physical Activity Self- Assessment for Child		
Care environmental scan		
Healthy Kids, Resource Center		
Healthy Kids Festival		
Healthy Kids, Healthy Schools	Clark, Lincoln,	SNAP-Ed, County, Chefs for Kids
<ul> <li>Direct Education - Pick a better shack IM</li> <li>Nutrition Dramation with Objet Overview</li> </ul>	Vvashoe, Lyon,	
Nutrition Promotion with Cher Suzy	Counting, Storey	
School Wellness Policy Support	Counties, and	
SPAN-ET Assessments	Oliste	
Healthy Steps to Freedom	Clark	County
Direct Education		
Recovery Center Development (PSE)		
Heart & Shield Family Violence Prevention	ЕІКО	
Program'	Olarik, Linaalu	
	Washoe	SINAP-EO
Radon Education Program	Statewide	EPA / NV Division of Public and Behavioral Health
CATCH (formerly Small Steps 4 Big Changes)	Washoe	SNAP-Ed
Youth Horticulture Education Program <sup>1</sup>	Clark	County

Table 1 – University of Nevada, Reno Extension Health and Nutrition Programs, 2020.

<sup>1</sup>Program is not housed in the Health and Nutrition Department but includes health and nutrition education.

<sup>2</sup>Program is delivered by outside provider but is part of a larger partnership that includes Extension. <sup>3</sup>Programs are delivered by both Extension and in partnership with an outside provider.

	County Offered	Provider Name					
Re-Think Your Drink (Indirect	Carson City, Churchill, Douglas,	University of Nevada Reno,					
education & PSE); this program is	Elko, Esmeralda, Eureka,	College of Agriculture,					
not listed under Extension since	Humboldt, Lander, Lincoln,	Biotechnology, and Natural					
funding goes to the college and	Lyon, Mineral, Nye, Pershing,	Resources, Department of					
not to individual counties.	Storey, Washoe, White Pine	Nutrition & Dietetics					
Baby First Services	Clark	HELP of Southern Nevada					
Healthy Habits Smart\$hop	Clark	HELP of Southern Nevada					
Expansion of Clark County School	Clark	Southern Nevada Health District					
District Active Transportation		(SNHD)					
Programs (Safe Routes to							
Schools and Walk and Roll							
Program)							
Slam Dunk Health Challenge	Clark	SNHD					
School Wellness Social Media	Clark	SNHD					
Campaign							
Wolf Pack Coaches Challenge	Washoe	Washoe County Health District					
		(WCHD)					
Parks Utilization Project PSE	Washoe	WCHD					
Community Nutrition Education	Lyon, tribal focused	Yerington Paiute Tribe					
Program for Children (includes		Ũ					
physical activity)							
Community Nutrition Education	Lvon. tribal focused	Yerington Paiute Tribe					
Program for Adults at Food Bank		5					
Smart \$hopper for adults (AKA	Washoe	Food Bank of Northern Nevada					
Eating Smart, Be Active)		Washoe (FBNN)					
Healthy Pantry Initiative	Washoe	FBNN					
Seniors Eating Well	Washoe	FBNN					
Community Wellness	Nye	NyE Communities Coalition					
Collaborative	NyC	(NyECC)					
Cooking Matters	Clark Nye	(NyECC)					
Cooking Matters	Clark, Nye						
Childhood Obacity Awarapass	Statowida	Office of Food Security Obesity					
Month Social Modia Campaign	Statewide	Brovention and Central Brogram					
	Statowida						
Early Childhood Obesity	Statewide	Office of Food Security Obesity					
Compains		Prevention and Control Program					
	Lassa Nisa						
School Gardens Programs	Lyon, Nye	Healthy Communities Coalition of					
		Lyon and Storey Countles (HCC)					
		& NyECC					
Healthy School Lunch Program	Lyon	HCC					
Community Gardens and Farmers	Lyon	HCC					
Markets Policy, Systems, and							
Environmental (PSE)							
Grocery Store Tours	Nye	NyECC					
Cooking Classes for Middle	Nye	NyECC					
School students							

#### Table 2 – SNAP-Ed Programs Conducted by Other Providers in Nevada, 2020.

SNAP-Ed programming changes every year, as the state submits its plan annually to the federal government. However, two-year plans are now required effective fiscal year 2021. Additionally, the state implemented a request for proposals seeking to add new implementing agencies, creating the potential for a smaller amount of funding for Extension programs. It is imperative for Extension to continue to provide the highest

quality of evidence-based programs and evaluation, with a wide reach. Extension has the advantage of having offices in every county. However, support from Extension educators is essential to bring new health and nutrition programs to counties that lack these needed services. Extension educators without nutrition expertise or additional capacity to provide this type of programming should be able to rely on Extension health and nutrition specialists to help them meet the health-related needs of the residents in their counties. The vitality of a community should take into consideration multiple factors, and it is a disservice to ignore health and nutrition needs simply because a community lacks expertise or capacity when other resources exist to help fill this essential need.

It is well-recognized within public health that quality of life and health outcomes are influenced by factors such as economic stability, neighborhood and built environment, health care access and quality, social and community context, and education access and quality. These factors are known as the social determinants of health, Figure 2 (U.S. Department of Health and Human Services [DHHS], 2020). Recognizing that the mission of Extension is *"to discover, develop, disseminate, preserve and use knowledge to strengthen the social, economic and environmental well-being of people,"* Extension should have the capacity to make impacts on the social determinants of health. Thus, all Extension staff and programs have potential to improve health outcomes whether through the delivery of health and nutrition programs or through community or economic development, youth development, agriculture or horticulture programs, and other Extension programming.



#### Figure 2 – Social Determinants of Health.

During the spring of 2019, Health and Nutrition Program faculty emailed a survey to Extension educators to gage interest in bringing new or additional health- nutrition- and physical activity-related programming to counties outside of the urban setting of Clark County. The Survey Monkey questions asked about existing programming, coalitions, policy, systems, and environmental change work; populations served; level of interest in bringing health programming to county; and perception of greatest local need related to health and nutrition. Extension educators were given the option to forward the survey to others if they deemed someone else should fill it out. The responses to the survey are included in Table 3, 2019 Nevada Needs Assessment Survey.

			-		-				-
	Elko	Carson City/ Storey	Washoe <sup>1</sup>	Douglas	White Pine	Humboldt	Pershing <sup>1</sup>	Nye <sup>1</sup>	Lyon <sup>1</sup>
Programs Already in Place									
Existing Nutrition or Physical Activity (PA) Programs	Х	Х	Х	Х	Х			Х	Х
Existing Health Coalition	Х	X <sup>2</sup>	Х	X <sup>2</sup>	<b>X</b> <sup>2</sup>	X <sup>2</sup>		Х	Х
Policy, Systems, Environmental Efforts in Progress	Х	Х	Х			?	Х	Х	Х
Populations Served:									
Early Childhood	Х							Х	
Elementary School Age	Х		Х				Х	Х	Х
Middle School	Х		Х				Х	Х	
High School	Х						Х	Х	
Adults	Х		Х					Х	Х
Women	Х							Х	
Seniors		Х			Х			Х	
Level of Participation Desired									
Active – teaching or supervising an instructor	Х	Х	Х		Х		Х	Х	Х
Partner – work to support someone in the	Х	Х	Х	Х	Х				
community to deliver the program									
Areas of Concern in County						1		<b>.</b>	
Needs Assessment in Progress		Х		Х					
Food Insecurity/Low Access to Healthy Food	X <sup>3</sup>							<b>X</b> <sup>3</sup>	X <sup>3</sup>
Lack of Programming	X <sup>3</sup>								
Child Obesity			<b>X</b> <sup>3</sup>						
Inactivity/Limited Opportunities for PA			<b>X</b> <sup>3</sup>				<b>X</b> <sup>3</sup>	<b>X</b> <sup>3</sup>	
Excessive Screen Time						<b>X</b> <sup>3</sup>			
Food Waste			<b>X</b> <sup>3</sup>						
Diabetes					Х				
Poverty					Х			Х	
Isolation					Х				
Substance Abuse					Х				
Lack of Parental Involvement						Х			
Healthy Diet or Nutrition							X <sup>3</sup>		X <sup>3</sup>
Weight Management							X <sup>3</sup>		
School Overcrowding								Х	

Table 3 - 2019	) Nevada	Needs	Assessment	Survey.
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<sup>1</sup>Respondent was someone other than county Extension educator.

<sup>2</sup>Coalition exists, but Extension is not an active partner nor attends meetings.

<sup>3</sup>SNAP-Ed has resources to help address these issues.

Eleven emails were sent out to the Extension educators in Nevada, and there were no educators assigned to Lincoln, Lyon and Nye Counties at the time. Nine responses reflecting the counties listed on the survey were recorded from five educators, three Extension staff members, and one county coalition partner. Responses were not received from the Mesquite office in Clark, Eureka, and Mineral Counties.

With respect to programs already in place, survey responses indicated most counties were providing some type of nutrition or physical activity programming, with the exception of Humboldt and Pershing Counties. Nine counties were reported as having a health coalition, however Extension was not represented in coalitions within Douglas, Carson/Storey, White Pine, Humboldt and Nye Counties. All responding educators except for one expressed interest for support or adding or expanding health and nutrition programs in their county.

Policy, systems and environmental (PSE) change efforts were underway in six counties, and the status for Humboldt County was unknown. The term PSE refers to strategies that change the context to help make the healthy choice the easy choice. Policy changes are written changes to policies, while systems change affects the way business is conducted. Systems changes may modify or create an infrastructure or accompany a policy change, and environmental changes alter the physical, social or economic environments (Food Trust, 2012). As a starting point, a needs assessment using an environmental scan or similar tool should be conducted to determine the types of PSE changes that would help a community improve access to healthy food and physical activity. Ideally, PSE changes will be sustainable in the long term so that healthy behaviors may be supported even after grant funding is exhausted.

Some opportunities to provide programming based on the survey responses include participating in health coalitions, conducting scans to develop a PSE change plan to increase access to healthy food and physical activity opportunities, connecting people dealing with food insecurity with SNAP outreach efforts, and nutrition education. Coalitions that focus on health provide an excellent venue to network with others and collaborate on efforts that favor healthy communities, and often include members from disciplines outside of the health field. There are a variety of approved curricula, environmental scans, and activities for different audiences and different settings available in the SNAP-Ed Toolkit that would address many of the concerns shared in the survey. Activities may be included in a SNAP-Ed plan when they are part of an approved intervention. Since SNAP-Ed interventions focus on primary prevention – *preventing injury or disease onset* – the self-management of diabetes and substance use disorder would need to be addressed using different resources.

#### **Target Population**

SNAP-Ed programming is targeted to people who are eligible to receive SNAP benefits and must meet limits on gross monthly income, net income and assets (Center on Budget and Policy Priorities, 2016). Additionally, Nevada's priority populations include women, children and seniors. When considering potential sites for program delivery, some locations provide a high likelihood that the majority of people present will include SNAP-eligible people, such as public housing sites, welfare offices, food banks and jobtraining programs specifically designed for these populations. Other locations may also be suitable because they serve low-income people such as Women, Infants, and Children clinics, Title I schools, Head Start centers, etc. The SNAP-Ed guiding principles state that people with an income less than or equal to 185% of Federal Poverty guidelines may be eligible for federal assistance, such as those listed on Table 4. The implementing agency needs to be able to show that more than or equal to 50% of the people served by their chosen locations for SNAP-Ed programming are SNAPeligible (USDA, 2019c).

2017	Under 5 Years	5 - 17 Years	18 - 64 Years	65 Years and Over	Total Share of State	Total Below Poverty Threshold	Total Population	% of Population Below Poverty
	Number	Number	Number	Number	%	Number	Number	%
Carson City	877	1,649	4,282	890	1.90%	7,698	52,245	14.7%
Churchill	107	738	1,895	505	0.80%	3,245	23,519	13.8%
Clark	31,653	72,356	175,584	24,856	75.12%	304,449	2,085,154	14.6%
Douglas	348	785	2,878	636	1.15%	4,647	47,298	9.8%
Elko	909	1,435	3,078	509	1.46%	5,931	51,609	11.5%
Esmeralda	0	18	26	31	0.02%	75	1,097	6.8%
Eureka	0	0	46	127	0.04%	173	1,723	10.0%
Humboldt	201	250	927	157	0.38%	1,535	16,853	9.1%
Lander	197	163	311	98	0.19%	769	5,845	13.2%
Lincoln	44	199	300	25	0.14%	568	4,696	12.1%
Lyon	545	1,553	4,303	747	1.76%	7,148	52,030	13.7%
Mineral	93	283	412	106	0.22%	894	4,399	20.3%
Nye	422	1,527	4,157	1,282	1.82%	7,388	42,757	17.3%
Pershing	71	183	309	146	0.17%	709	4,714	15.0%
Storey	19	57	197	27	0.07%	300	3,877	7.7%
Washoe	5,059	11,495	36,941	5,147	14.47%	58,642	440,168	13.3%
White Pine	89	343	549	111	0.27%	1,092	8,381	13.0%
Nevada	40,634	93,034	236,195	35,400	8.7%	405,263	2,846,365	14.2%
US	4,390,252	10,320,233	26,622,668	4,317,192	9.5%	45,650,345	313,048,563	14.6%

Table 4 – Summa	y of Poverty	by Age	(Percent at or Be	elow Poverty	y Threshold).
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Note: County percentages are out of total number in Nevada. Source: (U.S. Census Bureau, 2019). American Fact Finder. "S1701 Poverty Status in the Past 12 Months" 2012-2017 American Community Surveys. US Census Bureau's American Community Survey Office, 2017.

Not surprisingly, nearly 90% of people with incomes at or below poverty are located in Clark and Washoe Counties. However, there are several counties with thousands of people who may benefit from programming. Many rural counties are sparsely populated thus numbers are low, but a need may exist in those counties if there are no other nutrition education resources available. The three counties with the highest percentages of their population in poverty are Mineral (20.3%), Nye (17.3%) and Pershing (15.0%). Clark County (14.6%). Carson City (14.7%) also have numbers higher than the state average of 14.2%. The percentage of students who are eligible to receive free and reduced-price meals in schools is an indication of income and eligibility to receive SNAP-Ed. During the 2018-2019 academic year, all counties had at least one qualifying school except Eureka and Lander (Table 5). As students move up in grade levels, less of them tend to turn in applications for federal child nutrition programs, even though they may qualify. Programming for schools includes nutrition lessons in the classroom or school garden; environmental scans; and support to implement school wellness policy goals, which includes nutrition promotion and education, physical activity and other school-based activities that promote student wellness (Nevada Department of Agriculture, 2014).



Schools with at least 50% free and reduced student population are eligible to receive SNAP-Ed programming.

County	% Free and Reduced Students	Total FR Students	Number more than or Free and l	Number of FR Students in These Schools		
			Elementary	Middle	High	
Carson City	51.25	4,183	6	2	2	2,044
Churchill	52.01	1,749	4	1	1	1,338
Clark	69.52	226,028	189	48	33	195,202
Douglas	36.28	2,091	1		1	254
Elko	38.14	3,928	4	3	3	1,488
Esmeralda	65.56	45	2			44
Eureka	26.36	82				0
Humboldt	49.10	1,713	4	1	1	887
Lander	37.49	367				0
Lincoln	48.53	447	2	1	1	195
Lyon	52.82	4,802	5	3	3	2,813
Mineral	65.45	372	2	1		316
Nye	90.88	4,783	9	6	6	4,738
Pershing	48.55	336	1			186
Storey	51.11	23	1			23
Washoe	48.79	33,311	39	9	4	19,024
White Pine	40.22	467	1	0	1	75
Nevada	59.7	264,430	256	76	41	241,276

Table 5 – Nevada Schools: Percentage of Free and Reduced (FR) Pre-Kindergarten - 12 Students and Number of Schools by Grade for All Counties, 2018-2019.

Note: Does not include charter schools. When schools include several grade levels, the lowest grade level was selected. For example, if a school included K-12, it was reported under elementary schools. Source: (Nevada Department of Agriculture, 2019) *Free and reduced lunch data*.

#### Secondary Data Related to Nevada's Priority Overall Objectives

The goal of Nevada's SNAP-Ed programming is to improve the likelihood that Nevadans eligible for SNAP will make healthy food choices with a limited budget and choose physically active lifestyles (DWSS, 2016). To help meet that goal, the state has created four priority objectives:

- Assist Nevadans in gaining access to healthy foods and beverage
- Reduce food insecurity through food resource management
- Increase physical activity and decrease sedentary behavior
- Increase daily fruit and vegetable consumption

The federal government requires that each state report outcomes using a specific set of indicators found in the SNAP-Ed's Evaluation Framework.



Nevada's SNAP-Ed logo

There are five population-level outcome indicators that may be used to measure Nevada's progress toward achieving its four priority objectives. Each indicator has associated measures from national-level public health data that may be compared with similar data obtained from Nevada's SNAP-Ed-eligible population. The data from these measures may then be used to assess how well Nevada's SNAP-Ed-eligible population is meeting the Physical Activity and Dietary Guidelines for Americans. Additionally, the indicators help assess the effectiveness of comprehensive programming implemented across multiple levels of the social ecological model.

Since SNAP-Ed also focuses on obesity prevention, obesity rates are relevant. The subsequent pages include tables of secondary data related to the following priority population-level outcome indicators for the state of Nevada:

- Overall diet quality
- Consumption of water, 100 % fruit juice and unhealthy beverages
- Food security
- Physical activity and sedentary behavior
- Daily fruit and vegetable consumption, including subgroups of under consumed vegetables (University of North Carolina Center for Health Promotion and Disease Prevention, 2016)

This secondary data helps provide an understanding of how well Nevada is doing on population-level measures that are priority areas for the State SNAP-Ed Agency.

#### **Overall Diet Quality**

The Healthy Eating Index (HEI) is a measure that assigns a score of 0-100 related to dietary intake. It consists of points assigned for healthy dietary choices made in the adequacy components, including fruits, vegetables, whole grains, dairy, proteins and fatty acids; as well as points for healthy choices made in the moderation components, including refined grains, sodium, added sugars and saturated fats. This measure provides an indication of how well a population follows the recommendations contained in the Dietary Guidelines for Americans. As may be seen in Table 6, U.S. Americans average scores between 54.9 and 65.5, depending on their age group.

		Scores Obtained by Various Age Groups						
Component	Maximum points	All Americans (2+ years)	Children (2-17 years)	Adults (18-64 years)	Older Adults (65+ years)			
Total HEI Score	100	58.9	54.9	58.0	65.5			
Adequacy:								
Total Fruits	5	2.8	3.6	2.4	3.7			
Whole Fruits	5	4.0	4.6	3.5	5.0			
Total Vegetables	5	3.2	2.3	3.3	3.9			
Greens and Beans	5	3.0	1.9	3.2	3.3			
Whole Grains	10	2.8	3.0	2.5	4.0			
Dairy	10	6.5	8.9	5.9	5.9			
Total Protein Foods	5	5.0	4.7	5.0	5.0			
Seafood and Plant Proteins	5	5.0	3.0	5.0	5.0			
Fatty Acids	10	4.3	2.7	4.6	5.0			
Moderation:								
Refined Grains	10	6.2	4.7	6.3	7.6			
Sodium	10	4.0	4.4	3.9	4.0			
Added Sugars	10	6.5	6.1	6.4	7.5			
Saturated Fats	10	5.8	5.1	6.0	5.7			

#### Table 6 – Average Healthy Eating Index (HET) – 2015 Scores for Americans by Age.

Due to rounding, HEI component scores in each age group may not add up precisely to the total HEI score of 100.

Notes: The Healthy Eating Index-2015 (HEI-2015) is a measure of diet quality used to assess how well a set of foods aligns with the 2015-2020 Dietary Guidelines for Americans. The HEI-2015 includes 13 components that can be summed to a maximum total score of 100 points. The components capture the balance among food groups, subgroups, and dietary elements including those to encourage, called adequacy components, and those for which there are limits, called moderation components. For the adequacy components, higher scores reflect higher intakes that meet or exceed the standards. For the moderation components, higher scores reflect lower intakes are more desirable. A higher total score indicates a diet that aligns better with the Dietary Guidelines.

#### Sources:

Data—National Center for Health Statistics, *What We Eat in America/National Health and Nutrition Examination Survey, 2013-2014.* Healthy Eating Index-2015 Scores—U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, access <u>https://www.cnpp.usda.gov</u>.

A limitation of Table 6 (USDA, 2019d) is that it aggregates national data and is not available for Nevada or its counties. However, it provides a good indication of the average score by age group, and further breaks it down by individual components. By comparing each score to the total available score on the left, one can determine which components have the greatest opportunity for improvement. For example, among children ages 2-17 years, the total score for fruits, vegetables, beans and greens may be determined by adding 3.6 + 4.6 + 2.3 + 1.9 = 12.4 out of a possible 20 points, indicating plenty of room for improvement with respect to fruits and vegetables.

A potential source of Nevada-specific HEI data is the Expanded Food and Nutrition Program (EFNEP). Instructors collect two days of dietary recall data from EFNEP class participants in a similar manner as the data that is used to determine national HEI scores. This dietary information is entered into a data collection platform known as the Web-Based Nutrition Education Evaluation and Reporting System (WebNEERS), which then calculates HEI scores for each EFNEP participant. EFNEP is an Extension program based in Clark County serving eligible middle school students and mothers. Coordination between EFNEP and SNAP-Ed programs would maximize resources, reduce duplication, and provide valuable additional data to help Extension better serve the state. The EFNEP HEI scores and other measurable outcomes should be shared with Extension SNAP-Ed to provide a more comprehensive assessment of dietary quality and other behaviors of interest among SNAP-eligible Nevadans. The measures for this SNAP-Ed indicator focus on reporting mean HEIs, changes of HEIs over time, and the proportion of people in the lowest category of Healthy Eating Index Scores.

#### Consumption of Water, 100-Percent Fruit Juice, and Unhealthy Beverages

This indicator may be assessed by comparing SNAP-Ed participants' outcomes to existing data sources, such as the Youth Risk Behavior Survey (YRBS), the Kindergarten Health Survey, or the Behavioral Risk Factor Surveillance System (BRFSS) as presented in Tables 7 through 9b.

	National	Total	Female	Male
Did not drink milk	26.6	26.8	34.0	19.8
Drank soda or pop	72.2	70.4	66.4	74.5
Drank a can, bottle or glass of soda or pop is more than or equal to 1 times per day	18.7	15.3	11.4	19.0
Drank a can, bottle or glass of soda or pop is more than or equal to 2 times per day	12.5	9.1	6.1	11.7
Drank a can, bottle or glass of soda or pop is more than or equal to 3 times per day	n/a	5.7	3.4	7.6

Table 7 – Nevada High School Youth Beverage Consumption (YRBS), 2017.

Note: Survey asks about behaviors during past seven days. Data Source: (CDC, 2017b.) *High School Youth Risk Behavior Survey (YRBS).* 

#### Table 8a – Times per Week Kindergartner Drinks Non-diet Soda in Nevada, 2018-2019.

	State %	Clark County %	Washoe County %	Rural Counties %
None	69.7	69.9	69	69.2
A few times	23.5	23.1	24.1	25.2
Once a day	4.7	4.9	4.6	3.6
More than once a day	2.1	2.1	2.3	2.1

Data Source: (Nevada Institute for Children's Research and Policy, 2019) Kindergarten Health Survey.

#### Table 8b – Times per Week Kindergartner Drinks Juice in Nevada, 2018-2019.

	State %	Clark County %	Washoe County %	Rural Counties %
None	12.3	11.6	15.4	12.7
A few times	41.7	40.4	45.4	44.7
Once a day	28.5	29.2	25.8	27.4
More than once a day	17.5	18.9	13.4	15.2

Data Source: (Nevada Institute for Children's Research and Policy, 2018) Kindergarten Health Survey.

Nevada's youth appear to have better beverage consumption habits as compared to national data (Tables 7, 8a) with respect to sugar-sweetened beverages, but are below national numbers with respect to milk consumption. One-third of high school girls do not drink milk on a daily basis at a time when building bone mass is crucial. Nearly three out of four youth in Nevada reported drinking a soda or pop on a daily basis, thus the prevalence of daily sugar-sweetened beverages consumption is high. Beverages contribute 20% of the daily calories in an average child's diet and should consist of the most nutritious beverages, rather than sugary high-calorie beverages. Nearly one in five kindergarteners consume juice more often than once per day, and the maximum consumption recommendation from the American Academy of Pediatrics (AAP) for children 4-6 years of age is no more than 4-6 ounces per day (Heyman & Abrams, 2017). To help influence beverage consumption in a positive direction, the CDC recommends multi-level community-based strategies employed through various settings and methods targeted to youth and their parents (Miller et al., 2017).

 Table 9a – Prevalence of Regular Soda or Fruit Drink Consumption Among Adults for Nevada, 2012.

	Consumption of regular Soda, Fruit Drinks or Both (%)			Regular	Regular Soda Consumption (%)			Fruit Drink Consumption (%)			
	None	Less than 1/day	More than or equal to 1/day	None	Less than 1/day	More than or equal to 1/day	None	Less than 1/day	More than or equal to 1/day		
Nevada	23.2	40.5	36.3	36.9	39.2	23.9	48.7	32.7	18.7		
Overall	28.5	45.2	26.3	41.6	41.3	17.1	52.8	35.6	11.6		

Note: Data from 2012 Behavioral Risk Factor Surveillance System (BRFSS) optional module; survey asks about behaviors during past 30 days. Data Source: (Kumar et al., 2014) *Sugar-Sweetened Beverage Consumption Among Adults — 18 States, 2012* 

Table 9b – Prevalence of Consumption of Regular Soda or Fruit drinks more than
or equal to 1 time/day Among Adults, by Age Group, Sex, Race/Ethnicity, Nevada,
2012.

	Ag	ge Group (%	%)	Sex (%)		Race/Ethnicity (%)			
	18-34	35-54	55+	Men	Women	White	Black	Hispanic	Other
	F	Regular Soc	da (i.e., nor	n diet) more	e than or ec	jual to 1 Tii	mes per Da	аy	
Nevada	31.3	24.8	16.8	29.2	18.8	21.1	30.2	32.2	15.5
Overall	24.5	17.6	10.2	21	13.5	15.7	20.9	22.6	10.7
Fruit Drinks more than or equal to 1 Times per Day									
Nevada	26.6	18.8	12.1	20	17.4	11.5	28.7	33.8	15.5
Overall	16.6	11.0	7.8	12.3	10.9	8.1	21.9	18.5	8.1

Note: Data from 2012 BRFSS optional module; survey asks about behaviors during past 30 days. Data Source: (Kumar et al., 2014) *Sugar-Sweetened Beverage Consumption Among Adults — 18 States, 2012.* 

In 2012, daily sugar sweetened beverage (SSB) consumption among Nevada's adults was higher as compared to national levels. This is also true when looking at the data across all age groups, gender and race/ethnicity, but daily fruit drink consumption was nearly double that of the national consumption for Hispanics and other races/ethnicities not black or white. The module containing questions related to beverage intake is optional in the Behavioral Risk Factor Surveillance System (BRFSS) used to collect

adult data (Centers for Disease Control and Prevention, 2019a). Thus, if progress on this indicator is to be measured, it is important to request that the Nevada Division of Public and Behavioral Health include this module in the state BRFSS.

### **Food Security Status**

Food security is a measure to determine access to sufficient, safe and nutritious food to meet the dietary needs and food preferences for an active and healthy life. Among SNAP-Ed-eligible people, this indicator may be assessed by comparing food insecurity classifications, such as: Very Low Food Security, Low Food Security, or Marginal Food Security. The USDA measures food security using the *Guide to Measuring Household Food Security (Revised 2000)* (USDA, 2017). Feeding America provides annual county level estimates of food insecurity rates using Current Population Survey and Bureau of Labor Statistics data (2019), as shown in Table 10.

County	Population	Food Insecurity Rate	Estimated Number of Food Insecure Individuals	% Below 200% Poverty	% Above 200% Poverty
Carson City	54,219	12.4%	6,740	77%	23%
Churchill	24,022	12.7%	3,040	69%	31%
Clark	2,112,436	12.6%	265,720	78%	22%
Douglas	47,632	11.0%	5,250	58%	42%
Elko	52,377	8.7%	4,550	63%	37%
Esmeralda	1,102	11.1%	120	100%	0%
Eureka	1,728	11.5%	200	48%	52%
Humboldt	17,088	7.6%	1,300	75%	26%
Lander	5,887	7.9%	470	63%	37%
Lincoln	5,203	12.5%	650	60%	40%
Lyon	52,303	12.3%	6,410	73%	27%
Mineral	4,471	15.1%	670	70%	30%
Nye	43,296	14.1%	6,120	77%	23%
Pershing	6,661	11.1%	740	57%	43%
Storey	3,891	10.2%	400	59%	41%
Washoe	445,551	11.2%	49,690	73%	28%
White Pine	9,858	10.8%	1,070	62%	38%
Nevada	2,940,058	12.7%	372,820	76.0%	24.0%

 Table 10 – Overall Food Insecurity in Nevada by County, 2017.

Source: (Feeding America Research, 2019) Map the Meal Gap.

Humboldt and Lander Counties are among the counties with with the lowest levels of food insecurity, while Mineral and Nye Counties have the highest percentages in the state. Food insecurity rates may reflect high unemployment, poverty, limited neighborhood access to food and limited transportation to obtain food, among other

factors. People affected by food insecurity tend to have poorer health outcomes, and for children, may result in developmental problems. Federal food assistance programs may help reduce food insecurity (U.S. DHHS, Office of Disease Prevention and Health Promotion, 2020).

#### **Physical Activity and Sedentary Behavior**

The inclusion of physical activity in state SNAP-Ed plans was authorized in the 2014 Farm Bill, which formally acknowledged the contribution of physical activity to good overall health and obesity prevention. State-level data is presented by county prevalence for adults (Table 11) and age group or income level for adults (Table 12a and12b); while high school data exists by gender (Table 13), and kindergartener data is reported using time as a measure (Tables 14 and 15). The American College of Sports Medicine Fitness Index (Table 16) ranks America's 100 largest cities on a composite of health behaviors, health outcomes, community infrastructure and local policies that support a physically active lifestyle and may help prioritize policy, systems and environmental changes.

Region/ County					_	_			_	_	_
Region/ County	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	10 Year Average
Rural and Frontier											
Churchill	21.8	24.6	25.4	27.2	26.2	24.6	24.3	23.4	23.5	24.0	24.5
Douglas	15.9	16.2	16.7	17.8	16.7	15.9	16.0	17.0	15.8	17.6	16.6
Elko	24.9	26.3	24.5	24.4	21.1	20.1	20.9	21.4	23.1	21.1	22.8
Esmeralda	23.8	26.2	25.9	25.5	24.5	24.3	23.9	22.3	19.5	20.9	23.7
Eureka	24.4	26.4	26.0	26.3	24.9	23.3	23.3	21.2	19.3	19.0	23.4
Humboldt	22.6	26.4	26.0	24.8	21.5	20.2	20.5	20.9	21.2	19.9	22.4
Lander	23.3	23.6	22.7	24.8	23.6	20.8	22.3	21.2	19.7	17.7	22.0
Lincoln	22.3	24.6	25.7	26.0	22.7	22.3	21.7	24.8	22.4	22.5	23.5
Lyon	21.1	23.5	24.1	26.5	25.9	24.8	27.6	26.9	26.5	21.9	24.9
Mineral	27.7	27.1	27.7	30.4	30.5	28.4	26.6	24.7	23.5	23.5	27.0
Nye	27.7	30.1	28.5	31.3	29.2	28.3	29.4	29.7	27.7	25.3	28.7
Pershing	22.0	26.5	24.5	25.6	22.4	20.8	23.1	22.5	22.0	19.5	22.9
Storey	19.4	20.1	20.6	23.2	24.6	23.9	23.9	22.9	21.2	20.5	22.0
White Pine	23.6	23.7	22.6	24.7	26.1	23.9	26.0	24.2	23.7	19.4	23.8
Urban											
Carson City	21.0	22.4	21.3	20.7	18.7	17.9	17.4	17.2	18.2	19.5	19.4
Clark	23.6	24.6	25.1	25.4	23.7	21.7	21.7	21.6	22.8	22.1	23.2
Washoe	17.3	17.4	16.9	17.4	16.1	15.7	16.1	16.0	16.4	16.3	16.6
Nevada	22.4	23.4	23.4	24.4	22.4	21.3	22.4	21.3	23.7	22.6	22.7

Table 11 – Physical Activity Prevalence in Nevada by County, 2006-2015.

Note: Sub-header was removed because it was incorrect in source, and the source has been notified about mistake. It should read, *Percent of Adult Population Who Are Physically Active*. Data Source: (University of Nevada, Reno School of Medicine, 2019) *Nevada Rural and Frontier Health Data Book - Ninth Edition*.

For comparison, the national average was 23.2% for adults aged 18 and over who met the Physical Activity Guidelines for both aerobic and muscle-strengthening activities

(U.S. DHHS National Center for Health Statistics, 2019). Douglas, Washoe and Lander Counties have the lowest prevalence, while Mineral, Nye and Churchill Counties have the highest prevalence. Regardless, the prevalence of meeting physical activity guidelines among Nevada adults is very low and presents an opportunity for improvement.

	Less Than \$15,000	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000+
More than or equal to_150 mins/week aerobic activity	41.0	41.2	42.5	46.9	52.8
Participation in PA in past month	66.3	66.2	63.1	74.5	77.5
Muscle strengthening more than or equal to 2 times/week	25.1	24.7	18.8	37.3	37.6
Met guidelines	16.6	15.5	11.8	18.2	24.5
Less than 150 mins/week aerobic activity	59.0	58.8	57.5	53.1	47.2
No participation in PA over past month	33.7	33.8	37.0	25.5	22.5
Muscle strengthening less than 2 times/week	74.9	75.3	81.2	62.7	62.4
Did not meet PA guidelines	83.4	84.5	88.2	81.8	75.5

Table 12a – Adult Physical Activity (PA) by Income for Nevada, 2017.

Data Source: CDC, 2017a. Nevada Behavioral Risk Factor Surveillance System (BRFSS).

#### Table 12b – Adult Physical Activity (PA) by Age Group for Nevada, 2017.

					- / -	
	18-24	25-34	35-44	45-54	55-64	65+
More than or equal to 150 mins/week aerobic activity	49.3	44.6	43.3	43.7	52.8	49.1
Participation in PA in past month	77.3	77.6	71.1	68.8	73.0	66.6
Muscle strengthening more than or equal to 2 times/week	42.2	42.7	31.6	27.4	23.6	24.6
Met guidelines	23.0	24.4	19.8	16.4	17.0	17.4
Less than150 minutes/week aerobic activity	50.7	55.4	56.7	56.3	47.2	50.9
No participation in PA past month	22.7	22.4	28.9	31.2	27.0	33.4
Muscle strengthening less than 2 times/week	57.8	57.3	68.4	72.6	76.4	75.4
Did not meet PA guidelines	77.0	75.6	80.2	83.6	83.0	82.6

Data Source: CDC, 2017a. Nevada Behavioral Risk Factor Surveillance System (BRFSS).

Tables 12a and 12b contrast adults that meet elements of physical activity guidelines with those who do not, comparing them by income and age group. The data indicates that as income levels increase, physical activity levels increase and vice versa, however, those with incomes between \$25,000 and \$34,999, and adults between the ages of 45 and 54, report the lowest percentages of meeting physical activity guidelines.

	Total	Female	Male
Played video or computer games or used a computer for more than or equal	36.7	36.7	36.9
to 3 hours per day*			
Watched television 3 or more hours per day*	22.1	22.1	22.2
Were not physically active for a total of at least 60 minutes on at least 1 day	14.9	17.6	12.3
Were not physically active at least 60 minutes per day on 5 or more days	53.6	62.7	45.3
Were not physically active at least 60 minutes per day on all 7 days	75.1	81.6	68.9
Did not go to physical education (PE) classes on 1 or more days	44.6	52.2	37.6
Did not go to physical education (PE) classes on all 5 days	71.6	74.9	68.3
Did not play on at least one sports team	52.7	57.8	47.8

#### Table 13 – Nevada High School Youth Physical Activity Behaviors, 2017.

\*Indicates data from 2015 YRBS; survey asks about behaviors during past seven days. Data Source: (CDC, 2017b) *High School Youth Risk Behavior Survey (YRBS).* 

High school data indicates there is no difference between genders for sedentary behavior. However, there is a clear difference with respect to participation in physical activity, with females reporting much higher numbers of inactivity. Additionally, females participated less than males in physical education and team sports, missing opportunities to increase physical activity levels and improve physical fitness.

Table 14 – Days	per Week Kindergartner Had	d More Than or Equa	I to 60 Minutes
<b>Physical Activity</b>	y in Nevada, 2017-2018.		

	State %	Clark County %	Washoe County %	<b>Rural Counties %</b>
None	1.2	1.4	0.7	0.6
1 day	1.9	2.3	1.0	0.9
2 days	6.4	7.5	3.9	3.0
3 days	11.6	13.1	8.9	6.3
4 days	11.7	12.4	10.4	9.6
5 days	19.6	20.6	17.6	15.9
6 days	8.6	8.2	9.2	10.1
7 days	39.0	34.6	48.3	53.8

Data Source: (Nevada Institute for Children's Research and Policy, 2019) Kindergarten Health Survey.

Table 15 – Hours Kindergartner	<sup>•</sup> Spends in Sedentary	Activity on an	<b>Average Day</b>
in Nevada, 2018-2019.			

	State	<b>e</b> %	Clark Co	ounty %	Washoe County %		Rural Counties	
	TV	Games	TV	Games	TV	Games	TV	Games
None	2.7	28.5	2.7	27.4	2.8	28.8	2.2	35.3
Less than one	14.3	22.5	14.1	21.7	13.2	23.6	17.4	26.0
1 hour	32.4	26.5	32.6	27.4	30.9	25.9	33.0	22.0
2 hours	32.9	14.7	32.7	15.3	34.6	14.5	32.1	11.5
3 hours	12.8	5.1	13.0	5.4	13.3	4.7	11.1	3.9
4 hours	3.2	1.5	3.2	1.7	3.3	1.5	3.0	0.8
5 hours or more	1.7	1.0	1.8	1.1	1.8	1.0	1.2	0.5

Data Source: (Nevada Institute for Children's Research and Policy, 2019) Kindergarten Health Survey.

Tables 14 shows that less than half of the state's kindergarteners in Washoe and Clark counties are achieving the recommended 60 minutes (one hour) or more of moderate-to-vigorous physical activity every day. The shaded areas in both tables indicate areas for improvement. As Table 15 demonstrates, more than half of Washoe and Clark

County's kindergarteners exceed the recommendations to limit sedentary screen time to two hours or less.

Table 16 - American College of Sports Medicine Fitness Index for North Las
Vegas, Reno, Henderson and Las Vegas, 2019 Rankings.

Indicator	Highest	North	Reno	Hender-	Las
	Ŭ.S.	Las		son	Vegas
	City	Vegas			-
Overall rank with 1 being best out of 100 cities	1	92	48	73	63
Overall score between 1 (low) and 100 (high)	77.7	34.0	50.0	42.4	45.1
Personal health rank	1	69	36	69	69
Personal health score	86.8	38.0	55.7	38.0	38.0
% exercising in last 30 days	90.9	74.8	78.2	74.8	74.8
% meeting aerobic activity guidelines	63.9	52.8	61.0	52.8	52.8
% meeting aerobic & strength activity guidelines	31.4	24.1	28.5	24.1	24.1
% consuming 2+ fruits/day	38.9	24.1	35.8	24.1	24.1
% consuming 3+ vegetables/day	27.5	16.8	21.5	16.8	16.8
% getting 7+ hours of sleep/day	74.3	60.8	67.8	60.8	60.8
% smoking	5.9	15.9	15.3	15.9	15.9
% with obesity	15.0	24.7	26.4	24.7	24.7
% in excellent or very good health	63.9	45.3	47.8	45.3	45.3
% physical health not good during past 30 days	22.4	35.8	40.8	35.8	35.8
% mental health not good during past 30 days	23.7	36.2	39.9	36.2	36.2
% with asthma	2.4	7.9	8.5	7.9	7.9
% with high blood pressure	18.5	26.7	32.4	26.7	26.7
% with angina or coronary heart disease	1.3	4.5	4.0	4.5	4.5
% with stroke	0.7	3.2	2.7	3.2	3.2
% with diabetes	4.8	11.4	9.9	11.4	11.4
Community/ environment rank	1	95	64	55	42
Community/ environment score	81.3	29.4	43.5	47.3	53.2
Parkland as % of city	84.20%	26.2	5.4	13.4	19.2
Acres of parkland/1,000 people	2,992.9	70.5	13.9	32.6	26.6
Farmers markets/1,000,000 people	85.1	4.2	24.5	3.4	6.3
% using public transportation to work	56.60%	1.9	3.1	1.0	3.9
% bicycling or walking to work	18.30%	0.7	4.6	0.9	1.7
Walk Score®	89.2	33.2	37.6	29.6	41.1
% within a 10-minute walk to a park	98.70%	57.9	71.1	49.3	69.7
Ball diamonds/10,000 people	5.4	0.5	2.0	2.1	0.8
Dog parks/100,000 people	6.8	0.0	0.8	5.3	4.1
Park playgrounds/10,000 people	7.1	2.4	2.1	3.1	2.9
Basketball hoops/10,000 people	9.8	2.1	3.9	3.6	1.3
Park units/10,000 people	11.6	2.1	4.7	2.3	8.2
Recreational centers/20,000 people	2.9	0.2	0.3	0.6	0.8
Swimming pools/100,000 people	10.9	1.7	1.6	4.6	1.9
Tennis courts/10,000 people	6.1	0.5	1.9	2.3	1.1
Park expenditure/resident (adjusted)	\$590	\$49	\$49	\$106	\$109
Physical education requirement	3	1	1	1	1

Data Source: (American College of Sports Medicine, 2019) American Fitness Index Rankings.

Table 16 lists the four cities from Nevada that were included in the ranking of America's 100 largest cities compared to the number one ranked city of Arlington, Virginia. Of interest are the community and environmental indicators that support healthy behaviors

related to diet and physical activity. The score for number of farmers markets per 1 million people is substantially lower than the score of 85.1 in America's top city; in southern Nevada it ranged from 3.4 in Henderson to 6.3 in Las Vegas, while for Reno it was 24.5. The percentage of residents using public transportation to work was lower than the score of 56.6 in the number 1 city; in southern Nevada it ranged from 1.0 in Henderson to 3.9 in Las Vegas, and for Reno it was 3.1. The percentage of residents bicycling or walking to work was lower than the score of 18.3 in Arlington; in southern Nevada it ranged from 0.7 in North Las Vegas to 1.7 in Las Vegas, and for Reno it was 4.6. These scores suggest opportunities for policy, systems, or environmental changes.

#### **Daily Fruit and Vegetable Consumption**

Fruit and vegetable intake remain below dietary recommendations across the nation and in Nevada, as indicated by Tables 17a and 18. This is an area of concern because these foods provide essential nutrients and help prevent or reduce the risk of developing chronic disease and obesity. There are many things that may be done in communities to help increase access to and affordability of fruits and vegetables. For example, the CDC State Indicator Report on Fruit and Vegetable for Nevada, 2018 lists indicators related to policies or systems that can help improve access to fruits and vegetables for different groups. The indicators shown below are broken down into three categories, including individuals and families, children, and food system support.

Individuals and Families	<u>Children</u>	Food System Support
Number of farmers	State Farm-to-School or Farm-to-	State food policy
markets per 100,000	Early Childhood Education (ECE)	council, 2018
residents, 2017	Policy, 2002-2017	Yes
1.3	Yes	Number of local food
Percentage of farmers	State ECE licensing regulations	policy councils, 2018
markets accepting WIC	align with national standards for	2
Farmers Market Nutrition	fruits and vegetables, 2016	Number of food hubs,
Program (FMNP), 2017	Νο	2017
7.5	Percent school districts	1
State policy on food	participating in Farm-to-School,	
service guidelines, 2014	2014	
Νο	22.2	
	Percent of middle and high	
	schools offering salad bars, 2016	
	23.3	

#### Table 17a – Adult Fruit and Vegetable Consumption by Income for Nevada, 2017.

	Less Than \$15,000	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000+
Vegetables more than or equal to 1 time/day	68.6	68.5	69.5	80.1	85.7
Fruit more than or equal to 1 time/day	69.6	61.1	57.6	60.5	63.6
Vegetables less than 1 time/day	31.4	31.5	30.6	20.0	14.3
Fruit less than 1 time/day	30.4	38.9	42.4	39.6	36.4

Data Source: (CDC, 2017a) Nevada Behavioral Risk Factor Surveillance System (BRFSS).

	- J				, -	
	18-24	25-34	35-44	45-54	55-64	65+
Vegetables more than or equal to 1 time/day	75.0	77.3	78.1	78.0	82.2	76.4
Fruit more than or equal to 1 time/day	55.7	65.4	65.6	58.2	62.2	64.5
Vegetables less than 1 time/day	25.0	22.7	22.0	22.0	17.8	23.6
Fruit less than 1 time/day	44.4	34.6	34.4	41.8	37.9	35.5

#### Table 17b – Adult Fruit and Vegetable Consumption by Age for Nevada, 2017.

Data Source: (CDC, 2017a) Nevada Behavioral Risk Factor Surveillance System (BRFSS).

Table 17a clearly shows that consumption of fruits and vegetables is higher as income levels increase. Table 17b shows that the youngest group, 18-24 years of age, had the lowest reported intake of all age groups in Nevada.

#### Table 18 – Nevada High School Youth Risk Behavior Survey, 2017.

	Total	Female	Male
Did not eat fruit or drink 100% fruit juices	7.5	6.9	8.1
Did not eat vegetables*	7.2	5.2	8.8

\*Data from 2015 YRBS; survey asks about behaviors during past seven days. Data Source: (CDC, 2017b) *High School Youth Risk Behavior Survey (YRBS).* 

Table 18 shows that over 7% of Nevada's high school students reported not having either a fruit or a vegetable in the past seven days, with males having the higher prevalence.

#### **Obesity and Other Data That May Be Relevant**

Although obesity is not included explicitly in Nevada's priority objectives, SNAP-Ed is referred to as a USDA Nutrition Education and Obesity Prevention Program in fiscal year 2020. State-level data includes obesity prevalence for kindergartners, high school students and adults (Tables 19 through 22b).

	State %	Clark County %	Washoe County %	<b>Rural Counties %</b>
Underweight	17.2	17.1	18.3	16.0
Healthy	51.2	51.2	50.3	52.7
Overweight	10.7	10.5	11.2	11.2
Obese	20.9	21.2	20.2	20.1

#### Table 19 – Kindergartner's Weight Status in Nevada, 2018-2019.

Data Source: (Nevada Institute for Children's Research and Policy, 2019) Kindergarten Health Survey.



### Figure 3 – Child's Weight Category by Number of Juice Drinks Consumed in a Week, 2018-2019 n = 12,670

*Note.* \* *indicates percentages are calculated out of the total number of valid BMI responses in each category.* Data Source: (Nevada Institute for Children's Research and Policy, 2019) *Kindergarten Health Survey.* 

According to Table 19, approximately one-third of Nevada's kindergarteners are overweight or obese. Figure 3 pairs fruit juice consumption with weight status and shows that as fruit juice intake increases, so does the number of obese children.

Table 20 – Nevada High School Touth Kisk	Denavior Su	1vey, 2017.	
	total	female	male
Had obesity (more than or equal to 95 <sup>th</sup> percentile)	14.0	10.9	16.9
Were overweight (more than or equal to_85 <sup>th</sup> percentile, but less than 95 <sup>th</sup> )	14.3	14.2	14.3
Described themselves as slightly or very overweight*	30.8	34.0	27.7
Were not trying to lose weight*	52.2	40.1	64.1

#### Table 20 – Nevada High School Youth Risk Behavior Survey, 2017.

\*Indicates data from 2015 YRBS. Data Source: (CDC, 2017b) *High School Youth Risk Behavior Survey* (*YRBS*).

Nearly one-third of Nevada's high school students would describe themselves to be slightly or very overweight. However, when compared to BMI data, female students tend to describe themselves as slightly or very overweight despite less of them being classified as being overweight or having obesity. The opposite is true for their male counterparts, with less males describing themselves as slightly or very overweight despite more of them being classified as being overweight as being overweight or having obesity or very overweight or having obesity according to Table 20.

Pagion ( County	Percent of Adult Population Who Are Obese										
Region/ County	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	10 Year Average
Rural and Frontier											
Churchill	27.5	26.8	25.8	28.8	31.6	31.6	28.8	25.5	25.3	27.3	27.9
Douglas	19.3	20.8	21.1	21.7	22.5	21.9	22.4	21.4	22.8	25.5	21.9
Elko	25.9	29.6	29.8	31.1	32.7	32.1	31.9	30.3	30.4	29.3	30.3
Esmeralda	24.5	25.6	25.0	27.7	29.1	27.4	26.6	25.5	26.7	28.6	26.7
Eureka	25.1	27.1	26.5	27.1	25.7	26.0	26.3	27.2	26.7	26.8	26.5
Humboldt	27.4	31.6	29.9	29.8	27.1	25.9	24.7	25.7	26.0	30.4	27.9
Lander	28.9	30.1	29.2	27.2	27.1	29.4	28.5	30.4	31.6	33.9	29.6
Lincoln	28.3	28.9	26.2	25.2	26.8	24.7	25.2	25.9	27.2	30.0	26.8
Lyon	26.2	27.7	28.6	30.2	30.9	28.4	29.9	29.8	35.0	34.7	30.1
Mineral	29.9	29.8	29.4	31.3	29.5	26.9	26.4	28.0	29.9	31.0	29.2
Nye	30.5	31.2	30.2	30.2	30.1	29.1	29.1	31.5	34.2	33.8	31.0
Pershing	31.0	33.5	33.2	29.3	29.3	31.0	32.4	31.1	30.9	32.0	31.4
Storey	27.7	27.8	25.8	23.1	23.7	25.2	25.9	26.9	26.4	27.6	26.0
White Pine	29.8	32.9	34.5	29.9	26.1	24.8	25.1	28.7	30.4	32.5	29.5
Urban											
Carson City	22.1	23.7	23.7	23.0	23.0	23.0	24.1	24.6	26.0	27.7	24.1
Clark	23.1	24.8	26.0	26.2	25.1	24.9	25.8	27.8	27.7	26.6	25.8
Washoe	19.5	21.2	21.6	22.7	22.5	22.2	22.2	21.8	21.4	22.8	21.8
Nevada	24.2	24.1	25.1	25.8	28.3	24.6	28.3	24.6	27.7	26.7	25.9

Table 21 – Obesity Prevalence in Nevada by County, 2005 – 2015.

Note: The prevalence for obesity is 39.8% nationwide. Data Source: (University of Nevada, Reno School of Medicine, 2019) *Nevada Rural and Frontier Health Data Book - Ninth Edition.* 

The prevalence for adult obesity in Nevada ranged from 22.8% in Washoe County to 34.7% in Lyon County, still lower than the 39.8% nationwide. This does not include people who are overweight.

Table 22a – Adult Weight Classifications by Body Mass Index (BMI) by Incon	ie for
Nevada, 2017.	

	Less Than \$15,000	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000+
Obese BMI more than or equal to 30	27.2	29.2	28.5	29.7	24.6
Overweight BMI 25.0 - 29.9	34.2	36.0	42.7	38.4	41.8
Normal Weight BMI 18.5 - 24.9	36.7	32.2	28.5	29.4	31.8
Underweight BMI less than 18.5	*	*	*	*	1.9

Data Source: (CDC, 2017) Nevada Behavioral Risk Factor Surveillance System (BRFSS).

## Table 22b – Adult Weight Classifications by Body Mass Index (BMI) by Age Group for Nevada, 2017.

	18-24	25-34	35-44	45-54	55-64	65+
Obese BMI more than or equal to 30	17.4	28.9	25.3	32.6	27.4	25.0
Overweight BMI 25.0 - 29.9	34.3	37.1	40.0	40.7	39.9	40.2
Normal Weight BMI 18.5 - 24.9	44.7	31.4	33.7	24.9	32.4	32.0
Underweight BMI less than 18.5	*	*	*	*	*	2.8

Data Source: (CDC, 2017) Nevada Behavioral Risk Factor Surveillance System (BRFSS).

With respect to income levels and obesity, adults with the lowest prevalence are in the highest income category of \$50,000 and above, as noted in Table 22a. The highest levels of overweight and obesity occur in the 45-54-year-old group as compared to other age groups in Table 22b.

### **County Health Rankings**

The County Health Rankings are a collaborative effort between the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation, and provide rankings based on multiple factors that contribute to community health (2019). These factors help make communities better places to live, learn, work and play, and the Rankings provide a tool to better understand the influences on residents' health and longevity. The Rankings consist of scores based on the following information:

- *Health Behaviors* (30%) tobacco use, diet and exercise, alcohol and drug use, and sexual activity
- Clinical Care (20%) access to care, and quality of care
- Social and Economic Factors (40%) education, employment, income, family and social support, and community safety
- *Physical Environment* (10%) air and water quality, and housing and transit

Figure 4 shows how Nevada's counties ranked with respect to county health factors including health behaviors, clinical care, social and economic factors, and physical environment. The top-ranking counties for health *factors* were Douglas, Washoe, Story and Elko, while the lowest-ranking included Mineral, Nye, Lyon and Pershing Counties. Figure 5 shows how each of the counties in Nevada ranked for health outcomes including length of life and quality of life. The top-ranking counties for health *outcomes* were Lincoln, Douglas, Pershing and Elko, while the lowest-ranking included Nye, Mineral, Carson and White Pine Counties. Elko and Douglas Counties ranked highly for both rankings, while Mineral and Nye Counties consistently ranked among the lowest. Table 23 lists the indicator scores used to measure the health factors for each county.

Figure 4 – County Health Factors Ranks in Nevada: Health Behaviors, Clinical Care, Social and Economic Factors, and Physical Environment.



Source: (University of Wisconsin Population Health Institute, 2020) *Nevada County Health Rankings* 2020.





Source: (University of Wisconsin Population Health Institute, 2020) *Nevada County Health Rankings* 2020.

	Health Outcomes		Health Factors		Fo Enviro Ind	Food Environment Index		ss to cise unities	Childre	en in Single Households	-parent	Quality	of Life
County	Z- Score	Rank Among Others in NV <sup>1</sup>	Z- Score	Rank Among Others in NV <sup>1</sup>	Access to Healthy Food <sup>2</sup>	Z- Score	% With Access	Z- Score	# Single- Parent House- holds	# Total House- holds	% Single- Parent House- holds	Z-Score	Rank Among Others in NV <sup>1</sup>
Nevada					7.9		73		242,952	662,648	37		
Churchill	-0.17	7	0.00	10	7.3	0.15	84	-0.90	1,768	5,556	32	-0.12	7
Clark	-0.13	8	0.11	11	8.1	-0.55	73	-0.54	189,145	493,869	38	0.15	11
Douglas	-0.99	2	-0.74	1	7.5	-0.03	87	-1.01	2,438	8,461	29	-0.36	3
Elko	-0.52	4	-0.25	4	8.4	-0.81	62	-0.17	4,012	14,437	28	-0.27	5
Esmeralda		NR		NR	3.8		11		66	202	33		NR
Eureka		NR		NR	5.9		34		50	406	12		NR
Humboldt	-0.12	9	-0.04	7	8.3	-0.73	60	-0.09	1,444	4,647	31	-0.30	4
Lander	-0.01	10	-0.01	9	8.6	-0.99	91	-1.14	642	1,612	40	-0.17	6
Lincoln	-1.19	1	-0.06	6	5.4	1.80	54	0.10	122	963	13	-0.63	1
Lyon	0.35	11	0.47	13	7.5	-0.03	53	0.14	3,537	11,438	31	0.31	12
Mineral	1.59	14	0.71	15	4.8	2.32	5	1.74	668	908	74	0.85	15
Nye	1.67	15	0.61	14	6.2	1.10	7	1.68	1,959	7,331	27	0.72	14
Pershing	-0.70	3	0.20	12	8.0	-0.46	23	1.16	336	1,113	30	-0.06	8
Storey	-0.46	5	-0.42	3	8.7	-1.07	24	1.12	186	438	42	-0.46	2
Washoe	-0.29	6	-0.51	2	7.9	-0.38	84	-0.89	31,683	98,156	32	0.01	10
White Pine	0.37	12	-0.06	5	7.4	0.06	59	-0.07	451	2,030	22	0.34	13
Carson City	0.60	13	-0.02	8	7.9	-0.38	91	-1.13	4,445	11,081	40	-0.01	9

#### Table 23 – Nevada County Health Rankings Select Indicators, 2019.

<sup>1</sup> Ranking is from 1 (top) to 15 (bottom) and within Nevada only. <sup>2</sup> Indicator of access to healthy foods, 0 is worst, 10 is best. Source: (University of Wisconsin Population Health Institute, 2019) *Nevada County Health Rankings 2019.* 

In Table 23, Mineral county stands out for its high percentage of single-parent households at 74%, compared to 37%, which is the average for the entire state of Nevada. According to the data, Mineral County has 668 single-parent households. Other counties with percentages that exceed the state average include Storey (42%), Carson (40%), Lander (40%), and Clark (38%).

Figure 6 illustrates children living in poverty, comparing Nevada's numbers to the nation's and breaking them down by race and ethnicity. Overall, 18% of Nevada's children live in poverty, with large variations among counties ranging from 10% to 27%. The rates differ for racial and ethnic groups ranging from 10% for White children to 39% for American Indian and Alaskan Native children.



Figure 6 – Children Living in Poverty in Nevada.

Note: Extreme values or missing/suppressed values can occur in places with small populations.

Source: (University of Wisconsin Population Health Institute, 2020) Nevada County Health Rankings 2020

#### Conclusion

This collection of secondary data and survey responses from Extension educators was compiled to serve as a reference to help inform Extension SNAP-Ed programming needs for future SNAP-Ed proposals. Other tools that may help guide Extension proposals include statewide plans, such as the Early Childhood Obesity Prevention Plan (Nevada Division of Health and Human Services, 2018) and the 2018 Food Security in Nevada Plan for Action (Nevada Department of Public and Behavioral Health, 2018). Individual county plans addressing any of the indicators found in this report, such as

county health assessments, should also be considered to prevent duplication of services.

Some areas of opportunity made evident by this needs assessment include:

- Integration of Extension EFNEP and SNAP-Ed nutrition education programs
- Improved external coordination and collaboration processes between Extension and its partners when creating the statewide SNAP-Ed plan proposal
- Internal collaboration between the University of Nevada, Reno's Rethink Your Drink Program and Extension's SNAP-Ed programs sharing similar audiences and places
- Needs assessments consisting of environmental scans when appropriate, health program inventories, and coalition representation by Extension staff in all counties, regardless of SNAP-Ed eligibility, to gain a better understanding of gaps and opportunities to improve community health
- Prioritization of needs assessments for counties with higher percentages of poverty and poorer health rankings
- In-depth assessment of dietary quality among the SNAP-Ed priority population conducted periodically, such as the compilation of Healthy Eating Index Scores, to ascertain whether or not changes made at the different levels of the Social Ecological Model are creating positive impacts on health behaviors
- A petition or funding so the Nevada Division of Public and Behavioral Health can include modules related to dietary behaviors of interest in the state BRFSS, such as consumption of sugar-sweetened beverages

One limitation of this needs assessment is the lack of secondary data at the county level, particularly for Nevada's rural and frontier counties. Frontier counties have a population of less than 7 people per square mile according to the Rural Health Information Hub (2018). Census data listing population density per square mile for Nevada counties is included in the Appendix. Sparsely populated areas make it challenging to obtain large enough sample sizes to provide reliable data for the 11 frontier counties, which include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing and White Pine. This also limits Nevada's ability to compete for grants. For example, some grant opportunities are linked to obesity rates reported to the CDC, such as the High Obesity Program 1809 grant (CDC, 2019b). However, Nevada was ineligible to apply because CDC data did not match Nevada state data. It is possible that SNAP-Ed funding could be used to complement existing health and nutrition programming – *or help fill a void* – in these counties.

Another limitation is not knowing what programming exists in the counties for which responses were not received. There may be health-related coalitions that are actively working or other programs delivered through the state Division of Health, but this will require further exploration beyond the scope of this report.

In conclusion, this needs assessment may be used as a starting point to help determine eligibility for SNAP-Ed funding and reference population-level indicators pertaining to nutrition, physical activity and obesity prevention for each of Nevada's counties.

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#### Appendix

Population Density per Square Mile for Nevada Counties Carson City = 382.1 Churchill = 5.0Clark = 247.3 Douglas = 66.2Elko = 2.8Esmeralda = 0.2Eureka = 0.5Humboldt = 1.7Lander = 1.1Lincoln = 0.5Lyon = 26.0 Mineral = 1.3Nye = 2.4 Pershing = 1.1Storey = 15.3Washoe = 66.9White Pine = 1.1

Source: U.S. Census Bureau. (2018). *Quick facts, Nevada*. Geography, Population per square mile.