

Webinar Transcript:

Data Training Webinar: The Updated Food Environment Atlas

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Valerie: Good afternoon, everyone. My name is Valerie, your host, for today's data training Webinar on behalf of USDA's Economic Research Service, welcome and thank you for joining us. Today's webinar will provide an overview of the updated Food Environment Atlas and its new features, as well as a tutorial of how to use the mapping tool to better understand how food environments interact to influence communities access to healthy and affordable food and diet quality. Before we begin. I'd like to note that this webinar is being recorded and will be available on the ERS website. If you have any questions after today's presentation, please submit them using the Q&A feature at the bottom of your screen. Now, I'd like to introduce our speaker, Alana Rhone. Alana is an Agricultural Economist in the Food Assistant Branch of our Food Economics Division. Her research focuses on measuring and examining food access in the U.S. Thank you for joining us today, Alana. I'll turn it over to you now.

Alana Rhone: Thank you, Valerie, for that warm introduction, and good afternoon, everyone. Thank you for joining me today as I introduce or perhaps reintroduce you to an amazing and powerful tool called the Food Environment Atlas. So, let's start with an interesting fact. Did you know more than 900 counties in the United States had at least one on-farm market in 2023? On farm markets are farms that sell fresh produce and products directly to consumers, something that is particularly common this time of the year. At the State level, the top 5 States, with the largest number of on- farm markets in 2023 were all located east of the Mississippi River. They were Michigan, with a statewide total of 104 self-reported on-farm markets, followed by Ohio, Florida, New York, and Virginia. And of those counties with on-farm markets, Hillsborough County, Florida, with eleven reported on-farm markets, ranked as the number one county with the most on-farm markets nationwide. So, you may be asking, now why is this such an interesting fact? Well, because it's one of the many new indicators you can find and explore in the updated Food Environment Atlas. And this is also an Economic Research Service Chart of Note that was released just this morning. So, it is hot off the press. And you can find it on the ERS website.

Here are the objectives for today's webinar. First, we'll learn about the Food Environment Atlas, and why it matters. Then I'll go over what's new, such as new features, new data and updates. Followed by demonstrating how to use the Atlas to better understand how food environments interact to influence communities' access to healthy and affordable food and diet quality.

We released our 1st version of the Food Environment Atlas in 2011. So, it has been around for several years. The objectives of the Food Environment Atlas are to provide a spatial overview of a community's ability to access healthy food and its success in doing so, and

also to assemble statistics on food environment indicators to stimulate research on the determinants of food choices and diet quality.

The Atlas currently includes over 300 indicators of the food environment, compiled from a variety of data sources. The year and geographic level of the indicators vary to better accommodate data from a variety of sources. Some indicators are at the county level, while others are at the state level. The most recent county level data when retrieved, was used whenever possible. However, please note they do cover varying years.

So, as mentioned, the Atlas assembles statistics on broad categories, three in fact, of food environment factors. The first one being food choices. So, these are indicators of a community's access to and acquisition of healthy and affordable food in the United States, such as the number of food, stores, restaurants, convenience stores, and dollar stores and other general merchandise stores in a county. Also, food and nutrition assistance program participation, like the Supplemental Nutrition Assistance Program (SNAP) or the Women's Infants and Children Program (WIC). And, also, the availability of local foods, such as information on food hubs, food banks, CSA's, farm to school program, or even the number of farms in the county with vegetables, potatoes, or melons harvested for sale.

Category number two, health and well-being. These are an indicator's success in maintaining healthy diets, such as food insecurity, diabetes and obesity rates and physical activity levels, and also community characteristics. So, these are characteristics that might influence the food environment, such as demographic composition and income and poverty among others.

Why does researching the U.S. food environment matter? The food environment can play a key role in shaping dietary behaviors and health outcomes across communities. Limited access to supermarkets, super centers, grocery stores, or other sources of healthy and affordable food may make it harder for some people to eat a healthy diet. Did you know that in the U.S. there are more than twice as many convenience stores as grocery stores, and over four times as many fast-food restaurants, in 2020? You can find these and other updated indicators and estimates using the updated Food Environment Atlas. So, key factors like proximity to food outlets, availability of local foods, availability of nutrition assistance programs and also community characteristics can shape the food environment.

And all of those factors can interact to influence the types of foods available to consumers. For example, not all communities have the same access to whole foods, such as fresh produce, whole grains, or lean meats. The type of food available can impact dietary habits. Also, those factors can interact to influence the accessibility and convenience of food options, and this could impact the choice of stores at which an individual or household chooses to shop for food, the time and monetary cost to travel to purchase food, and even the frequency that an individual or household does their

shopping. Those factors can also interact to influence participation in programs that support nutrition and food security. Programs like SNAP, WIC, and local food banks can help individuals and families access healthy food. Also, they can interact to influence a community's diet quality and health.

The Atlas has been used to identify a community's ability to access healthy food, and help target where programs or policies may be the most needed, such as government agencies to identify underserved areas and allocate resources to improve food access. The USDA for example, Food and Nutrition Service (FNS) uses several data from the Food Environment Atlas in their Nutrition Education and Local Food Access dashboard that provides a county level visualization of FNS nutrition support, specifically looking at nutrition education and local food access. The Atlas has also been used to serve community planners to inform local development and food access strategies.

Also, researchers and academics use the Atlas as well to analyze trends in food access and their links to health and socioeconomic factors. In fact, the atlas has been used in research to examine how food environments influence adult obesity rates. Additionally, a local county office utilized it during their community health assessment to analyze the growth of fast food restaurants within their county.

Also, journalists use the Food Environment Atlas as well to inform public reporting. And the atlas isn't just for policymakers or researchers, although I must admit they do love using the tool. The general public can use the tool to explore their own local food environments. I've had the best time walking students and people of all ages through exploring their food environment in their own communities. As you can see, the Food Environment Atlas can be used to strengthen strategies to encourage healthy choices, healthy outcomes, and healthy families.

Here, at the Economic Research Service, we prioritize customer service, and we listen to the feedback we received from our users and stakeholders. So, there are a few things that are new with this update that I am so excited to share. The Food Environment Atlas has undergone an exciting refresh. We've got a cleaner, more modern interface. And yes, it is mobile, friendly. So, you can explore indicators on the go. And you can now search by a specific address and use new filtering tools to zoom in on the data that matters most to you or your community.

In terms of new data, we've expanded data on food outlets, now including dollar stores and general merchandise stores, and on-farm markets that I shared earlier, giving us a richer picture of local food environments. We've also added key indicators, like the deep poverty rate, which is the percent of a county's population living in families with income below half of one's poverty threshold, or the deep child poverty rate, which is the percent of county population under the age of 18. And also, the 2020 Decennial Census data was also added and updated. As I mentioned before, there is over 300 indicators in the mapping tool, but more than 260 indicators have been updated, covering everything from

food access and local food availability to health and socioeconomic characteristics. This makes the Atlas a powerful resource in data products. Our geographies have also been updated as well.

With the Atlas, you can create maps showing the variation in a single indicator across the United States. You can also view all county level indicators, and you can zoom into specific areas, and you can export or even print maps. And all of the data included in the Atlas are aggregated into an excel and machine-readable formats for easy download.

So now, let's walk through how to use the Food Environment Atlas. To access the Food Environment Atlas, you can Google search ERS Food Environment Atlas or type in your browser www.ers.usda.gov. Once you're on the website, you can stroll down and you will see a link for the Food Environment Atlas, and it will take you directly to that page [www.ers.usda.gov/data-products/food-environment-atlas]

This is what you will see when you land on the Food Environment Atlas overview web page. To go into the mapping tool, you can click here or click ['Go to the Atlas' under the 'In this Section' on the left-hand side of the page] or click here ['Enter the Map' button on the bottom of the page]. We like to give our users different options. The documentation section provides more information about the Atlas, and it also contains the reference guide that has complete information on data sources, and definitions. The current version of the Food Environment Atlas data file, that contains all of the nationwide data in excel and machine-readable formats, you can find that, along with seven previous versions of the data and documentation, which are also available under the 'Data Access' and 'Documentation Downloads' section.

This page is the starting point for the investigation of indicators by category and geographic display. The page contains a menu icon and four main links. The menu icon provides easy access to map displays of various indicators listed by category. The 'Go to the Food Environment Atlas' gives access to the full mapping application to explore all Food Environment Atlas indicators in a single interactive tool. You can quickly find specific food, health, and economic indicators, such as I mentioned, fast food restaurants, farmers markets, and deep poverty rate, here ['Search for indicators' on the right hand side of the page]. And you can view indicators that are grouped by broader themes, such as local foods, restaurant availability and store availability, using the 'Browse by category' section. And if you forget everything that I say on this webinar, don't worry. I got you. We also have a handy dandy user guide for users to navigate the atlas and use its features.

A click on the menu icon in the upper right corner presents the following dropdown menu. And this menu persists throughout the Atlas. A further click on the down marker, next to an item presents a list of indicator groupings that are relevant to that category. Clicking further opens the Atlas mapping tool.

The search indicator section on the landing page and menu opens this page which presents a list of all the available indicator map layers. The search indicators feature may be helpful when you want to explore what types of indicators are available in the Atlas. So, let's say I'm interested in SNAP. I'll start by typing SNAP into the search box, just like this image, which was begun with SNAP in the search box, which will then load with layers that match the search name. A selection in that box applies the indicator name to the search and reduces results in the list to that specific indicator.

The list displays the indicator name alongside a view map button. Clicking this button opens a map viewer, allowing users to explore the corresponding data layer. For example, selecting the SNAP authorized stores per 1,000 population in 2023 button launches a map displaying data on the average monthly number of stores in the county that are authorized to accept SNAP benefits per 1,000 county residents.

The browse by category item on the main landing page and in the menu, opens a page showing the nine main categories of indicators in the Food Environment Atlas. By clicking on a category, a sublevel with additional groupings within that category is revealed. Each sublevel provides access to individual maps related to that specific group, making it easy to navigate and explore the diverse statistics available. For example, selecting restaurant availability will lead you to a detailed view of related statistics.

This map allows for a visual presentation of the data geographically. The map interface contains a map view area, a legend, and various buttons or tools on the map view, and also, as I mentioned before, the site, wide menu is still on the title. The tools with gray buttons are general tools for navigation. So, zooming in and out, navigating to initial view extent, and also searching for locations. When exploring the map, users can zoom, reset to the default map, with a home looking button as well. Users can now search for a specific location with the magnifying glass, and you can move, pan the map to different areas as well.

The darker gray tools are specific to the map's purpose. It has an indicator list, a U.S. State selection selector tool to zoom to a particular state outline, a view metropolitan or non-metropolitan tool, and then also a print tool. These tools may present a selector within the tool for more options. The map indicator list tool is the first mapping tool, also known as the layer list. It displays a drop-down menu of indicators related to the health grouping.

The next tool is a selector that enables zooming into a specific state within the United States, and this toggle within this box that appears activates the zoom function. And when the function is toggled off, the map returns to its initial extent.

The metropolitan non-metropolitan tool allows users to select to hide counties that USDA categorizes as metropolitan and non-metropolitan areas, and this tool also presents a selector to turn on masks that hide certain counties.

The last tool is a print tool. When clicked, the tool opens a dialog with two headers: 'Print Template' and 'Results'. In the 'Print Template' is a selector that appears to allow selection of one of three options; US-level landscape with insets of Alaska and Hawaii, and then the print area being shown in landscape and portrait mode. After the print button is pressed, the results tab will open, with a number of the resulting documents ready view and print. And the legend provides information about the indicator and colors. By default, the legend is automatically expanded to the left of the map. And to contract it or to hide it, the legend, you can click the pullout to collapse the legend, minimizing its display.

As mentioned earlier, one of the newer features we've added, is an innovative way to locate places or access to specific data on the map using the search tool. So, while you know, users can still pan, zoom, or read details and pop ups as you explore, the search function provides a faster and more precise option. For instance, simply typing Bowie County, Texas, into the search bar brings up a drop-down list. From there I can instantly zoom to that area on the map.

And then, once I click on a location anywhere in the U.S., detailed county level, information appears just like on this map. And the zoom tool makes it easy to focus directly on a selected county.

And you'll also notice a few interface tools to customize your view. You will have the access button, and it offers multiple ways to download the indicator data, such as JSON, and CSV formats. There's also the 'Dock / Undock' button which lets you reposition the pop-up box to avoid overlap, and you also have the expand collapse tool which allows you to adjust its visibility based on your needs.

So, let's take a look at Bowie County, Texas, to see how the Food Environment Atlas helps us understand food access in a specific community. When I click on Bowie County in the map interface, several key indicators come up specifically related to WIC authorized stores. So, these are locations where participants in the WIC program can purchase approved healthy foods.

In 2022, Bowie County had 17 WIC authorized stores, that translates to about 0.18 stores per 1,000 residents, and maybe even more telling is the change over time. From 2016 to 2017, there was a 22.73 decline in the number of WIC authorized stores, and a 22.11% drop per capita. This example shows how the Atlas helps us not just visualize food access, but can also help analyze trends. A user may use the atlas to see what steps might be taken to improve access again.

Let's now check out one of the other features. On the layer list, the indicators are organized by category. For example, you're seeing WIC authorized stores here, with specific data points grouped underneath, such as the total number of WIC authorized stores within a county. And the image shown on the map corresponds to a selected indicator within that specific group. By default, only one indicator is visible at a time, but

by clicking the arrow next to the category it expands the full list, then you can easily select any indicator to view its map data.

To explore additional indicators. You'll see the scrolling bar on the right side of the panel. At the far end of each listed indicator, you will find an ellipsis icon. Clicking it opens a menu with new functionalities, such as set filters, viewing indicator level statistics, and exporting data in various formats.

One particular, powerful, new feature is the filtering tool. The set filter tool begins in an inactive state. To enable it simply toggle it on. Once activated, it allows for advanced filtering—letting users refine which counties they'd like to focus on. For example, under 'Add filter,' you can set a custom query, like highlighting counties in the U.S. with more than ten WIC-authorized stores, in 2022, which is shown here on the map. It's important to note that counties that don't meet the filter criteria aren't displayed as 'no data.' Instead, they're simply hidden. On this map for example, this means you won't see the boundaries or shaded areas for excluded counties.

In the mapping up application. You'll need to select the highlighted button to display the legend as shown in the image. Unlike the desktop version, the legend does not automatically appear by default on mobile devices.

Before I close. I want to extend a sincere thank you. To everyone who has worked on the Food Environment Atlas. This tool reflects the incredible dedication and expertise of an amazing tool at the Economic Research Service. The published estimates and maps you've seen today are available on the ERS Food Environment Atlas web page, where you can explore the data even further. I look forward to hearing what you find. My contact information is also here on the slide [alana.y.rhone@usda.gov]. So please feel free to reach out if you have any questions, if they come up on down the road, or you would like to continue the conversation. This concludes my presentation, and I now pass it back to you, Valerie.

Valerie: Thanks, Elena. Let's go ahead and take some questions from our participants now. So, as a reminder, questions can be submitted through the Q&A feature on the bottom of your screen.

For our first question, how does the Food Environment Atlas differ from the Food Access, Research Atlas?

Alana Rhone: The Food Access Research Atlas maps and provides selected food access indicators for census tracts. The Food Environment Atlas provides a wider set of statistics on food choices, health, well-being, and community characteristics. So, the Food Access Research Atlas provides information at the census tract level, and the Food Environment Atlas provides information at the county level.

Valerie: Good to know. Thank you, Alana. Up next, how often is the Food Environment Atlas updated?

Alana: Updates to the Food Environment Atlas data products are planned every 2 to 3 years.

Valerie: Okay, next question, for what time period are those numbers for on-farm markets in each county? And do we know, month by month?

Alana Rhone: For on-farm markets. It's when the data was pulled for that particular year. While we don't have monthly information, we do have information at the county level for the number of on-farm markets at the year level.

Valerie: All right. Here's another question. Did you say there's county level information on nutrition education and food availability / access?

Alana Rhone: Data in the Food Environment Atlas covers a wide range of varying years and also geographies. Some data, food and nutrition assistance data, is at the county level. However, there are other data in the Food Environment Atlas that is at the state level as well.

Valerie: Thanks. For your next question, are you able to view or download data to a more granular level than county, for example, by zip code?

Alana Rhone: Thank you for that question. Currently, the Food Environment Atlas does not provide any data at the zip code level. Most of the information is at the county level or state level.

Valerie: Thanks, Alana, for your next question, can you please define on-farm markets?

Alana Rhone: Yes, on-farm markets are farms that sell products and produce directly to consumers, and you can find more information on on-farm markets in our Chart of Notes that was released this morning, and can also be found on the ERS website.

Valerie: Wonderful, thanks, Alana, for your next question. How do you download the data? And can you export data behind the maps?

Alana Rhone: To download the data. Yes, you absolutely can. We have a section that you can find on our overview web page of the Food Environment Atlas. That's for data access and download section. There, you can find the aggregated nationwide data for the whole nation, that is located there, as well as archive versions of the Food Environment Atlas. Also, one of the features in the Food Environment Atlas is that, as I mentioned, where you can look at specific information for a county. You can also download these indicators and

data for a specific county as well. So, we have a lot of available options. As I mentioned. We love, we prioritize, customer service at ERS, and we listen to our consumers. So, we do have that option available for a specific county level or for the whole nationwide that you can download.

Valerie: And you may have mentioned this in your answer Alana, but just as a quick reminder, how about batch downloads? Are we able to do that as well?

Alana Rhone: Can one explain further, what is meant by batch downloads?

Valerie: So, can you download multiple data sets at a time?

Alana Rhone: Yes. So, with the data downloadable spreadsheet and thanks for clarifying Valerie with the data download spreadsheet, it has all of the data aggregated into different tabs, all into one excel file. So, within that file, you can compare counties if you want to go back and forth between different indicators. But, the data downloadable file will help with that.

Valerie: Thank you for clarifying Alana. For your next question, does the ERS Atlas include information on U.S. territories, or about U.S. territories.

Alana Rhone: U.S. territories. Right now, currently, the Food Environment Atlas includes information on the continental U.S., Alaska, and Hawaii.

Valerie: All right. Here's another question, is GIS data available, or a table that can be brought into a GIS?

Alana Rhone: Yes, it sure can. We do have layers available, and that can be found on the data access and download section of the overview web page.

Valerie: Oh, wonderful! That'll be helpful for many folks. For your next question, can one do searches for whole States or nationwide? So, a locality can compare itself against a reference?

Alana Rhone: Using one way to do that is using the data download spreadsheet which users can compare different indicators over time. We do have percent changes for some indicators, and we also do have different archived versions of the Food Environment Atlas, which allows users to compare the different versions of the of their food environment. Atlas as well.

Valerie: Wonderful. And here's a follow up, or a similar question, is there a way to compare counties side by side?

Alana Rhone: Yes, of course. The Food Environment Atlas can help users compare counties across a wide range of indicators. So, while the platform doesn't necessarily offer a direct side by side visual comparison, like a split screen. Users can, however, use the mapping tool to visualize how a single indicator varies across the U.S. So, users can select counties on the map, and view their data individually by selecting between them, or users, as I mentioned, can download the full data set which allows you to manually compare counties side by side across all indicators that is in the data downloadable spreadsheet.

Valerie: Alright, now while on the topic of county level data, how is the data collected from each county?

Alana Rhone: The Food Environment Atlas data comes from a variety of sources. Some are external to USDA. So, we take the primary data sources and also secondary data sources, and we compile all of the data together. For instance, the Atlas, as I mentioned, compiles data from a wide range of federal and non-federal data sources including USDA agencies like ERS, the Economic Research Service, the Food and Nutrition Service, and other USDA agencies as well, but that's only a part of it. Some data also comes from the Census Bureau as well.

Valerie: That was helpful. Next question, can you compile multiple indicators into one map view, and download the data set?

Alana Rhone: With the food Environment Atlas, on the mapping tool, you can only look at one specific indicator at a time, but we do have the option where you can also click on another indicator within the same view, and it'll change the map and also the legend to follow accordingly to what the indicator was chosen. So, though we don't have where you can look at it side by side, all in one place, you can go back and forth and look at all the indicators on the mapping screen.

Valerie: Thanks. Next question, where can you see the source of your data?

Alana Rhone: Yes. So, our sources can be found in the documentation section of our overview page of the Food Environment Atlas, and in the documentation section we have a subsection that is called the 'Reference Guide', and in that reference guide you can find the available information on the data source, and also the years, and geographic details, as well, as far as if it's at the state level or county level.

Valerie: Next question. How might I use the Atlas with high school students, or do you provide additional resources for educators on how to use the atlas in the classroom?

Alana Rhone: Sure, I mentioned earlier how I, you know, I have the best time walking students of all ages through how to use the Food Environment Atlas So, some schools that I have presented to have used the Atlas to explore what their food environment looks

like in their community. And one way that they may use it is, looking at the data for this county and where they are. They may decide that a school garden may be a resource to plant. So, there are different ways that a variety of people and students also use the data as well.

Valerie: Thanks, Alana. Can the Food Environment Atlas be used to track changes in food environments over time?

Alana Rhone: Absolutely, the Atlas includes archive versions of past data sets which users can access through the data access and documentation download section. And so, this allows users to compare indicators across different years to observe different trends, analyze access to healthy food store proximity, and nutrition assistance participation over time, and also conduct research by downloading and aligning data sets from multiple years. I will say, keep in mind that not all indicators are updated every time, and some may vary in geographic boundaries over the years or methodology. So, while it is definitely a great tool for tracking changes, users should always consult the documentation and reference guide to ensure consistency and comparisons.

Valerie: That was very insightful, Alana. Thank you. Now we have a few minutes left. Here's a question, and perhaps you can guide this viewer through it. But this person says, I cannot find State numbers, only county. Can this be shown how to get to?

Alana Rhone: Yes, it depends on the indicator that a user chooses. As mentioned before, some data and indicators are at the county level, and some indicators are only at the state level. So, for those state level indicators, you may not necessarily see just the county level, because that indicator is at the State. The indicators at the State level, I will say, to consult the reference guide is a helpful tool on how to identify which indicators are at the county or State level.

Valerie: And in case folks may have forgotten it or missed where to find the reference guide. Could you remind us again?

Alana Rhone: I sure can. Users can find the reference guide in the documentation section of the Economic Research Service Food Environment Atlas Web page. So, on that webpage section, you will have a section that has the documentation, and in that documentation, you will find the reference guide that has all of the information related to that specific indicator.

Valerie: Thanks, Alana, and for folks tuning in, we will drop that link in the chat shortly, so feel free to look for it there as well. For your next question, Alana. Can the Atlas be used to indicate food deserts in an area over time?

Alana Rhone: A mapping tool that is similar to the Food Environment Atlas, it is called the Food Access Research Atlas, and it's another mapping tool developed and created by the

USDA Economic Research Service, and it maps and provides selected food access indicators for low-income and low-access census tracts. Since 2013, while food deserts have definitely been a convenient term or way to name low-income and low-access areas, low-income and low-access is specific to what we look at in the Food Access Research Atlas. So, the food access research Atlas is a helpful tool to look at low-income and low-access areas.

Also, in addition to that, the Food Environment Atlas does have the number and share of people that live in low-income and low-access areas as well. So, if you want to find the population or shares aggregated to the county level, that can be found in the food Environment Atlas.

Valerie: Wonderful, and for your next question, Are there accessibility features for users, like 508 compliance?

Alana Rhone: Of course, the Food Environment Atlas is hosted on a platform that follows Federal accessibility standards, including section 508 compliance. So, this means specifically that this site, the mapping tool, is designed to be navigable by screen readers. Keyboard navigation is also supported. Text, and contrast of colors is also optimized for readability, and the data download sheet is also available in machine readable format as well.

Valerie: Thank you, Alana.

Valerie: All right, that's all we have for today. Alana, thank you for giving us an overview of the updated Food Environment Atlas and walking us through how to use the mapping tool, and thank you to our listeners for joining us for this Data Training Webinar. We hope this has been helpful. As a reminder. If you missed any of the wonderful information Alana has provided us throughout this presentation, know that this webinar is being recorded, and will be posted to the ERS website. You can also follow us on social to find out when we do post it to the ERS website.

Alana, next slide please. Thank you.

ERS continues to deliver timely relevant research through our website, ers.usda.gov. You can also follow us, as I mentioned, on social through LinkedIn, and X.

Once again, thank you for attending today. This concludes our webinar.