

COMBINED SPECIAL MEETING / WORK SESSION AGENDA

SPECIAL MEETING / WORK SESSION
TUESDAY
OCTOBER 22, 2024

COUNCIL CHAMBERS
211 WEST ASPEN AVENUE
3:00 P.M.

All City Council Meetings are live streamed on the city's YouTube page
(<https://www.youtube.com/@FlagstaffCityGovernment>)

*****PUBLIC COMMENT*****

Verbal public comments not related to items appearing on the posted agenda may be provided during the "Open Call to the Public" at the beginning and end of the meeting and may only be provided in person.

Verbal public comments related to items appearing on the posted agenda may be given in person or online and will be taken at the time the item is discussed.

To provide online verbal comment on an item that appears on the posted agenda, use the link below.

[ONLINE VERBAL PUBLIC COMMENT](#)

Written comments may be submitted to publiccomment@flagstaffaz.gov. All comments submitted via email will be considered written comments and will be documented in the record as such.

SPECIAL MEETING

1. Call to Order

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this special meeting, the City Council may vote to go into executive session, which will not be open to the public, for discussion and consultation with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. Roll Call

NOTE: One or more Councilmembers may be in attendance through other technological means.

MAYOR DAGGETT
VICE MAYOR ASLAN
COUNCILMEMBER HARRIS
COUNCILMEMBER HOUSE

COUNCILMEMBER MATTHEWS
COUNCILMEMBER MCCARTHY
COUNCILMEMBER SWEET

3. Pledge of Allegiance, Mission Statement, and Land Acknowledgement

MISSION STATEMENT

The mission of the City of Flagstaff is to protect and enhance the quality of life for all.

LAND ACKNOWLEDGEMENT

The Flagstaff City Council humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations who will forever know this

place as home.

4. **Proclamation:** National Homelessness Awareness Month
5. **Proclamation:** Native American Heritage Month
6. **Open Call to the Public**

Open Call to the Public enables the public to address the Council about an item that is not on the prepared agenda. Comments relating to items that are on the agenda will be taken at the time that the item is discussed. Open Call to the Public appears on the agenda twice, at the beginning and at the end. The total time allotted for the first Open Call to the Public is 30 minutes; any additional comments will be held until the second Open Call to the Public.

If you wish to address the Council in person at today's meeting, please complete a comment card and submit it to the recording clerk as soon as possible. Your name will be called when it is your turn to speak. You may address the Council up to three times throughout the meeting, including comments made during Open Call to the Public and Public Comment. Please limit your remarks to three minutes per item to allow everyone an opportunity to speak. At the discretion of the Chair, ten or more persons present at the meeting and wishing to speak may appoint a representative who may have no more than fifteen minutes to speak.

7. **LIQUOR LICENSE PUBLIC HEARINGS**

Applications under Liquor License Public Hearings may be considered under one public hearing and may be acted upon by one motion unless otherwise requested by Council.

STAFF RECOMMENDED ACTION:

1. Open the Public Hearing
2. Staff Presentation
3. Council Questions
4. Public Comment
5. Close Public Hearing
6. Council Deliberation and Action

The City Council has the option to:

1. Forward the application to the State with a recommendation for approval;
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

- A. **Consideration and Action on Liquor License Application:** Christopher Wilke, "Rolle Activity Center", 304 E Pine Knoll Dr., Series 05 (Government), New License

STAFF RECOMMENDED ACTION:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

- B. Consideration and Action on Liquor License Application: Christopher Wilke, "Lumberjack Stadium", 824 S. San Francisco St., Series 05 (Government) New License

STAFF RECOMMENDED ACTION:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

8. **Adjournment**

WORK SESSION

1. **Call to Order**

NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the City Council and to the general public that, at this work session, the City Council may vote to go into executive session, which will not be open to the public, for discussion and consultation with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).

2. **Former Courthouse Redevelopment Discussion**

Staff will provide an update on the response received to the Request for Proposals (RFP) for the redevelopment of the former courthouse site and obtain direction on the desired elements of the project.

3. **United States Department of Agriculture Urban Agriculture and Innovative Production Grant Update: Community Food Systems Assessment**

This is an informational update only.

4. **Update on the Red Gap Ranch Water Pipeline Feasibility Study**

Information and discussion only.

5. **FAIR -- Discussion and Possible Direction Regarding Vice Mayor Selection Process Council Discussion**

6. **Open Call to the Public**

7. **Informational Items To/From Mayor, Council, and City Manager; future agenda item requests**

8. **Adjournment**

CERTIFICATE OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at Flagstaff City Hall on _____, at _____ a.m./p.m. in accordance with the statement filed by the City Council with the City Clerk.

Dated this _____ day of _____, 2024.

Stacy Saltzburg, MMC, City Clerk

THE CITY OF FLAGSTAFF ENDEAVORS TO MAKE ALL PUBLIC MEETINGS ACCESSIBLE TO PERSONS WITH DISABILITIES. With 48-hour advance notice, reasonable accommodations will be made upon request for persons with disabilities or non-English speaking residents. Please call the City Clerk (928) 213-2076 or email at stacy.saltzburg@flagstaffaz.gov to request an accommodation to participate in this public meeting.

NOTICE TO PARENTS AND LEGAL GUARDIANS: Parents and legal guardians have the right to consent before the City of Flagstaff makes a video or voice recording of a minor child, pursuant to A.R.S. § 1-602(A)(9). The Flagstaff City Council meetings are live-streamed and recorded and may be viewed on the City of Flagstaff's website. If you permit your child to attend/participate in a televised Council meeting, a recording will be made. You may exercise your right not to consent by not allowing your child to attend/participate in the meeting.

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Stacy Saltzburg, City Clerk
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:

Consideration and Action on Liquor License Application: Christopher Wilke, "Rolle Activity Center", 304 E Pine Knoll Dr., Series 05 (Government), New License

STAFF RECOMMENDED ACTION:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

Executive Summary:

The liquor license process begins at the State level and applications are then forwarded to the respective municipality for posting of the property and holding a public hearing, after which the Council recommendation is forwarded back to the State. A Series 5 license allows for a government agency to sell and serve spirituous liquor solely for consumption on the premises. If approved, the Rolle Activity Center will be the 5th active series 05 license in Flagstaff.

To view surrounding liquor licenses, please visit the [Active Liquor Licenses Map](#).

The application was properly posted on October 2, 2024 and the Police and Community Development divisions have reviewed the application and provided their respective reports. No written protests have been received to date.

Financial Impact:

There is no budgetary impact to the City of Flagstaff as this is a recommendation to the State.

Policy Impact:

Not applicable

Previous Council Decision or Community Discussion:

Not applicable

Options and Alternatives to Recommended Action:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

Connection to PBB Priorities and Objectives:

Liquor licenses are a regulatory action and there are no Community Priorities that directly apply.

Connection to Regional Plan:

Not applicable

Connection to Carbon Neutrality Plan:

Not applicable

Connection to 10-Year Housing Plan:

Not applicable

Attachments:

Letter to Applicant

Hearing Procedures

PD Memo

Code Memo

Series 05 Description

Map



CITY OF FLAGSTAFF

Office of the City Clerk

10/10/2024

Christopher Mark Wilke
1050 S. Knoles Dr
Flagstaff, AZ 86011
Christopher.wilke@sodexo.com

Dear Mr. Wilke,

Your application for a Series 05 (Government) Liquor License for Rolle Activity Center located at 304 E Pine Knoll Dr., Flagstaff, AZ was posted on September 24, 2024. The City Council will consider the application at a public hearing during their scheduled Special Session City Council Meeting on **October 22, 2024, which is scheduled to begin at 3:00 p.m.**

It is important that you or your representative attend this Council Meeting via video conference ([Microsoft Teams Meeting](#)) or in person and be prepared to answer any questions the City Council may have. Failure to be available for questions could result in a recommendation for denial of your application. We suggest you contact your legal counsel or the Department of Liquor Licenses and Control at 602-542-5141 to determine the criteria for your license. To help you understand how the public hearing process will be conducted, we are enclosing a copy of the City's liquor license application hearing procedures.

The twenty-day posting period for your liquor license application is set to expire on October 14, 2024, and the application may be removed from the premises at that time.

If you have any questions, please email me at georganna.staskey@flagstaffaz.gov.

Sincerely,

Georganna Staskey
City Clerk's Office

Enclosures



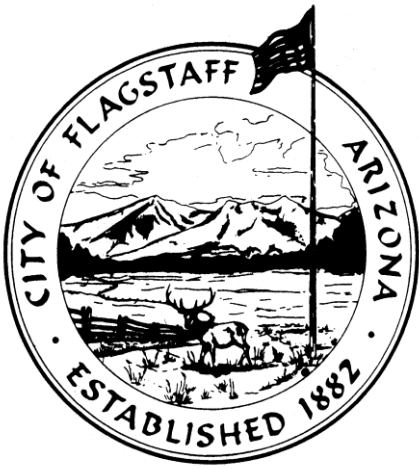
City of Flagstaff

Liquor License Application Hearing Procedures

1. When the matter is reached at the Council meeting, the presiding officer will open the public hearing on the item.
2. The presiding officer will then ask whether City staff have information to present to the Council regarding the application. Staff should come forward at this point and present information to the Council in a presentation not exceeding ten (10) minutes. Council may question City staff regarding the testimony or other evidence provided by City staff.
3. The presiding officer will request that the Applicant come forward to address the Council regarding the application. The applicant can give a presentation not exceeding ten (10) minutes. Council may question the Applicant regarding the testimony or other evidence provided by the Applicant.
4. Other parties, if any, may then testify, limited to three (3) minutes per person. Council may question these parties regarding the testimony they present to the Council.
5. The Applicant may make a concise closing statement to the Council, limited to five (5) minutes. During this statement, Council may ask additional questions of the Applicant.
6. City staff may make a concise closing statement to the Council, limited to five (5) minutes. During this statement, Council may ask additional questions of City Staff.
7. The presiding officer will then close the public hearing.
8. The Council will then, by motion, vote to forward the application to the State with a recommendation of approval, disapproval, or shall vote to forward with no recommendation.

R19-1-702. Determining Whether to Grant a License for a Certain Location

- A. To determine whether public convenience requires and the best interest of the community will be substantially served by issuing or transferring a license at a particular unlicensed location, local governing authorities and the Board may consider the following criteria:
1. Petitions and testimony from individuals who favor or oppose issuance of a license and who reside in, own, or lease property within one mile of the proposed premises;
 2. Number and types of licenses within one mile of the proposed premises;
 3. Evidence that all necessary licenses and permits for which the applicant is eligible at the time of application have been obtained from the state and all other governing bodies;
 4. Residential and commercial population of the community and its likelihood of increasing, decreasing, or remaining static;
 5. Residential and commercial population density within one mile of the proposed premises;
 6. Evidence concerning the nature of the proposed business, its potential market, and its likely customers;
 7. Effect on vehicular traffic within one mile of the proposed premises;
 8. Compatibility of the proposed business with other activity within one mile of the proposed premises;
 9. Effect or impact on the activities of businesses or the residential neighborhood that might be affected by granting a license at the proposed premises;
 10. History for the past five years of liquor violations and reported criminal activity at the proposed premises provided that the applicant received a detailed report of the violations and criminal activity at least 20 days before the hearing by the Board;
 11. Comparison of the hours of operation at the proposed premises to the hours of operation of existing businesses within one mile of the proposed premises; and
 12. Proximity of the proposed premises to licensed childcare facilities as defined by A.R.S. § 36-881.
- B. This Section is authorized by A.R.S. § 4-201(I).



FLAGSTAFF POLICE DEPARTMENT

911 SAWMILL RD • FLAGSTAFF, ARIZONA 86001 • (928) 779-3646

ADMIN FAX (928)213-3372

TDD 1-800-842-4681



Police Chief
Sean P. Connolly

MEMORANDUM

Memo #24-086

TO: Chief Connolly

FROM: Sgt. N. Almendarez #703

DATE: October 9th, 2024

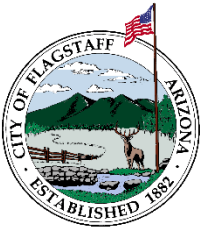
RE: New Application – Series 5 (Government) Liquor License Application– Rolle Activity Center

On October 9th, 2024, I initiated an investigation into a new application for a Series 05 (Government) liquor license filed by Christopher Mark Wilke. This is for a new application, and the application number is 300849. It is for the Rolle Activity Center, located at 304 East Pine Knoll Drive, Flagstaff, AZ.

I conducted a query through local systems and public access on Christopher. I discovered no derogatory records. I conducted a search for current or historical liquor violations on the business and located no violations.

I found evidence that the applicants have taken the mandatory liquor license training. This business is not located within 300 feet of a school.

A representative for the business was invited to be present for the council meeting on October 22nd, 2024.



Planning and Development Services Memorandum

To: Stacy Saltzburg, City Clerk
From: Reggie Eccleston, Code Compliance Manager
CC: Michele McNulty, Planning Director
Date: October 1, 2024
Re: Application for Liquor License #300849
304 E Pine Knoll Dr., Flagstaff, Arizona 86001
Assessor's Parcel Number 103-25-001D
Christopher Mark Wilke on behalf of Rolle Activity Center

This application is a request for a new Series 5 Government liquor license by Christopher Mark Wilke on behalf of Rolle Activity Center. This business is located within the Public Facilities district. This district does allow for this use.

There are no active Zoning Code violations associated with the applicant or the property at this time.

License Type: Series 5 Government

Non-transferable

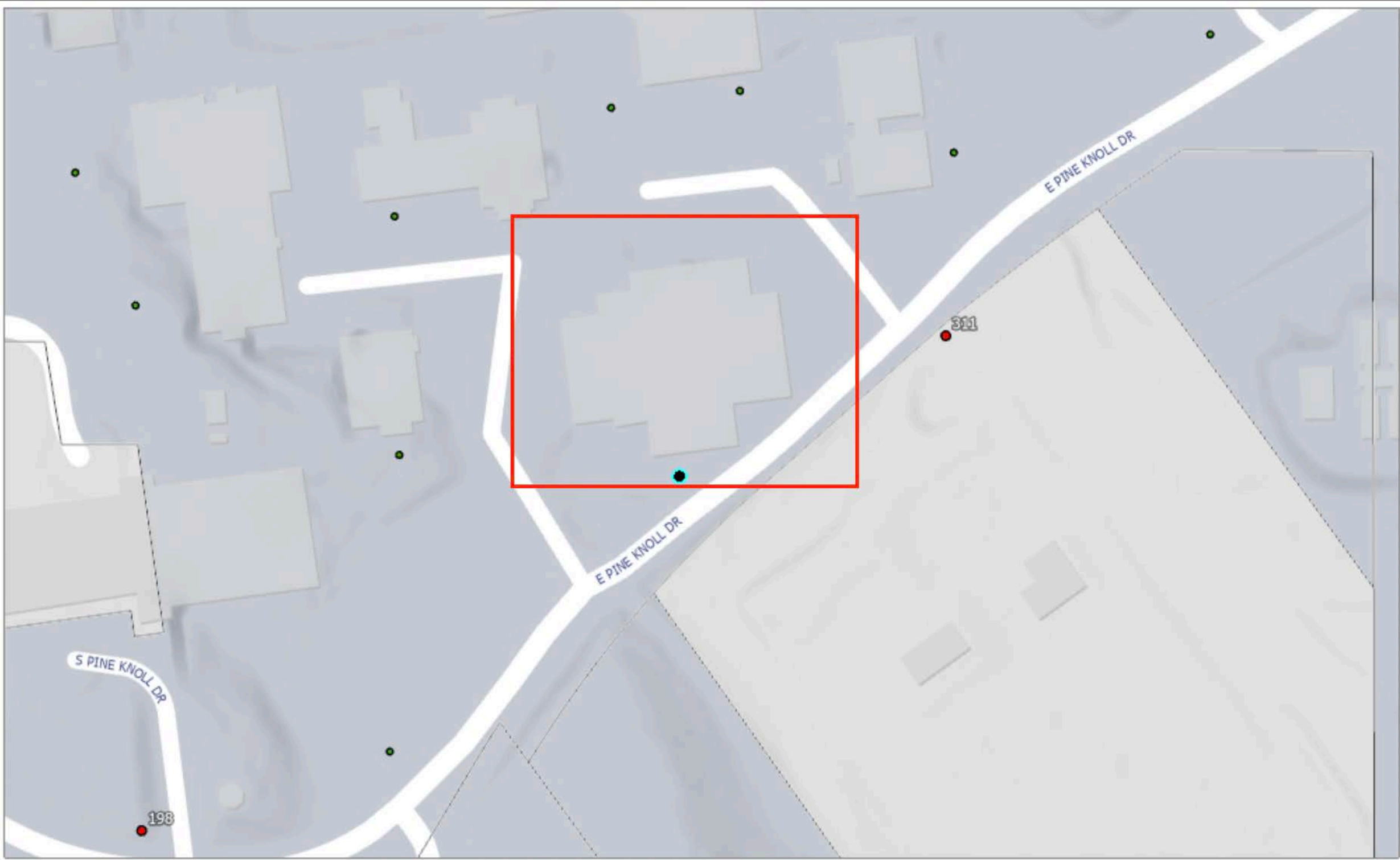
On-sale retail privileges

PURPOSE:

Allows the holder of a government license to sell and serve spirituous liquor solely for consumption on the premises for which the license is issued. The license is issued in the name of a county, city, town, state university or the Arizona Coliseum and exposition centerboard whose governing body has authorized its use. A separate license is required for each premise upon which spirituous liquor is served. The application must designate, for each location, a manager or other individual responsible for administering the license.

ADDITIONAL RIGHTS AND RESPONSIBILITIES:

Applicants, licensees, and managers must take a Title 4 training course (liquor handling, laws and regulations) prior to approval. A pregnancy warning sign for pregnant women consuming spirituous liquor must be posted within twenty (20) feet of the cash register or behind the bar. An Employee Log must be kept by the licensee of all persons employed at the premises including each employee's name, date and place of birth, address and responsibilities.



304 E PINE KNOLL DR



City of Flagstaff maps and data are updated on a regular basis from data obtained from various sources. The City of Flagstaff endeavors to provide accurate information, but accuracy is not guaranteed. You are strongly encouraged to obtain any information you need for a business or legal transaction from a surveyor, engineer, title company, or other licensed professional as appropriate. Information is provided subject to the express condition that you knowingly waive any and all claims for damages against the City of Flagstaff relating to use of this information.



10/17/2024 3:19 PM

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Stacy Saltzburg, City Clerk
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:

Consideration and Action on Liquor License Application: Christopher Wilke, "Lumberjack Stadium", 824 S. San Francisco St., Series 05 (Government) New License

STAFF RECOMMENDED ACTION:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

Executive Summary:

The liquor license process begins at the State level and applications are then forwarded to the respective municipality for posting of the property and holding a public hearing, after which the Council recommendation is forwarded back to the State. A Series 5 license allows for a government agency to sell and serve spirituous liquor solely for consumption on the premises. If approved, the Lumberjack Stadium will be the 6th active series 05 license in Flagstaff.

To view surrounding liquor licenses, please visit the [Active Liquor Licenses Map](#).

The application was properly posted on September 24, 2024 and the Police and Community Development divisions have reviewed the application and provided their respective reports. No written protests have been received to date.

Financial Impact:

There is no budgetary impact to the City of Flagstaff as this is a recommendation to the State.

Policy Impact:

Not applicable

Previous Council Decision or Community Discussion:

Not applicable

Options and Alternatives to Recommended Action:

1. Forward the application to the State with a recommendation for approval; or
2. Forward the application to the State with a recommendation for denial based on the testimony received at the public hearing and/or other factors.

Connection to PBB Priorities and Objectives:

Liquor licenses are a regulatory action and there are no Community Priorities that directly apply.

Connection to Regional Plan:

Not applicable

Connection to Carbon Neutrality Plan:

Not applicable

Connection to 10-Year Housing Plan:

Not applicable

Attachments:

Letter to Applicant

Hearing Procedures

PD Memo

Code Memo

Series 05 Description

Map



CITY OF FLAGSTAFF

Office of the City Clerk

10/10/2024

Christopher Mark Wilke
1050 S. Knoles Dr
Flagstaff, AZ 86011
Christopher.wilke@sodexo.com

Dear Mr. Wilke,

Your application for a Series 05 (Government) Liquor License for Lumberjack Stadium located at 824 S. San Francisco St., Flagstaff, AZ was posted on October 2, 2024. The City Council will consider the application at a public hearing during their scheduled Special Session City Council Meeting on **October 22, 2024, which is scheduled to begin at 3:00 p.m.**

It is important that you or your representative attend this Council Meeting via video conference ([Microsoft Teams Meeting](#)) or in person and be prepared to answer any questions the City Council may have. Failure to be available for questions could result in a recommendation for denial of your application. We suggest you contact your legal counsel or the Department of Liquor Licenses and Control at 602-542-5141 to determine the criteria for your license. To help you understand how the public hearing process will be conducted, we are enclosing a copy of the City's liquor license application hearing procedures.

The twenty-day posting period for your liquor license application is set to expire on October 22, 2024, and the application may be removed from the premises at that time.

If you have any questions, please email me at georganna.staskey@flagstaffaz.gov.

Sincerely,

Georganna Staskey
City Clerk's Office

Enclosures



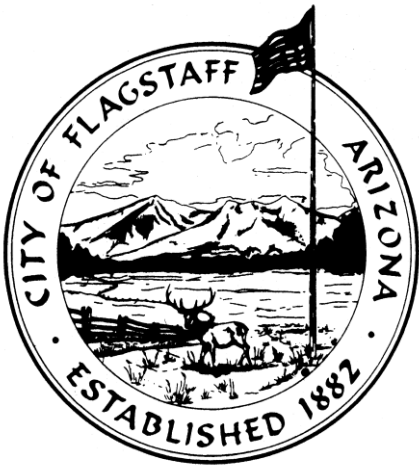
City of Flagstaff

Liquor License Application Hearing Procedures

1. When the matter is reached at the Council meeting, the presiding officer will open the public hearing on the item.
2. The presiding officer will then ask whether City staff have information to present to the Council regarding the application. Staff should come forward at this point and present information to the Council in a presentation not exceeding ten (10) minutes. Council may question City staff regarding the testimony or other evidence provided by City staff.
3. The presiding officer will request that the Applicant come forward to address the Council regarding the application. The applicant can give a presentation not exceeding ten (10) minutes. Council may question the Applicant regarding the testimony or other evidence provided by the Applicant.
4. Other parties, if any, may then testify, limited to three (3) minutes per person. Council may question these parties regarding the testimony they present to the Council.
5. The Applicant may make a concise closing statement to the Council, limited to five (5) minutes. During this statement, Council may ask additional questions of the Applicant.
6. City staff may make a concise closing statement to the Council, limited to five (5) minutes. During this statement, Council may ask additional questions of City Staff.
7. The presiding officer will then close the public hearing.
8. The Council will then, by motion, vote to forward the application to the State with a recommendation of approval, disapproval, or shall vote to forward with no recommendation.

R19-1-702. Determining Whether to Grant a License for a Certain Location

- A. To determine whether public convenience requires and the best interest of the community will be substantially served by issuing or transferring a license at a particular unlicensed location, local governing authorities and the Board may consider the following criteria:
1. Petitions and testimony from individuals who favor or oppose issuance of a license and who reside in, own, or lease property within one mile of the proposed premises;
 2. Number and types of licenses within one mile of the proposed premises;
 3. Evidence that all necessary licenses and permits for which the applicant is eligible at the time of application have been obtained from the state and all other governing bodies;
 4. Residential and commercial population of the community and its likelihood of increasing, decreasing, or remaining static;
 5. Residential and commercial population density within one mile of the proposed premises;
 6. Evidence concerning the nature of the proposed business, its potential market, and its likely customers;
 7. Effect on vehicular traffic within one mile of the proposed premises;
 8. Compatibility of the proposed business with other activity within one mile of the proposed premises;
 9. Effect or impact on the activities of businesses or the residential neighborhood that might be affected by granting a license at the proposed premises;
 10. History for the past five years of liquor violations and reported criminal activity at the proposed premises provided that the applicant received a detailed report of the violations and criminal activity at least 20 days before the hearing by the Board;
 11. Comparison of the hours of operation at the proposed premises to the hours of operation of existing businesses within one mile of the proposed premises; and
 12. Proximity of the proposed premises to licensed childcare facilities as defined by A.R.S. § 36-881.
- B. This Section is authorized by A.R.S. § 4-201(I).



FLAGSTAFF POLICE DEPARTMENT

911 SAWMILL RD • FLAGSTAFF, ARIZONA 86001 • (928) 779-3646

ADMIN FAX (928)213-3372

TDD 1-800-842-4681



Police Chief
Sean P. Connolly

MEMORANDUM

Memo #24-087

TO: Chief Connolly

FROM: Sgt. N. Almendarez #703

DATE: October 9th, 2024

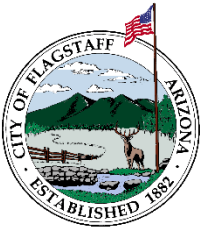
**RE: New Application – Series 5 (Government) Liquor License Application–
Lumberjack Stadium**

On October 9th, 2024, I initiated an investigation into a new application for a Series 05 (Government) liquor license filed by Christopher Mark Wilke. This is for a new application, and the application number is 300850. It is for the Lumberjack Stadium, located at 824 South San Francisco Street, Flagstaff, AZ.

I conducted a query through local systems and public access on Christopher. I discovered no derogatory records. I conducted a search for current or historical liquor violations on the business and located no violations.

I found evidence that the applicants have taken the mandatory liquor license training. This business is not located within 300 feet of a school.

A representative for the business was invited to be present for the council meeting on October 22nd, 2024.



Planning and Development Services Memorandum

To: Stacy Saltzburg, City Clerk
From: Reggie Eccleston, Code Compliance Manager
CC: Michelle McNulty, Planning Director
Date: October 1, 2024
Re: Application for Liquor License #300850
824 S San Francisco St., Flagstaff, Arizona 86001
Assessor's Parcel Number 103-05-003
Christopher Mark Wilkie on behalf of Lumberjack Stadium

This application is a request for a new Series 5 Government liquor license by Christopher Mark Wilkie on behalf of Flagstaff Lumberjack Stadium. This business is located within the Public Facility district. This district does allow for this use.

There are no active Zoning Code violations associated with the applicant or the property at this time.

License Type: Series 5 Government

Non-transferable

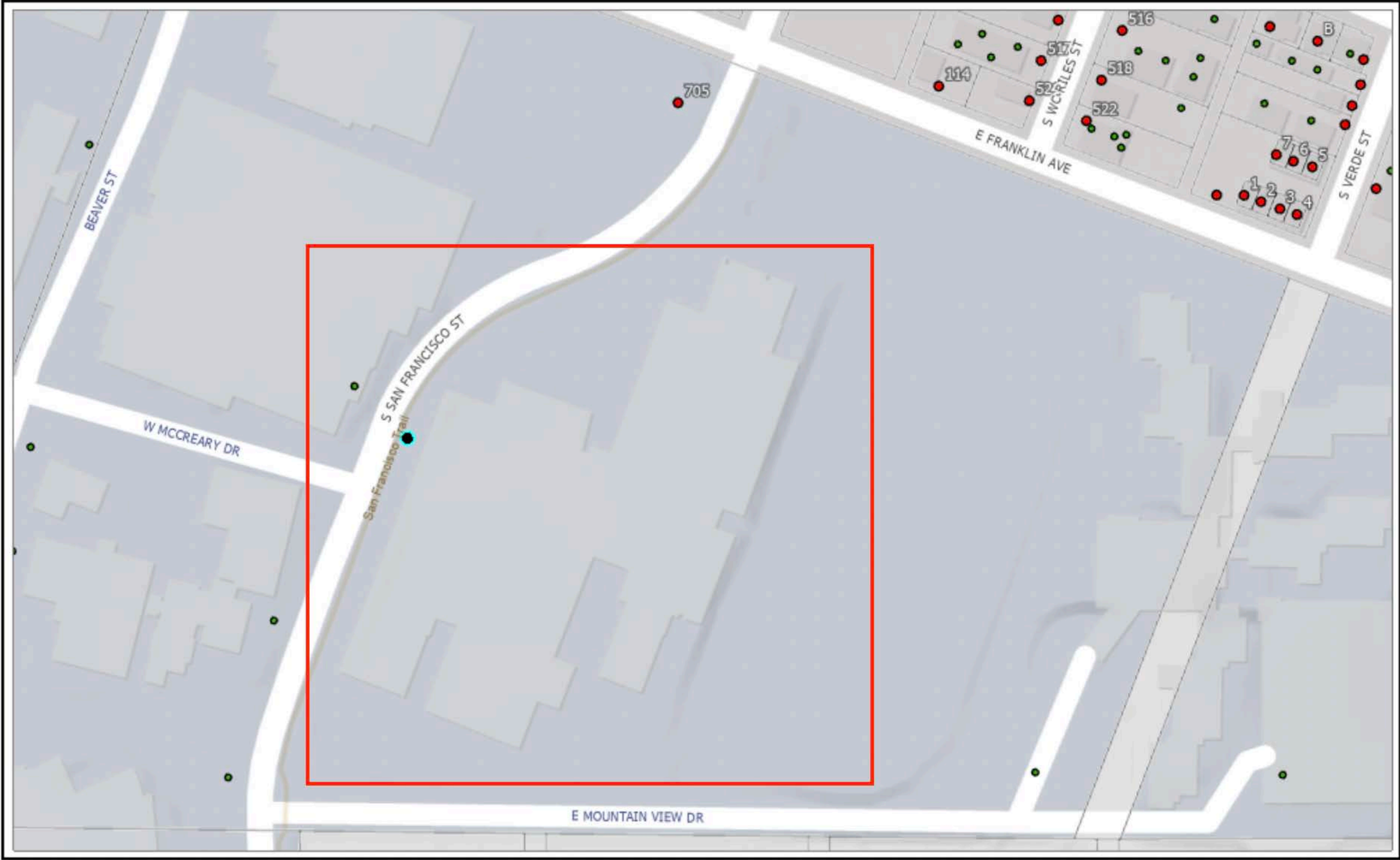
On-sale retail privileges

PURPOSE:

Allows the holder of a government license to sell and serve spirituous liquor solely for consumption on the premises for which the license is issued. The license is issued in the name of a county, city, town, state university or the Arizona Coliseum and exposition centerboard whose governing body has authorized its use. A separate license is required for each premise upon which spirituous liquor is served. The application must designate, for each location, a manager or other individual responsible for administering the license.

ADDITIONAL RIGHTS AND RESPONSIBILITIES:

Applicants, licensees, and managers must take a Title 4 training course (liquor handling, laws and regulations) prior to approval. A pregnancy warning sign for pregnant women consuming spirituous liquor must be posted within twenty (20) feet of the cash register or behind the bar. An Employee Log must be kept by the licensee of all persons employed at the premises including each employee's name, date and place of birth, address and responsibilities.



824 S SAN FRANCISCO ST



City of Flagstaff maps and data are updated on a regular basis from data obtained from various sources. The City of Flagstaff endeavors to provide accurate information, but accuracy is not guaranteed. You are strongly encouraged to obtain any information you need for a business or legal transaction from a surveyor, engineer, title company, or other licensed professional as appropriate. Information is provided subject to the express condition that you knowingly waive any and all claims for damages against the City of Flagstaff relating to use of this information.



10/17/2024 3:29 PM

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Michelle McNulty, Planning Director
Co-Submitter: David McIntire
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:
Former Courthouse Redevelopment Discussion

DESIRED OUTCOME:

Staff will provide an update on the response received to the Request for Proposals (RFP) for the redevelopment of the former courthouse site and obtain direction on the desired elements of the project.

Executive Summary:

In January 2024, Flagstaff City Council supported the Downtown Action and Vision Plan completed by the Flagstaff Downtown Business Association in partnership with the City, Coconino County, and Mountain Line. The plan identified several catalytic sites, including the entire block housing the former Courthouse site and called for the City to put out a Request for Proposals (RFP) for the redevelopment of the property. Prior to issuing the RFP, staff provided an update to Council on what would be included in the RFP and sought their feedback prior to finalizing the proposal. An RFP was issued and originally ran from April 12, 2024, through June 11, 2024. A two-week extension was granted based on questions and comments received from interested parties and the response period ultimately closed June 25, 2024. There were three firms that showed interest in the project, only one response was received and appears to include many of attributes identified in the Downtown Action and Vision Plan and addresses the City's housing and carbon neutrality priorities.

Information:

The parcels included in the RFP included:

APN 100-21-009A which is approximately 3,225 feet

APN 100-21-011 which is approximately 10,018 feet

APN 100-21-009B which is approximately 6,825

APN 100-21-001B which is approximately 10,890

This is a total area of 30,958 square feet or .71 acres. There is an alley separating 100-21-001B from the other three parcels which are adjacent to each other.

These properties were previously used as the former courthouse, and as parking for the courthouse and the public.

On the remainder of the block are four privately owned parcels.

The City of Flagstaff owned lots are currently public parking managed by ParkFlag and serving the downtown and the new courthouse.

Attachments: [Presentation](#)

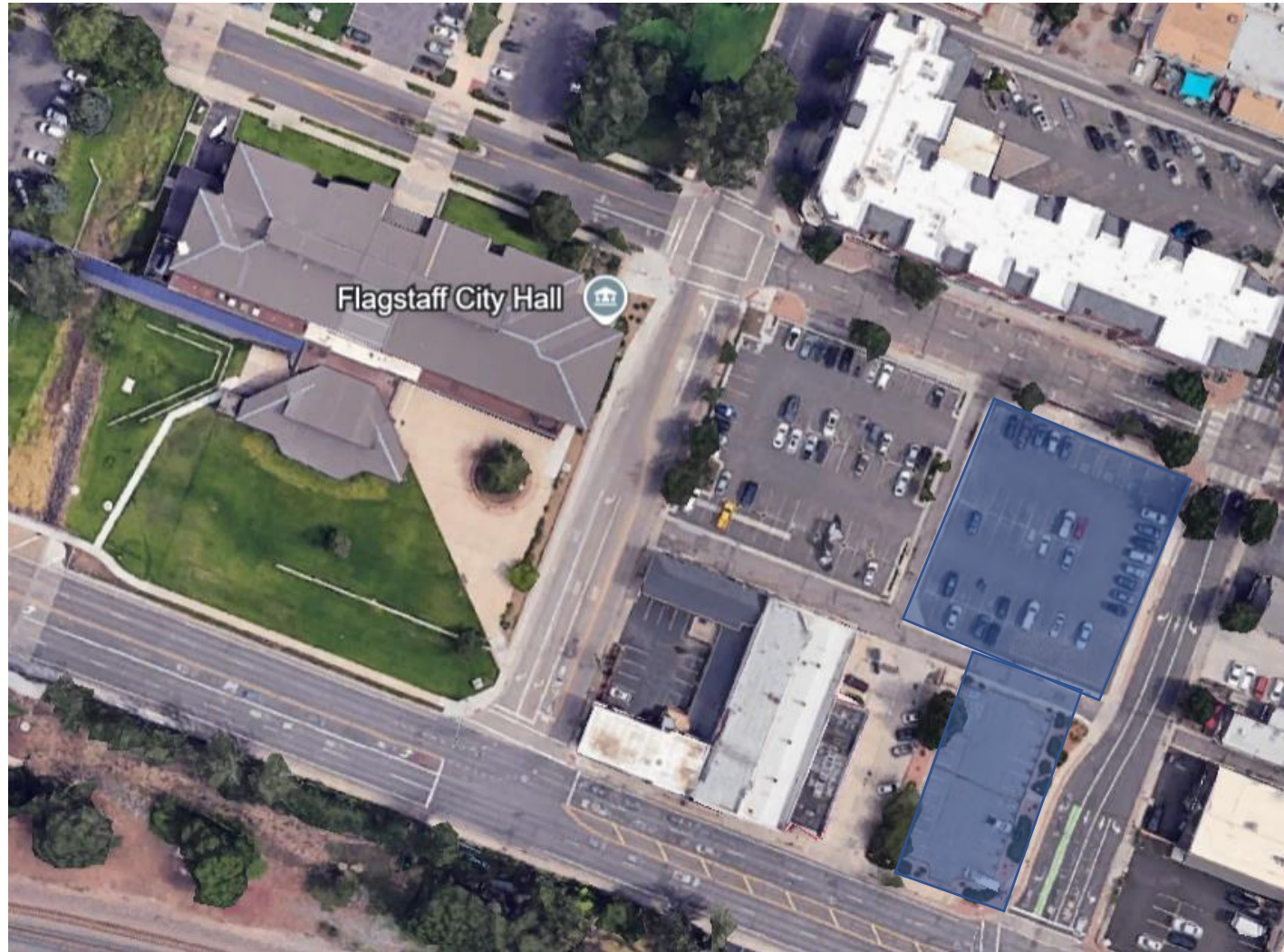
Former Courthouse Redevelopment





Former Courthouse Redevelopment

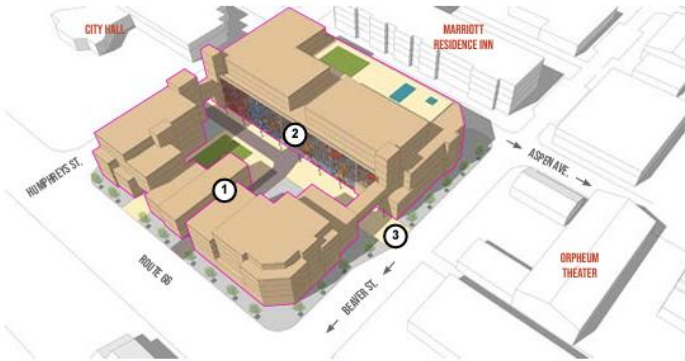
Vicinity Map



Former Courthouse Redevelopment

Framing the RFP

A - OLD CITY COURTHOUSE



This concept shows the entire block redeveloping into a mixed use gateway to downtown. This catalyst project envisions a public-private partnership to redevelop into a mixed use block with a public-parking component. The program is to be determined, but any project on this site should give back to the community with public parking and public space. This location would also be ideal to contribute downtown housing and a small grocery/market.



The Dairy Block in Denver, CO is a public amenity with art, games, lighting, and seating areas. A boutique hotel and lobby bar is one use that activates the space.

- 1 City should issue Request for Proposals for development on this block. Scenario shown would include the entire block redeveloping at once. This scenario shows three primary structures with massing broken up to fit into the context of downtown. Uses should include residential units and ground floor retail. Office and hotel uses may also be appropriate. A small corner market to support downtown residents is also desired.
- 2 Any future development proposal should include some amount of public parking (exact number to be negotiated) to serve downtown businesses.
- 3 Maintaining alleys is desired. This scenario shows a wide pedestrian-only alley and plaza for a half block at Beaver Street that would be activated with adjacent uses and connected across Beaver to the downtown core alleys. The parking structure could include a thru-drive passage to enhance connectivity and options for entering and exiting to avoid congestion (see next page.)



The diagram above shows how site circulation to parking could work. All entries/exits would be right in, right out due to Aspen being a one-way street and Route 66 and Humphreys being busy streets. This concept envisions a pedestrian-only alley for a half-block at Beaver Street with a safe mid-block pedestrian crossing to allow pedestrians a safe and interesting walk that connects to the downtown core and activated alleys.



A pedestrian alley in Rapid City, SD that is similar to the concept shown, with parking structure on one side (with flat floors and high ceilings for future adaptive reuse) and businesses activating the other side. Ample pedestrian-scaled lighting, flowers, and other amenities keep the space looking nice and feeling safe.

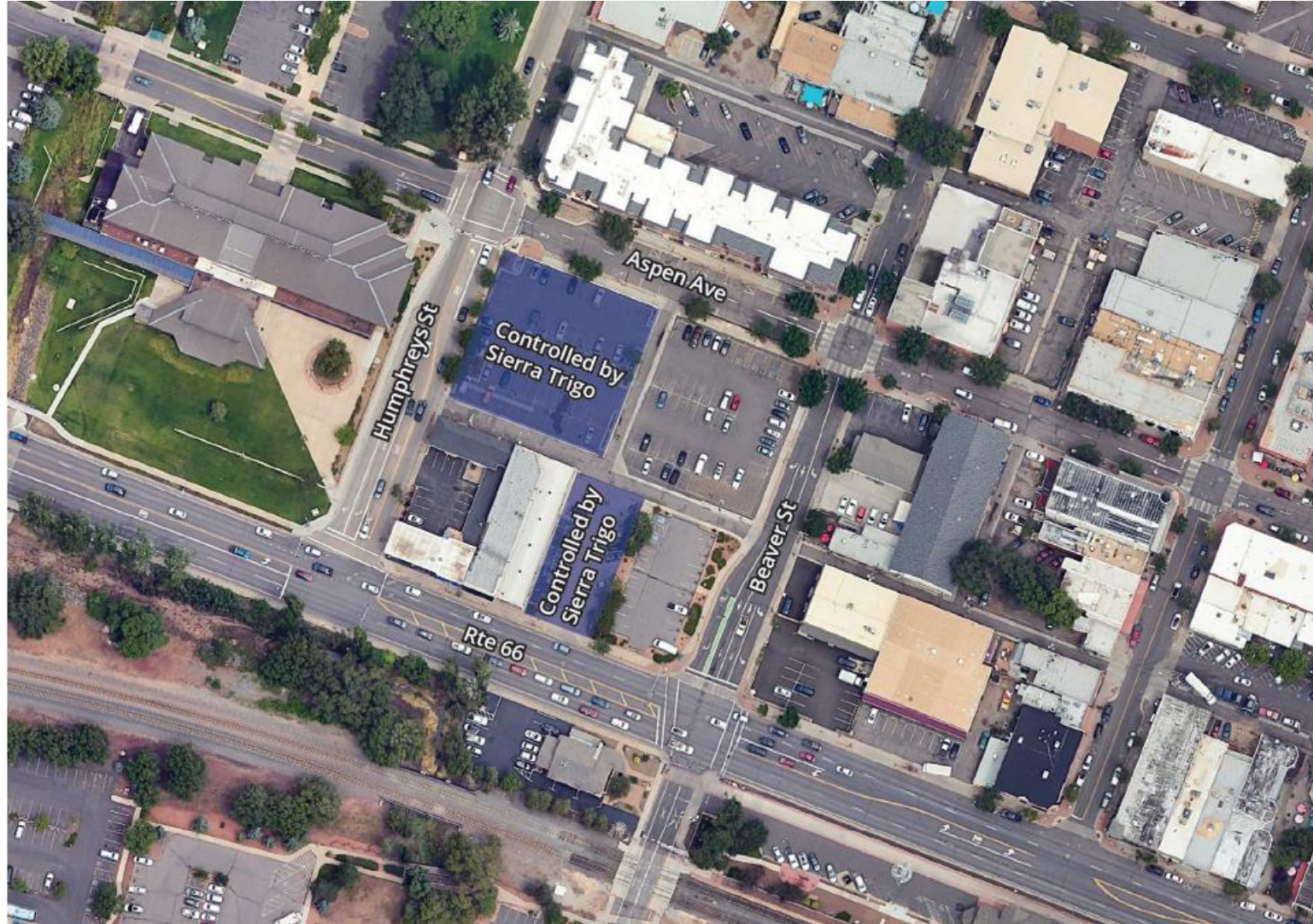


Parking areas should be screened from public view. When facing a public street, design the edges with active building uses, when feasible, or design to look like a building with similar bay rhythm and materiality. When facing an alley, use creative screening techniques, such as mesh, screens, green walls, or design to look like a building.



Former Courthouse Redevelopment

Proposal





Former Courthouse Redevelopment

Proposal – conceptual floor plans

- First level: retail, restaurant, grocery, protected bicycle parking and 50 parking spaces
- Levels 2 and 3: Parking decks (265 spaces)
- Levels 4 through 7: residential and hotel guestrooms
 - ~ 80 residential units (separate entry entirely from hotel space)
 - A mix of mostly studio and 1 bedrooms with some larger units with multiple bedrooms
 - 150 hotel guestrooms
 - Level 6 could include conference and event space
- \$2 million dollars



Former Courthouse Redevelopment

Proposal – conceptual elevations

Proposed Development Conceptual Exterior - View from Corner of Humphreys St & Aspen Ave





Former Courthouse Redevelopment

Proposal – conceptual elevations

Proposed Development Conceptual Exterior - View from Corner of Beaver St & Aspen Ave





Former Courthouse Redevelopment

Proposal – conceptual elevations

Proposed Development Conceptual Exterior - View from Corner of Rte 66 & Beaver St





Former Courthouse Redevelopment

Input seeking:

- Mass & scale vs. parking vs. density vs. money
 - Mass and scale allowed by code (CUP) – does the benefit of what we get make the mass and scale work for you?
 - If get more parking, we lose units
 - Could reduce amount received for purchase
 - If we lose floors, we could lose parking and/or units
 - Could reduce amount received for purchase
- Reducing mass and scale could reduce grocery footprint
 - This would limit ability to commit to providing a grocery store

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Steven Thompson, Sustainability Manager
Co-Submitter: Natalie Pierson
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:

United States Department of Agriculture Urban Agriculture and Innovative Production Grant Update: Community Food Systems Assessment

DESIRED OUTCOME:

This is an informational update only.

Executive Summary:

The Sustainability Division received a United States Department of Agriculture (USDA) Urban Agriculture and Innovative Production (UAIP) grant for the development of a comprehensive food systems assessment, innovative food business feasibility study, and Food Action Plan. The grant was accepted by City Council on September 6, 2022.

The Community Food Systems Assessment (CFSA), funded through the USDA, provides an in-depth review of food systems, food access, and food distribution in Flagstaff and Northern Arizona. This assessment completes the first of three phases of the "Assessing and Growing a Sustainable Community Food System" project.

This informational presentation will share key findings from Phase 1: Comprehensive Food Systems Assessment.

Information:

Key Findings from Phase 1: Comprehensive Food Systems Assessment

- **Local Food Channels**
 - Northern Arizona has experienced a 10% loss in the number of farms and ranches and a 4% loss in agricultural acreage over the last decade.
 - The cost of land is the biggest reported barrier to farming near Flagstaff.
- **Food System Infrastructure**
 - Limited numbers of food processing facilities
 - 83% of survey respondents who manufacture a food product do so at home versus in a commercial/certified kitchen.
 - 24% of food and farming businesses expressed dissatisfaction with zoning regulations that impact their businesses.
- **Food Retail Environment**
 - 14% of survey respondents grow, hunt, or fish for their food
 - 26% of survey respondents would buy more local food if it were affordable.
- **Food Consumption and Health**
 - Northern Arizona shoppers spend 11% of their total consumer spending on food.
 - 66% of food spending is on food consumed at home.
 - 21% of survey respondents report not being able to afford the healthy food they want.
 - The high cost of housing was reported as a barrier to healthy eating.
- **Access to Food**
 - Food insecurity rates in Northern Arizona are higher than the state average.

- 14% of residents want more information/knowledge on how to grow their own food.
- **Food Waste and Recovery**
 - Arizona produces the most food waste in the nation.
 - 5.8 million pounds of food waste is created in Flagstaff and sent to the landfill each year.
 - There are limited options for hot food recovery from restaurants and caterers.
 - 19% of Flagstaff businesses indicated that a composting program would support their business development.

Financial Impact:

There is no financial impact.

Policy Impact:

These activities support strategies identified in the [Carbon Neutrality Plan](#) targeting the reduction of greenhouse gas emissions from Flagstaff's food distribution, encouraging sustainable consumption, building community resilience, improving food security, and implementing climate actions that are equitable.

City Council and PBB Goals

- Sustainable, innovative infrastructure -- Utilize existing long-range plans that identify the community's future infrastructure needs and all associated costs.
- Environmental stewardship -- Strengthen Flagstaff's resilience to climate change impacts on built, natural, economic, health, & social systems
- Robust Resilient Community - Attract employers that provide high quality jobs & have a low impact on infrastructure & natural resources.

Regional Plan

Goal E&C.2: Reduce greenhouse gas emissions.

Carbon Neutrality Plan

SC-2: Encourage sustainable consumption.

SC-3: Divert more waste from the landfill.

SC-4: Reduce organic waste going to the landfill and reduce food insecurity.

CR-2: Strengthen existing community systems to create resilience to both short-term shocks and long-term change.

ES-2: Proactively engage community members on an ongoing basis.

ES-3: Design targeted climate policies and programs to serve disproportionately impacted communities first.

ES-4: Actively seek to recognize past harms, repair trust, and build deeper relationships with community members.

Housing, Neighborhoods & Equity: "Research has shown that neighborhoods can be a good predictor of health. Therefore, it is imperative to place housing in areas of opportunity, such as community spaces, open spaces, quality schools, food, and transportation."

Previous Council Decision

There has been previous Council decision to accept the USDA grant to fund this project.

- **Grant acceptance approval on September 6th, 2022**

Social Network Analysis
Presentation
Stakeholder Conversation Invitation

2024 COMMUNITY FOOD SYSTEM ASSESSMENT



CITY OF FLAGSTAFF &
NORTHERN ARIZONA

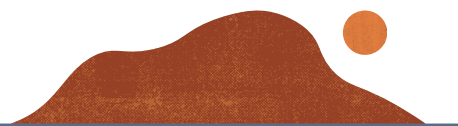
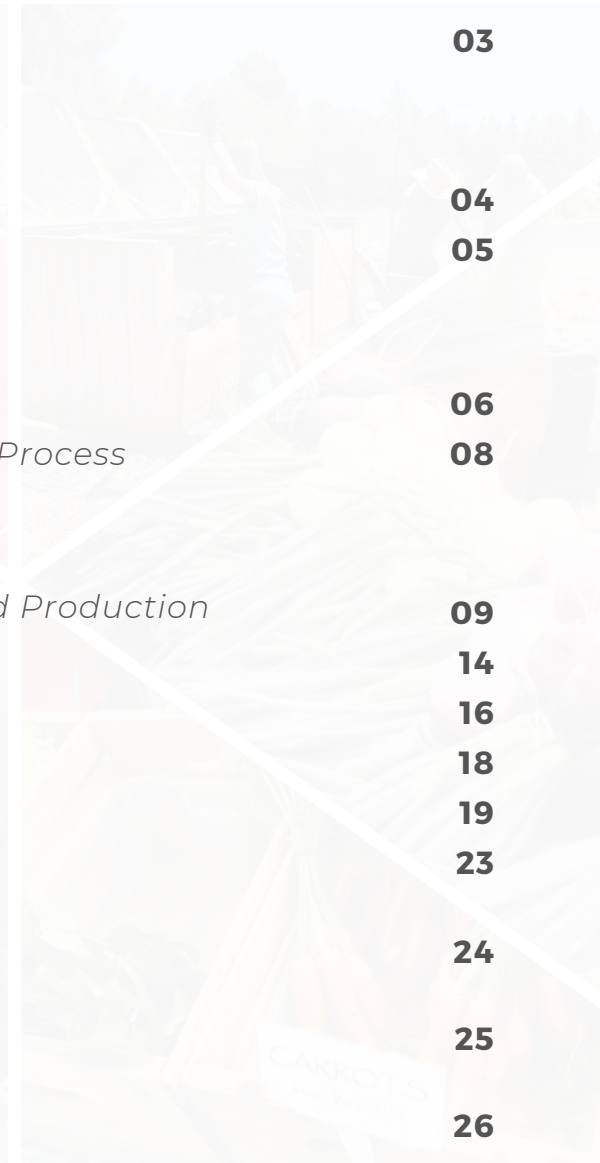


Table of Contents



I. FOREWORD	03
II. ACKNOWLEDGEMENTS	
<i>Acknowledging the Land</i>	04
<i>Acknowledging People</i>	05
III. INTRODUCTION	
<i>What is a Food System?</i>	06
<i>Our Food System Assessment Process</i>	08
IV. SYSTEM OVERVIEW	
<i>Agricultural Landscape & Food Production</i>	09
<i>Food System Infrastructure</i>	14
<i>Food Retail Environment</i>	16
<i>Food Consumption & Health</i>	18
<i>Access to Food</i>	19
<i>Food Waste & Recovery</i>	23
V. NEXT STEPS	24
VI. GLOSSARY	25
VII. SOURCE NOTES	26

All photos in this document were provided by the City of Flagstaff Sustainability Office, Flagstaff Foodlink, and our food system partners.



Foreword

From the City of Flagstaff, Mayor's Office

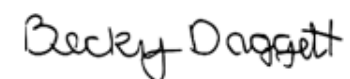
The City of Flagstaff Community Food System Assessment represents a collaborative effort, reflecting the dedication and advocacy of those committed to establishing a sustainable and equitable food system. We recognize and thank them for their efforts.

This report is the culmination of the initial phase of the city's 3-year "Assessing & Growing a Sustainable Community Food System" project to deepen our understanding of the challenges and opportunities related to food access and distribution throughout Northern Arizona. While the primary focus of this assessment is on the City of Flagstaff, we want to honor Flagstaff's interwovenness with neighboring communities and counties. As such, the assessment also includes findings from Coconino, Mohave, Apache, Navajo, and Yavapai counties. Without them, a sustainable, local, and accessible food system could not exist.


This assessment has three overarching goals. The first is to establish a comprehensive understanding of the northern Arizona and Flagstaff Food System, identifying both assets to strengthen and obstacles to overcome to achieve a sustainable food system. The second is to create a baseline of crucial food system metrics that can be monitored over time, enabling the community to measure progress in building a resilient and just food system. Finally, the assessment sets the stage for actionable policy, recommendations, and the development of a forthcoming Community Food Action Plan, laying the groundwork for meaningful change and improvements in our food system.

The City is committed to enhancing urban agriculture as a means of creating a sustainable, resilient, equitable, and thriving food system. This report will serve as a tool to enact strategic policy and investment strategies to address key barriers and leverage existing strengths to improve public health, foster community building, and increase capacity of the local food system to better serve the needs of residents. These findings will also support the incorporation of sustainable food systems strategies into policy guiding plans such as the Flagstaff Carbon Neutrality Plan and 2045 Regional Plan.

Community engagement is vital to this process, as it fosters creative partnerships, brings a diversity of voices into decision-making processes, promotes equity, and advances community-driven goals. We invite all community members to engage with this project to cultivate a sustainable, resilient, and equitable food system in Northern Arizona for the benefit of all. To learn more and contribute to this project, you can visit our website at www.flagstaff.az.gov/NAZFSA.



Becky Daggett, Mayor



"This report will serve as a tool to enact strategic policy and investment strategies to address key barriers and leverage existing strengths to improve public health, foster community building, and increase capacity of the local food system to better serve the needs of residents."



Acknowledging the Land

The City of Flagstaff humbly acknowledges the ancestral homelands of this area's Indigenous nations and original stewards. These lands, still inhabited by Native descendants, border mountains sacred to Indigenous peoples. We honor them, their legacies, their traditions, and their continued contributions. We celebrate their past, present, and future generations, who will forever know this place as home.

The project team for this Community Food System Assessment recognizes that this acknowledgment does not replace action. We commit to building meaningful relationships with stewards of this land and deepening our understanding of how this history impacts our food system today.

Acknowledging People

This assessment was supported by the energy and input of residents and community partners alike.

Particular thanks are extended to:

1,000+ RESIDENTS who took the time to complete the community-wide survey, **THIRTY-FOUR** focus group participants who shared their time and wisdom with us, and **THIRTY-THREE** community organizations who participated in the social network analysis.

A very special thanks to:

THE PROJECT STEERING COMMITTEE who met multiple times throughout the project to dig deep into the data, ask great questions, and shape the assessment that follows.



STEERING COMMITTEE MEMBERS

ART LEEDS

Rocking L3 Ranch | Farmer & Rancher

GAYLE GRATOP

UA Cooperative Extension | Agent - Family, Consumer, and Health Sciences

ELIZABETH TAYLOR

Arizona Department of Agriculture (AZDA) Food & Policy Advisory Committee (FAPAC) | Chair

MELISSA ECKSTROM

Flagstaff Foodlink | Board Co-President

PETER FRIEDERICI

NAU Sustainable Communities | Director, Rural Foods Pathways Project

SANDRA LUBARSKY

Flagstaff College and Communiversity | President

CITY OF FLAGSTAFF SUSTAINABILITY OFFICE

SUMMER WHITE

Food and Waste Sustainability Supervisor

NATALIE PIERSON

Food Systems Coordinator

NICOLE ANTONOPOULOS

Sustainability Director

FLAGSTAFF FOODLINK

SUMMER GRANDY

Food Systems Coordinator

NEW VENTURE ADVISORS

EILEEN HORN | Team Lead

MAYA ATLAS | Project Manager

JULIA LAROCHE | Research Associate

What is a Food System?

The “food system” is the process food follows as it moves from the farm to your table

A Food System is a cycle that encompasses a range of activities:

- **Growing, foraging, and ranching;**
- **Processing; transporting and distributing;**
- **Retailing and marketing;**
- **Preparation and cooking;**
- **Eating;**
- **Waste management;**
- **Safety;**
- **Land and water stewardship;**
- **Environmental preservation.**



The journey our food takes through the food system is influenced by our northern Arizona ecosystem, research, education, funding, policies, and our community’s rich cultural traditions.

In the past, our food system was mostly self-sufficient: food was grown, processed, sold, consumed, and disposed of in one place, and food choices were restricted to what could be grown and gathered in our region.



Today, our food system is global, and we have unprecedented access to foods grown around the globe. This global food system impacts the health of our people and our planet.

Producing food is a major economic activity in our region, but certain industrial farming practices and food waste have negative impacts on our environment and change our climate. Food is not distributed equitably around our communities, causing health challenges like hunger and obesity. The energy and resources consumed to grow, harvest, process and transport food in this global system are also significant.



In response, communities like ours have looked to food systems as an opportunity to tackle these challenges.

OUR FOOD SYSTEM VALUES

- | | |
|----------------|--------------|
| EQUITY | FOOD JUSTICE |
| HEALTH | RESPECT |
| SUSTAINABILITY | HUMAN RIGHTS |

When food system activities are localized, there are more opportunities to support the economy, reduce transportation emissions, and promote a healthier community.

THE FOOD SYSTEM



KEY AREAS OF THE FOOD SYSTEM

AGRICULTURAL LANDSCAPE & FOOD PRODUCTION

Where our food comes from. This includes everything from farming to ranching to backyard gardening.



FOOD SYSTEM INFRASTRUCTURE

How food is moved from the farm and then processed and distributed to places where people consume it.



FOOD RETAIL ENVIRONMENT

How and where food is purchased by consumers at stores, restaurants, or cafeterias.



FOOD CONSUMPTION & HEALTH

How the food we eat impacts the health of individuals and our communities.



FOOD ACCESS

How community members have (or don't have) access to adequate, affordable, and culturally relevant foods.



FOOD WASTE & RECOVERY

How food that doesn't get eaten is recovered and shared, composted, or landfilled.



Our Food System Assessment Process

JANUARY 2023 The City of Flagstaff Sustainability Office was awarded a USDA Urban Agriculture and Innovative Production grant to support the development of a northern Arizona food systems assessment. The community food system assessment was designed to improve the community's understanding of gaps and opportunities in the regional food system and to lay the groundwork for the creation of recommendations in a community food action plan for Flagstaff and the surrounding region.

MAY 2023 The City of Flagstaff contracted with New Venture Advisors (NVA), a strategy consulting firm specializing in food system planning and food enterprise development to complete this community food system assessment. The City of Flagstaff partnered with Flagstaff Foodlink, and a steering committee of key stakeholders in the regional food system to inform the project.

Together, the City of Flagstaff, Flagstaff Foodlink, the steering committee, and the team at NVA facilitated a twelve month-long assessment process.

Components of the Assessment

Extensive secondary data collection: Information was pulled from the key county, state, and national datasets that help us understand our food system. Sources include the U.S. Census, the USDA Census of Agriculture, CDC, County Health Rankings, Feeding America, and local community health assessments and reports.

Community-wide survey: Community members from across the five-county region were invited to share their experiences and perceptions of the regional food system. We received 1,041 total responses from a variety of food system participants—consumers, growers, and food businesses.

Focus groups: Thirty-four key food system stakeholders participated in focus groups to share their on-the-ground insights and experiences. Focus groups covered six food system audiences:

1. Food Retail Outlets
2. Farmers/Ranchers
3. Funders in the Food System
4. Institutional Food Purchasers
5. Emergency Food Access
6. Food Waste/Recovery

Social Network Analysis

A social network analysis (SNA) was conducted with representatives from thirty-three key regional food system organizations to understand the connections and relationships between stakeholders within the food system. The purpose of this SNA was to identify central players in the local food system, understand community structures, and pinpoint bridge organizations within these networks.

Together, these data provide a picture of the northern Arizona and City of Flagstaff food system, providing actionable insights for enhancing collaboration, identifying potential areas for intervention, and supporting decision-making processes among stakeholders in the food system.

The SNA is included in its own report document, accessible at: www.flagstaff.az.gov/NAZFSA



How to Read this Assessment

Each of the six food system sectors—**Agricultural Landscape and Food Production, Food System Infrastructure, Food Retail Environment, Food Consumption and Health, Access to Food, and Food Waste and Recovery**—contains information about both the five-county northern Arizona food system (comprising Coconino, Yavapai, Mohave, Apache, and Navajo Counties) and the City of Flagstaff in these four sub-sections:

- 1 **Sector Facts:** These are the key secondary data points for both northern Arizona and the City of Flagstaff (where city-level data was available). These mostly quantitative data are generated by government and nonprofit organizations (i.e. the Census of Agriculture, conducted by USDA).
- 2 **Survey & Focus Group Findings:** These are the qualitative data from the community-wide survey and sector-specific focus groups.
- 3 **Trends & Challenges:** These are the key findings and themes that emerged across the secondary data, survey, and focus groups.
- 4 **Remaining Questions:** These are the remaining questions that will require additional research and community engagement.



Data specific to the city of Flagstaff is called out in the “Flagstaff in Focus” boxes throughout this document.

Agricultural Landscape & Food Production

Where our food comes from, including everything from farming to ranching to backyard gardening.



Sector Facts

Northern Arizona is home to 11,670 farms/ranches, with 17.1 million acres in production.

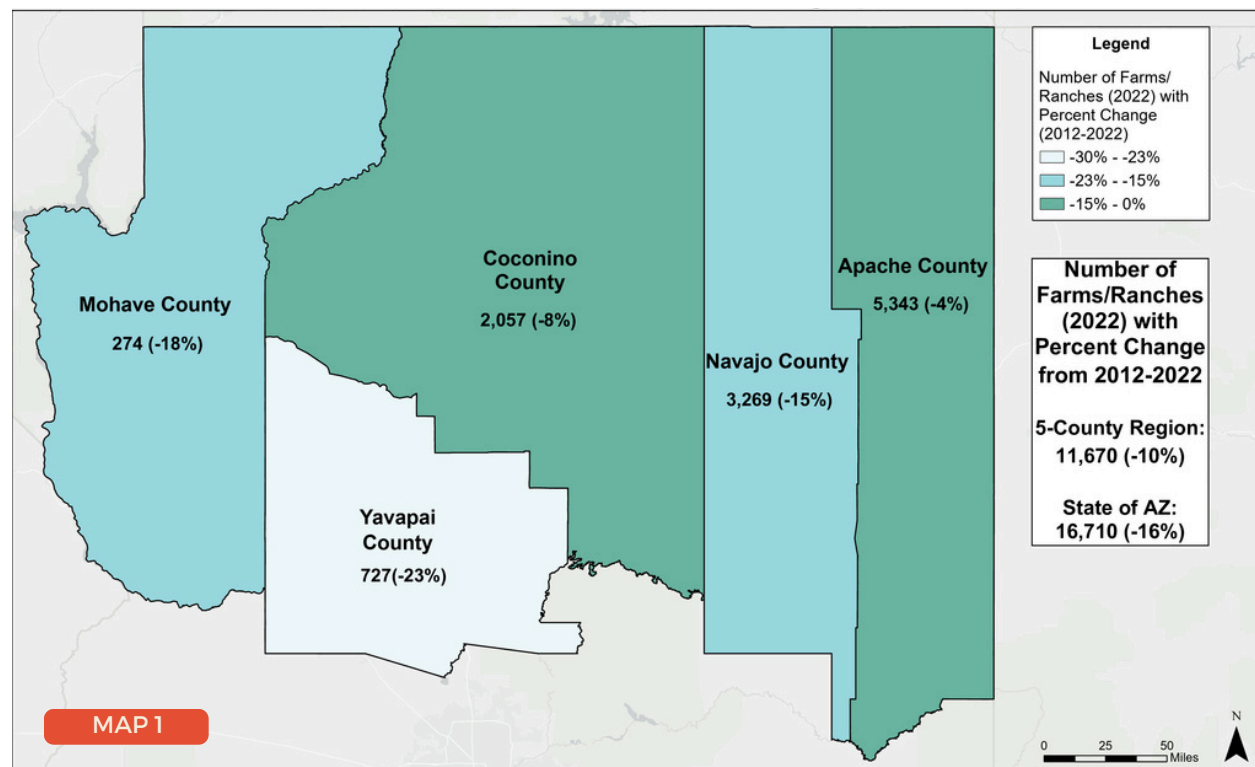
This region represents 70% of all Arizona farms/ranches and 67% of the state's agricultural acreage.¹

In the last decade (2012-22), northern Arizona has seen:

- 10% loss in the number of farms/ranches. The state lost 16% over that same period.
- 4% loss of agricultural acreage.
- Variation in average farm/ranch size change, ranging from -26% in Mohave County to +3.8% in Yavapai County.²

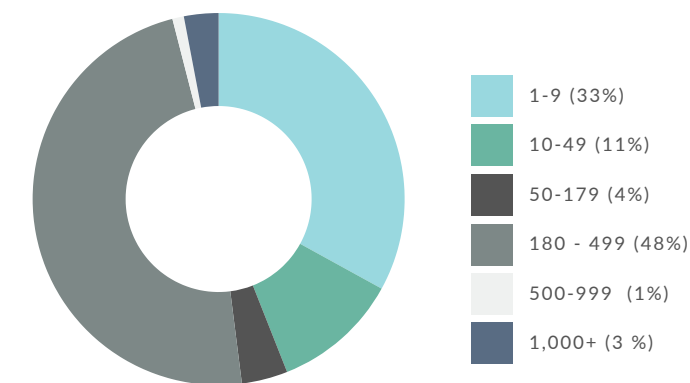
(See Map 1)

Number of Farms / Ranches (2022) with % Change (2012-2022)



FARM / RANCH SIZE BY ACREAGE (2022)

FIGURE 1



48% of farms/ranches fall within the size category of 180-499 acres.

33% fall in the smallest category of 1-9 acre farms.³ (See Figure 1)

Northern Arizona farms/ranches account for just 3.4% of the state's agricultural sales despite being home to 67% of Arizona's agricultural acreage.

Total agricultural sales in northern Arizona in 2022 accounted for 3.4% of state agricultural sales (\$178,142,000).

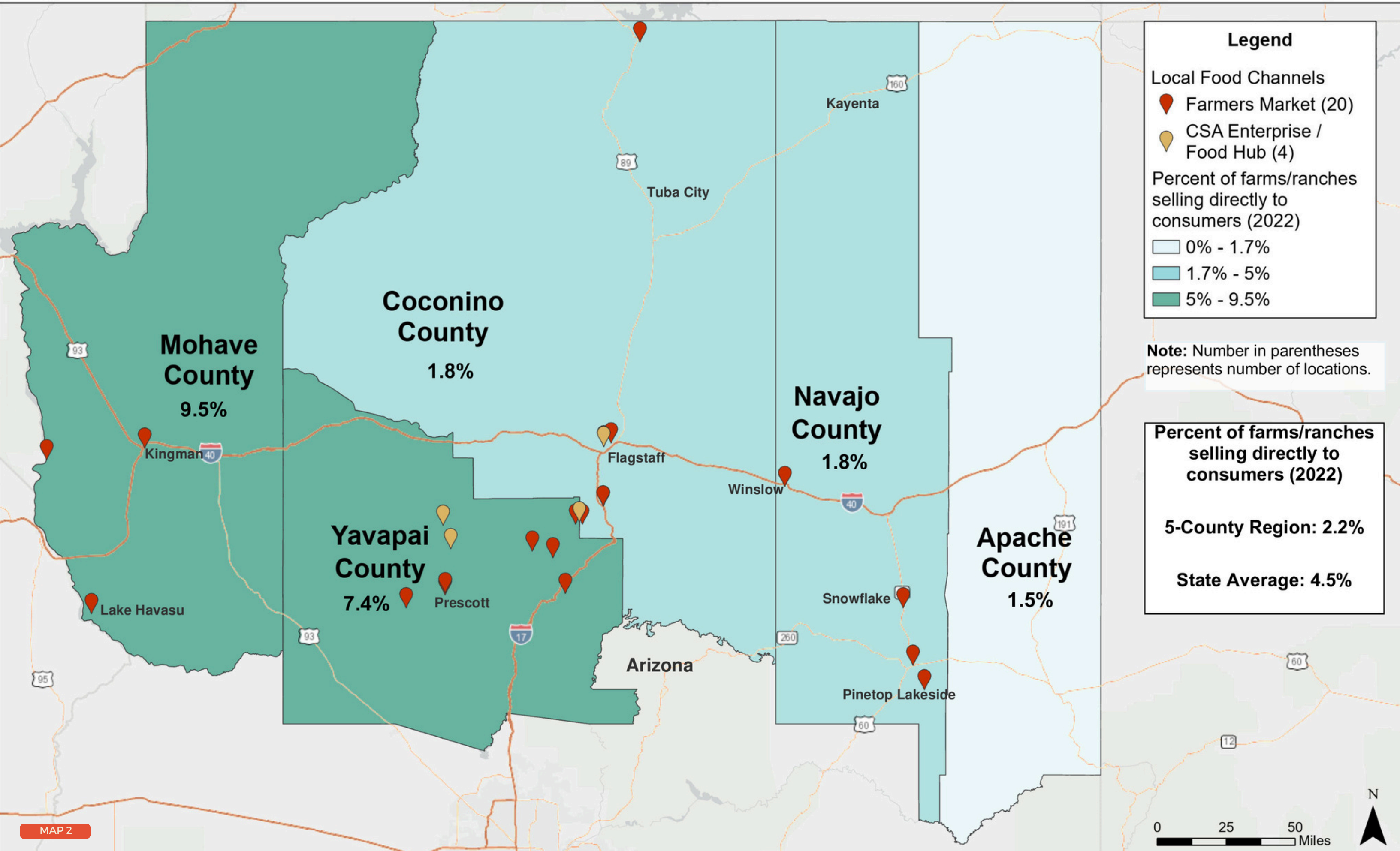
Of these sales \$6,584,000 are local direct-to-consumer sales. Between 2017 and 2022, these direct-to-consumer sales grew by 60.8%.

Mohave and Yavapai Counties have the greatest percentage of farms/ranches selling direct-to-consumer and through local channels, 9.5% and 7.4% respectively.⁴

Apache, Coconino, and Navajo Counties have the most farms/ranches yet the least local market connectivity (1.5%, 1.8%, and 1.8%, respectively).

(See Map 2)

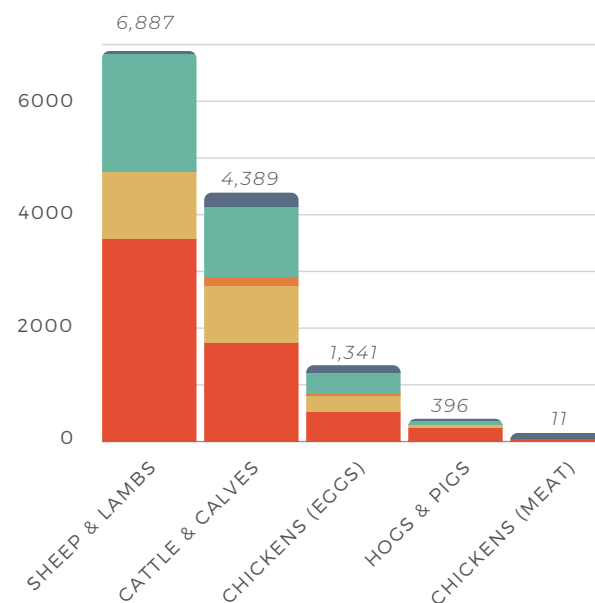
Local Food Channels of Northern Arizona





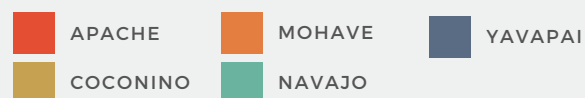
LIVESTOCK & POULTRY FARMS BY TYPE & COUNTY (2022)

FIGURE 2



Agricultural Landscape & Food Production Sector Facts, Continued

COUNTY COLOR KEY



PRODUCTION FAST FACTS:

TOP FIVE CROPS ACROSS THE REGION BY ACREAGE⁵:

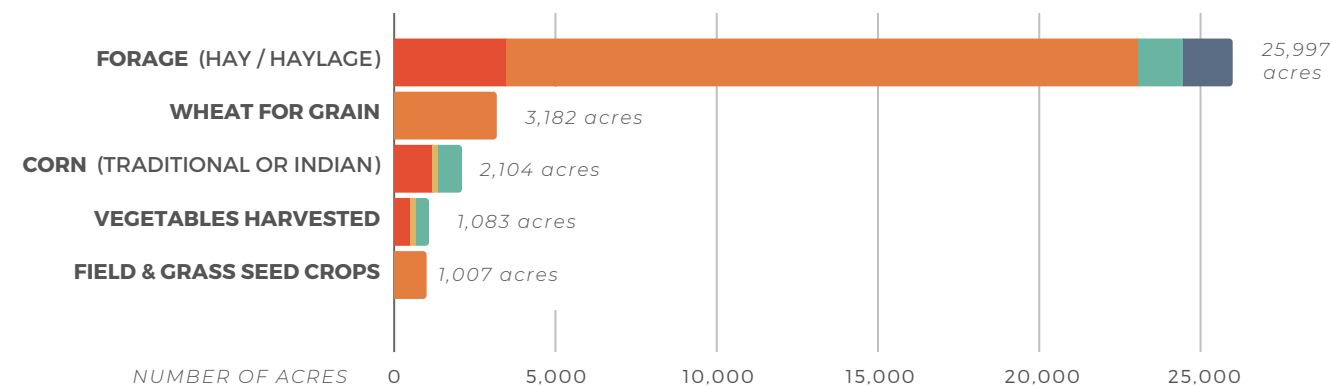
1. Forage (Hay/Haylage) 25,997 acres
2. Wheat for Grain 3,182 acres
3. Corn, Traditional or Indian 2,104 acres
4. Vegetables Harvested 1,083 acres
5. Field and Grass Seed Crops 1,007 acres

NUMBER OF LIVESTOCK AND POULTRY FARMS ACROSS NORTHERN ARIZONA⁶:

- Sheep and Lambs 6,887 farms (98% of AZ)
- Cattle and Calves 4,389 farms (75% of AZ)
- Chickens (Eggs) 1,341 farms (63% of AZ)
- Hogs and Pigs 396 farms (73% of AZ)
- Chickens (Meat) 11 farms (26% of AZ)

TOP FIVE CROPS BY TYPE & COUNTY (2022)

FIGURE 3



Northern Arizona producers rely more on farming as their primary occupation (63%) than the state average (57%).⁷

Most producers in northern Arizona are American Indian / Native American.

The average producer is 60 years-old.

19% of the region's farmers are considered "new and beginner farmers", or producing less than ten years.⁸

Regionally, 10,916 people are employed in farm labor.

62% of farm labor unpaid, which is defined as not being on payroll.⁹

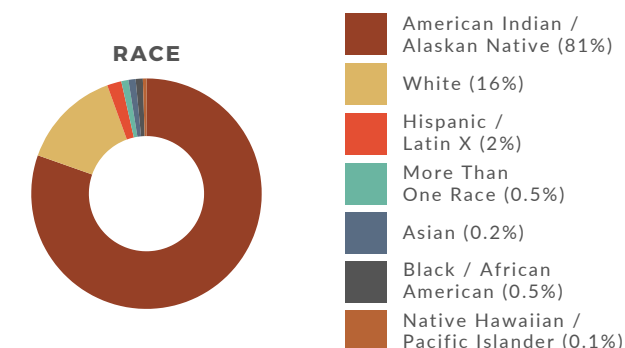
NORTHERN ARIZONA FARM/RANCH LABOR DEMOGRAPHICS

FIGURE 4

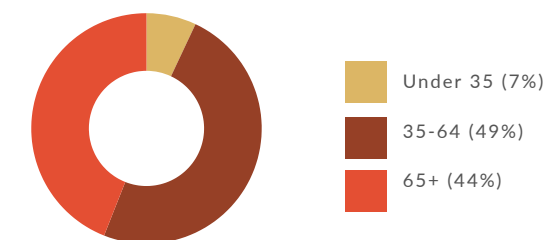
GENDER



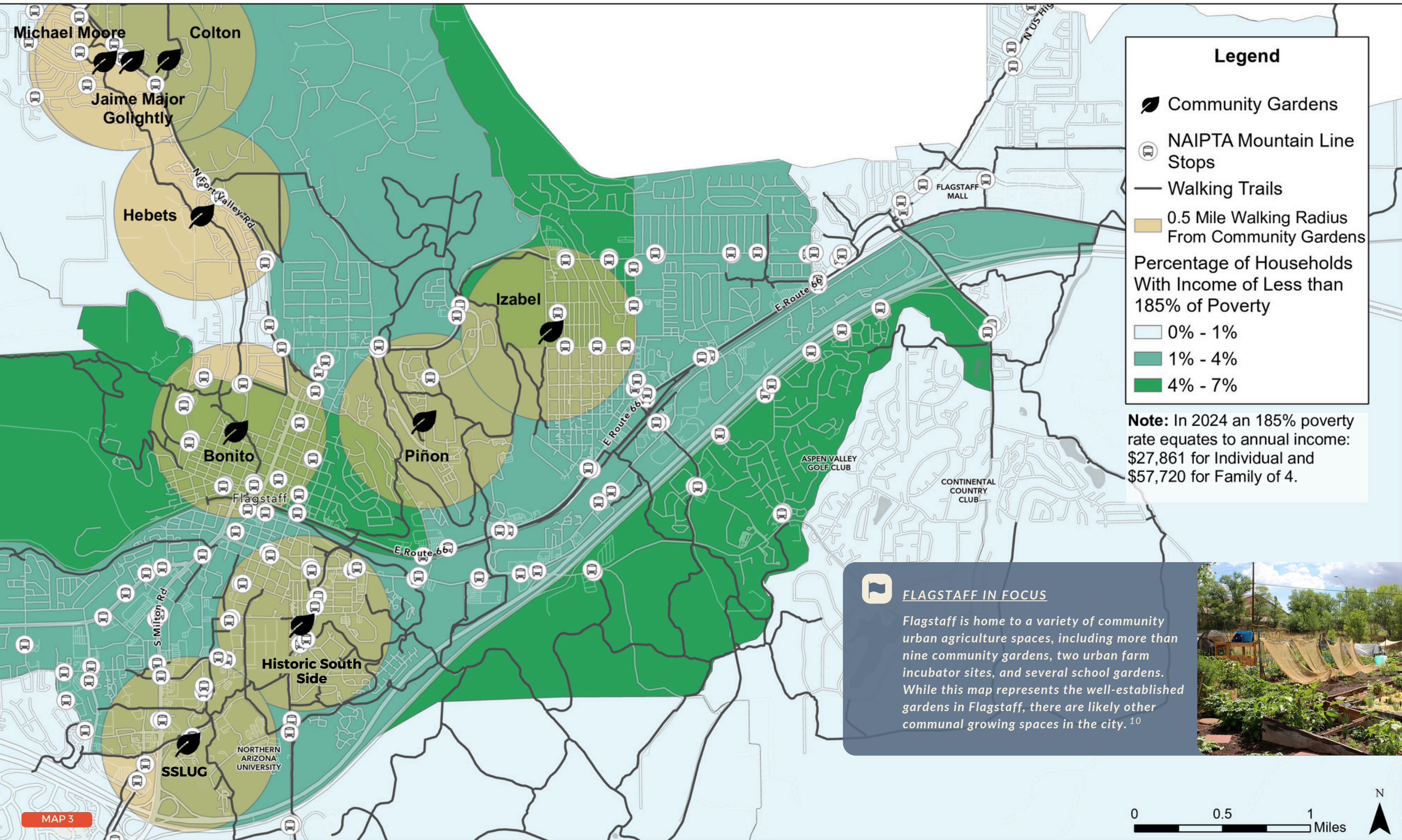
RACE



AGE



Access to Community Gardens in Flagstaff, Arizona



FLAGSTAFF IN FOCUS

Flagstaff is home to a variety of community urban agriculture spaces, including more than nine community gardens, two urban farm incubator sites, and several school gardens. While this map represents the well-established gardens in Flagstaff, there are likely other communal growing spaces in the city.¹⁰





Agricultural Landscape & Food Production, Continued

Survey & Focus Group Findings



- Accessing land to farm near Flagstaff is challenging. The cost of land is the biggest barrier to farming near Flagstaff. Other reported barriers to farming were: extreme weather, variable growing conditions, and the cost and access to water.
- There is interest among residents in urban agriculture and programs that support food production closer to Flagstaff.
- Businesses growing and producing food items are eager for collaboration and support from other businesses. While resources exist to support developing businesses, there is a lack of awareness about these resources and how to utilize them.
- The cultural relationship between food production and food sales on Native American reservation lands leads to an underreporting of what is actually being produced and what is reported in the USDA’s Census of Agriculture. Farmer’s markets on reservation land do not have many vendors, though there is significant food being produced for sharing and bartering.

Trends and Challenges

- Local direct-to-consumer food sales in the region are growing, which is a strong indicator of regional demand for local foods. However, the small size of farms, lack of business development resources, and sales outlets makes it difficult for the agricultural economy in the region to grow.
- Food and farm business owners in northern Arizona noted that the Flagstaff economy is very separated from southern Arizona, which limits the reach of the businesses.
- In addition to food production for business, there is significant subsistence and hobby farming in the region. Hunting, fishing, and other self-provisioning activities also occur.
- Producing food is challenging in this region. Farmers, ranchers, and gardeners noted climate variability, water access, cost of land, and distance to market as key challenges.
- Most producers in northern Arizona are Native American, and cultural differences around agricultural activities can undercut food sales and economic impact.
- Food producers growing for business have a strong desire for increased opportunities to collaborate with other businesses such as food processors, manufacturers, distributors, retailers, buyers, and so on.
- In Northern Arizona, raising of livestock such as cattle and sheep is a common land use on vast acreages. Some livestock raised on Native American lands are used for local consumption, but most cattle raised on public lands are not consumed in-state as processing facilities are lacking.
- Ranching and hay production (for animal feed) are the predominant agricultural activities in the region. However, the growth in direct to consumer sales in recent years suggest that regional buyers are also interested in locally-grown fruits and vegetables as well.



Remaining Questions

- *How can the City of Flagstaff facilitate better collaboration between food producers and the resources they need to increase production and profit?*
- *What business development tools can be provided to support farmers and gardeners in increasing the profitability of their production?*
- *Are there ways to further support urban agriculture in Flagstaff?*
- *What opportunities exist to support producers adapting to prolonged drought and climate change?*



FLAGSTAFF IN FOCUS

81% of survey respondents that grow food in Flagstaff grow on less than one acre of land, and 66% report that they own the land they grow on. This indicates that many growers in Flagstaff are gardeners and subsistence farmers versus individuals producing food for business.



Food System Infrastructure

How food is moved from the farm or ranch, then processed and distributed to places where people consume it.

Sector Facts

Northern Arizona is home to food processing facilities (predominantly bakeries), but commercial kitchen, slaughter, and storage facilities are limited. The majority of these resources are clustered around city centers, with very few in the northern half of the study region.

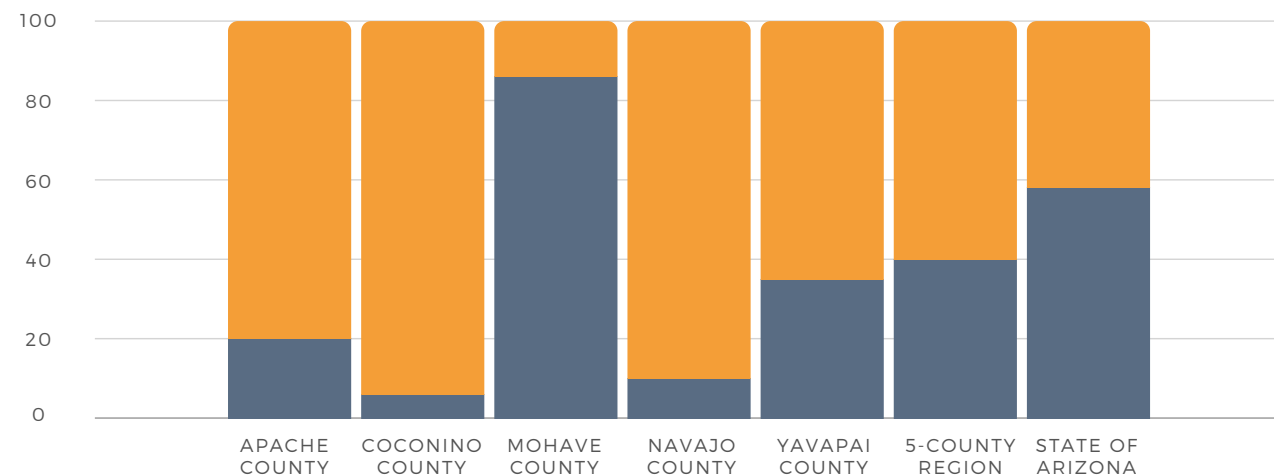
(See Map 4)



While four of the five counties in this study region produce significantly more livestock than crops, there are limited numbers of livestock processing facilities, especially in the rural areas. (Figure 4)

SHARE OF AGRICULTURAL SALES (%) BY TYPE & COUNTY (2022)

FIGURE 4



SALES COLOR KEY

■ LIVESTOCK & POULTRY PRODUCTS
 ■ CROPS

Survey & Focus Group Findings

- There is interest among survey respondents and focus group participants in services that support business development and build collaboration (such as a food hub).
- Most survey respondents (83%) that manufacture a food item do so at home versus in a commercial/certified kitchen.
- Surveyed residents of Flagstaff are processing (canning, freezing, preserving) food for personal use rather than commercial sales and are satisfied with the resources they have access to.
- Among individuals processing food for retail sale, there is some interest in resource sharing via a food hub (storage, sales, etc.) or an incubator kitchen to support new business development.
- The lack of regional meat processing facilities is a barrier to ranchers looking to raise, process, and sell meat products.
- Farms within range to sell produce to Flagstaff struggle to get product to Flagstaff because of the distance, variable climate, and lack of staffing. There are some farm-run initiatives to support distribution in the region, but there are not enough options.
- When asked about familiarity with Flagstaff business development services, the majority of respondents answered “unfamiliar” to all nine mentioned. Of the organizations listed, Flagstaff Foodlink was the most utilized with 16% of businesses having interacted with them.
- When asked about zoning regulations that impact their food or farm business, 24% of respondents expressed dissatisfaction.

Trends and Challenges

- The lack of processing (meat processing and commercial kitchen space) outside of the city centers limits food producers' abilities to expand production and sales.
- The current lack of distribution infrastructure (e.g., food hubs) has led businesses to collaborate, sharing deliveries, building on-farm processing, and contracting directly with farmers. However, the lack of distribution infrastructure also limits their ability to sell beyond their immediate communities.
- The distance between food producers and resources (kitchens, processing, storage, customers, etc.) is a significant barrier to starting and growing businesses in the region.
- Businesses in this sector expressed interest in increasing collaboration with farmers and other food system stakeholders.
- There is a need for increased funding opportunities to support business development.



Remaining Questions

- How can Flagstaff build infrastructure that supports the region as a whole in producing more local foods?
- What opportunities exist to scale current small-scale infrastructure to serve a larger market?



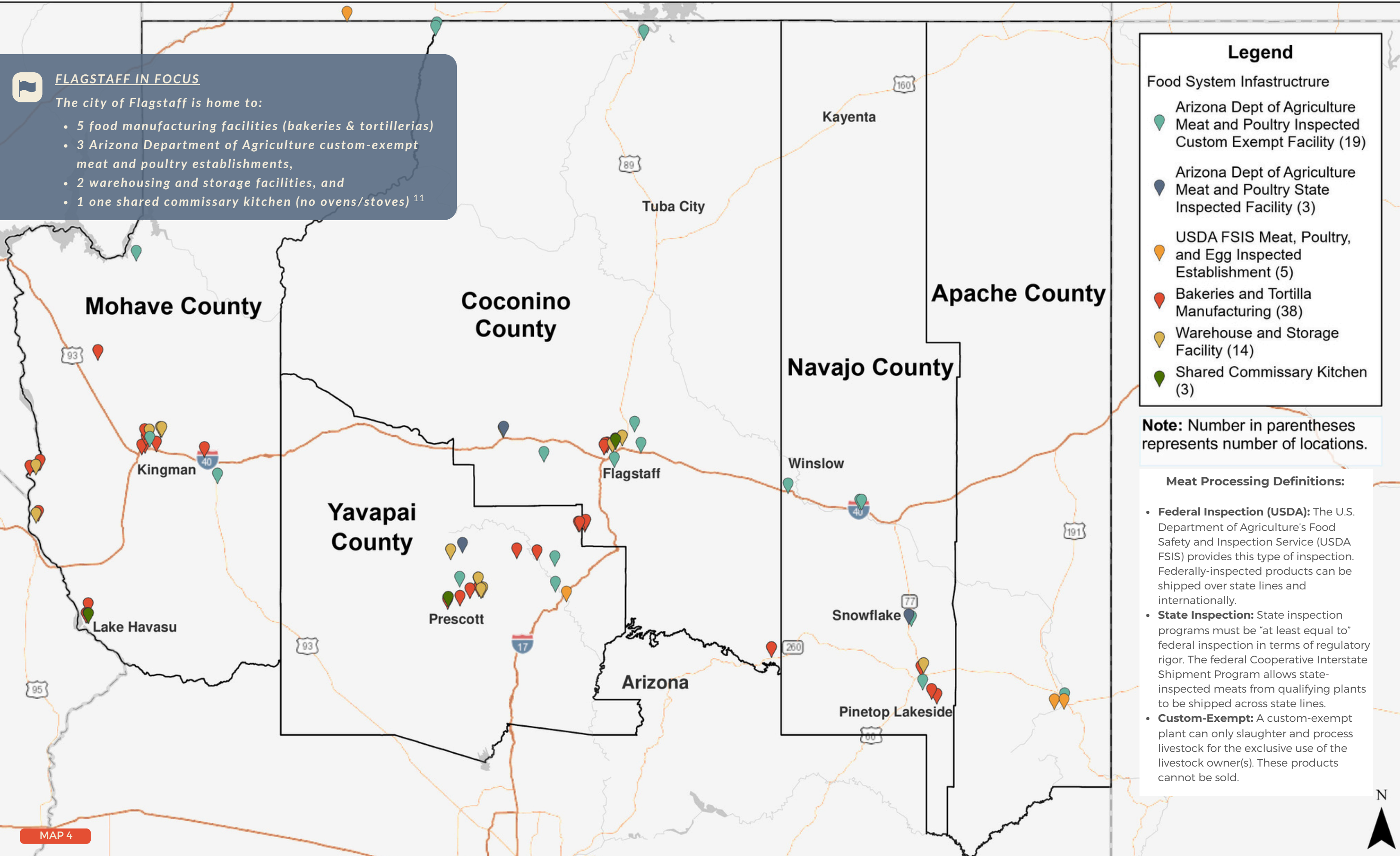
Food System Infrastructure of Northern Arizona



FLAGSTAFF IN FOCUS

The city of Flagstaff is home to:

- 5 food manufacturing facilities (bakeries & tortillerias)
- 3 Arizona Department of Agriculture custom-exempt meat and poultry establishments,
- 2 warehousing and storage facilities, and
- 1 one shared commissary kitchen (no ovens/stoves) ¹¹



Legend

Food System Infrastructure

- Arizona Dept of Agriculture Meat and Poultry Inspected Custom Exempt Facility (19)
- Arizona Dept of Agriculture Meat and Poultry State Inspected Facility (3)
- USDA FSIS Meat, Poultry, and Egg Inspected Establishment (5)
- Bakeries and Tortilla Manufacturing (38)
- Warehouse and Storage Facility (14)
- Shared Commissary Kitchen (3)

Note: Number in parentheses represents number of locations.

Meat Processing Definitions:

- **Federal Inspection (USDA):** The U.S. Department of Agriculture's Food Safety and Inspection Service (USDA FSIS) provides this type of inspection. Federally-inspected products can be shipped over state lines and internationally.
- **State Inspection:** State inspection programs must be "at least equal to" federal inspection in terms of regulatory rigor. The federal Cooperative Interstate Shipment Program allows state-inspected meats from qualifying plants to be shipped across state lines.
- **Custom-Exempt:** A custom-exempt plant can only slaughter and process livestock for the exclusive use of the livestock owner(s). These products cannot be sold.



Food Retail Environment

How and where food is purchased by consumers at stores, markets, restaurants, cafeterias, etc.

Sector Facts

Northern Arizona is home to many food sales outlets ¹²:

- 20 Farmers Markets
- 4 Community Supported Agriculture (CSA)/Food Hub Enterprises
- 139 Grocery Stores
- 135 Convenience Stores
- 9 Specialty Food Stores

(See Map 5)

Food retail channels that offer local food sales in the study region are small in numbers, but help generate \$6.6 million in direct-to-consumer sales.¹⁴

Local food can be found in school meal programs. There are thirty-five schools in northern Arizona serving local food, and seven have edible gardens.¹⁵

The majority of Navajo and Apache counties qualify as “low income and low access,” which means that residents of urban areas don’t have a grocery store within a half mile of their home and rural residents have to travel more than ten miles to access a grocery store.



FLAGSTAFF IN FOCUS 

The city of Flagstaff is home to ¹³:

- 3 Farmers Markets,
- 1 CSA,
- 18 grocery stores,
- 14 convenience stores,
- 0 specialty food stores, and
- 276 restaurants and eating places.

Survey and Focus Group Findings

- Local Flagstaff shoppers mostly get food from grocery stores. Farmers markets are among their top four shopping outlets, preceded by traditional grocery stores, restaurants, and food warehouses (like Costco or Sam’s Club); 14% of respondents grow, hunt, or fish for their food.
- In Flagstaff, 58% of respondents drive less than 5 miles to access a grocery store.
- The high cost of food was mentioned by 46% of Flagstaff respondents; 26% would buy more local food if it were affordable.
- Only 20% of shoppers stated that they are satisfied with their grocery options.
- The Flagstaff CSA serves an important role in providing consistent access to local food to residents and a consistent sales outlet for local farmers.
- Rural areas of northern Arizona have very few retail food options. Individuals rely on gardening, raising animals, and purchasing directly from food growers.



Trends and Challenges

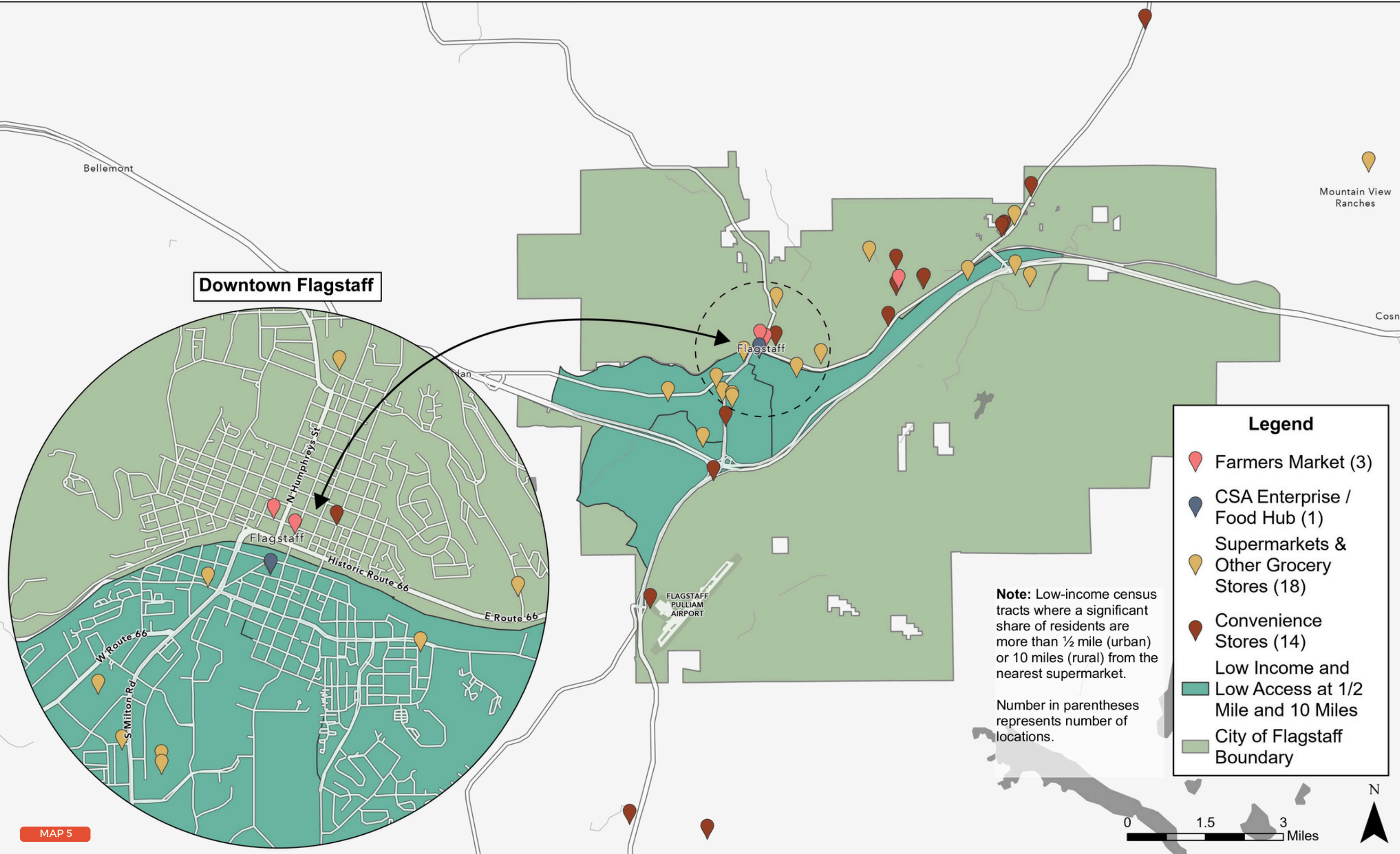
- Food stores are concentrated near urban and suburban centers, with few options in rural areas of the region.
- Communities living on Native American reservation land have very few stores to buy from, and the stores they do have offer only limited food options.
- The lack of local food outlets and food distribution for local food has led to direct purchasing from farms by restaurants and businesses who want to source and sell local foods.
- The high cost of food is a challenge for many in the region, and locally grown food is perceived as being especially expensive and hard to access.

Remaining Questions 

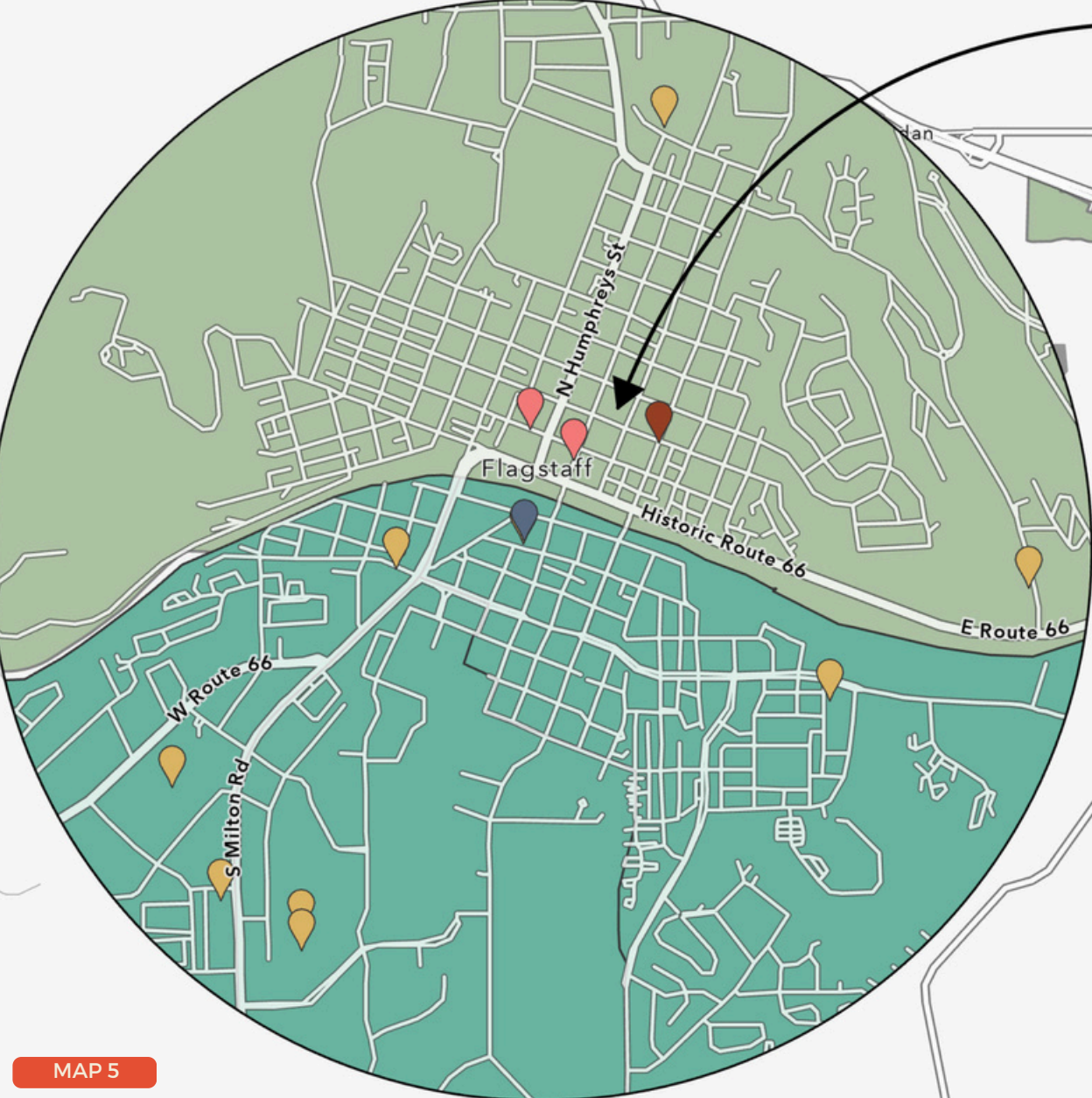
- What is needed to make local food more accessible in grocery or restaurant settings?
- What strategies exist to ensure that all food outlets in the region are stocked with a full and diverse selection of foods?
- What strategies exist to make food more affordable?
- How can the elected leaders in the region support a stronger food retail environment?



Food Retail Locations in Flagstaff, Arizona



Downtown Flagstaff



Legend

- Farmers Market (3)
- CSA Enterprise / Food Hub (1)
- Supermarkets & Other Grocery Stores (18)
- Convenience Stores (14)
- Low Income and Low Access at 1/2 Mile and 10 Miles
- City of Flagstaff Boundary

Note: Low-income census tracts where a significant share of residents are more than 1/2 mile (urban) or 10 miles (rural) from the nearest supermarket.

Number in parentheses represents number of locations.

Note: Low-income census tracts where a significant share of residents are more than 1/2 mile (urban) or 10 miles (rural) from the nearest supermarket.

Number in parentheses represents number of locations.



Food Consumption & Health

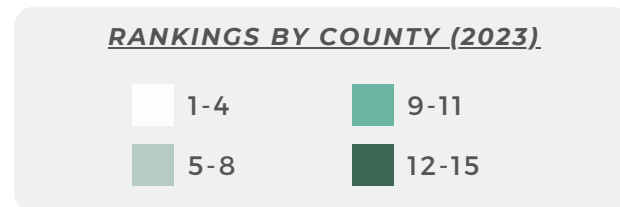
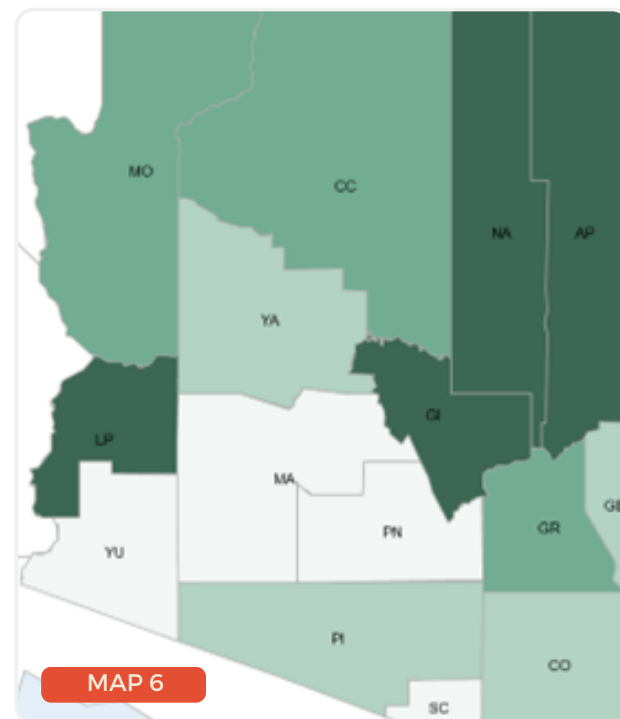
How the food we eat impacts the health of individuals and our community.

Sector Facts

On average, northern Arizona residents spent \$7,845 / household on food in 2021, which is approximately 11% of their total consumer spending and is considerably less than the state average spending on food per household (\$10,245).

- Of total food spending, 66% is on food consumed at home, 19% of which is spent on fruits and vegetables.
- Three of the five northern Arizona counties (Apache, Mohave, and Navajo) consistently hold bottom rankings (out of fifteen total Arizona counties) for all county health ranking categories.¹⁶
- Zero of five counties meet daily fruit intake recommendations and only three of five counties (Apache, Coconino, and Yavapai) meet the lower limits of adequate vegetable intake.¹⁷
- Navajo and Apache Counties both have large populations of Native Americans. Native Americans or Alaskan Native adults are 50% more likely to be obese than non-Hispanic Whites.²⁰

Arizona Health Outcomes Map



Health Outcomes tell us how long people live on average within a community, and how much physical and mental health people experience in a community while they are alive.

- Apache, Mohave, and Navajo Counties exceed state averages for the following health metrics that are impacted by food and nutrition:
 - Poor / Fair Health (Apache, Mohave, Navajo)
 - Adult Obesity (Apache, Mohave, Navajo)
 - Diabetes Prevalence (Apache, Navajo)¹⁸
- All five northern counties have:
 - Lower life expectancies than the Arizona state average;
 - Higher age-adjusted death rates, as well as higher child and infant mortality rates compared to the state averages;
 - Limited access to healthy foods compared to the state average.¹⁹

Survey and Focus Group Findings

- 21% of survey respondents in the region reported that they can't afford to buy the healthy food they want.
- 7% of survey respondents said that universal free school meals would help them access food more readily.
- Healthy foods are scarce on reservation land, and the grocery stores there don't offer much variety.
- The high cost of housing in northern Arizona is a barrier to eating healthy food, as high housing costs compete with food costs in family budgets.
- 10% of Flagstaff survey respondents said they would like to see Flagstaff focus its efforts on healthy food education and programming.

Trends and Challenges

- Parts of northern AZ lack access to healthy food; residents struggle to meet recommended intakes of fruits/vegetables.
- This lack of access to healthy foods is particularly acute in rural areas and on reservation lands.
- Lack of access to healthy food contributes to negative health impacts in the region (obesity /diabetes / lower life expectancy). In fact, three of the five counties in northern Arizona rank among the least healthy in the state.
- Affordability of healthy food is a key barrier, and the rising cost of housing in the region makes it even more difficult for families to afford healthy food.

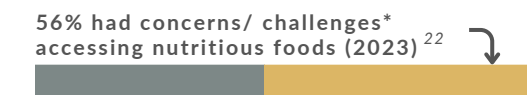
County-Level Community Health Survey Results

Assessments in each county revealed residents' needs and priorities related to food and nutrition:

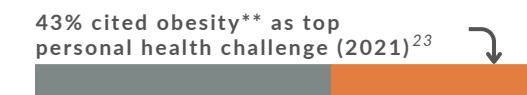
Apache County



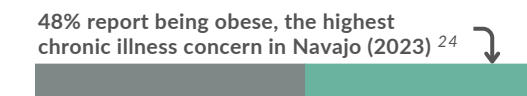
Coconino County



Mohave County



Navajo County



Yavapai County



* In Coconino County, access to food and nutritional security was one of the top four identified needs (along with housing, behavioral health, & transportation).

** In Mohave County, 23% of survey respondents reported that it was "somewhat difficult" or "very difficult" to access fresh fruits and vegetables



Remaining Questions

- How can the City of Flagstaff and regional leaders attract new or support existing healthy food outlets, especially in rural parts of the region?
- How can the City of Flagstaff help remove barriers to residents achieving healthier diets?
- What programs and policies can be implemented to provide more education around accessing healthy foods?



Access To Food

How community members have (or don't have) access to adequate, affordable, and culturally relevant foods.

Sector Facts

Food insecurity rates in this region are higher than the state average. Navajo and Apache Counties have the highest rates of food insecurity in the region.



- In northern Arizona, 13.3% of the population is food insecure, compared to the statewide rate of 10.3%. This means that 103,210 people in this region don't have enough food to eat and do not know where their next meal will come from.²⁶
- Food insecurity rates are even higher among children (18.6%).
- Racial minorities experience food insecurity at a higher rate than non-Hispanic White populations: Native American (22%), Black (13.32%), and Hispanic (13-19%).²⁷

(See Maps 7a & 7b)

SNAP PROGRAM

Participation in SNAP is significant, and the regional need is still not being met.

- Northern Arizona residents are participating at a higher rate (12.7%) than the rest of the state (10.1%)
- Individuals on reservation lands participate at 3-4 times the AZ average.
- There are more residents that are income eligible for this program but do not actively utilize the program.²⁸

(See Map 8)

Regional Food Access Locations*



FOOD ACCESS LOCATIONS	N.A.Z	Flag
FOOD PANTRIES, BACKPACK PROGRAMS, SENIOR MEAL SITES, ETC. ²⁹	145	16
RETAILERS ACCEPTING SNAP ³⁰	123	12
RETAILERS ACCEPTING WIC ³¹	64	7
DOUBLE UP FOOD BUCKS PROGRAMS ³²	6	3

*Regional Food Access locations include charitable food locations such as food pantries or communal meal sites, retailers accepting SNAP benefits, retailers accepting WIC coupons, and Double Up Food Bucks program locations.

(See Map 9)

Survey & Focus Group Findings

Eliminating hunger was the highest ranked food system goal for survey respondents.

- Survey responses show that residents of Navajo and Mohave County travel the greatest distance to reach food at distribution sites, sometimes up to 150 miles one way; surveyed residents from the Flagstaff region travel 5-15 miles.
- 32% of respondents rely on food distribution sites weekly; 18% utilize these services 1-2 times per month.
- Residents are often not able to find fresh, local food to purchase with SNAP benefits.
- Flagstaff residents are interested in finding ways to feed themselves outside the food retail system; 52% would like information about how to grow/hunt/fish for their own food. 14% surveyed support themselves now by growing, hunting, or fishing for their own food.
- Flagstaff residents are coping with food insecurity by supporting their neighbors, with over 50% sharing food in the last twelve months.
- Flagstaff resident participation in SNAP (7.7%) is nearly half that of the region average (12.7%)³³
- When asked what community services would help them access food more easily, the top three responses were local food-related:
 - 19% want more farmers markets;
 - 14% wish to gain knowledge on how to grow food;
 - 12% would like access to community gardens to grow food in the city.

Trends and Challenges

Regional food insecurity > State Average

- Children, Hispanic, Black, and Native American populations suffer from higher food insecurity rates across the region.
- SNAP benefits are not as widely used as they could be based on income eligibility.
- Housing and utility costs compete with money for food available in family budgets.
- Flagstaff residents have greater access to charitable food distribution programs than residents living in rural northern Arizona.
- Residents actively share food with neighbors to combat food insecurity.
- There is strong interest in services that would teach residents where and how to grow/harvest their own food.

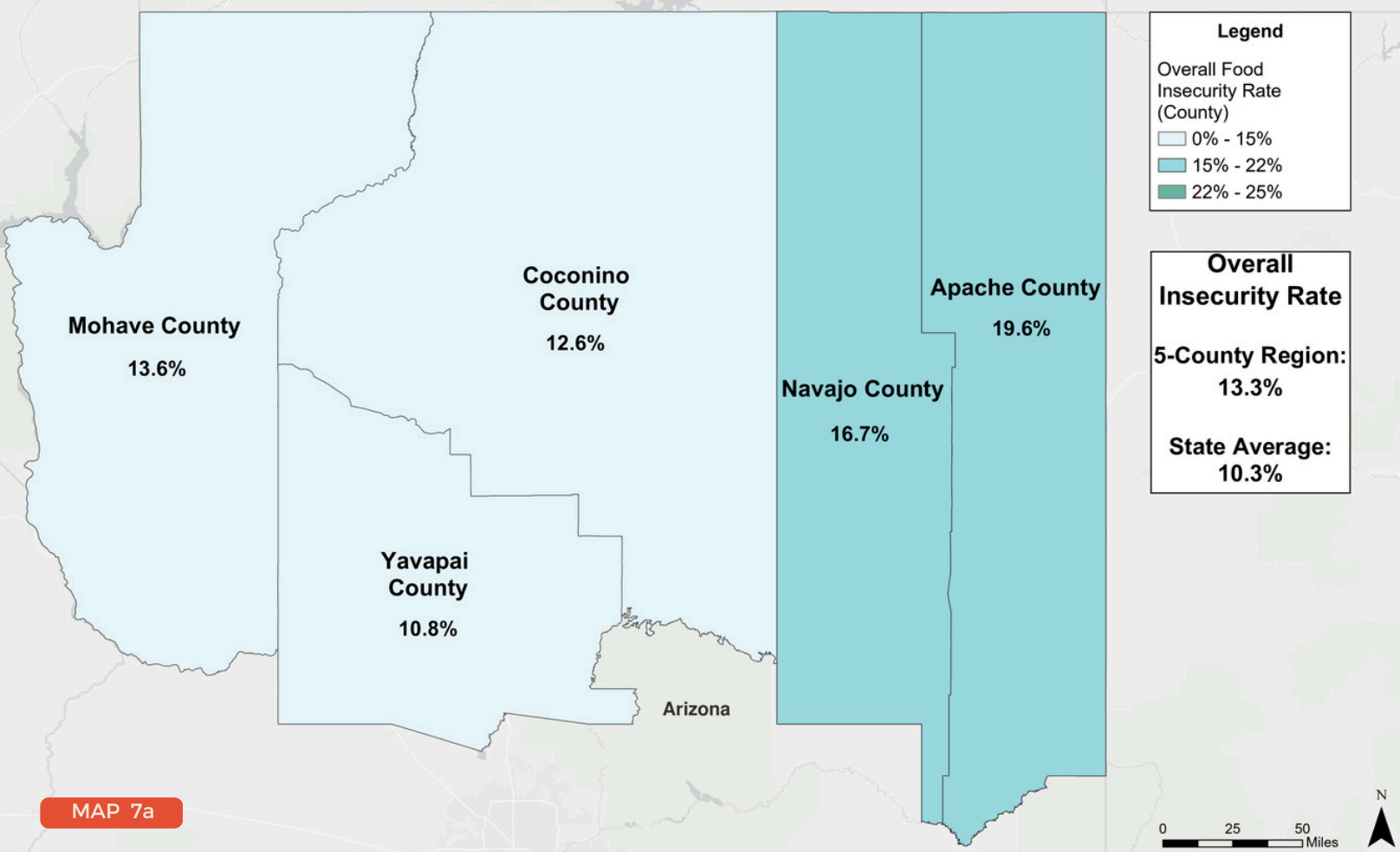


Remaining Questions

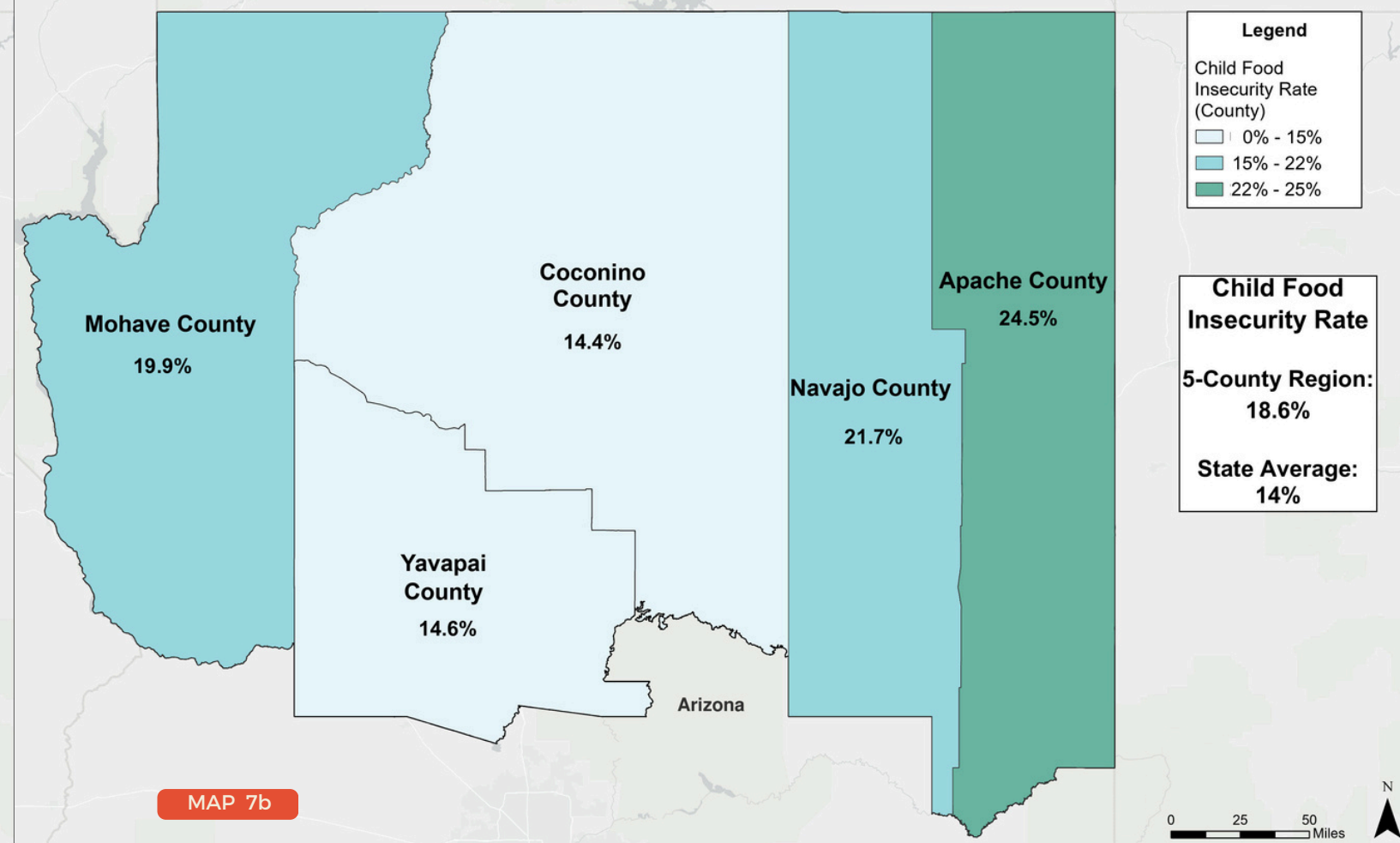
- How can the City of Flagstaff and local organizations increase enrollment in SNAP for income-eligible individuals and families? What practical barriers stand in the way?
- How can institutions in Flagstaff (government entities, schools, hospitals) increase access to healthy food?
- How can the City and local organizations meet residents' needs for education and resources related to self-provisioning?
- Why are so many more children food insecure than adults? What can local leaders do to address this?



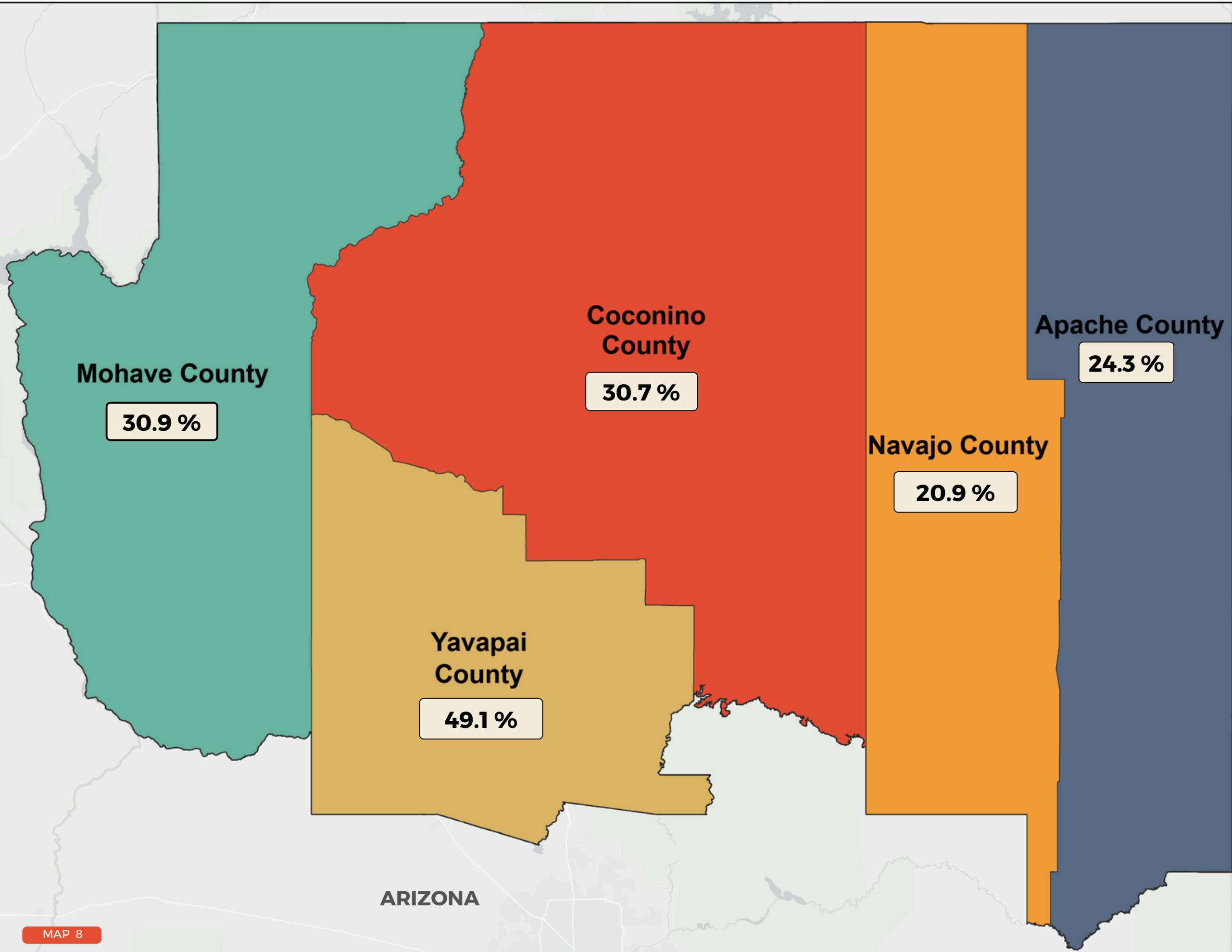
Overall Food Insecurity in Northern Arizona (2021)



Child Food Insecurity in Northern Arizona (2021)



% of Eligible Individuals Not Receiving SNAP Benefits (Northern AZ)



PERCENTAGE OF ELIGIBLE INDIVIDUALS NOT RECEIVING SNAP IN AZ IS 34.2%

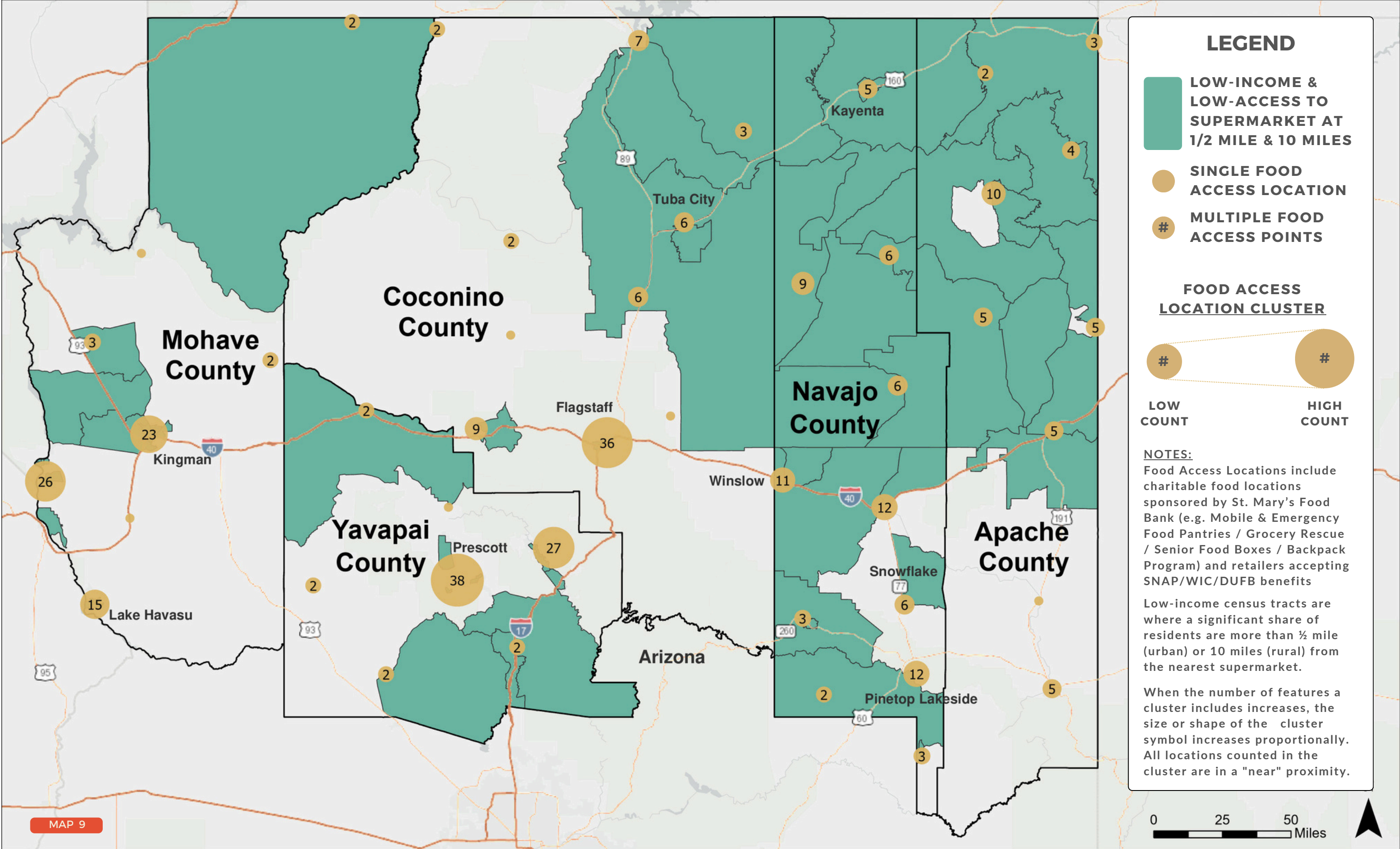
FLAGSTAFF IN FOCUS
56% of Flagstaff survey respondents do not know how to sign up for SNAP, WIC, Senior Farmers Market Nutrition Program coupons, and other government food programs.



ARIZONA



Food Access Locations in Northern Arizona Compared to Low Income / Foodstore Access Areas



Food Waste & Recovery

How food that doesn't get eaten is recovered and shared, composted, or landfilled.

Sector Facts

\$9.5 billion worth of food is wasted each year in Arizona, the most in the nation,³⁴ with the average household producing 4.17 lbs of food waste every week.³⁵

5.87 million pounds of food are wasted each year in the city of Flagstaff, resulting in 4,002,061 pounds of annual CO2 emissions (1,815 metric tons). That's the equivalent of using 204,265 gallons of gasoline.³⁶



- There are eight local food waste, composting, and recovery programs operating in the city of Flagstaff.
- There are robust programs for recovering whole foods (i.e., food recovery from gardens, grocery stores), but there are very limited options for hot food recovery (i.e., food from restaurants and caterers).

- Through the Flagstaff Sustainability Office Residential Food Scraps Program, approximately 29,457 pounds of food was diverted from the landfill between November 2022 and November 2023.³⁷
- Northern Arizona University is making significant efforts to institutionalize their food waste management program with a strong focus on waste diversion. Since July 2022, 48.24 tons of organic waste has been diverted from landfill and turned to usable compost.³⁸

Survey & Focus Group Findings

- Residents and business owners alike reported misunderstandings of zoning barriers and health department regulations as barriers to composting.
- Flagstaff survey respondents are more likely to participate in a free drop-off compost program than a paid curbside pickup program.
- 44% of Flagstaff survey respondents already compost at home.
- 11% of respondents listed eliminating food waste as a top personal food system goal.
- 19% of Flagstaff businesses identified that a composting program would support their business development.
- Flagstaff is home to many formal and informal composting programs and relationships between business owners and farmers.
- Organizations like the Arizona Food Bank Network are leveraging their proximity to the large growing regions of Mexico to repurpose industrial scale food waste.

Trends and Challenges

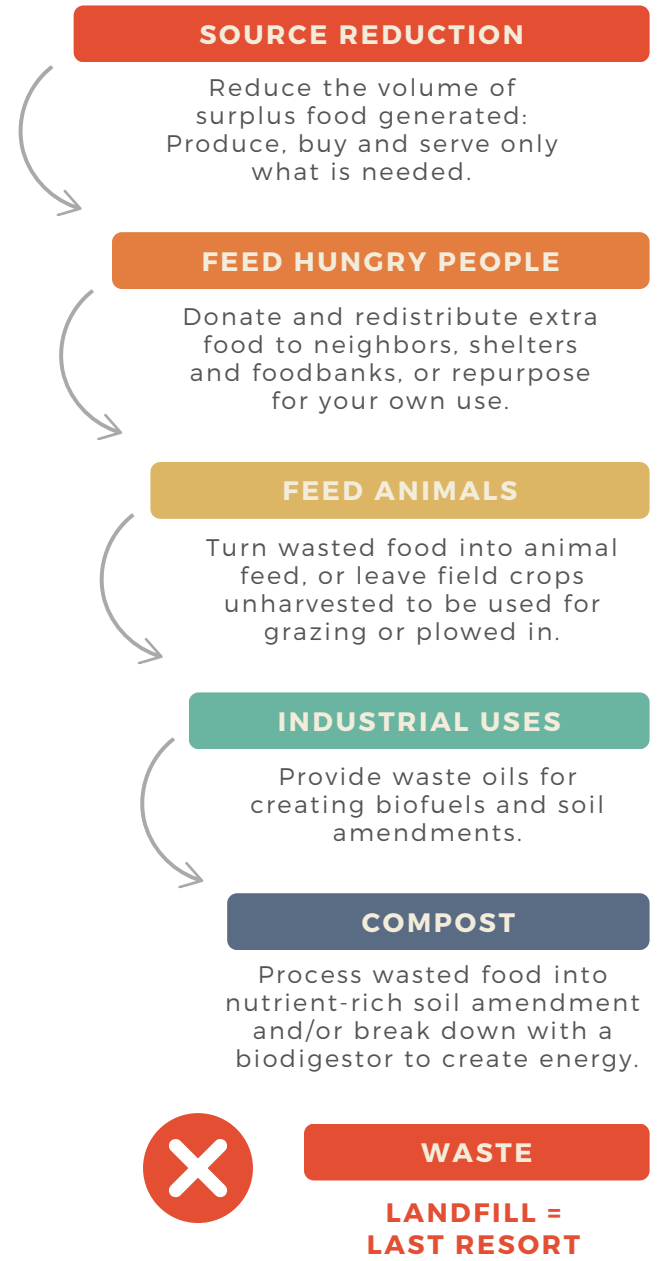
- While Arizona was ranked #1 in the country for food waste, Flagstaff has many initiatives to support the reduction of food waste.
- At the household, corporate, university, and municipal levels, there are significant efforts being taken in Flagstaff to decrease food waste.
- Confusion about the health codes, inspection, and zoning processes around compost are restrictive to residents and businesses looking to manage their food waste.
- Flagstaff is a leader in food recovery efforts, but the recovery of hot food from restaurants and caterers still poses a logistical challenge.



Remaining Questions

- *What efforts can the City of Flagstaff lead to scale up current food waste reduction programs?*
- *What can residents do to decrease food waste?*
- *How can food waste reduction efforts also increase access to food for Flagstaff and the surrounding areas?*

Food Recovery Heirarchy from most to least preferred.



Next Steps


The findings from this community food system assessment will help tell the story of the current state of the northern Arizona regional food system.

NEXT:

The City of Flagstaff, Pinnacle Prevention, Flagstaff Foodlink, NVA, and other partners will facilitate a robust public engagement process to take this information to the community.

The City will host a series of community conversations with residents of Flagstaff to share the findings of the assessment and to hear their ideas for potential businesses, policies, needed funding, and program solutions that the City should consider.

LEARN MORE AND GET INVOLVED:

- [Visit the City of Flagstaff project website.](#) 
- [Join our email list](#) to stay updated with project activities and additional ways to participate.
- Contact the City of Flagstaff Sustainability Office sustainability@flagstaffaz.gov

FLAGSTAFF IN FOCUS

The work above will result in a City of Flagstaff food action plan that establishes tangible goals and strategies for building a more robust, sustainable, and equitable food system for the future.



GLOSSARY OF TERMS

COMMERCIAL/ INCUBATOR KITCHEN

A fully equipped commercial food processing facility designed to allow multiple entrepreneurs or food processing operators to grow their businesses by providing a licensed or certified kitchen space with food and packaging equipment.

COMMUNITY GARDEN

Community gardens are collaborative projects on shared open spaces where participants share in the maintenance and products of the garden, including healthful and affordable fresh fruits and vegetables.

COMMUNITY SUPPORTED AGRICULTURE (CSA)

A CSA involves consumers who support a farmer financially by paying for a share of the farm's production prior to each growing season. The arrangement allows farmers to buy the seeds, transplants, and other inputs they need for the growing season and pay their farm labor without waiting until harvest to generate revenue. The customers will share in the successes or failures of the farmer.

COUNTY HEALTH RANKINGS

Annual County Health Rankings measure vital health factors, such as high school graduation rates, obesity, smoking, unemployment, access to healthy foods, the quality of air and water, income inequality, and teen births in nearly every county in America. The annual Rankings reveal how the built environment and socioeconomic factors influence health.

DIRECT-TO-CONSUMER MARKETING

Where local producers engage with consumers face-to-face at roadside stands, farmers' markets, pick-your-own farms, on farm stores, and community-supported agricultural arrangements (CSAs).

DOUBLE UP FOOD BUCKS

A program that doubles the value of federal SNAP benefits spent at participating markets and food retail stores, helping people bring home more healthy fruits and vegetables while supporting local farmers.

EQUITY

Equity is the fair and just distribution of resources, access, and opportunity. It is the process of developing, strengthening, and supporting policies and procedures that prioritize the distribution of resources to those who have been historically and are currently marginalized.

GLOSSARY OF TERMS, CONTINUED

FOOD HUB

A business or organization that actively manages the aggregation, distribution and marketing of source-identified food products, primarily from local and regional producers, to strengthen their ability to satisfy wholesale, retail, and institutional demand.

FOOD INSECURITY

Food insecurity is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. Food-insecure households lack enough food for an active, healthy life.

FOOD JUSTICE

Food justice ensures that the benefits and risks of where, what, and how food is grown, produced, transported, distributed, accessed and eaten are shared fairly. Food Justice is seen in communities exercising their right to grow, sell, and eat healthy food. Healthy food is fresh, nutritious, affordable, culturally-appropriate, and grown locally with care for the well-being of the land, workers, and animals. People practicing food justice leads to a strong local food system, self-reliant communities, and a healthy environment.

FOOD SYSTEM

This is the process food follows as it moves from the farm to your table. It encompasses a range of activities, including growing, foraging, and ranching; processing; transporting and distributing; retailing and marketing; preparation and cooking; eating; waste management; safety; land and water stewardship; and environmental preservation. The journey our food takes through the food system is influenced by our northern Arizona ecosystem, research, education, funding, policies, and our community's rich cultural traditions.

ORGANIC

USDA-certified organic foods are grown and processed according to federal guidelines addressing, among many factors, soil quality, animal raising practices, pest and weed control, and use of additives. Organic producers rely on natural substances and physical, mechanical, or biologically based farming methods to the fullest extent possible. Produce can be called organic if it's certified to have grown on soil with no prohibited substances applied for three years before harvest. However, many crops are organically grown but do not carry the USDA certified organic label because the certification process can be expensive for small farms.

SOCIAL NETWORK ANALYSIS

SNA is a methodological approach for examining the relationships and interactions among individuals or groups within a specific network, in this case, a food system. The process entails collecting data on the connections among entities, representing these connections graphically, and analyzing the graph through mathematical and statistical techniques.

SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC)

The WIC program provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.

SUSTAINABILITY

Sustainability is often defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." It includes environmental, social, and economic sustainability.

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP)

The largest federal nutrition assistance program, SNAP provides benefits to eligible low-income individuals and families via an electronic benefits transfer (EBT) card. This card is used like a debit card to purchase eligible food in authorized retail food stores.

USDA LOW INCOME, LOW ACCESS

The United States Department of Agriculture (USDA) identifies areas of low food access based on certain low-income and low-access criteria. Low-income (LI) is defined as a census tract with a poverty rate of 20% or greater, or median family income at or below 80% of the statewide or metropolitan area median family income. Low-access (LA) is defined as a low-income census tract with at least 500 people or 33% of the tract's population living more than one mile (urban areas) or more than ten miles (rural areas) from the nearest supermarket or grocery store.

VALUE-ADDED PROCESSING

Value-added processing is a means to utilize produce not used for fresh market sales and the surplus of product during the growing season. Adding value can be something as simple as sorting fruits and vegetables by size and selling through unique packaging to the complexity of processing salsa, jams, jellies, chutney, and meat animals.



SOURCE NOTES

- [1] USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 1. County Summary Highlights: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Arizona/st04_2_001_001.pdf.
- [2] Ibid.
- [3] Ibid.
- [4] Calculation made by NVA by adding the of number of operations selling direct-to-consumer to the number of operations with retail, food hub institutional sales and dividing the sum by the total number of farms. Figures from USDA NASS, 2022 Ag Census, County Data Arizona, "Table 2. Market Value of Agricultural Products Sold Including Food Marketing Practices and Value-Added Products: 2022 and 2017," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Arizona/st04_2_002_002.pdf.
- [5] USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, State and County Profiles Arizona, accessed March 31, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/County_Profiles/Arizona/index.php.
- [6] USDA NASS, "Table 1. County Summary Highlights: 2022."
- [7] USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 45. Selected Operation and Producer Characteristics: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Arizona/st04_2_045_045.pdf.
- [8] Ibid.; USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 57. New and Beginning Producers: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Arizona/st04_2_055_057.pdf.
- [9] USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 7. Hired Farm Labor—Workers and Payroll: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Arizona/st04_2_007_007.pdf.

- [10] City of Flagstaff Sustainability Office, "Flagstaff Community Gardens Story Map," accessed December 21, 2023, <https://gis.flagstaffaz.gov/portal/apps/storymaps/stories/cc004b5e15224b54822d78da8016a089>;
City of Flagstaff Sustainability Office, "Sustainable Food Systems 2023 Annual Report," accessed February 2, 2024, <https://www.flagstaff.az.gov/DocumentCenter/View/77966/2023-Sustainable-Food-Systems-Annual-Report?bidId=>.
- [11] SafeGraph, "Places Data," 2023, accessed via ESRI Business Analyst February 19, 2024; Rick Mann, Arizona Department of Agriculture, Animal Services Division, personal email communication, December 8, 2023.
- [12] Arizona Grown, "2023/24 Specialty Crop Guide," accessed November 3, 2023, <https://azgrown.azda.gov/wp-content/uploads/2023/04/FMs-and-UPs.pdf>;
SafeGraph, "Places Data."
- [13] Arizona Grown, "2023/24 Specialty Crop Guide"; SafeGraph, "Places Data"; U.S. Bureau of Labor Statistics, "Quarterly Census of Employment and Wages," accessed November 15, 2023, https://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables.
- [14] USDA NASS, "Table 2. Market Value of Agricultural Products Sold."
- [15] A. Chaifetz et al., "Data to Support a Thriving and Informed Local and Regional Food Sector," USDA Food & Agriculture Mapper & Explorer, accessed October 19, 2023, <https://localfoodeconomics.com/data/food-and-agriculture-data-explorer/>.
- [16] University of Wisconsin Population Health Institute, "County Health Rankings and Roadmaps," 2023, accessed October 5, 2023, <https://www.countyhealthrankings.org/explore-health-rankings/arizona?year=2023>.
- [17] Katharine Sanderson et al., "Advancing Wellbeing in Northern Arizona: A Regional Health Equity Assessment," prepared by the Northern Arizona University Center for Health Equity Research, September 6, 2017, accessed February 12, 2024.
- [18] University of Wisconsin Population Health Institute, "County Health Rankings."
- [19] Ibid.
- [20] Partnership with Native Americans, "Food Insecurity and Hunger," January 23, 2022, accessed February 12, 2024, http://www.nativepartnership.org/site/DocServer/Hunger_Research_2022_Update.pdf

SOURCE NOTES, CONTINUED

[21] Arizona Cooperative Extension, "2022 Statewide Needs Assessment Survey for Apache County," accessed April 3, 2024, <https://extension.arizona.edu/sites/extension.arizona.edu/files/programs/Apache%20County%20Report.pdf>.

[22] Coconino County Health and Human Services Department, "Coconino County Health Needs Assessment," February 2024, accessed March 31, 2024, <https://coconino.az.gov/DocumentCenter/View/62002/FINAL-2024-CHNA/>.

[23] Kingman Regional Medical Center, "Community Health Needs Assessment for Mohave County 2022," accessed April 1, 2024, <https://www.azkrmc.com/sites/default/files/2022-06/Mohave%20CHNA%20Report%20Final%202022-05-22.pdf>.

[24] Navajo County Public Health Services District, "Navajo County Community Health Assessment 2023," accessed April 1, 2024, <https://www.navajocountyaz.gov/DocumentCenter/View/1989/CHA-ToC-Clickable?bidId=>

[25] Yavapai County Community Health Services, "Community Health Assessment 2022," accessed April 1, 2024, <https://www.yavapaiaz.gov/files/sharedassets/public/v1/resident-services/community-health/documents/ycchs-2022-cha.pdf>.

[26] Feeding America, "Map the Meal Gap 2023: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2021." Accessed October 18, 2023, <https://map.feedingamerica.org/county/2021/overall/arizona>.

[27] Ibid.

[28] U.S. Census Bureau, American Community Survey 5-year Estimates Subject Tables "Table S2201. Food Stamps/Supplemental Nutrition Assistance Program (SNAP) 2022," accessed February 18, 2024, <https://data.census.gov/table/ACSST5Y2022.S2201?q=snap&tid=ACSST1Y2022.S2201>; U.S. Census Bureau, "Supplemental Nutrition Assistance Program (SNAP) Eligibility & Access (2017-2019)," accessed December 29, 2023, <https://www.census.gov/library/visualizations/interactive/snap-eligibility-access.html>.

[29] Adriana Salas, St. Mary's Food Bank, Community Engagement Coordinator, personal email communication, November 8, 2023.

[30] USDA, Food and Nutrition Service, "SNAP Retailer Locator," accessed January 9, 2024, www.fns.usda.gov/snap/retailer-locator.

[31] Arizona Department of Health, "Arizona WIC Program Authorized Vendors as of September 2023," accessed December 21, 2023, <https://www.azdhs.gov/documents/prevention/azwic/az-wic-vendor-list.pdf>.

[32] Arizona Double Up Food Bucks webtool, accessed December 21, 2023, <https://www.doubleupaz.org/locations>.

[33] U.S. Census Bureau, "Table S2201. Food Stamps/SNAP."

[34] Jordan Ardoin, "2022's States That Waste the Most Food," November 23, 2021, accessed November 18, 2023, <https://www.lawnstarter.com/blog/studies/states-that-waste-most-food/>.

[35] MITRE and Gallup, "The State of Food Waste in America," November 2023, accessed December 16, 2023, <https://sites.mitre.org/household-food-waste/wp-content/uploads/sites/41/2023/11/The-State-of-Food-Waste-in-America-11-14-23.pdf>. Accessed December 16, 2023.

[36] Calculation of Flagstaff food waste is based on the 4.17 pounds of food wasted per week per Arizona household. Conversion to CO2 equivalents was made using desktop calculator: <https://naturbag.com/food-scrap-calculator/>.

[37] Data from City of Flagstaff Sustainability Office, personal email communication, October 21, 2023.

[38] The Association for the Advancement of Sustainability in Higher Education, Sustainability Tracking, Assessment, and Rating System, accessed January 28, 2024, <https://reports.aashe.org/institutions/northern-arizona-university-az/report/2023-11-06/OP/waste/OP-18/>.



SOURCE NOTES, CONTINUED

MAP 1: USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 1. County Summary Highlights: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_2_County_Level/Arizona/st04_2_001_001.pdf.

MAP 2: Map 2: Arizona Grown, "2023/24 Specialty Crop Guide," accessed November 3, 2023, <https://azgrown.azda.gov/wp-content/uploads/2023/04/FMs-and-UPs.pdf>.

MAP 3: City of Flagstaff Sustainability Office, "Flagstaff Community Gardens Story Map," accessed December 21, 2023, <https://gis.flagstaffaz.gov/portal/apps/storymaps/stories/cc004b5e15224b54822d78da8016a089>; GIS Data from City of Flagstaff Information Technology, personal email communication, December 18, 2023; U.S. Census Bureau, "American Community Survey 5-year Census Tract Poverty Thresholds," 2021, accessed via ESRI Business Analyst, January 4, 2024.

MAP 4: USDA Food Safety and Inspection Service, "Meat, Poultry, and Egg Product Inspection Directory," accessed October 24, 2023, <https://www.fsis.usda.gov/inspection/establishments/meat-poultry-and-egg-product-inspection-directory>; SafeGraph, "Places Data," 2023, accessed via ESRI Business Analyst February 19, 2024; Rick Mann, Arizona Department of Agriculture, Animal Services Division, personal email communication, December 8, 2023.

MAP 5: USDA Economic Research Service, "Food Access Research Atlas," accessed February 7, 2024, <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>; Arizona Grown, "2023/24 Specialty Crop Guide"; SafeGraph, "Places Data."

MAP 6: University of Wisconsin Population Health Institute, "County Health Rankings and Roadmaps," 2023, accessed October 5, 2023, <https://www.countyhealthrankings.org/explore-health-rankings/arizona?year=2023>.

MAP 7a: Feeding America, "Map the Meal Gap 2023: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2021." Accessed October 18, 2023, <https://map.feedingamerica.org/county/2021/overall/arizona>.

MAP 7b: Feeding America, "Map the Meal Gap 2023: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2021." Accessed October 18, 2023, <https://map.feedingamerica.org/county/2021/overall/arizona>.

MAP 8: U.S. Census Bureau, "Supplemental Nutrition Assistance Program (SNAP) Eligibility & Access (2017-2019)," accessed December 29, 2023, <https://www.census.gov/library/visualizations/interactive/snap-eligibility-access.html>.

MAP 9: Adriana Salas, St. Mary's Food Bank, Community Engagement Coordinator, personal email communication, November 8, 2023; USDA, Food and Nutrition Service, "SNAP Retailer Locator," accessed January 9, 2024, www.fns.usda.gov/snap/retailer-locator; Arizona Department of Health, "Arizona WIC Program Authorized Vendors as of September 2023," accessed December 21, 2023, <https://www.azdhs.gov/documents/prevention/azwic/az-wic-vendor-list.pdf>; Arizona Double Up Food Bucks webtool, accessed December 21, 2023, <https://www.doubleupaz.org/locations>.

CHARTS: "Share of Agricultural Sales by Type (%):" USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, County Data Arizona, "Table 1. County Summary Highlights: 2022," accessed February 15, 2024, https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_2_County_Level/Arizona/st04_2_001_001.pdf.

EPA GRAPHIC: Adapted from the Environmental Protection Agency, "Wasted Food Scale," <https://www.epa.gov/sustainable-management-food/wasted-food-scale>, and City of Austin, Office of Sustainability, "State of the Food System Report 2022," [https://www.austintexas.gov/sites/default/files/files/Sustainability/Food/2022%20State%20of%20the%20Food%20System%20Report/SotFS%202022%20-%20FINAL%20\(Smaller\).pdf](https://www.austintexas.gov/sites/default/files/files/Sustainability/Food/2022%20State%20of%20the%20Food%20System%20Report/SotFS%202022%20-%20FINAL%20(Smaller).pdf).







THE FLAGSTAFF FOOD SYSTEM: A SOCIAL NETWORK ANALYSIS

PREPARED BY

**NEW VENTURE ADVISORS & RODRIGO ALDECOA
FOR THE CITY OF FLAGSTAFF & FLAGSTAFF FOODLINK**

MAY 2024



Table of Contents

- Table of Figures 2**
- Introduction..... 3**
- Methodology and Report Structure..... 3**
- Social Network Analysis 4**
 - Organization Awareness..... 4
 - Trust..... 6
 - Information 8
 - Collaboration11
 - Funding.....20
 - Service23
 - Joint Funding Request25
- Conclusion..... 27**
- Recommendations..... 28**

Table of Figures

- FIGURE 1: AVERAGE CENTRALITY SCORE IN THE AWARENESS NETWORK. 5
- FIGURE 2: AVERAGE CENTRALITY SCORE IN THE TRUST NETWORK..... 7
- FIGURE 3: AVERAGE CENTRALITY SCORE IN THE INFORMATION NETWORK..... 9
- FIGURE 4: INFORMATION NETWORK DEPICTED WITH VARYING ORGANIZATION SIZES. 10
- FIGURE 5: AVERAGE CENTRALITY SCORE IN THE COLLABORATION NETWORK. 12
- FIGURE 6: COMMUNITY STRUCTURE IN THE COLLABORATION NETWORK..... 14
- FIGURE 7: CENTRAL CORE OF THE COLLABORATION NETWORK. 15
- FIGURE 8: BETWEENNESS SCORES FOR EACH ORGANIZATION WITHIN THE COLLABORATION NETWORK..... 18
- FIGURE 9: COMMUNITY STRUCTURE IN THE COLLABORATION NETWORK..... 19
- FIGURE 10: FUNDING FLOW NETWORK..... 21
- FIGURE 11: FUNDING FLOW NETWORK..... 22
- FIGURE 12: SERVICE NETWORK. 24
- FIGURE 13: JOINT FUNDING NETWORK..... 25
- FIGURE 14: COMMUNITY STRUCTURE OF THE JOINT FUNDING NETWORK. 26

Introduction

This report presents a Social Network Analysis (SNA) conducted on key stakeholders in the regional food system surrounding the City of Flagstaff, Arizona. SNA is a methodological approach for examining the relationships and interactions among individuals or groups within a specific network, in this case, a food system. The process entails collecting data on the connections among entities, representing these connections graphically, and analyzing the graph through mathematical and statistical techniques.

The purpose of this SNA is to identify the central players in the Flagstaff regional food system, understand the structure of community networks, and highlight bridge organizations that connect different parts of these networks. The analysis draws on survey responses from 33 organizations engaged in various aspects of the food system, including agricultural production, food retail, institutional food procurement, and food access.

This analysis aims to provide actionable insights for enhancing collaboration, identifying critical areas for intervention, and supporting decision-making processes among stakeholders in the regional food system.

Methodology and Report Structure

This Social Network Analysis was conducted in the spring of 2024, concurrent with the creation of a Community Food System Assessment for the City of Flagstaff and its regional food system. Key food system organizations were identified throughout the assessment process, and then emailed an online survey for the SNA. The questions asked representatives from key food system organizations to identify their relationships with other organizations in the regional food system.

This SNA utilizes an "average centrality" metric to measure an organization's influence and activity within the network. This method combines several factors to show us not just who is most connected, but also who plays a crucial role in bringing others together, who is more actively involved, and who might work well together in the future.

The report is divided into three main sections:

- **Centrality Metrics:** We discuss the average centrality measure and its implications for identifying key organizations within the network.
- **Community Detection:** We analyze the structure of the network to identify distinct communities or clusters of organizations with shared interests or goals.
- **Bridges:** We use betweenness centrality to highlight organizations that act as intermediaries, facilitating the flow of information and resources across different parts of the network.

Only the most relevant networks or networks where there is a clear pattern of any of the metrics discussed are shown in this report.

Social Network Analysis

Organization Awareness

The organization awareness network was constructed by mapping directed links from Organization A to Organization B whenever A is cognizant of B. This information was gathered from our survey, where each organization was asked whether they are aware of the other organizations.

Centrality analysis emerges as a powerful tool to discern the relative prominence or recognition of organizations within the food network ecosystem.

Figure 1 visualizes the average centrality scores for each organization, offering insights into their standing and influence within the network.

Organizations such as Northern Arizona University, the City of Flagstaff Sustainability Office, Coconino County Health & Human Services, and Flagstaff Foodlink are currently the most central nodes within the network. Their high centrality scores suggest they are well-recognized by other organizations in the network.

The central positions of these organizations suggest they might serve not just as focal points of information and activity, but potentially as influential decision-makers and leaders in the food system. Their prominent roles could be leveraged to disseminate information effectively, advocate for system improvements, and drive collaborative initiatives within the network.

Average Centrality score in the awareness network

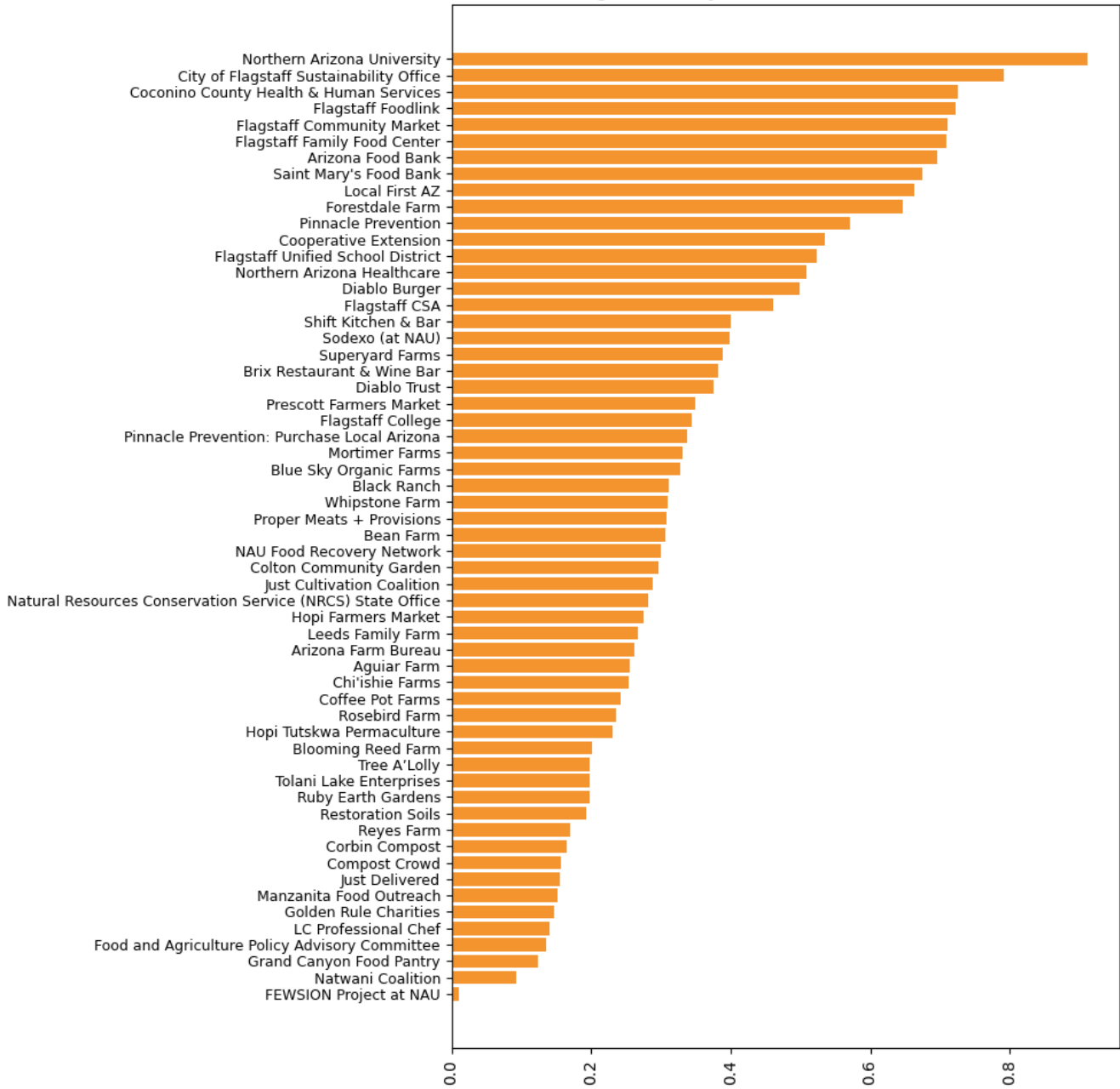


Figure 1: Average centrality score in the awareness network.

Note: In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Trust

The trust network is created by assigning a directed link from Organization A to Organization B whenever A deems B as trustworthy. This relationship is defined by Organization A's affirmative response to the statement "We consider this to be a trustworthy organization."

The trust network within Flagstaff's food system exhibits a high level of connectivity, reflecting a generalized sentiment of trust among the participating organizations.

Despite the prevalence of trust, the hierarchy of trustworthiness does show variations when compared to the network's previous organizational awareness ranking. While organizations previously identified as most well-recognized (from Organization Awareness) retain high trust scores, the order among the top-ranking organizations shifts, indicating nuances in how trust is accorded compared to general awareness (see figure 2).

Analyzing the centrality scores within the trust network reveals that Forestdale Farm, Flagstaff Family Food Center, the City of Flagstaff Sustainability Office, Flagstaff Foodlink, and Local First AZ are pivotal in shaping the trust landscape of Flagstaff's food system.

These organizations, by leading in average centrality, demonstrate a balanced combination of influence, connectivity, and trustworthiness among their peers. Their high scores suggest they are not only widely recognized and trusted within the network but also play significant roles in facilitating collaboration and information flow. This highlights their potential as key agents for spearheading initiatives, fostering a collaborative environment, and driving positive change within the community's food system.

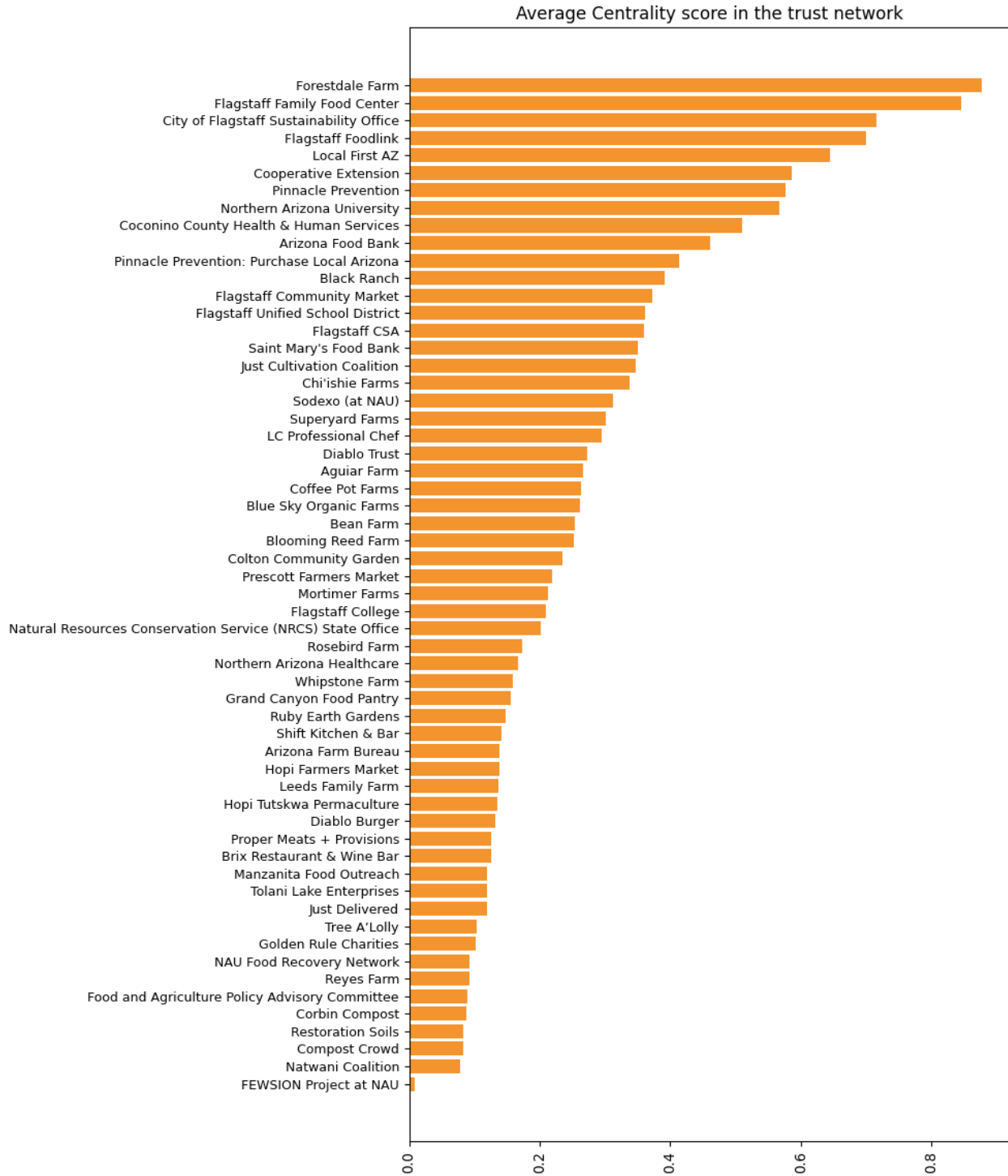


Figure 2: Average centrality score in the trust network.

Note: In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Information

The information network is formed by establishing a directed link from Organization A to Organization B whenever A regards B as a key source of information. This connection is determined by A's agreement with the statement, "When we have questions about the Northern Arizona food system this organization is a 'go-to' source."

In the information network, Pinnacle Prevention, Flagstaff Foodlink, City of Flagstaff Sustainability Office, Forestdale Farm, and Northern Arizona University emerge as the top five organizations based on average centrality. This ranking underscores their critical function as hubs of knowledge and information within the network. Their prominent average centrality scores indicate that these organizations are not merely well-connected; they are central to the flow of information, acting as vital resources that others turn to for guidance and expertise.

This positions them as influential leaders in disseminating knowledge, setting standards, and potentially guiding the strategic direction of the food system in Northern Arizona. Their role suggests a significant capacity for impacting decision-making processes, resource allocation, and the overall dissemination of innovations and best practices within the community.

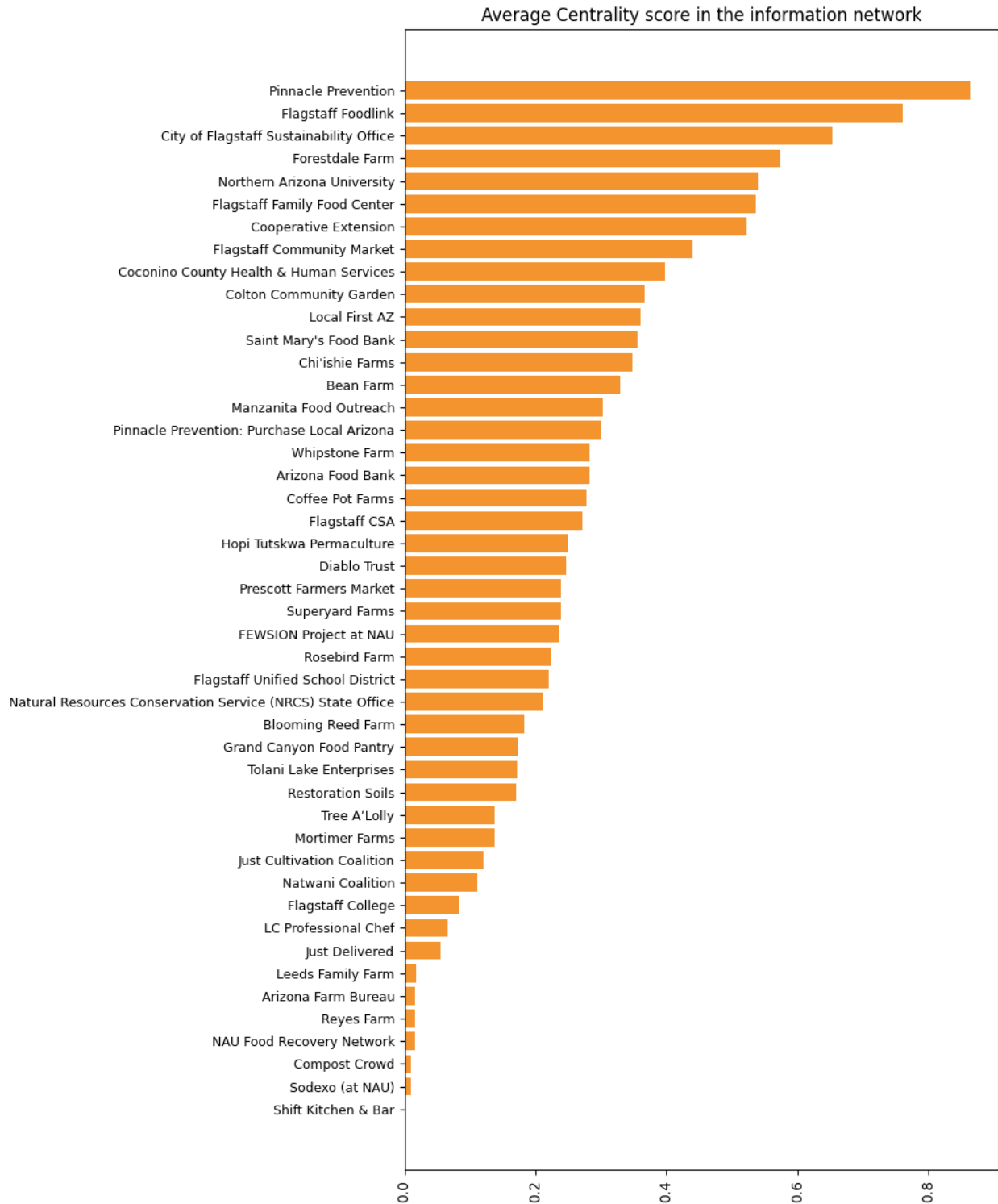


Figure 3: Average centrality score in the information network.

Note: In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

In figure 4, the information network is presented, with the size of each organization reflecting the number of other organizations that rely on it as a primary source of information.

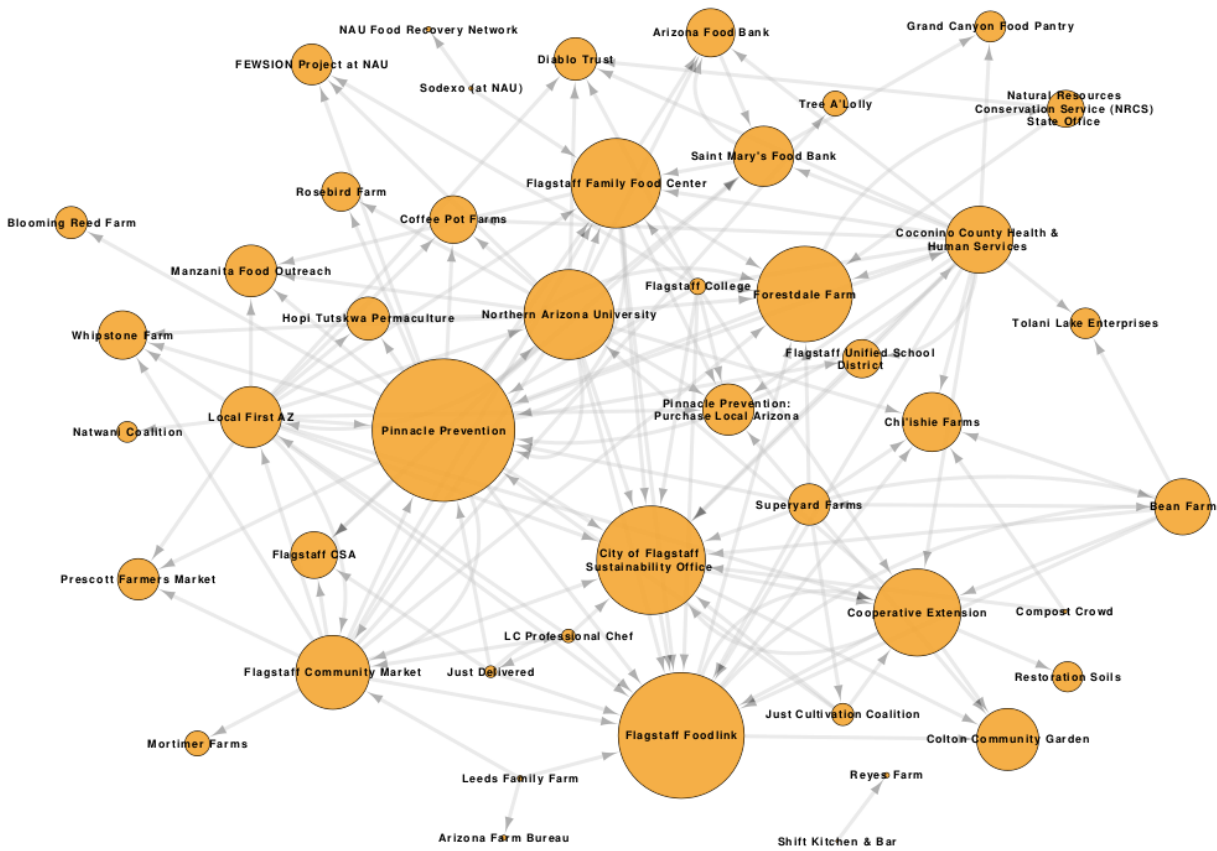


Figure 4: Information network depicted with varying organization sizes.

Note: each is proportional to the count of other entities depending on it as a principal information source.

Note: In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

Collaboration

The collaboration network is established by connecting Organization A with Organization B whenever there is a history of joint ventures, as indicated by mutual collaboration on programs (i.e. "We have collaborated on a jointly run program with this organization"). Given the reciprocal nature of such partnerships, the network is inherently undirected, signifying that collaboration is a two-way relationship.

Central nodes in a collaboration network typically represent organizations that are highly active in joint initiatives. They are often the hubs of partnership and cooperative effort, indicating that they have engaged with multiple entities in mutually run programs. Their centrality signifies a pivotal role in the network, suggesting these organizations might be:

- *Key Collaborators*: They frequently participate in, or even spearhead, collaborative projects, indicating they have the capacity, resources, or strategic interest in such ventures.
- *Influential Partners*: Due to their extensive collaborative ties, central nodes are likely to influence practices and trends within the network, potentially guiding the direction of collaborative efforts.
- *Cohesion Builders*: By participating in various joint programs, these organizations contribute to the network's cohesion, linking different clusters that might otherwise remain disconnected.
- *Resource Hubs*: Central nodes may have access to a variety of resources, either through their own reserves or through partnerships, and can be instrumental in resource sharing within the network.
- *Information Centers*: These organizations often become repositories of knowledge and information, accumulated through diverse collaborative experiences, which can be disseminated to other network members.

Figure 5 displays the centrality of each organization in the collaboration network.

In the collaboration network of Flagstaff's food system, the top organizations based on average centrality serve as foundational pillars. **Northern Arizona University is at the forefront, suggesting it plays a pivotal role in fostering collaborative efforts. Pinnacle Prevention, Local First AZ, Flagstaff Foodlink, and the City of Flagstaff Sustainability Office are also key, each demonstrating a strong capacity for partnership and joint initiatives.**

These organizations, due to their high average centrality scores, are crucial in creating a tightly knit network, vital for promoting collective endeavors and the sharing of resources among all members of the food system.

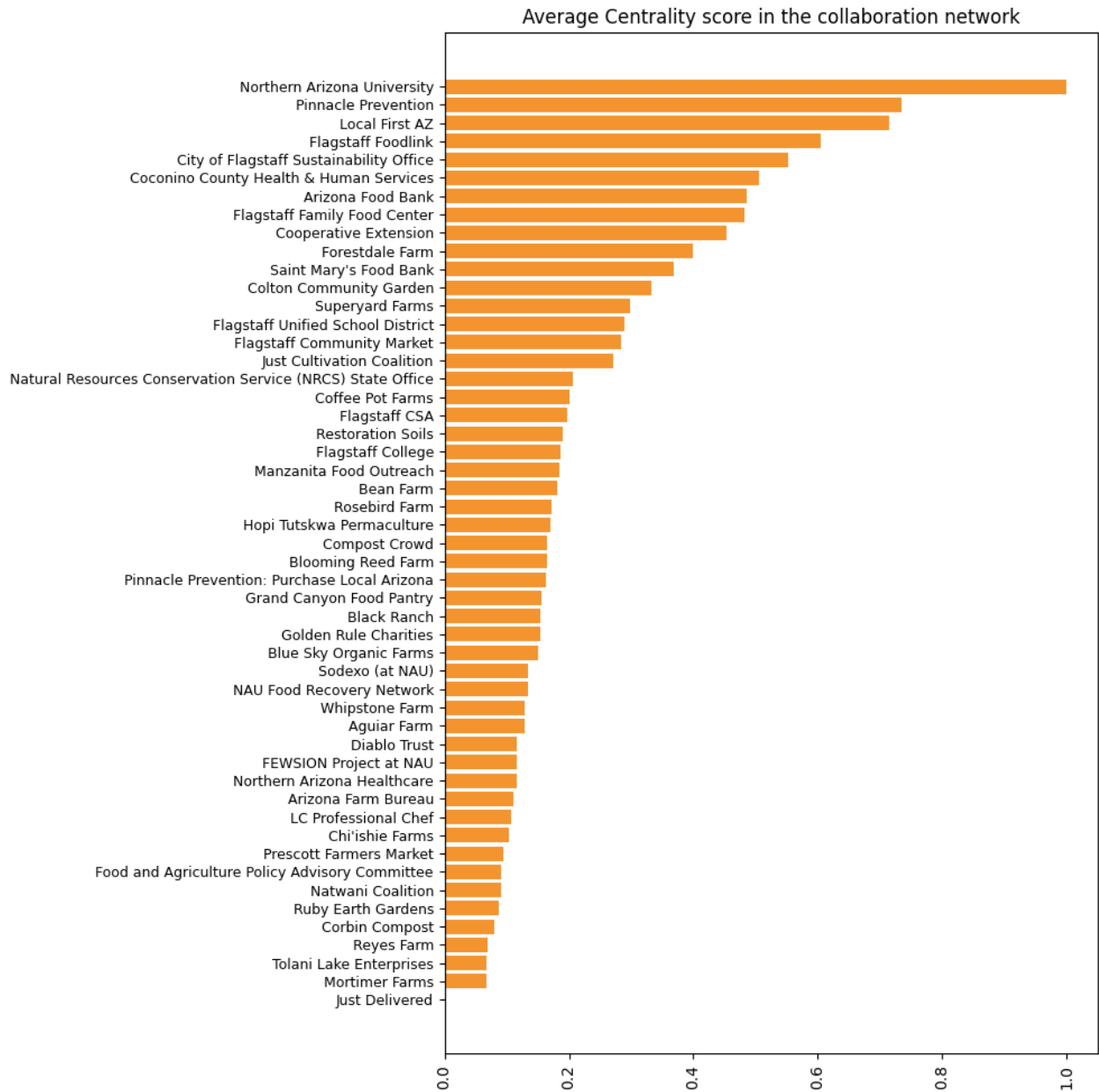


Figure 5: Average centrality score in the collaboration network.

Note: In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Strategic importance of Community Detection in the Collaboration Network

Of special interest are communities of organizations in these collaboration networks, since they often represent groups that have established stronger, more frequent, and more intensive collaborative relationships over time. Detecting such communities is of strategic importance for several reasons:

- *Resource Allocation:* Communities may indicate groups that are optimizing the use of shared resources, allowing for targeted support and resource allocation where it's most effective.
- *Policy Impact:* Understanding how organizations cluster in terms of collaboration can help policymakers and funders tailor interventions that reinforce successful community structures or address gaps in collaboration.
- *Network Resilience:* Communities within a network can contribute to overall resilience, as they may provide mutual support and assistance among members during challenges.
- *Best Practices Dissemination:* Strong collaborative communities can serve as models of effective partnership, setting benchmarks and disseminating best practices throughout the broader network.
- *Enhanced Impact:* Organizations within a community may have aligned goals and complementary capacities, leading to collaborations that can amplify their collective impact on the food system.
- *Networking Efficiency:* Identifying communities helps to understand the network's sub-structures, making it easier to navigate and engage with the network efficiently for new or external organizations.

Figure 6 shows the most significant partition of the collaboration network into five communities. Each color represents a different community, and organization size circle corresponds to their centrality in the network.

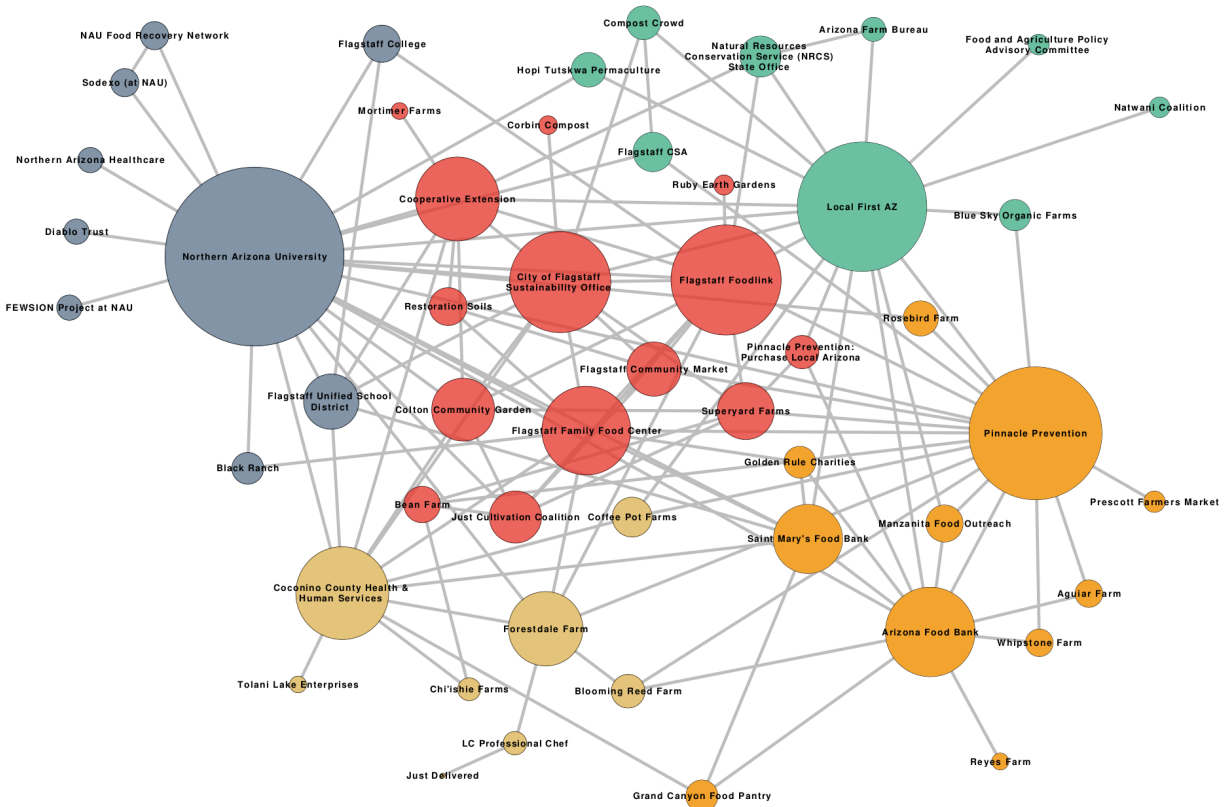


Figure 6: Community structure in the collaboration network.

Note: each color denotes a distinct community, and the size of each organization reflects its centrality score. In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

Three out of five identified communities are centered around one or two key organizations, indicative of their influential roles.

- The blue community is notably dominated by Northern Arizona University, which stands out as the central hub.
- Similarly, Local First AZ holds a pivotal position within the green community, acting as the primary connector.
- In the orange community, Pinnacle Prevention, Arizona Food Bank Network, and Saint Mary’s Food Bank are the principal entities driving collaborative efforts.
- The brown community is led by two major organizations: Coconino County Health & Human Services and Forestdale Farm.
- The red community is distinctive, comprising several vital organizations that engage in numerous collaborations, both intra-community and with external groups.

It is noteworthy that all highly connected nodes in the network, irrespective of their community affiliations, are interconnected (see figure 7), forming a structure known as “central core.” This feature, commonly observed in many social networks, highlights a significant aspect of network dynamics, where the most influential organizations, despite differing community memberships, tend to form an elite cluster of collaboration and influence.

The 9 most central organizations in the collaboration network are shown below in figure 7. They form a central core that interconnects the different communities and show a high degree of connectivity between them.

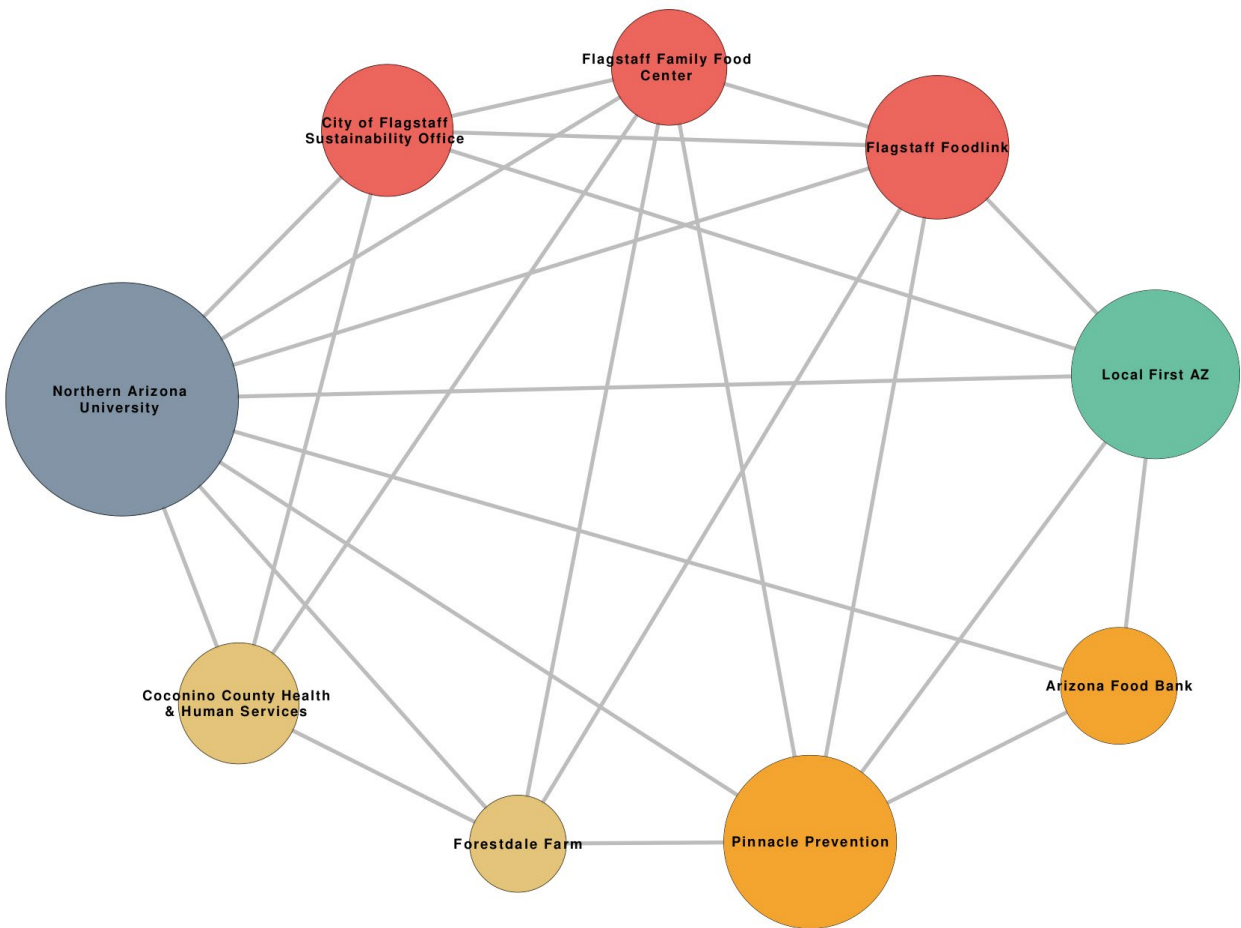


Figure 7: Central core of the collaboration network.

Note: each color indicates a different community and organization size reflects centrality score

Note: In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

The existence of a central core underscores several critical points of interest:

- *Enhanced Cohesion and Resource Flow:* The central core can facilitate a more efficient flow of information and resources across the network, as these central nodes often serve as major conduits for collaboration and communication.
- *Stability and Resilience:* Networks exhibiting a central core structure can be more resilient to disruptions. The interconnectedness of central nodes can help maintain network integrity and continuity of operations, even in the face of challenges affecting peripheral nodes.
- *Innovation and Spread of Best Practices:* The central core, due to its comprised entities' leadership and expertise, can be a hotbed for innovation. It can play a crucial role in initiating and disseminating new ideas and best practices throughout the network.
- *Potential for Strategic Interventions:* Understanding the central core structure within a network offers strategic entry points for interventions aimed at enhancing collaboration or introducing new initiatives. Engaging with this influential group can amplify the impact of such interventions across the network.

While the central core effect can have many benefits, it also poses a risk of creating an over-centralized network structure where too much reliance is placed on a few nodes. This can lead to vulnerabilities where the departure or failure of these key nodes significantly impacts the network.

Bridging Roles in Collaboration Networks

To assess the significance of each organization within the network, we identify entities that serve as bridges or intermediaries among various community segments, enhancing the flow of information and resources. This role is determined using "betweenness," a measure that essentially quantifies how often an organization lies on the shortest path between other pairs of organizations, indicating its role in connecting different parts of the network (see figure 8).

In the collaboration network, Northern Arizona University maintains its position as the most influential node with the highest betweenness centrality, indicating its role as a major connector and influencer across various entities. Local First AZ and Pinnacle Prevention also stand out significantly in this context, serving as critical hubs for collaboration and information dissemination within the network. These organizations are instrumental in bridging different groups, which suggests their involvement in multiple collaborative projects and their capacity to influence a broader spectrum of the network.

The strategic positioning of these entities underscores their potential as key partners in initiatives aimed at enhancing the effectiveness and cohesion of the food distribution system in Flagstaff. Enhancing collaborative ties with and between these central organizations could lead to more integrated and efficient network dynamics, potentially fostering more robust and sustainable food distribution practices across the region.

The significant betweenness centrality scores of the top organizations contrast sharply with the very low values observed for most other entities in the network. This stark disparity highlights a concentrated locus of influence within a few key organizations, while many others play relatively minor roles as connectors. Such a distribution suggests that while a select group of organizations facilitates the majority of collaborative efforts and information flow, there is potential to develop and strengthen the bridging capacities of the less central organizations. Enhancing these connections could lead to a more evenly distributed network resilience and a broader dissemination of resources and knowledge across all participants.

Within each community, we observe the presence of one or several organizations with high betweenness scores, functioning as pivotal connectors. These bridge nodes not only consolidate the integrity of their respective communities by ensuring internal cohesion but also play a crucial role in linking smaller organizations to the broader network. By acting as conduits, these bridge organizations facilitate the dissemination of communication, information, and procedural knowledge throughout the network. Their position and function underscore their importance, as they enhance the network's overall connectivity, resilience, and efficiency, ensuring that even the most peripheral members remain informed and integrated.

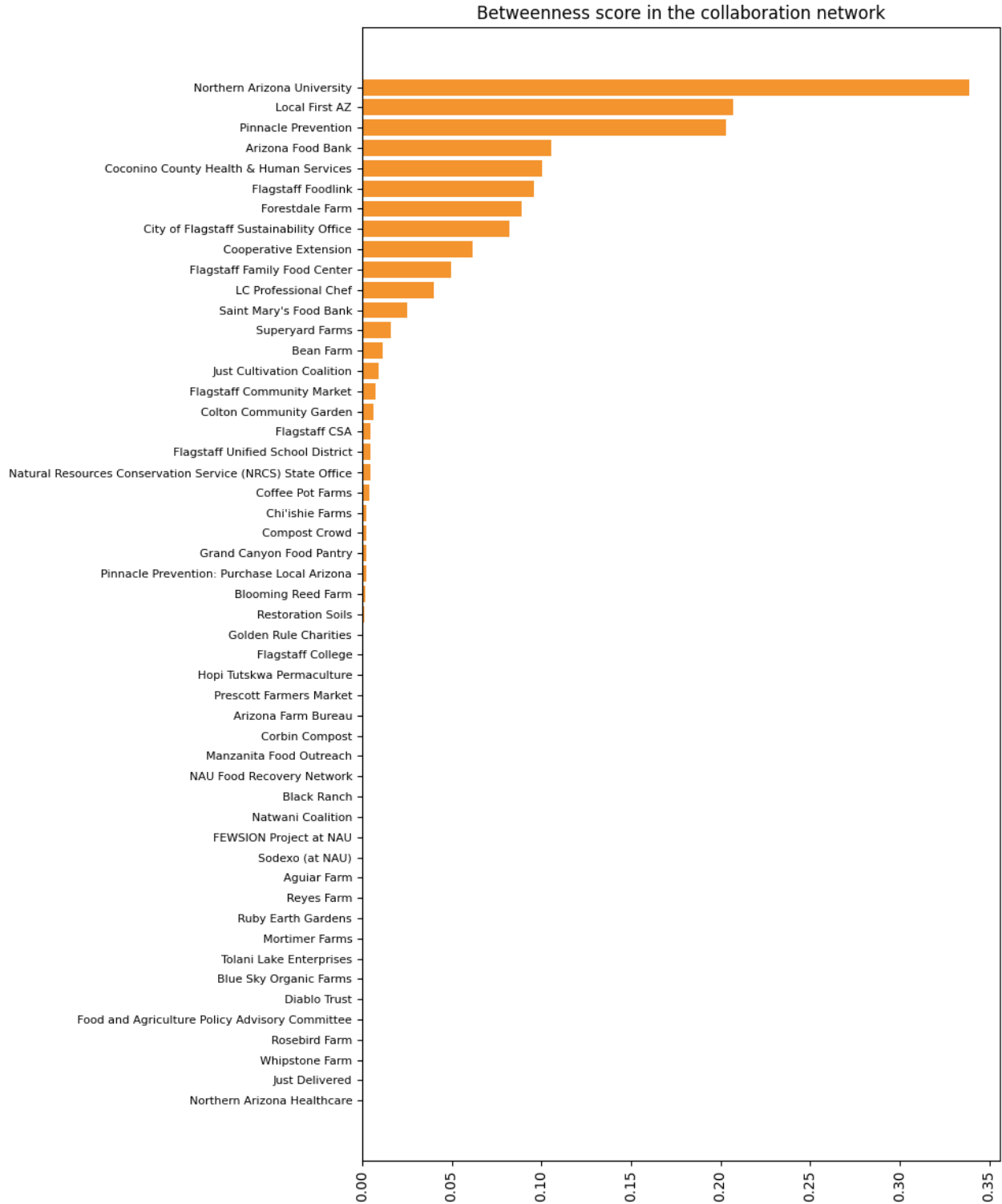


Figure 8: Betweenness scores for each organization within the collaboration network

Note: In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Figure 9 illustrates the collaboration network, with the size of each organization now adjusted to reflect their betweenness centrality score.

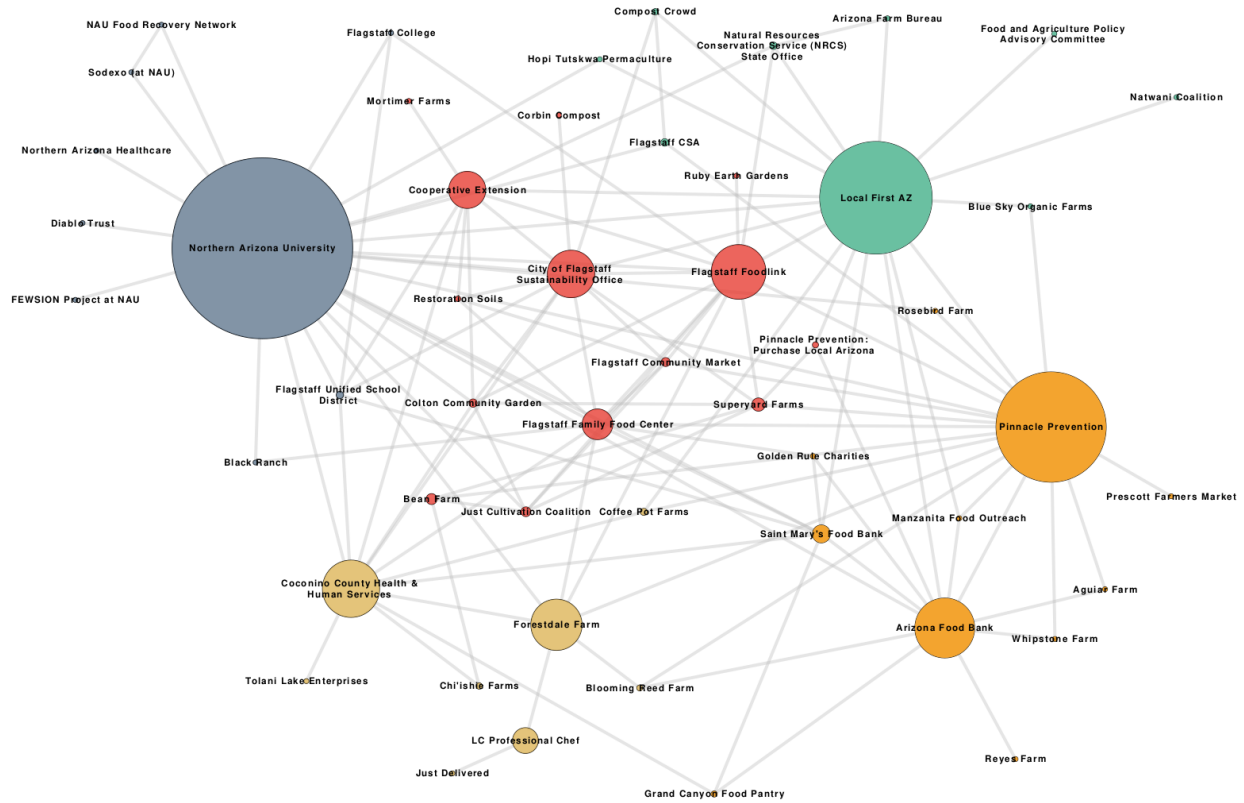


Figure 9: Community structure in the collaboration network.

Note: each color represents a different community. Organization circle size corresponds to their betweenness score. In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Funding

To examine the flow of funding within the network and identify which organizations are the primary funders and recipients, we construct the network by synthesizing responses from two distinct survey questions: “We have received funding from this organization,” and “We provide funding to this organization.”

Ideally, these two networks should mirror each other: if A has received funding from B in one network, then in the other, B should be identified as a funder of A. However, due to various factors, a complete reciprocal mapping of funding links is not always observed. For instance, the respondent from organization A may not be privy to all financial interactions, particularly if they are not directly involved with the department that manages or receives funding from organization B, leading to potential gaps in the reported funding relationships.

Merging these two networks provides a fuller picture of funding flows, better highlighting key funders and recipients despite data gaps.

Figure 10 illustrates the funding flow network, where the size of each organization circle corresponds to the number of different organizations it provides funding to. Conversely, figure 11 presents the same network, but here the node size represents the number of different organizations that fund each entity. It's important to mention that this analysis focuses solely on the connections of funding relationships and does not account for the actual amounts of funding given or received, as this information was not collected in the survey.

In the network of funding distribution, Pinnacle Prevention emerges as the most prolific donor, extensively supporting a wide array of organizations, reflecting its central role in resource allocation and its significant impact on the network's direction. Among the top receivers, the Flagstaff Family Food Center and Forestdale Farm stand out, each being targeted by multiple funders, which underscores their crucial roles in executing diverse projects and their trusted status within the community.

Additionally, Northern Arizona University and the City of Flagstaff Sustainability Office illustrate a balanced dynamic, acting both as key donors and prominent recipients. This balance indicates their integral roles in fostering collaborative efforts and maintaining the vitality of the network, ensuring a symbiotic relationship that enhances the entire community's resilience and efficacy.

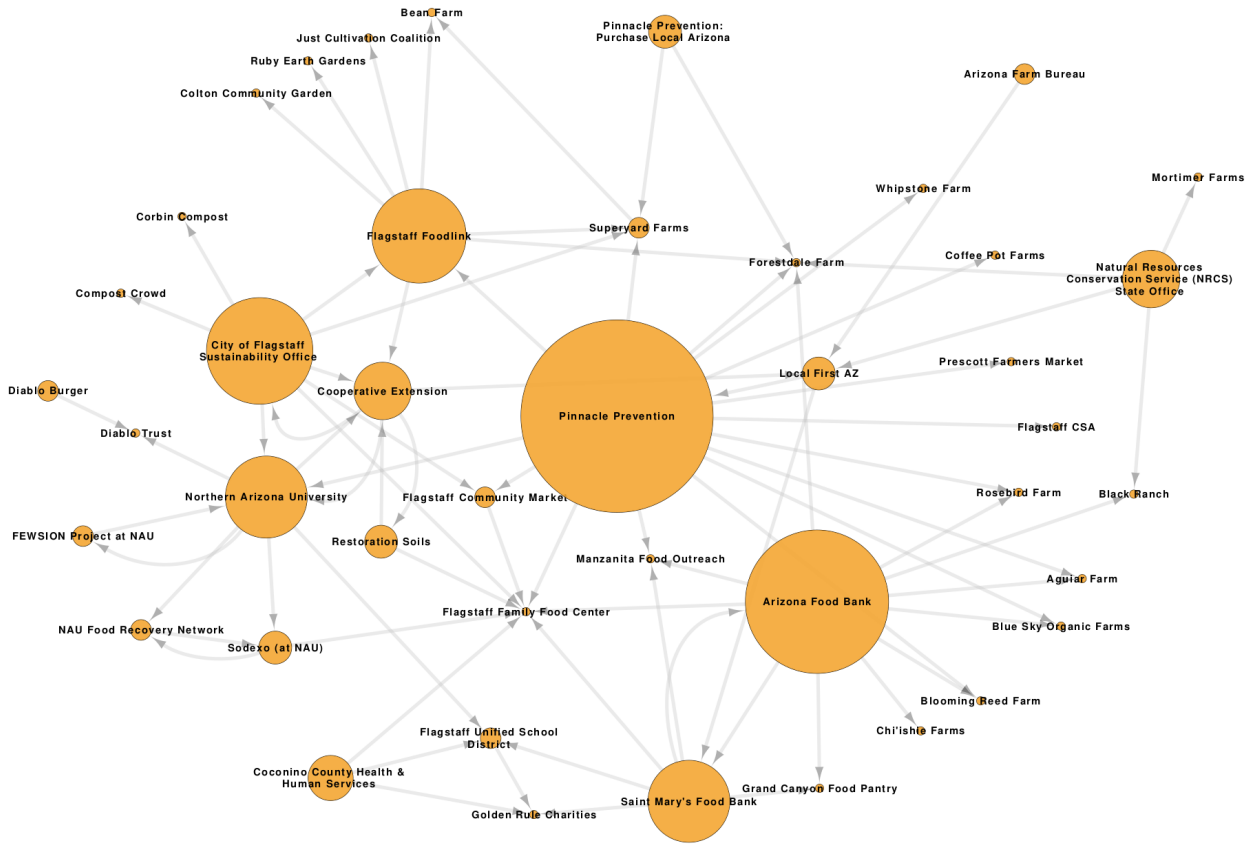


Figure 10: Funding flow network.

Note: the size of each organization corresponds to the number of different organizations it provides funding to. In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

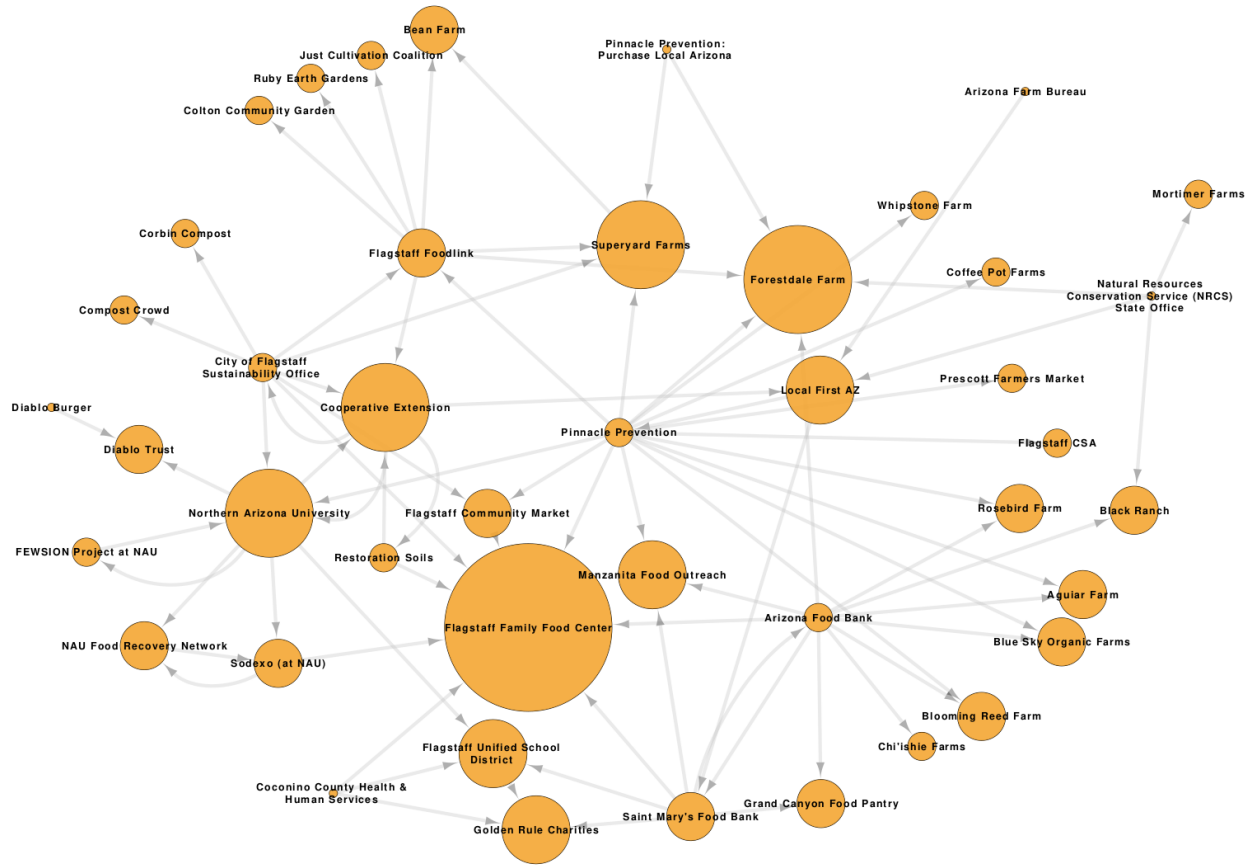


Figure 11: Funding flow network.

Note: the size of each organization is proportional to the number of different organizations providing it with funding. In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

Service

Similarly, we combine responses regarding service provision and receipt: "We provide services to this organization" with "We receive services from this organization."

The ensuing network visualizes the "A provides services to B" connections (where a link from A to B indicates service provision from A to B). In figure 12, the size of the nodes reflects each organization's betweenness centrality, indicating the significance of the organization as a bridge in sustaining the service network.

Northern Arizona University holds the highest betweenness centrality, significantly higher than the rest, which indicates it plays a crucial role in facilitating service provision between various organizations. It acts as a primary gateway through which services are channeled, positioning it as a central node for coordination and distribution.

Local First AZ and Flagstaff Family Food Center also stand out with high betweenness centrality, suggesting that they too are key conduits in the network, frequently engaged in mediating services between other members. Their strategic positions allow for a strong influence over the flow of services, enabling them to potentially control and shape the dynamics of service provision within this network.

The large disparity between these central organizations and those with lower betweenness scores points to a hierarchical structure within the network, with a small number of organizations holding substantial control over service distribution. This could imply potential risks where the removal or failure of these key nodes might disrupt the network's functionality. Conversely, it also opens opportunities for strengthening the network by developing the capacity of lower-centrality organizations to enhance the system's resilience and service redundancy.

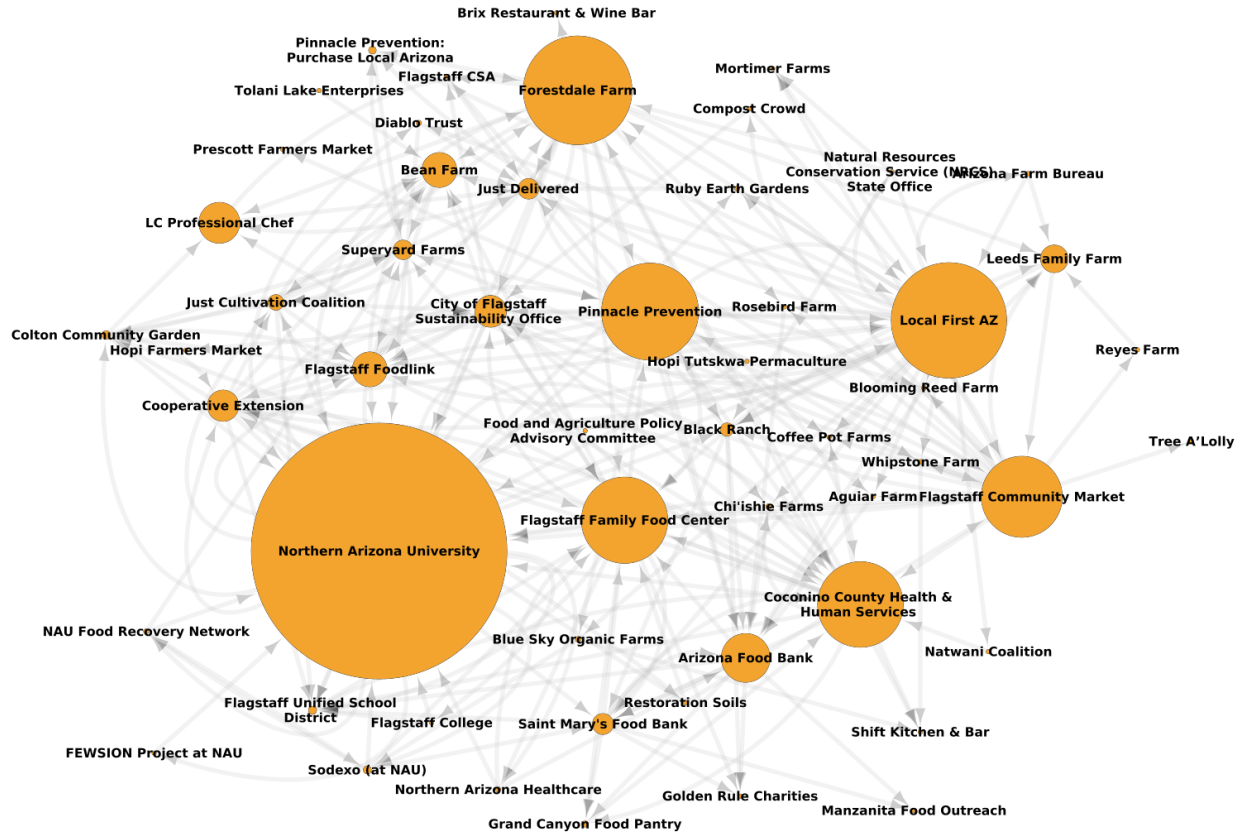


Figure 12: Service network.

Note: the size of each organization is proportional to its betweenness score. In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

Joint Funding Request

The "joint funding request" network is established by linking two organizations that have collaborated to submit a funding application as a partnership.

Figure 13 displays the network, with the node sizes reflecting the centrality score of each organization. Organizations with larger nodes are more established and are often sought after as partners by other entities looking to apply for funding collaboratively.

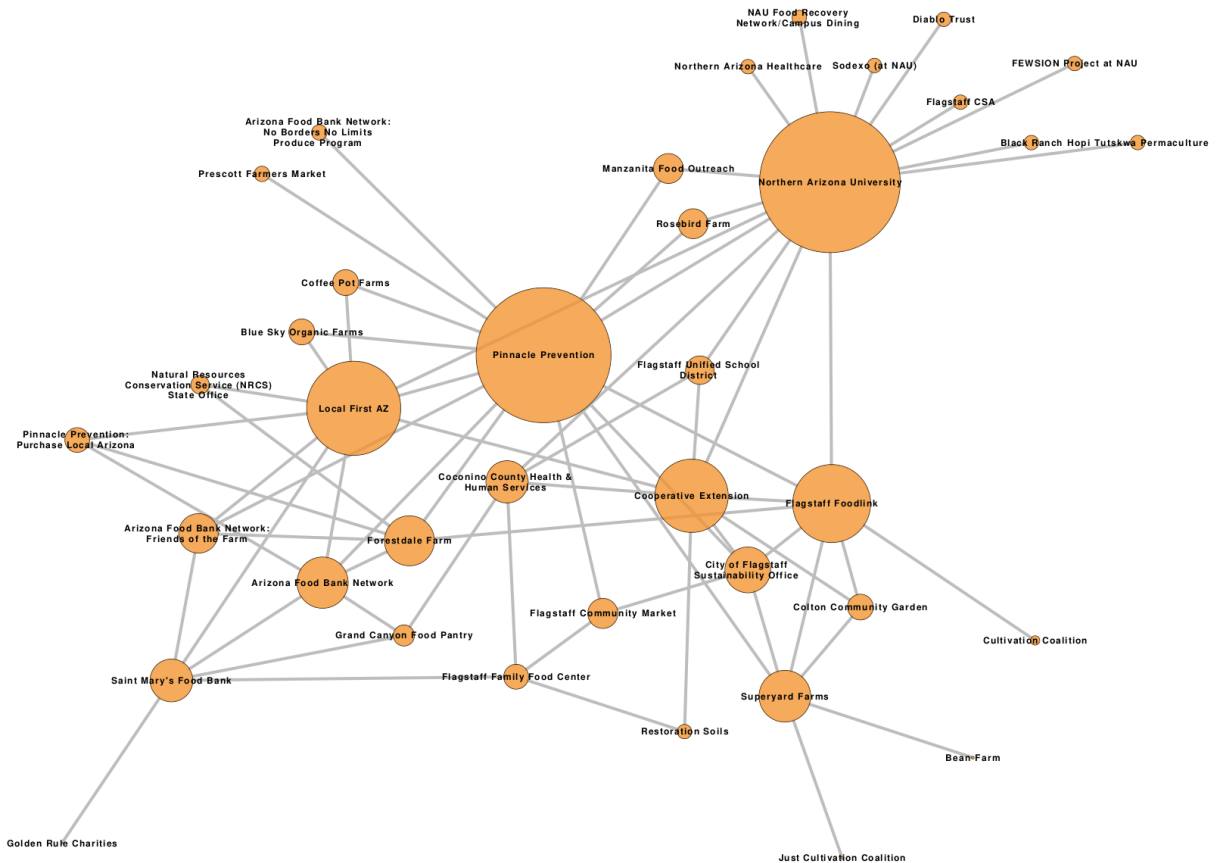


Figure 13: Joint funding network.

Note: the size of each node reflects the centrality score of each organization. In the figure, the "Arizona Food Bank" refers to the Arizona Food Bank Network.

Upon mapping the communities within the network, we distinguish several key clusters: one centered on Northern Arizona University (grey), another encompassing non-profit organizations, farms, and food banks operating at the state level (orange), and two other communities (green and red) comprising both government entities and non-profit organizations active at both the county and Flagstaff city levels (see figure 14).

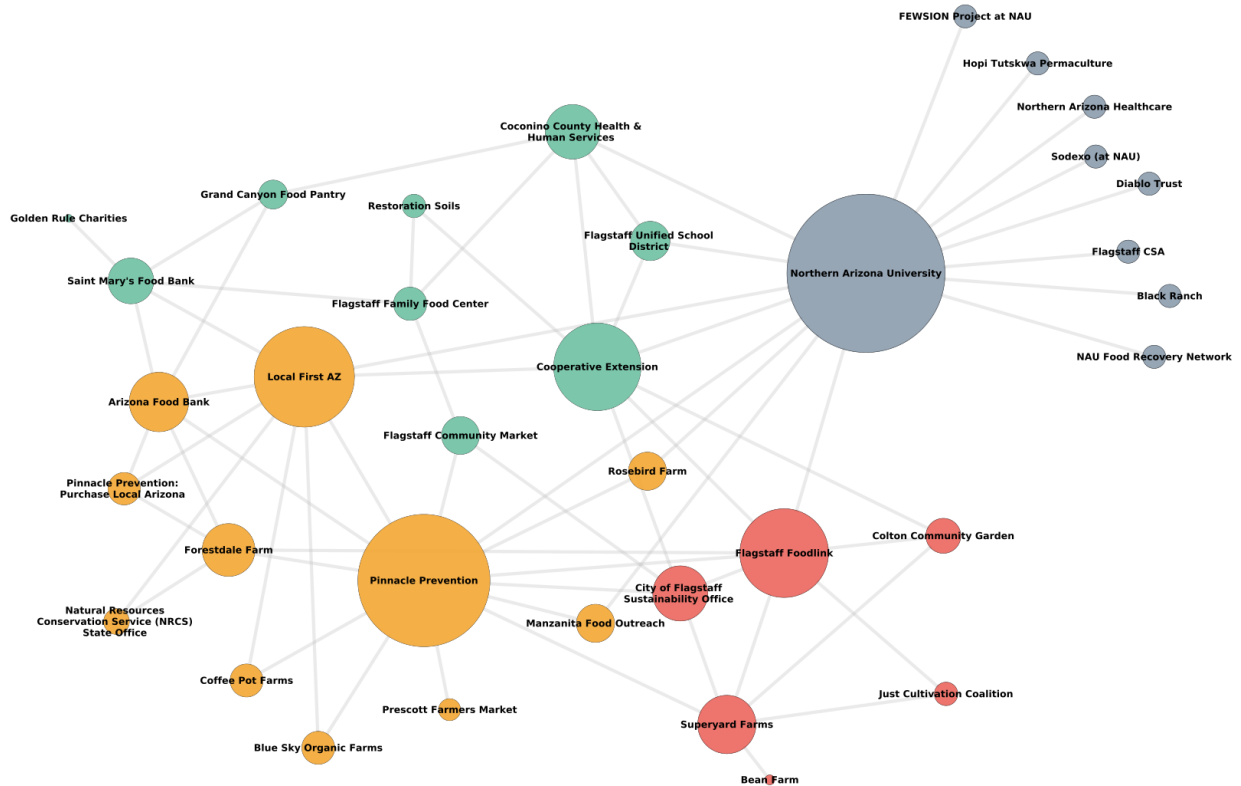


Figure 14: Community structure of the joint funding network.

Note: the size of each node reflects the centrality score of each organization. In the figure, the “Arizona Food Bank” refers to the Arizona Food Bank Network.

Conclusion

The analysis reveals that entities like Northern Arizona University, the City of Flagstaff Sustainability Office, Pinnacle Prevention, Local First AZ, and Flagstaff Foodlink serve as keystones within the network, evidencing their vast influence and crucial roles in maintaining the flow of services, information, and funding. These organizations, owing to their central positions, have the potential to catalyze significant improvements across the system, propelling initiatives that could reshape the food system's landscape in the region.

However, the hierarchical structure observed, characterized by a few highly interconnected central nodes –the central core, indicates a possible point of fragility. The network's health is tightly linked to these few entities, where their incapacitation could lead to widespread disruption. Thus, while these nodes bolster the network, their prominence also necessitates the creation of a more robust and diversified structure to ensure resilience against potential shocks.

Recommendations

Decentralization of Influence: To mitigate risks associated with over-reliance on central nodes, efforts should be directed towards decentralizing the network's influence. This can be achieved by empowering peripheral organizations, building their capacity for service provision, and integrating them more thoroughly into funding and information exchanges. Workshops, training programs, and resource-sharing initiatives could be instituted to elevate these organizations' roles within the network.

Bridging Gaps in Collaboration: Organizations with low betweenness scores represent untapped potential for enhancing network connectivity. By fostering partnerships with and between these entities, we can create more pathways for collaboration, leading to a denser, more interconnected network. Initiatives such as mentorship programs, collaborative grant opportunities, and regular networking events can bridge gaps and create a more cohesive food system.

Strategic Community Building: The identification of communities within the network offers a blueprint for targeted interventions. Policymakers and funders should concentrate efforts on reinforcing successful community structures and addressing collaboration gaps. By doing so, they can optimize resource allocation, support best practice dissemination, and ultimately, amplify the collective impact on the food system.

In conclusion, while the analysis has showcased the network's strengths, it has also highlighted areas for growth. By implementing these recommendations, stakeholders can not only enhance the network's efficiency and resilience but also foster an environment where innovation thrives, best practices are shared, and collective impact is amplified, ensuring that the regional food system can sustainably meet the needs of its community.

United States Department of Agriculture
Urban Agriculture & Innovative Production Grant

City of Flagstaff
Sustainability Office



COMMUNITY FOOD SYSTEMS ASSESSMENT

Flagstaff & Northern Arizona

Discussion Overview

01.
Project History &
Purpose

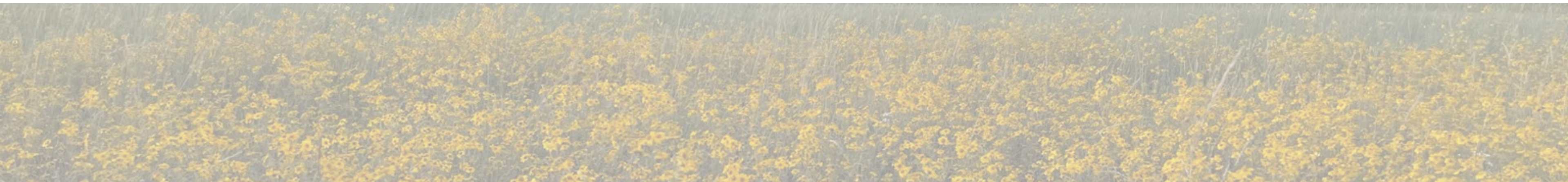
02.
CFSA Process

03.
CFSA Key Findings
& Major Takeaways

04.
Partner
Contributions

05.
Where Are We
Now?

06.
Questions



Our Team & Partners



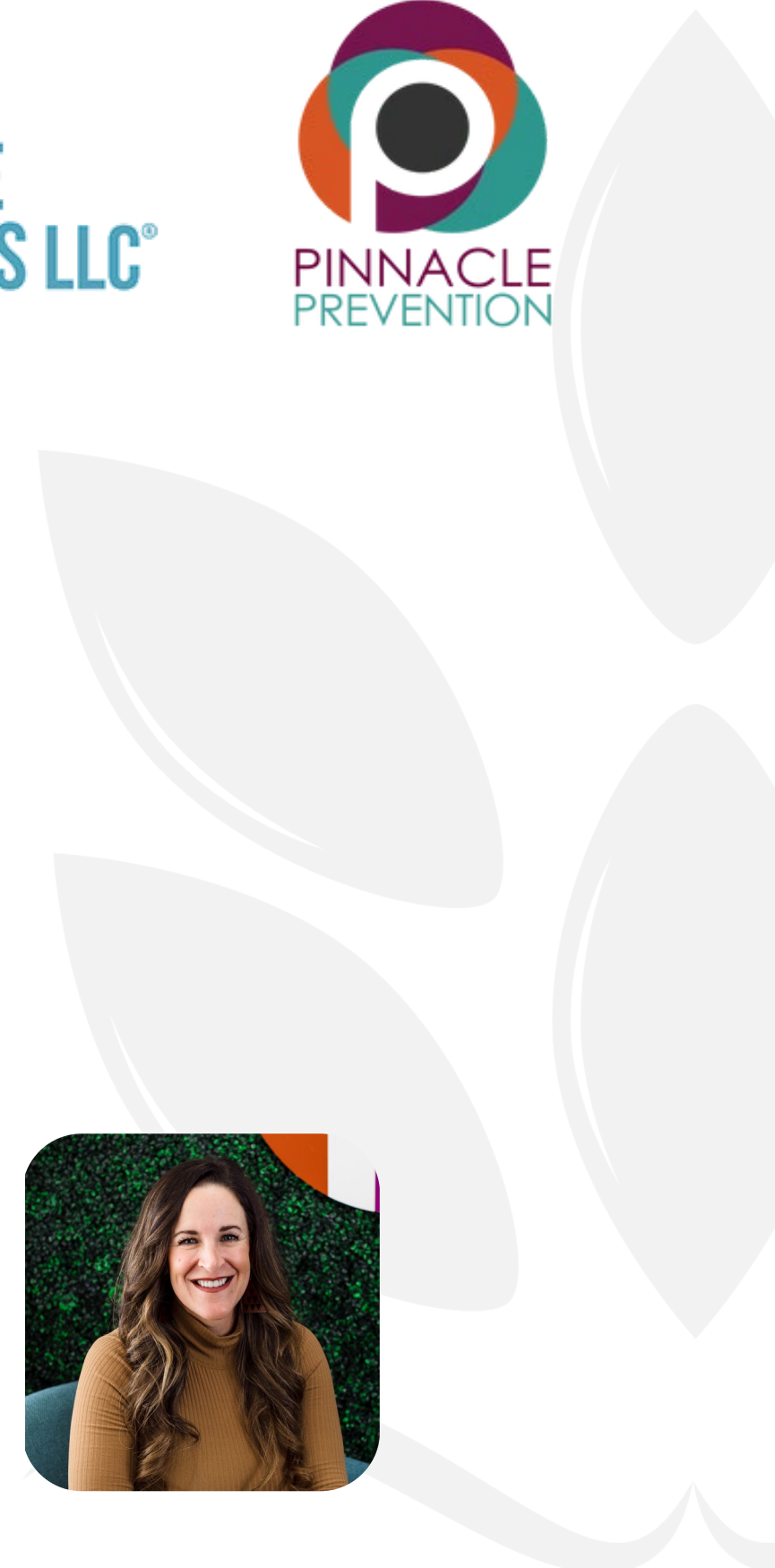
Natalie Pierson
*Food Systems
Coordinator*



Summer Grandy
*Flagstaff Foodlink /
FFFC*



Eileen Horn
Project Lead



Purpose of the USDA Grant Project:

Assessing and Growing a Sustainable Community Food System



Provides primary and secondary food systems research for 5 counties across northern Arizona



Supports community involvement of Flagstaff's climate goals related to sustainable and localized food access and distribution



Determines the City's food system commitments over the next **decade** to inform and engage decision-makers, key stakeholders, and the community

ASSESSING AND GROWING A SUSTAINABLE COMMUNITY FOOD SYSTEM

YEAR 1: 2023- 2024

Collect and synthesize food access, distribution, and agricultural data across NAZ into a CFSA.

YEAR 2: 2024-2025

Present CFSA findings to stakeholders and community members. Assess the feasibility of one strategic business opportunity.

YEAR 3: 2025-2026

Develop a Food Action Plan or other policy mechanism to guide improvements to infrastructure, programming, and funding for food systems over the next decade.



GOAL #1

Assess the local food system and collect data through a comprehensive food systems assessment (CFSA).



GOAL #3

Assess the feasibility of one strategic business opportunity in Flagstaff: food hub, commercial community kitchen, etc.



GOAL #2

Present CFSA findings to stakeholders and community members to increase awareness and understanding of the current state of our food system.



GOAL #4

Develop a Food Action Plan to guide City policy, programming, and investment in the local food system and urban agriculture opportunities.

2024 COMMUNITY FOOD SYSTEM ASSESSMENT



CITY OF FLAGSTAFF &
NORTHERN ARIZONA



Community Food System Assessment Process

- **Extensive secondary data collection:** NVA pulled from the key county, state, and national datasets that help us understand our food system. Sources include the U.S. Census, the USDA Census of Agriculture, CDC, County Health Rankings, Feeding America, and local community health data.
- **A Community-wide survey:** The project team received **1,041 total responses** from a variety of food system participants - consumers, growers, and food business entrepreneurs.
- **Focus Groups: 34 key food system stakeholders** participated in focus groups to share their on-the-ground insights with the project team. Focus groups covered six food system audiences:
 - Food retail outlets
 - Funders in the food system
 - Emergency food access
 - Farmers/ranchers
 - Institutional food purchasers
 - Food waste/recovery
- **Social Network Analysis:** A social network analysis (SNA) was conducted with representatives from **33 key food system organizations operating in the region** to identify central players in the local food system, understand community structures, and pinpoint bridge organizations within these networks.



What makes up Flagstaff's Food System?

- How our food gets to our table
- Where our food goes after it leaves our table
- And all the steps in between!

OUR FOOD SYSTEM VALUES

EQUITY
HEALTH
SUSTAINABILITY

FOOD JUSTICE
RESPECT
HUMAN RIGHTS

AGRICULTURAL LANDSCAPE & FOOD PRODUCTION

Where our food comes from. This includes everything from farming to ranching to backyard gardening.



FOOD SYSTEM INFRASTRUCTURE

How food is moved from the farm and then processed and distributed to places where people consume it.



FOOD RETAIL ENVIRONMENT

How and where food is purchased by consumers at stores, restaurants, or cafeterias.



FOOD CONSUMPTION & HEALTH

How the food we eat impacts the health of individuals and our communities.



FOOD ACCESS

How community members have (or don't have) access to adequate, affordable, and culturally relevant foods.



FOOD WASTE & RECOVERY

How food that doesn't get eaten is recovered and shared, composted, or landfilled.





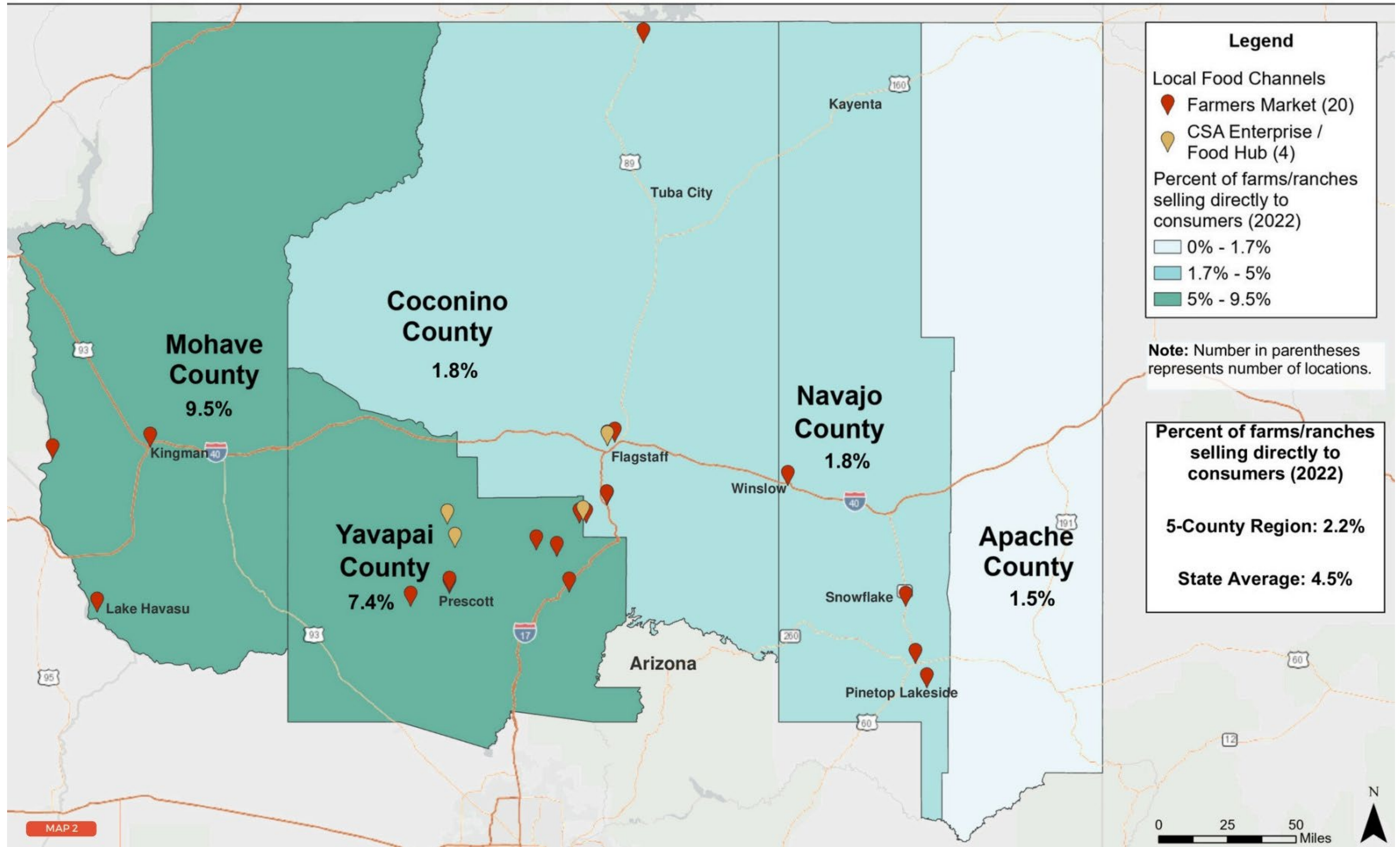
Ag Landscape & Food Production

Where our food comes from.
This includes everything from farming
to ranching to backyard gardening.

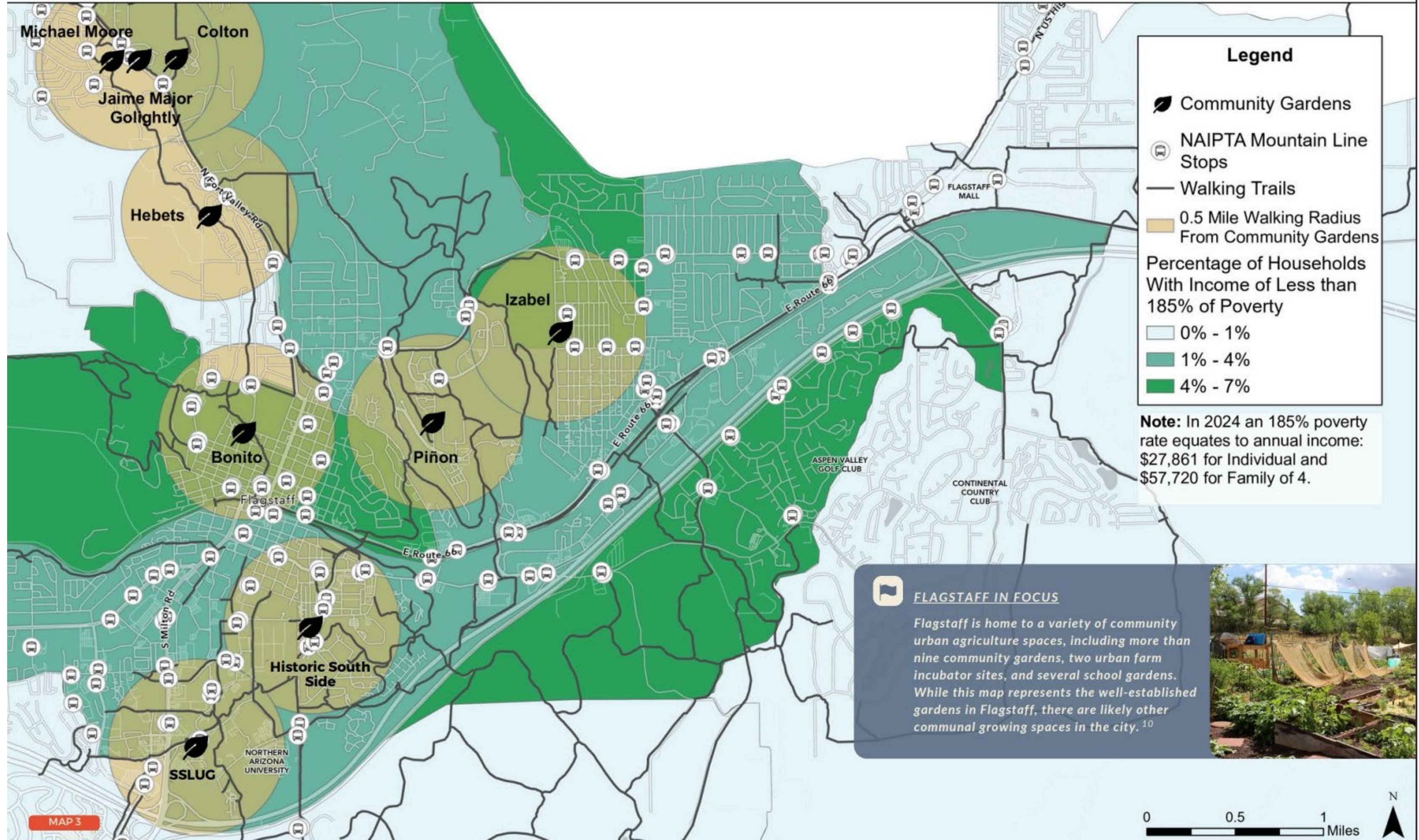


- **Local direct-to-consumer food sales in the region are growing**, which is a strong indicator of **regional demand for local foods**.
- However, the small size of farms, lack of business development resources, and sales outlets **makes it difficult for the agricultural economy in the region to grow**.
- The Flagstaff agriculture economy is very **separated from southern Arizona**, which limits the reach of the businesses.
- **Producing food is challenging in this region**. Farmers, ranchers, and gardeners noted climate variability, water access, cost of land and distance to market as key challenges.
- Food producers growing for business have a **strong desire for increased opportunities to collaborate** with other businesses such as food processors, manufacturers, distributors, retailers, buyers, and so on.
- **Most producers in northern Arizona are Native American**, and cultural differences around agricultural activities can undercount food sales and economic impact.

Local Food Channels of Northern Arizona



Access to Community Gardens in Flagstaff, Arizona



FLAGSTAFF IN FOCUS

Flagstaff is home to a variety of community urban agriculture spaces, including more than nine community gardens, two urban farm incubator sites, and several school gardens. While this map represents the well-established gardens in Flagstaff, there are likely other communal growing spaces in the city.¹⁰





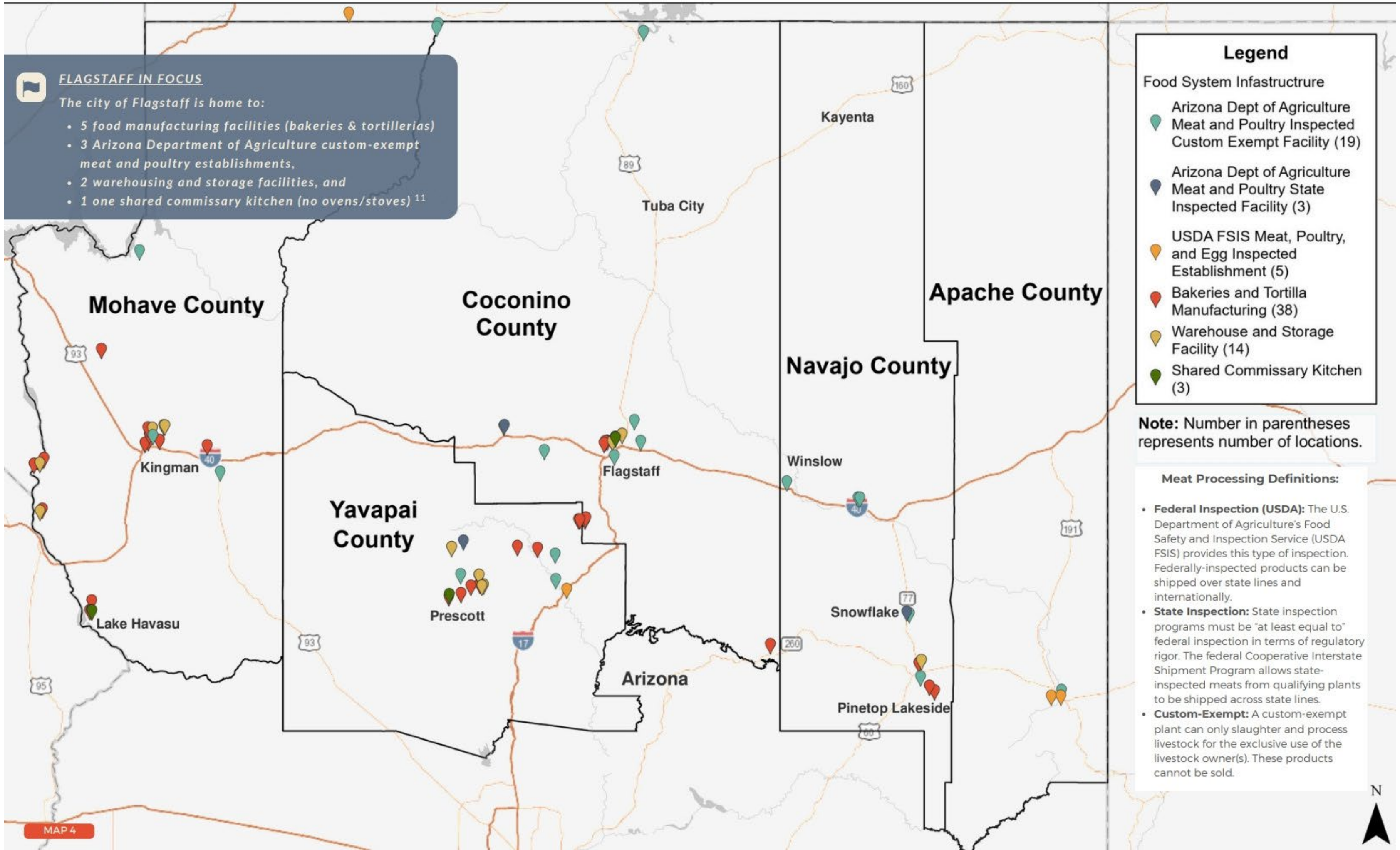
Food System Infrastructure

How food is moved from the farm and then processed and distributed to places where people consume it.



- **The lack of processing** (meat processing and commercial kitchen space) outside of the city centers **limits food producers' abilities to expand production and sales.**
- The **current lack of distribution infrastructure (e.g., food hubs) has led businesses to collaborate,** sharing deliveries, building on-farm processing, and contracting directly with farmers.
- The **distance between food producers and resources** (kitchens, processing, storage, customers, etc.) is a **significant barrier to starting and growing businesses** in the region.
- There is a need for **increased funding opportunities** to support **business development.**

Food System Infrastructure of Northern Arizona





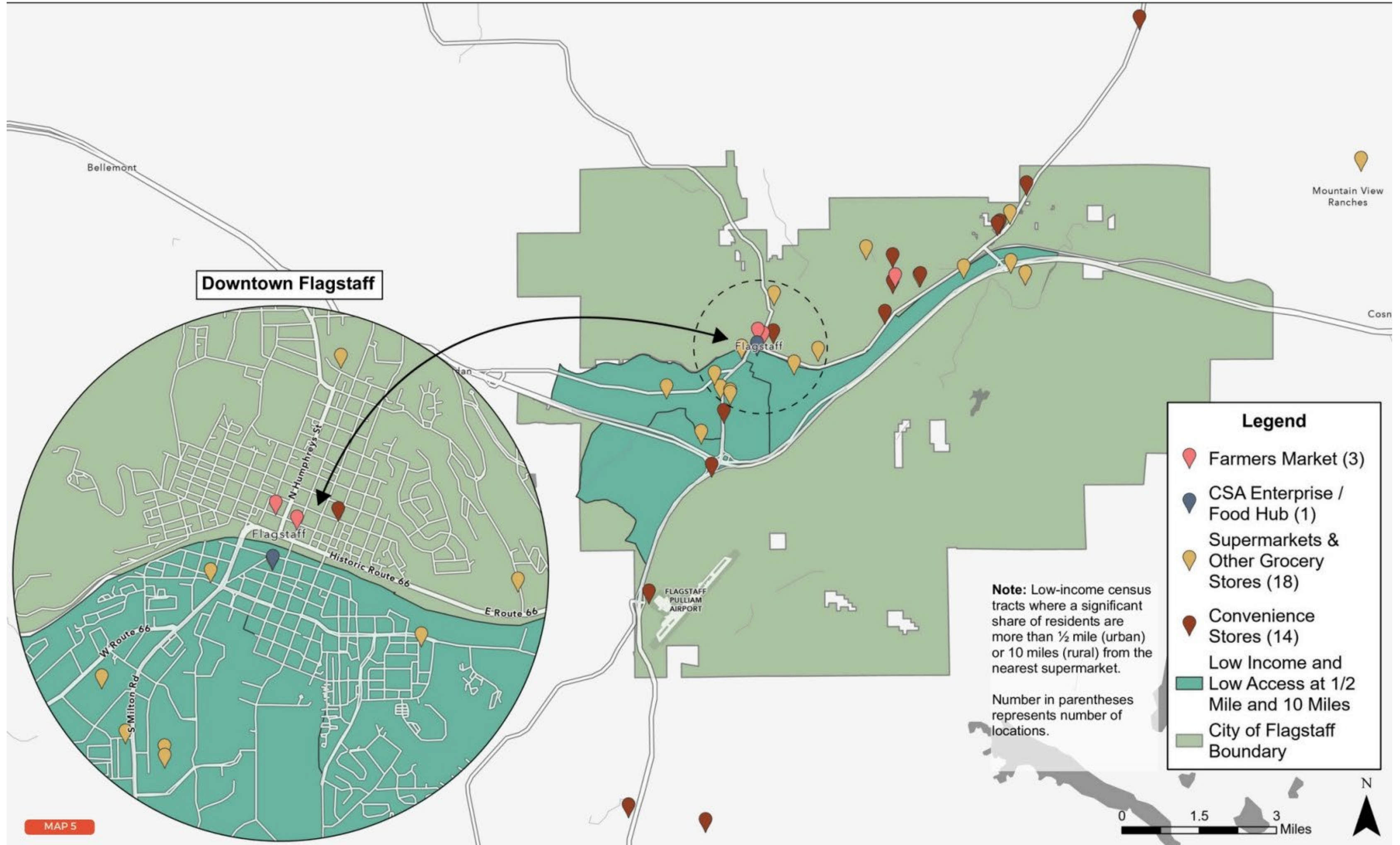
Food Retail Environment

How and where food is purchased by consumers at stores, restaurants, or cafeterias.



- **Food stores are concentrated near urban and suburban centers**, with few options in rural areas of the region.
- **Communities living on Native American reservation land have very few stores to buy from**, and the stores they do have offer only limited food options.
- The **lack of local food outlets and food distribution for local food has led to direct purchasing from farms** by restaurants and businesses who want to source and sell local foods.
- **The high cost of food is a challenge for many in the region**, and locally grown food is perceived as being especially expensive and hard to access.

Food Retail Locations in Flagstaff, Arizona





Food Consumption & Health

How the food we eat impacts the health of individuals and our communities.



- **Parts of northern AZ lack access to healthy food;** residents struggle to meet recommended intakes of fruits/vegetables. This **lack of access to healthy foods is particularly acute in rural areas and on reservation lands.**
- **Lack of access to healthy food contributes to negative health impacts in the region** (obesity /diabetes / lower life expectancy). In fact, three of the five counties in northern Arizona rank among the least healthy in the state.
- **Affordability of healthy food is a key barrier,** and the **rising cost of housing** in the region makes it even more difficult for families to afford healthy food.

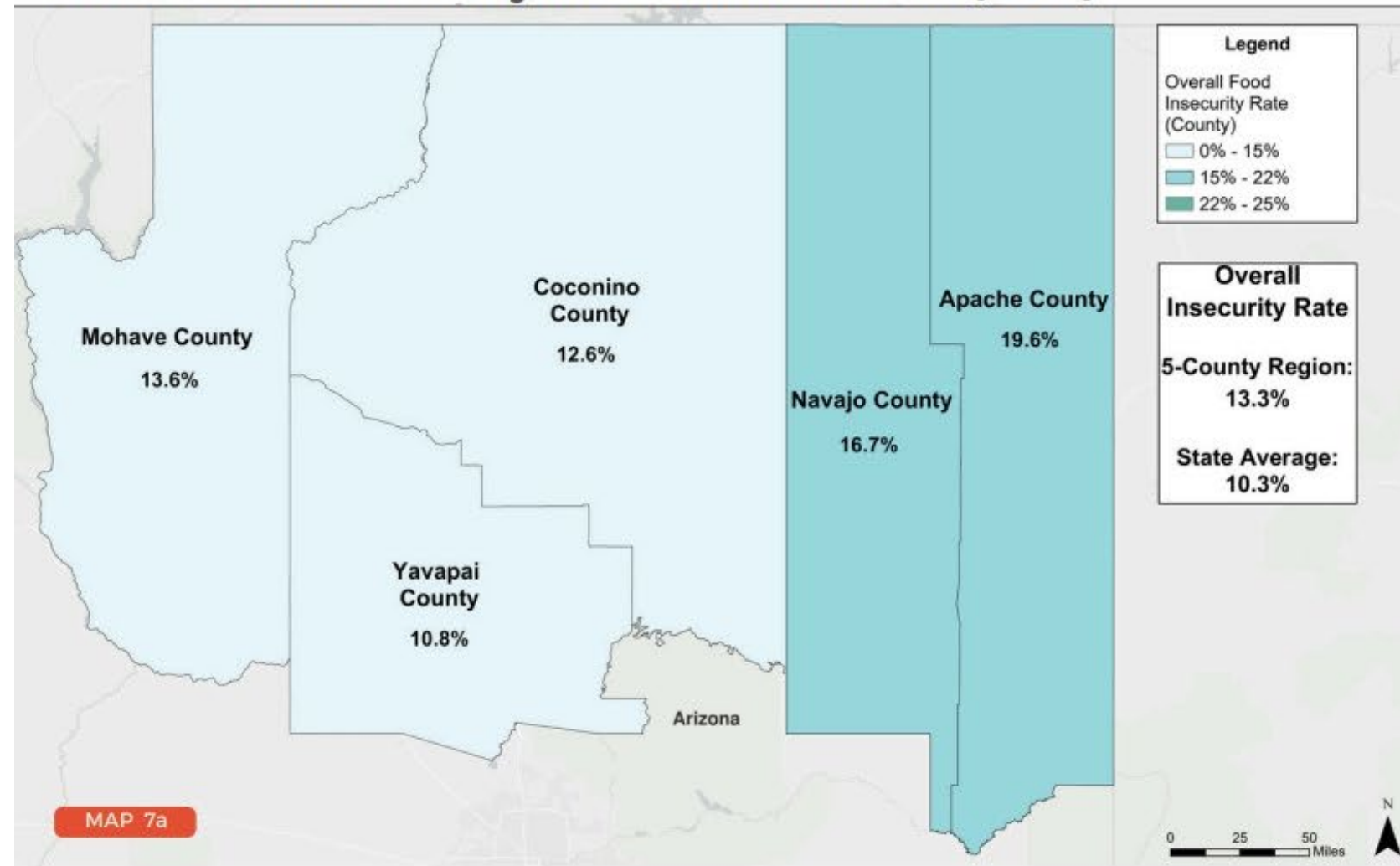
- Food insecurity rates in Northern Arizona are **higher** than the state average.
- **Children, Hispanic, Black, and Native American populations** suffer from higher food insecurity rates across the region.
- SNAP benefits are **not as widely used as they could be** based on income eligibility.
- **Housing and utility costs compete with money for food** available in family budgets.
- **Transportation challenges reduce access** to grocery stores in rural areas.
- There is **strong** interest in services that would **teach residents where and how to grow/harvest their own food.**



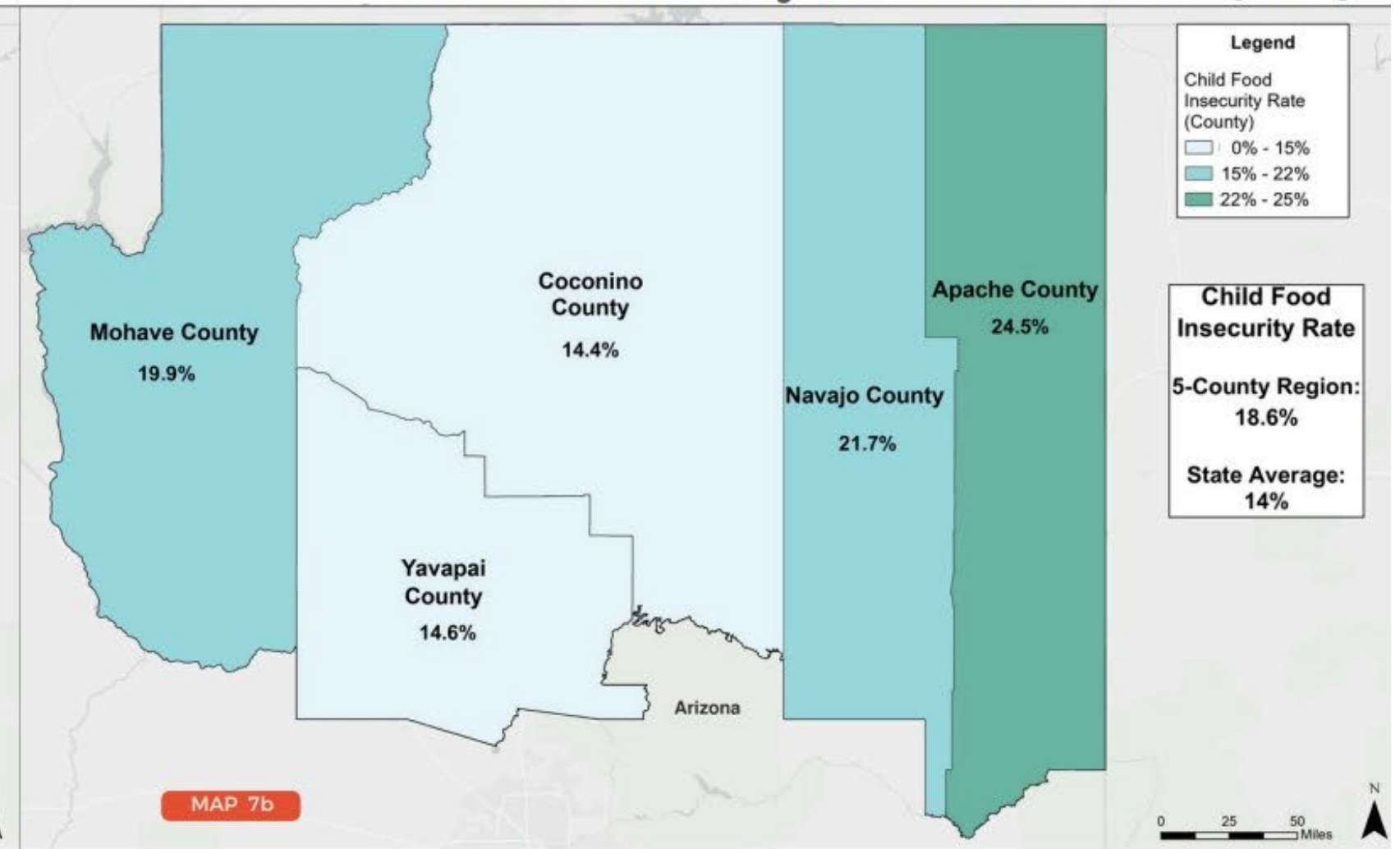
Food Access

How community members have (or don't have) access to adequate, affordable, and culturally relevant foods.

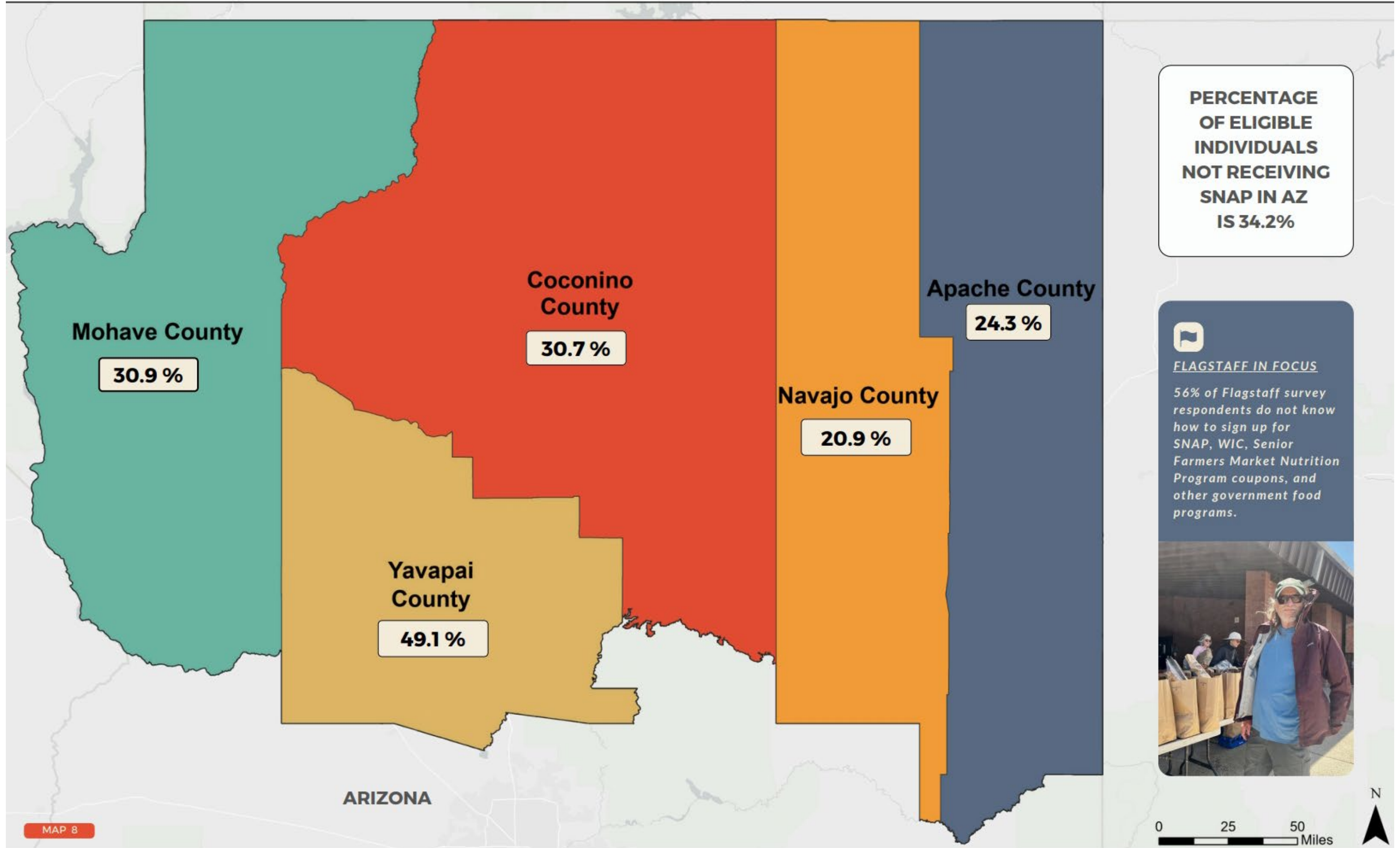
Overall Food Insecurity in Northern Arizona (2021)



Child Food Insecurity in Northern Arizona (2021)



% of Eligible Individuals Not Receiving SNAP Benefits (Northern AZ)





Food Waste & Recovery

How food that doesn't get eaten is recovered and shared, composted, or landfilled.



- While **Arizona was ranked #1 in the country for food waste**, Flagstaff has many initiatives to support the reduction of food waste.
- Significant efforts are being made in Flagstaff to **decrease food waste at the household, corporate, university, and municipal levels.**
- **Confusion about the health codes, inspection, and zoning processes around compost are restrictive** to residents and businesses looking to manage their food waste.
- Flagstaff is a leader in food recovery efforts, but the **recovery of hot food from restaurants and caterers still poses a logistical challenge.**

Partner Contributions: Stage 1



Built Relationships
Through their programs, Foodlink and FFFC have built relationships with various members of the food system.



Local Knowledge
Foodlink has an in-depth knowledge of the agricultural makeup of N. Arizona. FFFC has an in-depth knowledge of hunger & food insecurity in the region.



Outreach Strategy
FFFC & Foodlink were able to assist with interviews, manage the survey outreach, and update key stakeholders.

Where Are We Now?

Learning, Listening, and Planning



Learning: The CFSA has been published and we are sharing it as widely as we can **to educate community members about our local food system.**



Listening: We are wrapping up our community engagement listening sessions to **better understand community needs & priorities** related to our local food system.



Planning: Using research findings and community engagement feedback to **inform future policy** for cultivating a local food system that **better serves our community.**

Scan here to
read the
CFSA report!



Or visit www.flagstaff.az.gov/NAZFSA



THANK YOU

Please send any additional questions to
natalie.pierson@flagstaffaz.gov

STAKEHOLDER GATHERING

COMMUNITY FOOD SYSTEM ASSESSMENT



CITY OF FLAGSTAFF & NORTHERN ARIZONA

GATHER WITH US! JOIN US TO LEARN MORE ABOUT THE CITY OF FLAGSTAFF & NORTHERN ARIZONA COMMUNITY FOOD SYSTEM ASSESSMENT

About the Community Food System Assessment Stakeholder Gathering

This stakeholder gathering is an opportunity to reflect on key highlights from the City of Flagstaff and Northern Arizona Community Food System Assessment. You will also have the opportunity to share your needs and priorities for informing the development of a future food action plan. This event is facilitated by Pinnacle Prevention in collaboration with the City of Flagstaff and Flagstaff Foodlink.

Options for Attending

We will be gathering together at the Coconino Center for the Arts located at 2300 N Fort Valley Rd, Flagstaff, AZ 86001. There are two options for participating. Join us for either:

- Breakfast session | Wednesday, October 23, 2024 from 9AM-11:30AM
or
- Lunch session | Thursday, October 24, 2024 from 12PM-2:30PM



RSVP HERE
OR BY VISITING [HTTPS://BIT.LY/CFSA_STAKEHOLDERGATHERING](https://bit.ly/cfsa_stakeholdergathering)

YOU CAN LEARN MORE ABOUT THE COMMUNITY FOOD SYSTEM ASSESSMENT ONLINE:
<https://www.flagstaff.az.gov/4900/Assessing-Growing-a-Community-Food-System>

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Erin Young, Water Resources Manager
Co-Submitter: Shannon Jones, Water Services Director
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:
Update on the Red Gap Ranch Water Pipeline Feasibility Study

DESIRED OUTCOME:
 Information and discussion only.

Executive Summary:

In 2004, and with 71% voter approval, Flagstaff voters approved a \$15 million bond for to purchase Red Gap Ranch for Water Rights Acquisition and/or Water Development to provide for anticipated and demonstrated future water needs of the city in response to years of declining surface water supplies from drought. Subsequently, in 2005, the City Council approved the purchase of Red Gap Ranch 40 miles east of Flagstaff for the purpose of developing a well field, pipeline, and booster stations to provide for a long-term water supply to residences and businesses.

In 2008, the City contracted with JACOBS Engineering to conduct a 3-phase pipeline feasibility study to select the most feasible alignment for a pipeline and define a conceptual design and facility location. The first phase of that analysis was completed in 2009. After evaluating multiple alternative alignments, the frontage along Interstate 40 was selected as the preferred alignment. City staff subsequently started discussions with Arizona Department of Transportation (ADOT) and Federal Highway Administration in early 2010 about the use of the right-of-way along Interstate 40 as a proposed location for a pipeline. In 2016, the City signed an Intergovernmental Agreement with ADOT to establish the process and requirements necessary to obtain permits from ADOT to allow the City to place a waterline in the right-of-way of Interstate 40.

With an IGA in place, JACOBS Engineering started Phase 2 of the engineering analysis. Phase 2 made adjustments to the alignment in two locations, provided a conceptual design of a water treatment plant, pumping stations with 40 miles of 30-inch diameter steel pipeline, made recommendations for environmental and archaeological avoidance and mitigation, quantified the power needs for the proposed project, and identified lands that need to be acquired for right-of-way. The Phase 2 report also provided an opinion of probable construction costs based upon a 10% level design, in order to inform the public and stakeholders of project details and anticipated costs.

Phase 3 will comprise the final feasibility and design report that meets the U.S. Bureau of Reclamation guidelines and will be prepared in collaboration with that agency.

JACOBS will present highlights of the Phase 2 feasibility study to City Council.

Information:

The City has invested millions of dollars in acquiring Red Gap Ranch for a municipal water supply project and continues to invest in the development of a Regional Water Supply Project by conducting engineering feasibility studies, design plans, hydrology studies and by having drilled no less than ten additional wells at Red Gap Ranch for municipal use.

Attachments: [Presentation](#)

Red Gap Ranch Project Update

City Council Briefing

City of Flagstaff

October 22, 2024



Project Purpose and Need





Project Purpose and Need

Citizens approve Future Water Supply Bond Election

Due to multi-years of drought and impacts to Flagstaff's water supplies, a \$15 million Bond was approved by 71% of voters in 2004

- Purpose to acquire and/or develop property or water rights





Today's Presentation



1. Project Purpose and Need
2. Project History
3. ADOT Coordination
4. Rights of Way
5. Phase II Design
6. Environmental and Permitting
7. Opinion of Probable Construction Cost
8. Schedule





Project Purpose and Need

**City Council authorized the purchase of Red Gap Ranch for \$7.9M
for its water supply in 2005**

**8,500 deeded acres +
7,000 acres State land
Total = 15,500 acres**





Project Purpose and Need

Regional Planning

- Coconino Plateau Watershed Partnership & U.S. Bureau of Reclamation
 - Completed the North Central Arizona Water Supply Study in 2006 that identified the need for a new water supply for the region
 - Received a grant in 2013 to collaborate with the Navajo Nation on developing a groundwater model for the Leupp & Red Gap Ranch wellfield pumping
- Arizona Department of Water Resources
 - City obtained a 100-Year Designation of Adequate Water Supply for Red Gap Ranch in 2011
 - City modified its 100-Year Designation to include all of its water supplies in 2013



Project Purpose and Need

Overview

- Flagstaff faces a long-term water supply shortfall
- Water Services has been methodically planning for this shortfall looking at a variety of alternatives from additional water conservation to new supply options
- Other supply options will come to the Water Commission and City Council in the future
- Today's presentation is about Red Gap Ranch and Jacobs Phase II Feasibility Study



Project Purpose and Need

City of Flagstaff Planning

- Estimated Flagstaff's future water needs based upon population projections and land-use / zoning-based projections = **6,700 AF to 11,800 AF annual deficit** at buildout
- Conducted several evaluations on how to solve future water supply shortfall
 - Comprehensive study of Red Gap Ranch -Jacobs Feasibility Phase I report (2009)
 - Water Supply Alternatives (Carollo Engineering, 2017)
 - Advanced Water Reclamation Feasibility Study (Brown & Caldwell, 2018)
 - Water Conservation Strategic Plan (Maddaus, 2020)
 - Reclaimed Water Master Plan (Brown & Caldwell, 2021)
 - Red Gap Ranch – Jacobs Feasibility Phase 2 report (2024) – **Today's Presentation**
- Conducted scenario analysis on Flagstaff's Resiliency & Redundancy due to climate change and catastrophic wildfire potential impacts on its water supplies



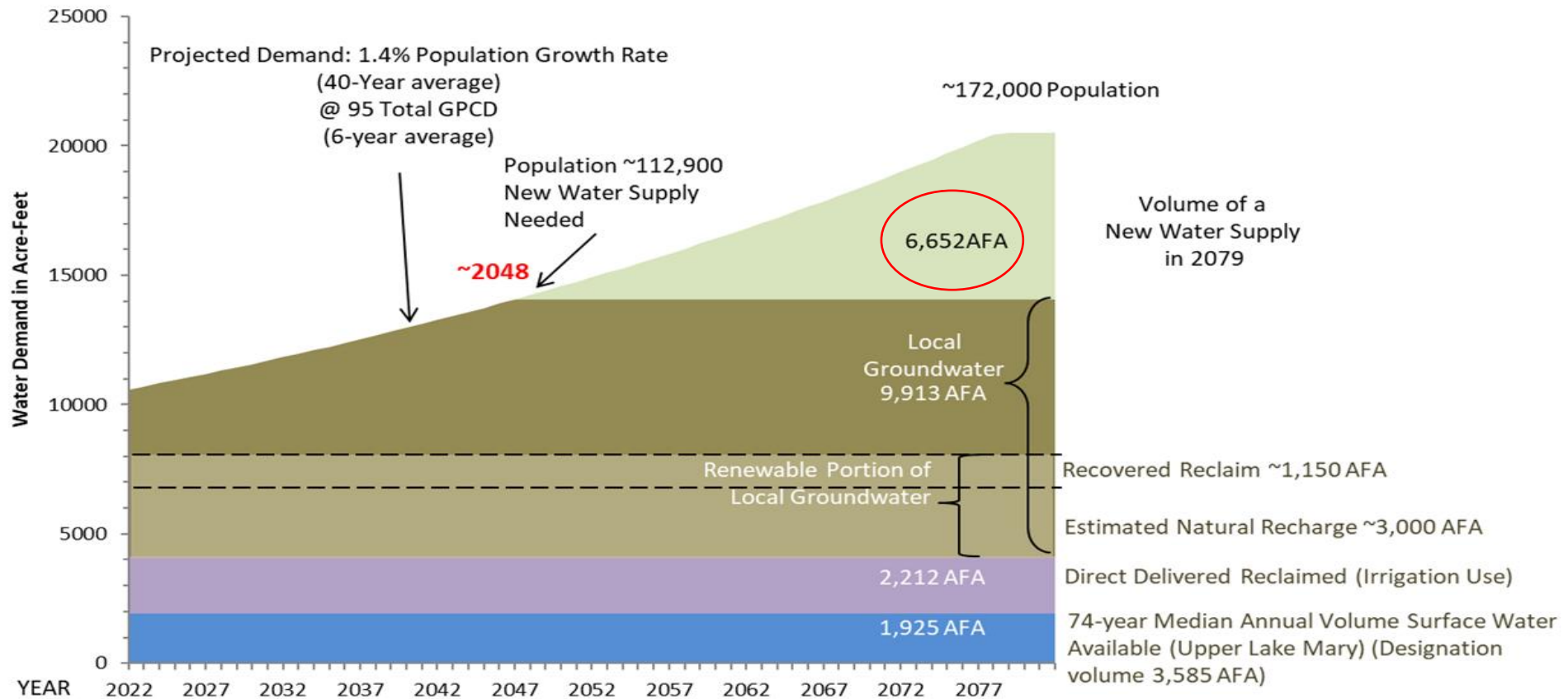
Population Demand Projections



R&R_Adequacy charts_2023 03NOV2023_AZWBv0.xls
R&R_Adequacy charts_2024 03JULY2024_AZWBv0.xls

City of Flagstaff - Water Resource Resiliency & Redundancy Scenario Basecase

Supplies are in acre-feet annually [AFA]





Population Demand Projections



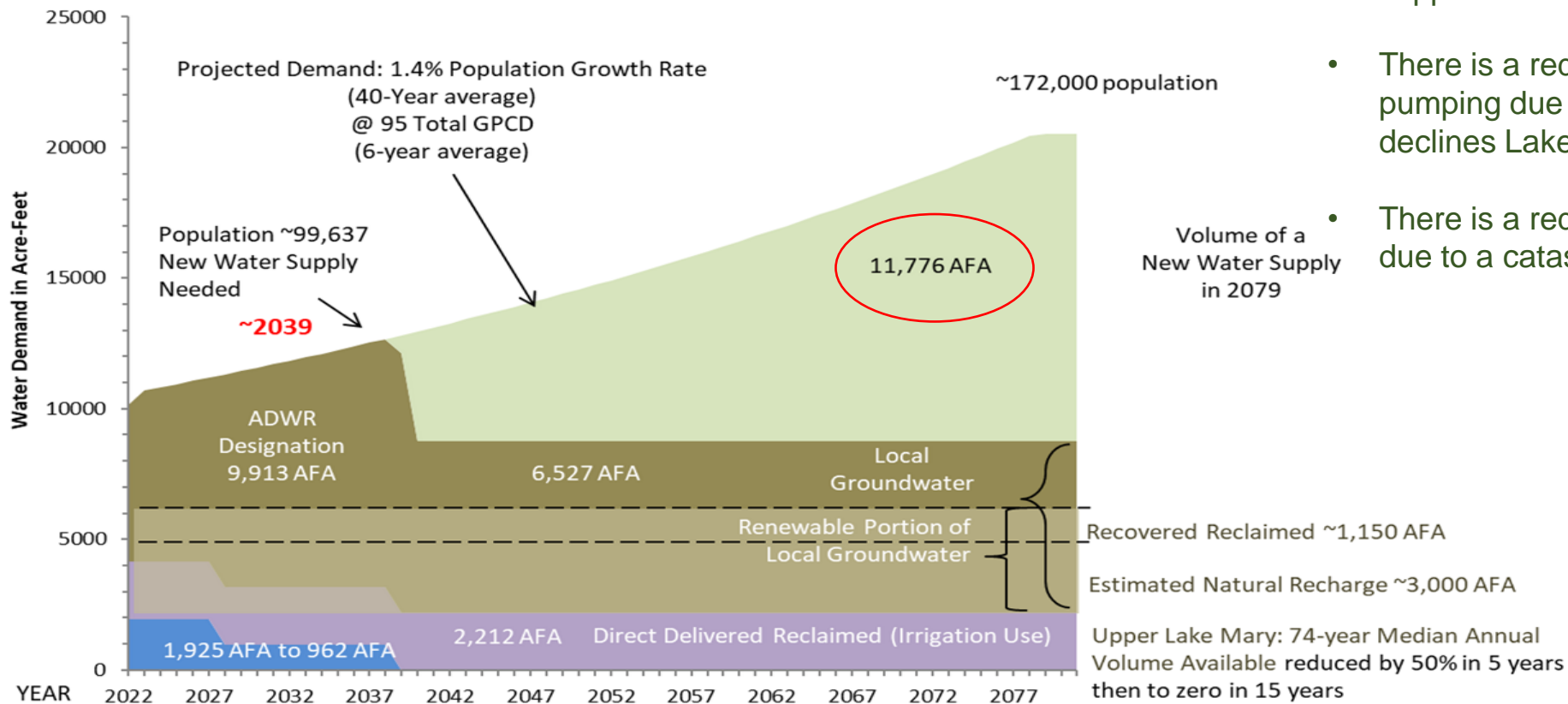
R&R_Adequacy charts 2023 03NOV2023_AZWBv2.xls
R&R_Adequacy charts 2024 03JULY2024_AZWBv2.xls

City of Flagstaff - Water Resource Resiliency & Redundancy Scenario 2 Addition of a Catastrophic Wildfire

Surface Water Dimishes with time and Groundwater Pumping Reduced
in Lake Mary & Woody Mtn Wellfields
Supplies are in acre-feet annually [AFA]

SCENARIO "What if?"

- There is a reduction in Upper Lake Mary supplies due to climate change
- There is a reduction in groundwater pumping due to excessive water level declines Lake Mary wellfield
- There is a reduction in groundwater supplies due to a catastrophic wildfire





Project History

2008 to 2024 (Phases I and II)

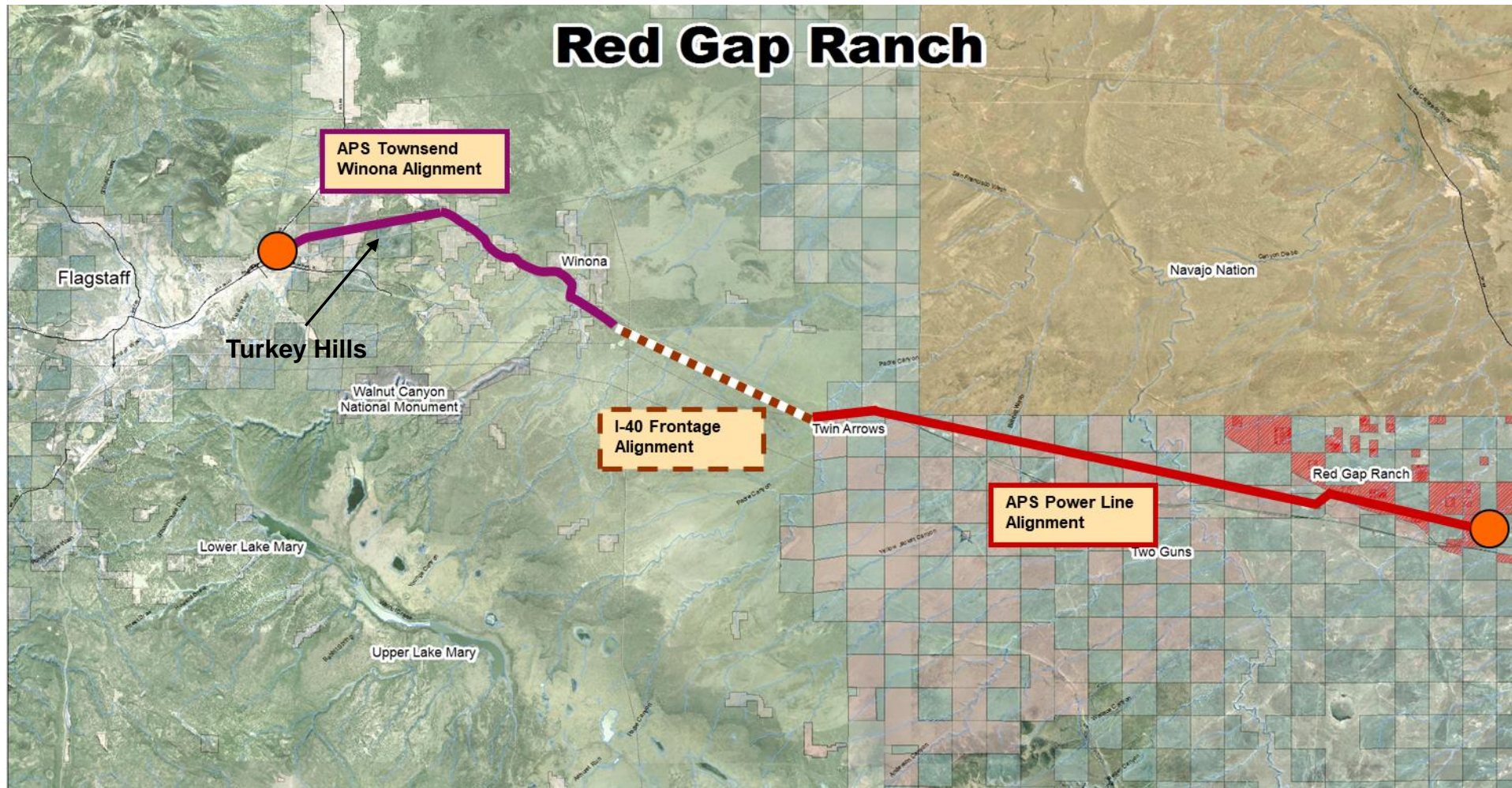




Project History

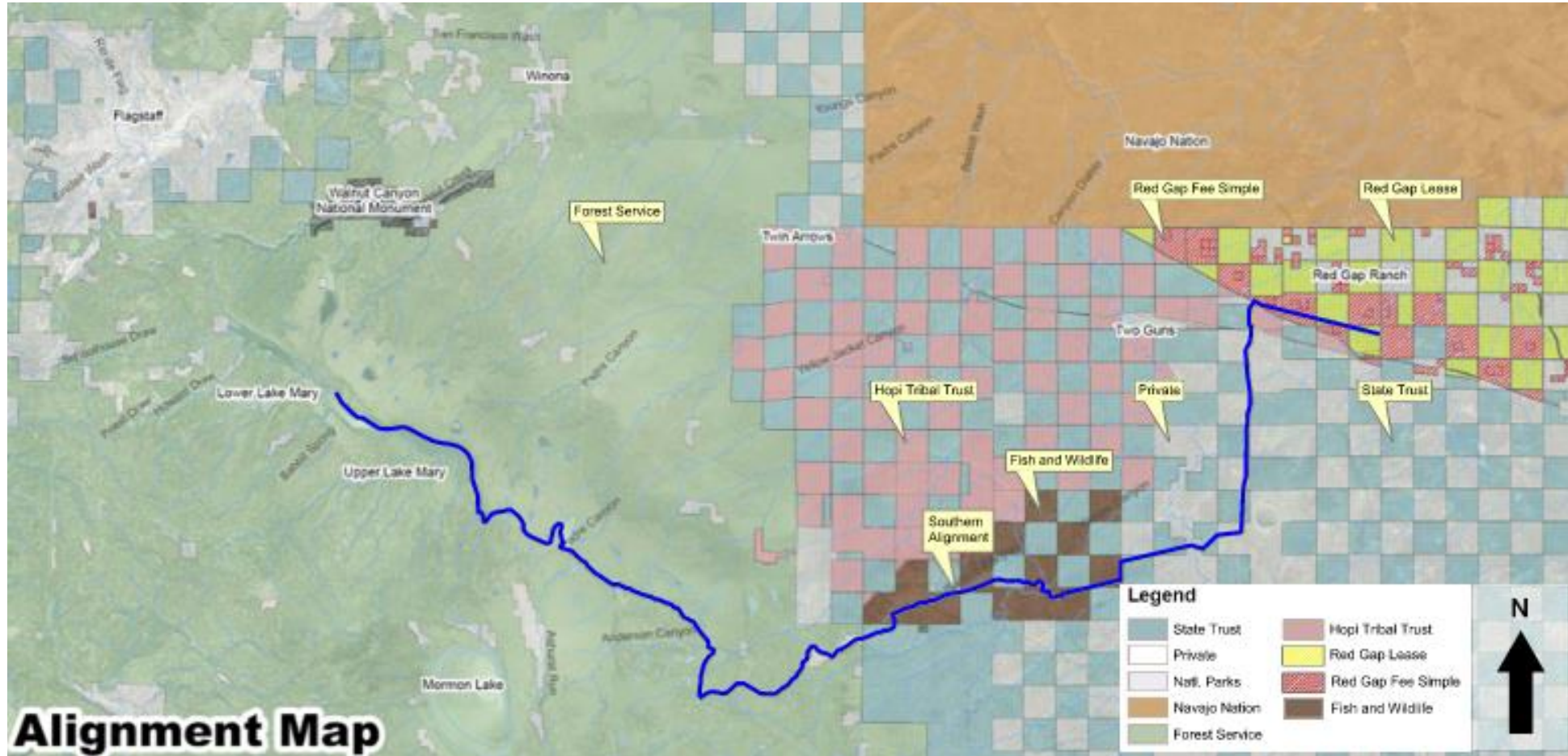


Phase I Selected Alignment (April 2009)



Project History

Southern Alignment Alternative (2011)



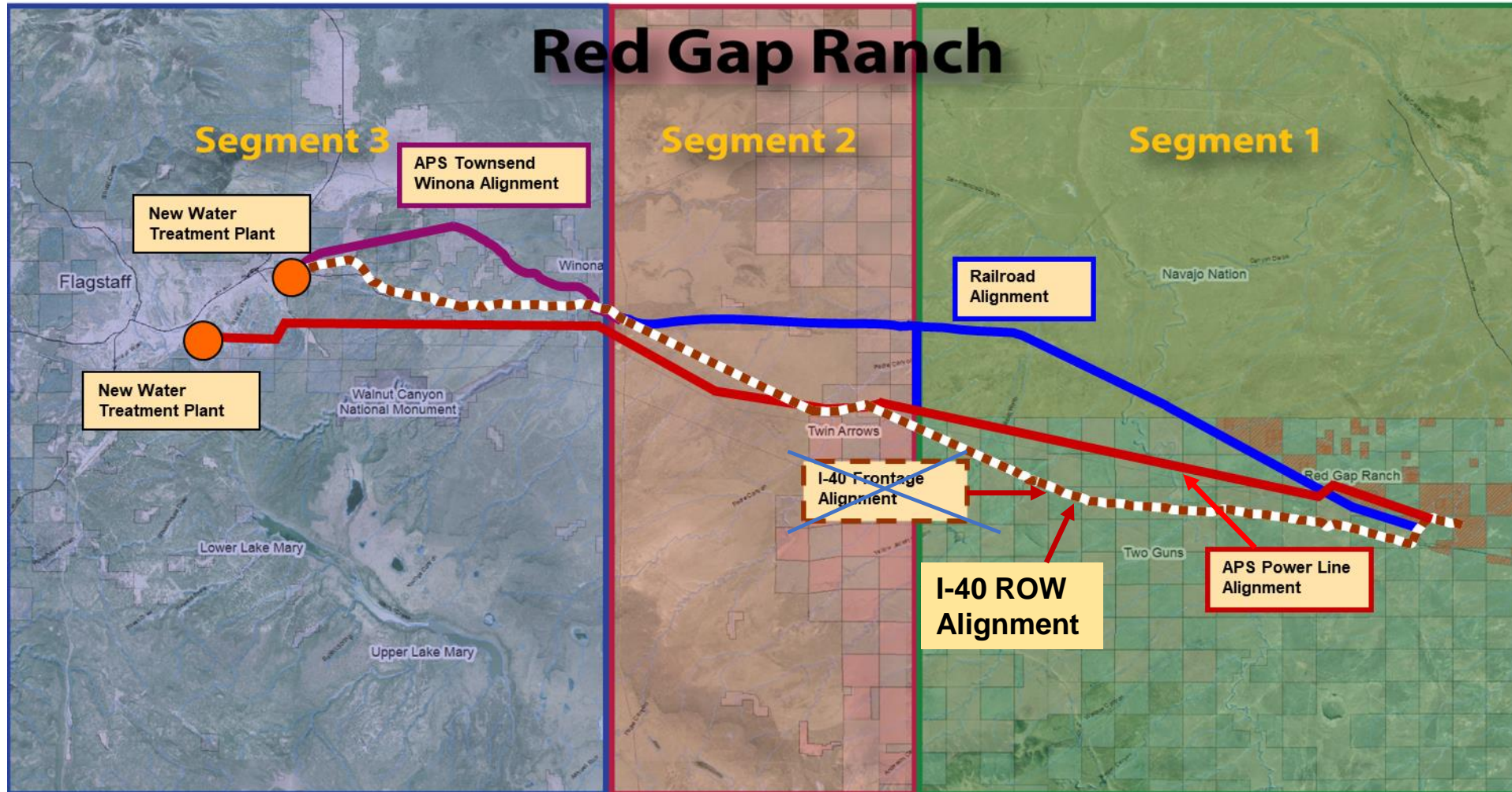
~ 18% increase in capital costs and ~ 8% increase in operational costs



Project History

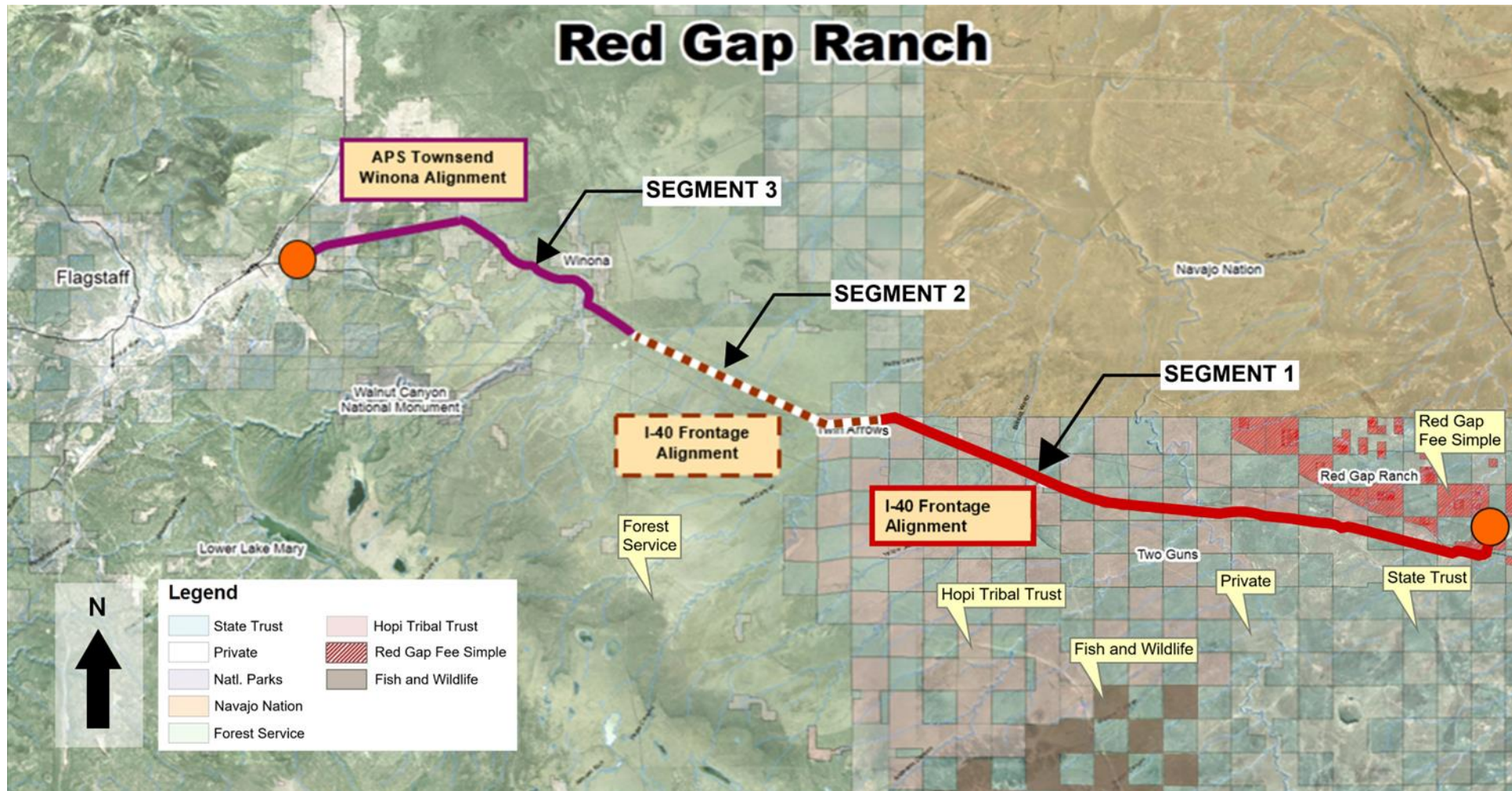


Segment 1 Revisions for I-40 Corridor (2016)



Project History

Segment 3 Cultural Resource (2019)

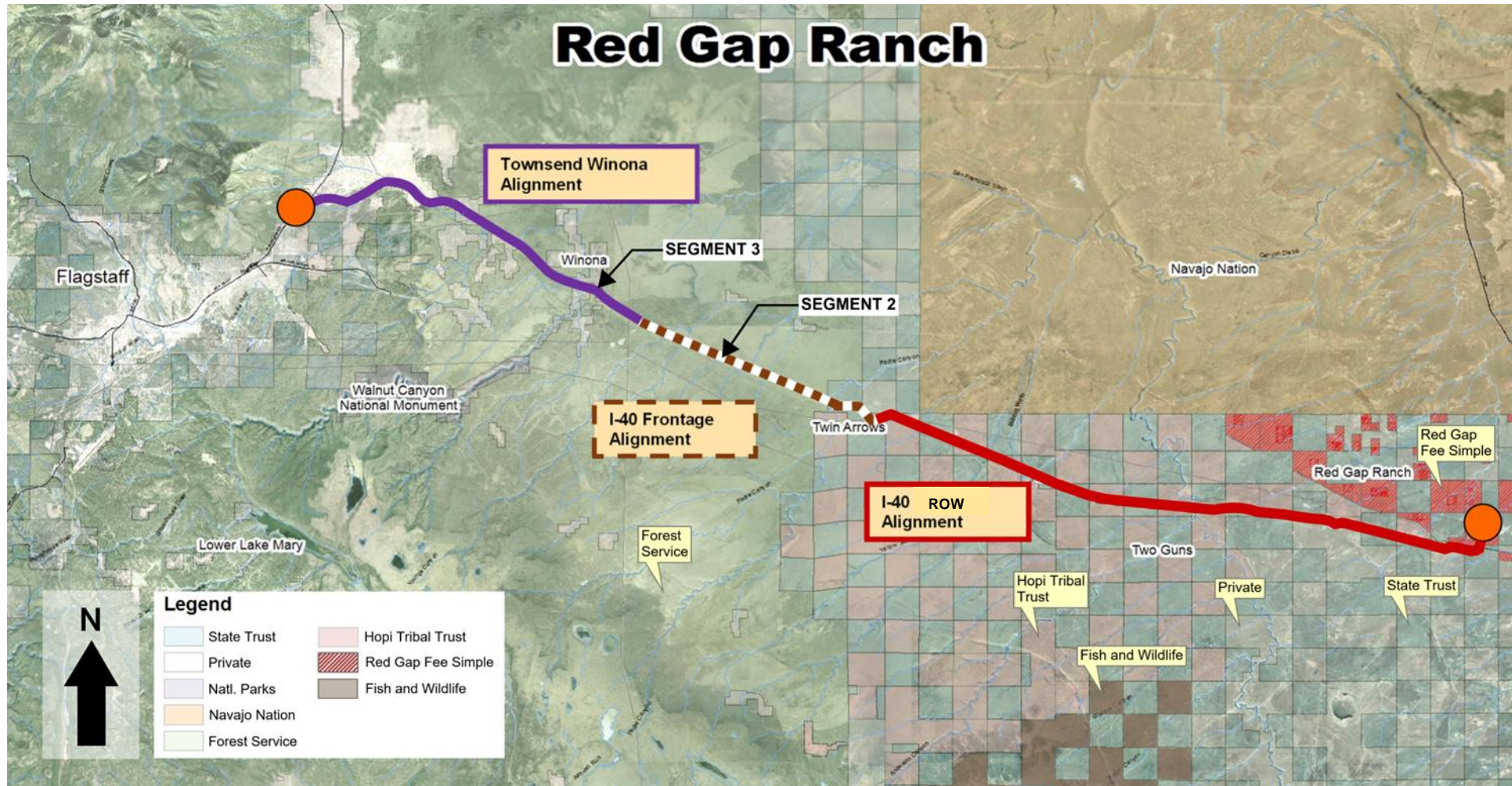




Project History



Alignment for Phase II Study (2021)



ADOT Coordination





ADOT Coordination

ADOT Coordination Items

- Intergovernmental Agreement (IGA) updates
 - Emergency response plan
 - Traffic mitigation costs
- Design criteria
 - ADOT engineering responses
 - Finalize criteria for final design
 - Minimum cover issue

Rights of Way





Rights of Way



Land Ownership Research

- Investigated in all 3 segments
- Ownership has changed since Phase I
- Pipeline alignment has shifted
- Determined to find out if there were barriers
- Determined to give the ability to anticipate land acquisition costs
- Majority of ASLD Right-of-Way has been acquired

Phase II Design





Phase II Design



Pipeline Sizing, Materials, and Backfill

- 30" Steel Pipeline
- Geotechnical
- Trench Section



Phase II Design

Pump Stations

- Pump Station Nomenclature:
 - A: Red Gap Ranch
 - B: Two Guns
 - C: Twin Arrows
 - D: Townsend-Winona Road
- Pump stations sized to lift 18.4 million gallons per day (MGD) to next downstream (uphill) pump station
- Pressure break tanks at end of each pumped segment



Phase II Design

Electrical Supply – Typical Pump Station

- Three duty pumps, one standby pump, auxiliary support loads
- Primary power source:
 - Stepped-down 69 KV APS power (Pump Station A, B, and C)
 - 230 KV APS power (Pump Station D)
- Transformers from high to medium voltage (~4 KV) at pump stations
- Cost sharing between City and APS to be determined
- Double 2 MW diesel generators at each site (fuel tank sized for 24 hr operation)



Phase II Design

Solar Power

- Renewable energy supply desired for RGR in recognition of City Council's Climate Action and Adaptation Plan
- Ongoing communication between City and APS regarding solar panels at Red Gap Ranch
- Approximately 10 acres of land needed to generate 10 MW of electricity (2.5 MW for each pump station)
- Distribution of solar power from RGR to Pump Stations B, C, and D not evaluated
- Solar arrays at individual pump stations not evaluated

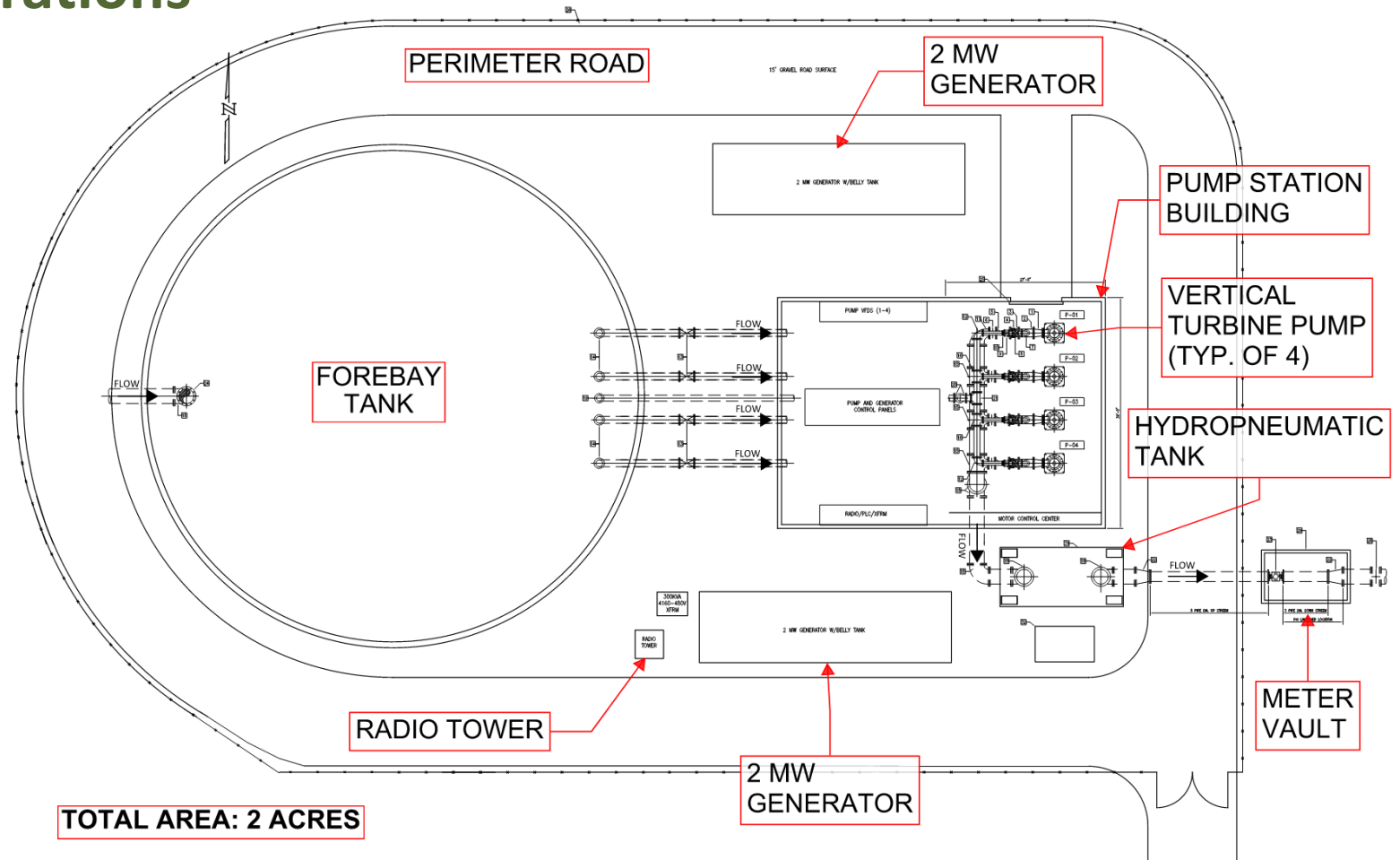


Phase II Design



Pump Station Site Considerations

- Pump equipment access
- Perimeter gravel road
- Crane “picks” pumps through skylights
- All valves and piping at operator level
- 8-ft overhead door for carting valves and fittings
- Meter in buried vault
- Several valves direct bury





Phase II Design

Control Schemes

- Demand-Based Controls (pull system):
Downstream pump station flows are regulated by the respective upstream pump station's break-tank level to maintain the break-tank's level
- Supply-Based Controls (push system):
Pump Station flows are based on the inflow from the Red Gap Ranch well field, or inflow from new water treatment plant (if located at RGR).
- To be determined in final design



Phase II Design



Water Treatment Plant Considerations

- Finished water quality desired
- Need for and type of treatment
- Location



Phase II Design



Comparative Water Qualities

Constituent	Flagstaff Existing (Wells)	Flagstaff Existing (Surface)	Red Gap Ranch	Glendale Water Services*
pH	N/A	7.2 to 8.7	7 to 7.5	7.01 to 8.16
TDS (mg/L)	122 to 309	50 to 309	500 to 970	332 to 862
Calcium (mg/L)	21 to 67	4 to 67	69 to 110	14 to 82
Sulfates (mg/L)	< 3	1.7 to 25	140 to 300	Nondetectable to 258
Chlorides (mg/L)	≤ 4	≤ 4	21 to 200	38 to 314
Hardness (mg/L)	100 to 270	17 to 270	170 to 370	203 to 280
Alkalinity (mg/L)	181 to 325	29 to 325	150 to 210	67 to 243

City Staff recommends 250 mg/L target for Flagstaff customers

*Obtained from Glendale Arizona's 2021 Annual Water Quality Report, selected to represent example of CAP water



Phase II Design

Treatment Process Considerations – Sulfate and TDS

- Only method to remove TDS and sulfate is membrane technologies (reverse osmosis or nanofiltration)
- Conventional treatment will not provide same reduction of TDS and sulfate
- Membrane technologies have a brackish waste stream that require evaporation ponds, mechanical evaporation, or injection wells (saltwater injection wells are not permitted in Arizona at this time)
- Membrane technologies require pretreatment to protect the membrane from excessive scaling



Phase II Design

Water Treatment Plant Location

- Options
 - Red Gap Ranch
 - Near Wildcat Hill WWTP
 - Location near US 89 and Townsend Winona Road (undetermined)
- Considerations
 - Footprint and land acquisition
 - Brine disposal
 - Potential potable water customers along pipeline
 - Location of operations staff
- Current study assumes Red Gap Ranch
- Determination for final design

Environmental and Permitting





Environmental and Permitting



Environmental Scope

- Phases I & II
 - Alternatives Analysis for Environmental and Archaeological Issues, Opportunities and Constraints
- Phase III
 - Draft Feasibility Report
 - Stakeholder/Public Involvement Plan
 - Final Feasibility Report





Environmental and Permitting



Future Steps

- NEPA Compliance
- Environmental and Archaeological field investigations & mitigation recommendations for potential impacts
- Engage Bureau of Reclamation and begin coordination and transfer of information
- Establish rapport other affected agency personnel to open discussions of future steps



Opinion of Probable Construction Cost (OPCC)





Opinion of Probable Construction Cost (OPCC)

Class 4 Estimate Summary	
<i>Pipeline Component</i>	\$254.5M
<i>Pump Station Component</i>	\$68.3M
Total Cost (Pipeline + Pump Station)	\$322.8M
<i>Water Treatment Plant Component (Membrane)</i>	\$98.8M
Total Cost (Pipeline + Pump Station + Treatment)	\$421.6M

Assumptions

- 2023 dollars
- OPCC Level 4 (Feasibility) – Approx 10% design
- Contingency: 20%
- Overhead power cost not included
- RGR wellfield and collection system not included
- Solar power array(s) not included
- No phasing, full build
- Matches Phase II report assumptions
- No blending considered if treatment requirements are reduced
- No consideration of Settlement Agreement terms or components:
 - Additional phasing
 - Points of delivery
 - Reduced water treatment

Schedule





Schedule

Report Completion Schedule

- Near Term:
 - Phase II briefings: through October 2024
 - Phase II report complete: October 2024
 - Phase III: Work scope to be adjusted to align with USBR Appraisal process needs
- Beyond:
 - Investigate USBR collaboration opportunities
 - Coordinate with Water Commission
 - Coordinate with Coconino Plateau stakeholders
 - Investigate and monitor funding
 - Conduct public outreach events

For today, no decisions—just updating.

**CITY OF FLAGSTAFF
STAFF SUMMARY REPORT**

To: The Honorable Mayor and Council
From: Stacy Saltzburg, City Clerk
Date: 10/17/2024
Meeting Date: 10/22/2024



TITLE:**FAIR -- Discussion and Possible Direction Regarding Vice Mayor Selection Process****DESIRED OUTCOME:**

Council Discussion

Executive Summary:

The current Council Rules of Procedure sets the process for selection of the Vice Mayor as noted below.

6.03 Selection of Vice Mayor

The candidate with the highest number of votes in the most recent general candidate election shall be appointed Vice Mayor until the next general candidate election. If for whatever reason the Vice Mayor cannot fulfill their term the position will be transferred to the candidate with the next highest number of votes in the most recent general candidate election.

Information:

Should the Council desire to amend the Council Rules of Procedure related to the selection of the Vice Mayor, staff will bring the requested amendments to Council for approval at a future City Council meeting.

Attachments: