



2022 - 2023 Shaw Innovation Fellows & Promise Scholars



PORTLAND • GORHAM • LEWISTON • ONLINE



The purpose of the **Shaw Innovation Fellowship Program** is to support students passionate about elevating their educational experience through research driven by innovation, entrepreneurship and exploration.

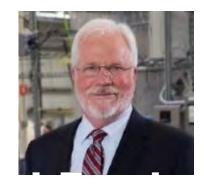


The program seeks proposals that demonstrate impact in solving human, environmental, economic, and societal problems of the 21st century. Up to five fellowships will be granted each year. Each Fellow is awarded up to \$5,000 plus a small project budget. Each Fellow also has the opportunity to work with and mentor an USM Promise Scholar.

Thank you to the Shaw Family for their generosity in establishing this fellowship opportunity.



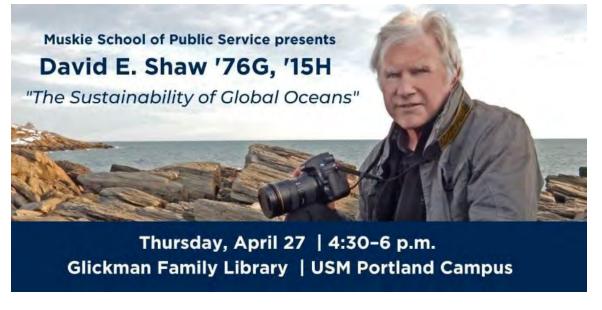




We anticipate announcing the next cohort of Shaw Innovation Fellows at David Shaw's Earth Day Event this Thursday April 27th. Please join us!







For additional information about the Shaw Fellows Program, please visit our website: usm.maine.edu/shaw-innovation-fellows

Shaw Innovation Fellowship Program creates a cohort experience with monthly workshops & events











Thank you for your support and involvement!

- Shaw Family: David Shaw, Abby Wark & John Shaw
- Shaw Innovation Fellowship Advisory Board: Daniel Barton, Rebecca Nisetich, Firooza Pavri & Rachel Bouvier
- Office of Graduate Studies: Michelle Erhard, Sydney Pontau, Andrew King & Caitlan Maddan
- Promise Scholars Program: Daniel Barton
- Workshop Leaders: Bruce Thompson, Sheilan Hamasoor, Paula Gerstenblatt, Rebecca Bushby & Meg Everist
- Video & Photo: Zach Boyce

2022 - 2023 Shaw Innovation Fellows and Promise Scholars



Emma Donnelly,
Masters Student in
Public Health



Ava Ellis,Masters Student in
Social Work



Elizabeth Muana,
Senior, BA Public Health





2022 - 2023 Shaw Innovation Fellows and Promise Scholars



Nancy Flagg,
Doctoral Student in
Leadership Studies



Loren Cassanguir, Promise Scholar, Senior, BS Information Technology



Sarah Sturtevant,
Graduate Student Public
Policy Analysis, Muskie
School of Public Service
USM; BA Bowdoin College



Jacob Curtis, Promise Scholar, Junior, BS in Business Administration & Business Analytics Major

Exploring Barriers to Accessing Emergency Contraception on Post-Secondary Campuses in Maine

Emma Donnelly, Shaw Innovation Fellow & Master of Public Health Student

Elizabeth Muana, Promise Scholar Project Assistant & Bachelor of Public Health Student

Introduction:

College students are at increased risk of unintended pregnancy, especially in states like Maine that have limited access to preventive measures, including emergency contraception (EC).

In 2020, 1 in 4 people in Maine with a recent live birth did not want to become pregnant or wanted to become pregnant later, indicating that Maine is in need of better access to reproductive healthcare. Mainers across the state struggle with accessing EC due to barriers related cost, transportation, lack of availability, and more.

This research seeks to understand what limitations to accessing EC exist in Maine for post-secondary students.

What is Emergency Contraception and How Does it Work?

Emergency contraception (EC) reduces the chance of pregnancy after unprotected sexual intercourse.

Common situations in which EC could be used include forgetting to take several birth control pills in a row, having a condom break or slip off, or not using a birth control method during sex.

EC prevents pregnancy from occurring by preventing or delaying ovulation after unprotected sex.

EC must be used soon (5 days or less) after unprotected sexual intercourse to be effective. It does <u>not</u> work if pregnancy has already occurred. EC is <u>not</u> the same as the abortion pill.

Common Places to Get Emergency Contraception in Maine:

- Pharmacies
 - Including grocery store pharmacies like Hannaford or Walgreens

- Family Planning Clinics
 - Such as Planned Parenthood, Mabel Wadsworth Center, or Maine Family Planning

On-Campus Health Centers (when available)

Methods:

Using a questionnaire distributed to students at five post-secondary institutions in Maine via email, we collected qualitative and quantitative data from 248 students to understand the barriers that students across the state face when accessing emergency contraception at their individual campuses and why those barriers exist.

The data collected will be used to strategize and implement ways to eliminate the identified barriers in order to increase access to necessary reproductive healthcare and allow students to have more control over their reproductive destiny.

Goals of the Project:

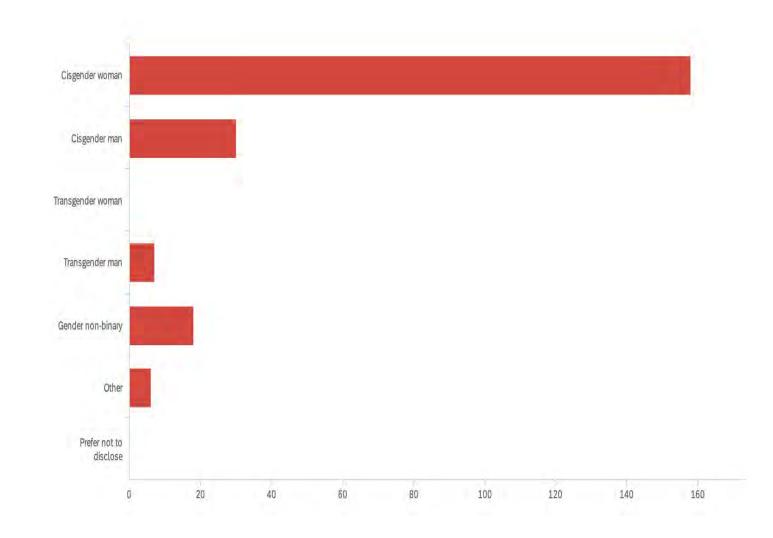
- Identify barriers that students face when accessing EC on their campuses.
- Understand who is most impacted by these barriers.
- Propose solutions to eliminating those barriers by connecting with health center staff at individual universities.

 Increase access to EC for students on post-secondary campuses, especially those in rural areas

Demographic Breakdown

Gender

- 72% of respondents were cisgender women
- 14% of respondents were cisgender men
- 3% of respondents were transgender men
- 8% of respondents were non-binary
- 3% opted to not disclose



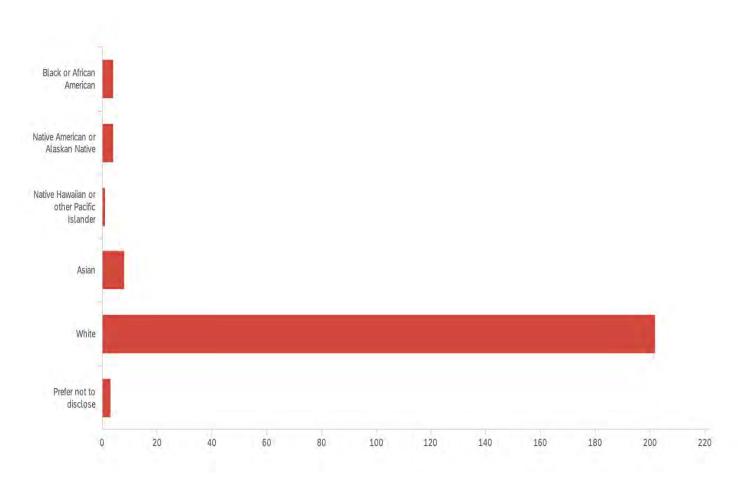
Demographic Breakdown

Ethnicity

 95% of respondents were non-Hispanic or Latino

Race:

- 91% of respondents were White
- 4% were Asian or Asian American
- 2% were Black or African American
- 2% were Native American or Alaskan Native
- 0.5% were Native Hawaiian or other Pacific Islander
- 1% chose not to disclose race



Check Your Knowledge:

Students were asked several questions to gauge their knowledge of EC and it's availability.

Here are some examples:

- What types of EC have you heard of?
- If you take EC too many times, can it make you infertile?
- Is there an age restriction to buy EC in Maine?
- Does your campus have a health center? Does it offer EC?
- Is there a family planning clinic near your campus?
- Is the closest pharmacy or grocery store accessible by walking, public transportation, car?

Knowledge Checks

Where to Access:

- Less than 30% of respondents identified being aware of EC options other than plan B
- 27% of respondents believe that EC works if someone is already pregnant
- 24% believe that if someone takes EC too many times it can make them infertile
- 22% believe there is an age restriction to buying EC in Maine, 40% were not sure

Knowledge Checks

On-Campus or Close-to-Campus Resources

- 19.46% of respondents were not sure if their campus had a health center
- 60.58% of students said their campus does not offer EC
- 44.44% of students who stated they can access EC at their campus need to make an appointment in order to receive it
- 37% of respondents stated that they do not know if there is a family planning clinic near them such as Planned
 Parenthood or Maine Family Planning
- 42% of respondents said that the closest pharmacy or grocery store is only accessible by car

Focus Group with UMO students Results

- Most students learned about EC through social media, health class, friends and movies and stated they didn't have a health class until they were in high school.
- Plan B was the only type of EC that the students had heard of.
- No students were aware of how to get EC from their health center.
- All students wished EC was more available and visible on campus.
- Most students would like to see sexual health education and program events on campus.
- Students are interested in online discussions on sexual health so they can gain more knowledge.
- Most students would like a portal on the school health center website for sexual and reproductive health resource and also to make appointments easily.
- Most students would like sexual education classes to be offered at their university.

Next Steps for the Project

- We have begun conducting focus group interviews with students from University of Southern Maine, University of Maine Orono, and University of Maine Presque Isle.
- We will analyze the results and present the results to university health center staff and hope to work alongside them to increase access to and awareness of Emergency Contraception on their campuses.

We will write a full report to be published.



Method: Why use an arts-based inquiry?

- For context, I studied Printmaking (Studio Art) and Cultural Anthropology at Washington U. in St. Louis and have an MA in Poetry from University of East Anglia in England.
- I am a current MSW student at the University of Southern Maine.
- Saw unmet financial need via maternal and child health nonprofit work and in domestic violence prevention case management work.
- Under-utilization of matched savings programs in Maine alongside increase in demand for support for basic needs (rent + utility aid, food insecurity, transportation needs).

Why focus on money?

- "Financial abuse occurs in 99% of DV cases." From National Network to End Domestic Violence (NNEDV).
- Need to understand the current system and consider how to better address the material realities that impact lives.
- Many DV survivors do not have access to an emergency fund, have housing insecurity, and/or have unreliable transportation... these ongoing stressors can compound and compromise their overall health and wellbeing.
- Working in case management, I saw that financial supports were not reaching clients who were income eligible. I wanted to see financial supports integrated into art support group models.

Art as process

- Art as a process and *a way in*, to discuss values and money, distinct from a starting with a spreadsheet. Many via the DV helpline and transitional housing clients' shared an interest in using art as a method to healing, though this may not work for all.
- Art was the method, the process into the topic: not the 'outcome' of the research.
- One-to-one series of art workshops for 1 hour with 8 participants. Input from a range of artists and non-artists. Also, my work within MCH and with DV survivors informs this work and approach.
- I included a resource list of financial programs to share information about underutilized financial supports.

Research Questions

- •What are common barriers individuals self-report in relation to money, saving and future-oriented planning?
- How can arts-based inquiry (through drawing) allow for alignment with ones' values?

Workshop Questions

Draw 3 to 5 things that represent what you value.

Draw three things you feel about your relationship with money or your thoughts regarding your financial situation.

Imagine your neighbor (or a stranger) what kind of constraints might they feel financially?

What was your childhood relationship to money?

Workshop Questions, continued

What constraints do you have around money? How do they hinder or support your goals?

How do you manage your money now? How do you budget?

Imagine your 'future self' what would make you feel secure financially?

What changes do you want to make regarding your relationship to money or to impact your long-term goals?

Lessons Learned

- The resource list is mostly Maine-focused and could be expanded to include national or international supports.
- Some interviews did not occur due to winter weather cancellations, COVID cancellations, and emergent scheduling conflicts.
- Small scale: would like to include more perspectives across class, gender, age, race, culture, single parents, blended families, caregivers, etc.
- Teaching printmaking over the summer could allow for a broader range of studio-based options: i.e. letterpress, etching, and cross-genre collaborations.

Participant Drawings

- Participant drawings are not included here, due to concerns about confidentiality: drawings are distinct and attributable, like handwriting.
- Drawing as process, not outcome: not an exhibition project.

Findings

- Common barriers: Folks expressed uncertainty around how to define their emergency fund goals, how much to save for homeownership or home repairs vs. retirement and how to balance daily spending of needs vs. wants.
- Drawings included: a 'head in hands, overwhelmed image' a 'pit in ones' stomach' about money and finances, a wobbly line to show uncertainty -' and 'birds' with mouths open' to show ongoing needs, and 'unopened mail' imagery, envisioning others needs included basic needs imagery.
- Participants mentioned avoidance around bills at varying times, as well as inconsistent budgets (needing to review and track more regularly), in DV work avoidance and overwhelm also comes up as well.

Findings

- All expressed not learning about money management or finances in childhood.
- All had their basic needs met as children (shelter, food, heat), yet money was not explicitly discussed.
- Some were sheltered from money concerns altogether/provided for, but not taught to manage money.
- Or in childhood had noticed when money was scarce (i.e. car issues, class differences, family conflict around spending) yet it was not discussed.

Findings: Need for Tailored Financial Planning

- All mentioned wanting to better track expenses and savings (i.e. daily expenses as well as saving for a home, home repairs, planning for a family, travel, plans for retirement, and accounting for future obligations as a caregiver).
- Variation in how they tracked: shows need for multi-approached per individual preference: Excel, apps, quarterly meetings, communicating with roommates/partners, visual charts, journals, advisor meetings.
- Need for financial education and planning across the lifespan (i.e. variation of needs, specificity to plan in each case: single/family/blended family)

Drawing as 'Perspective Taking'

- Drawing was a way to inhabit perspective-taking of what others face as financial constraints, systemic concerns and to contextualize ones' own relationship with money and values to support others.
- Art as method: 'soft factors' are important to consider and drawing highlighted the emotional relationship to money, impact of childhood on present values, less daunting than a spreadsheet/budget, was not 'outcome' based.
- Caveat: Spreadsheets and tracking via a budget can be a useful tool for self-reflection, this project aimed to take another route into considering money.

Mutual Aid Funds / Skill-Share

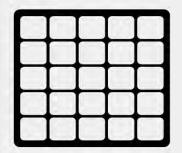
- How to continue to look at ways to address chronic economic disparities in a low-barrier way?
- Look to improve access to Mutual Aid Funds: 'Free From' and 'Out In The Open' that offer tangible, low barrier support to clients and survivors.
- How to connect values to action, envision flourishing? Next steps?
- Increase utilization of and support for mutual aid funds: i.e. integrate into existing art support groups and increase donor supports.
- Look to teach-ins and skill-shares, art-activism as a way into re-imagining approaches to mutual aid.

Thank you!

- Questions/comments do reach out: ava.ellis@maine.edu
- Thank you to David E. Shaw and colleagues, as well as to the University of Southern Maine for supporting undergraduate and graduate level research.

Next, Nancy Flagg will share her Independence Scale Project.

Instant Communication And Assessment



Nancy Flagg, PhD Student,

Leadership & Organizational Studies

Dr. Tara Coste, Leadership & Organizational Studies

Dr. Jamie Picardy, Food Studies & Honors

Flagg Independence Scale

Used to determine how near to independence and self-sufficiency an individual or group is.



Shelter











ependence Ind

Transportation







No Distance





Water and Food











Safety and Security











Location No Emergenc

Health and Wellbeing











All Medications

andy Food Studies & Honons

Change is Predictable The kind is not

1% of people worldwide are displaced.
United Nations

16.5% of people over 12 have meet the criteria for Substance Use Disorder, peaking between ages 18-25.

Health & Human Services.gov

30% of men and 39% of women will experience Intimate Partner Violence in their lifetime.

National Coalition Against Domestic Violence







How we cope with change & trauma must evolve with our growing numbers.

Trickle down does not suffice.

We need to know how to help Ourselves

& One Another



We need to build self-knowledge for:

Motivation

Adaptability

Resiliency



We need to build on the positive.
What do we have?



But not deny the reality.

What do we need?

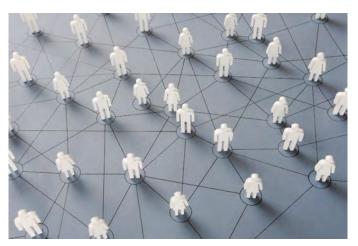


We need tools to cross barriers of

Language Class Belief Systems

So solutions can be Appropriate Specific

To connect us and deliver us past our trauma

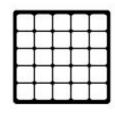






INSTANT COMMUNICATION

INSTANT ASSESSMENT



PROGRESSIVE FRAMES

GRID ORGANIZATION

OUR MOST FOUNDATIONAL NEEDS

INSTANTLY UNDERSTOOD

Nancy Flagg, Leadership & Organizational Studies Dr. Tara Coste, Leadership & Organizational **Studies**

Dr. Jamie Picardy Food Studies & Honors

Flagg Independence Scale

Used to determine how near to independence and self-sufficiency an individual or group is.



Shelter























Water and Food











Safety and Security











Health and Wellbeing











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Let the Subject see what they do have.



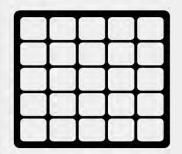
Let the Organization see what they do not have.



Get the person out of the boxes. Put the circumstances and solutions in the boxes.



Instant Communication And Assessment



Nancy Flagg, PhD Student,

Leadership & Organizational Studies

Dr. Tara Coste, Leadership & Organizational Studies

Dr. Jamie Picardy, Food Studies & Honors

Flagg Independence Scale

Used to determine how near to independence and self-sufficiency an individual or group is.



Shelter











Transportation







No Distance





No Independence

Water and Food











Safety and Security











Health and Wellbeing











AVAILABILITY OF WORKFORCE HOUSING IN MAINE

Sarah Sturtevant, Graduate
Student Public Policy Analysis,
Muskie School of Public Service
USM; BA Bowdoin College
Jacob Curtis, Promise Scholar, BS
in Business Administration &
Business Analytics Major



Two Major Questions:

- (1) How bad is it?
- (2) What can be done about it?

Sarah.j.Sturtevant@Maine.edu; Jacob.d.Curtis@Maine.edu Shaw Innovation Fellowship 2022-23

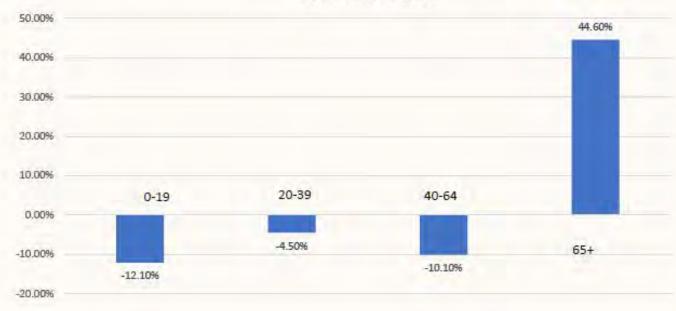
LONG TERM CHALLENGES

- Maine's population is oldest in Nation and is aging in place.
- Maine's HH size is small.
- 73% of housing is owner-occupied and only 27% rental.
- Cost of construction = \$400,000 regardless of single vs. multi-family or location; i.e. Affordable only for ~\$160,000+ income HHs.
- Stick-building a modern home is slow and complex –
 on average 24 sub-contractors (NAHB)
 taking 1-2 years after 1-2 years(?) for permitting/approvals.

GREYING OF MAINE:

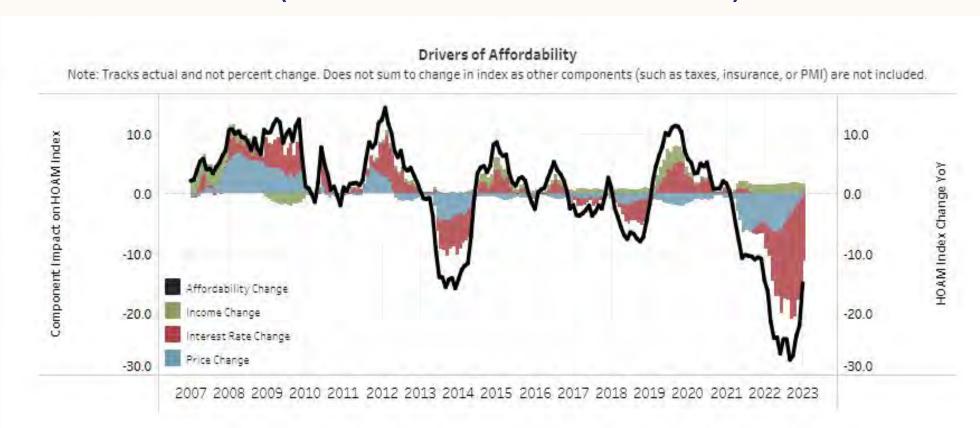
RETIREMENT + AGING IN PLACE = MORE HOUSING NEED

2018-2028 Maine Population Growth by Age Group; source Office of State Economist 4/2021



DESPITE SMALL UPTICK – HOUSING IS STILL HISTORICALLY UN-AFFORDABLE

(SOURCE ATLANTA FED DATA AVAILABLE 4/12/2023)



MAINE HOUSING GAPS

UNDERPRODUCTION

- UpForGrowth: Maine fell short 9,000 new affordable homes last year
- Maine Housing and National Low Income Housing Coalition estimate Maine is short between 20-24K rentals for low-income Mainers
- Maine is falling further behind each year

Cumulatively 20-24,000 homes short for existing residents with 9,000 of that shortfall coming last year

UNFILLED JOBS

- Maine has 42,000 unfilled jobs (JOLTS 1/2023)
- The lost GDP per job is estimated at ~\$60,000/year or 2.5 billion/year for Maine (Altanta Fed CFO Survey 7/21 and Shaw Calc)
- Lack of staffing for essential services is affected

10-20,000 additional homes needed – in order for new workers to immigrate to Maine to fill open jobs (42,000 open jobs minus 19,7000 unemployed)

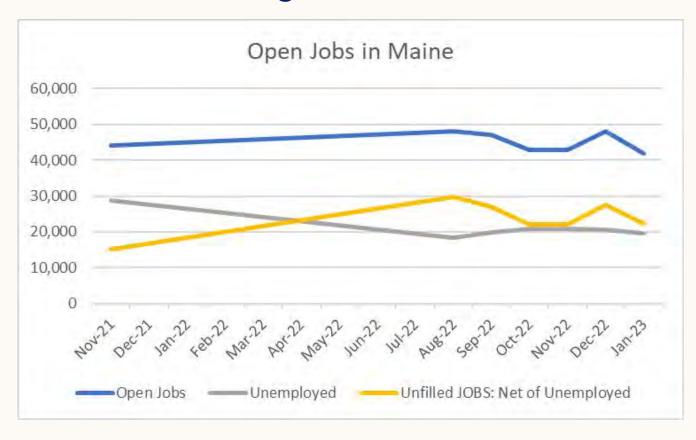
AFFORDABILITY

- The median income household can not afford the median home in any county
- Nearly 40% of owners without a mortgage are housing-cost-burdened
- Renting HHs are highly distressed given the lower household income level for renters vs. owners

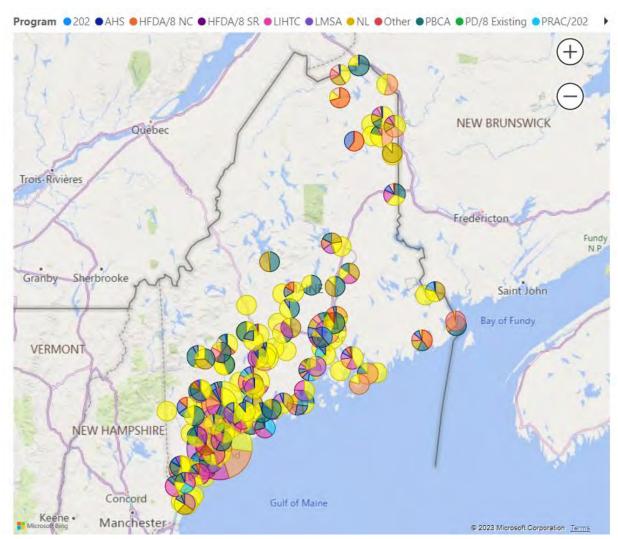
Over 15,000 households on the S8 Voucher waitlist ... vs ~12,000 households who have a voucher already (MaineHousing as of 2/2/23) 42,000 unfilled jobs in Maine 1/2023
Source (JOLTS, BLS)

19,702 unemployed Mainers Source (BLS)

=22,000 new workers needed (as well as worker housing)



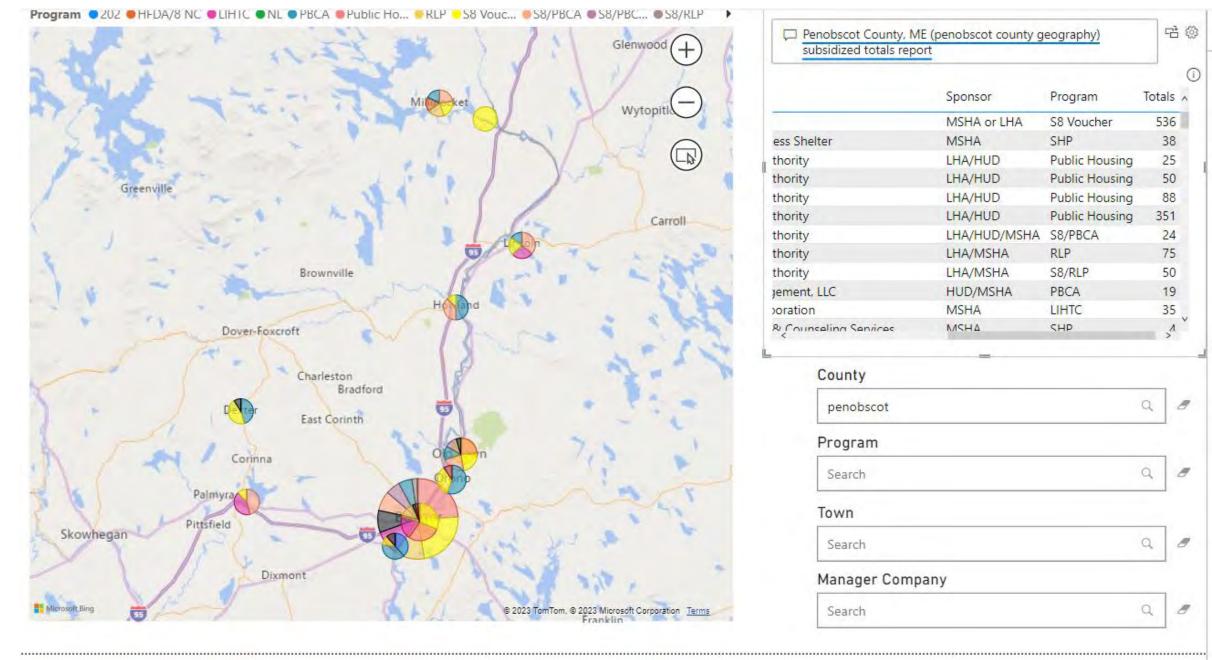
A little over 41,000 households in Maine receive housing subsidy of some sort as of Q3 2022...



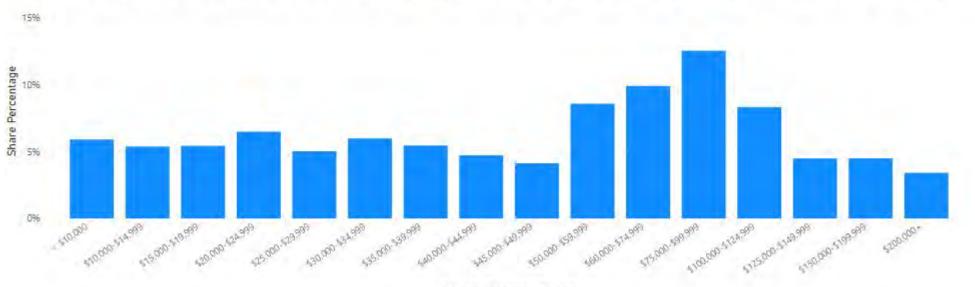
Data from MaineHousing as of 9/22

This is in a Power-BI query tool.

Please provide contact info if you would like access to the tool and to participate in a query-tool webinar



Distribution of Household Income For Penobscot County (Source ACS 2020 - Note ACS Uses Uneven Income Groupings)



Household Income Bucket

| County | Housing Type | Housing Cost/Monthly Rent | Income Needed | % of those who cannot afford |
|-----------|--------------------|------------------------------|------------------|------------------------------|
| Penobscot | FMR | \$987 | \$39,320* | 39.5% |
| | Median Sales Price | \$214,816 | \$85,296** | 70% |
| | New Construction | \$400,000 | \$160,000 | 92% |

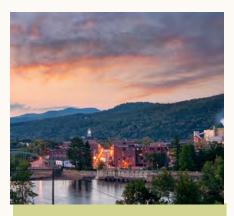
^{* (}FMR/0.3) x 12

^{** (}Housing Cost/2.5)

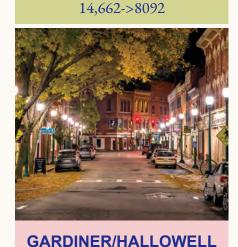
NOT ALL PLACES ARE OVER-BULT

~22K MORE PEOPLE MID-20TH CENTURY IN THESE 8 CITIES COMBINED

1950 -> 2020 (SOURCE: ACS FOR 2020; CENSUS OF 1950)



RUMFORD/MEXICO



9,720 -> 8,588

a laming a l

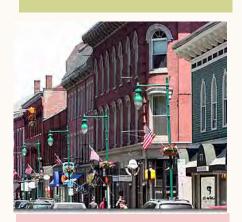
WATERVILLE 18,232 -> 15,028



FAIRFIELD 5,770 ->2,298



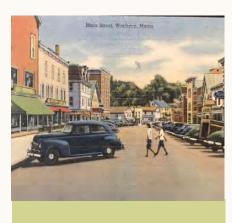
AUGUSTA 20,900 -> 18,899



ROCKLAND 9,138 -> 6,942



LEWISTON/AUBURN64,220 -> 60,405



WINTHROP 3,027 -> 2,476

WIP: IT IS POSSIBLE TO BUILD A <\$200K HOME

4 MODULAR TOWNHOMES, ON INFILL LOT, EACH WITH LAND, PARKING, SMALL BACKYARD -> EACH BELOW \$200K; SOURCE: DEVELOPER KARA WILBER; ARCHITECT CALEB JOHNSON



30+ EVOLUTIONARY CHANGES COMBINED...REDUCE COSTS AND SPEED BUILDING

(NUMBER OF CHANGES; SOURCES OF ACTIONS)

| Physical model | Site selection & Municipal model | Site-work; Set; Connect | Business & Financial Model | Building Maine's Building Workforce |
|----------------------------|--|----------------------------|---|--|
| (7 actions) | (7 actions) | (7 actions) | (7 actions) | (3 aspects) |
| KBS Dooryard Caleb Johnson | George O'Keefe, Director Economic Development, Rumford KBS | Dooryard KBS | Bangor Savings Bank; Genesis Fund MaineHousing.org KBS Dooryard | AGC Portland Adult Education |

| Physical model | Municipal model | Site-work; Set; Connect | Business & Financial Model | Building Maine's Building Workforce |
|--------------------------------|----------------------------------|--|--|---|
| Modular | Town lot sold at tax-card value | Cleared lot (no demo/tree cutting) | Off-season building lowers costs; KBS costs; GC availability/costs | AGC offers pre-apprenticeship programs |
| Small (400-700 sq ft) | No zoning | Infill site – already paved w. curb cuts | Home-buyers utilize first time buyers programs (lower APR; downpayment grants) | 200 members – have access to 7 select technical HS' students |
| Townhouse (higher density) | Set-back waiver (anticipated) | City water + sewerage in street | Bank + NGO dev. Financing (lower rate and loan origination costs) | Provide intro to 13 trades and guaranteed interview for formal apprenticeship |
| 2 homes per box | No water or sewerage hook-up fee | Optimize flatbed use – 1truck + driver – 1 day – 2 trips | Low carrying costs – quick build once started | |
| 80-90% complete at factory | No parking study | Optimize crane costs – 1 day | Vertically integrated dealer/developer | |
| Belly wrapped | No impact fee (anticipated) | Limited site work – no terraces etc. | Low pre-development costs | |
| Heat pump installed in factory | Low building permit cost | Limited site build – no porches/decks | Utilize dealers' plans | |

MAINE NEEDS 30-40,000 NEW

LOWER-COST HOMES

FOR CURRENT RESIDENTS AND

FUTURE WORKERS

- Jobs follow affordable housing.
- Not all towns abhor new construction.
- Modular/business changes can reduce costs.
- Private and Public leaders working together can increase the availability of affordable housing.
- Building for first-time-buyers frees up rental housing cost-effectively, reducing rental demand and rental inflation.



Please join us across the lobby to celebrate Ava, Emma, Nancy, Sarah, Jacob, Elizabeth & Loren!

Thank you for your support and involvement!

- Shaw Family: David Shaw, Abby Wark & John Shaw
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- Promise Scholars Program: Daniel Barton
- Workshop Leaders: Bruce Thompson, Sheilan Hamasoor, Paula Gerstenblatt, Rebecca Bushby & Meg Everist
- Video & Photo: Zach Boyce