

North Flint Aquaponics & Healthy Food Initiative:

How REI Co-Learning Plans and Student Led projects can serve as a catalyst for building local economies.

Bob Brown, Willie Smith, Rev. Reggie Flynn, Mark Evans, and Adriana Flores
September 7, 2016

We started with a straight forward concept:

- Let's co-implement applicable Co-Learning Plans or Student Led, Faculty Guided Projects with partners in Flint
- Let's see what we learn in that process

Almost immediately the context of Flint began to change our scope and scale of our effort.

A City of Hopes, Dreams, and Trauma



Home to Amazing People







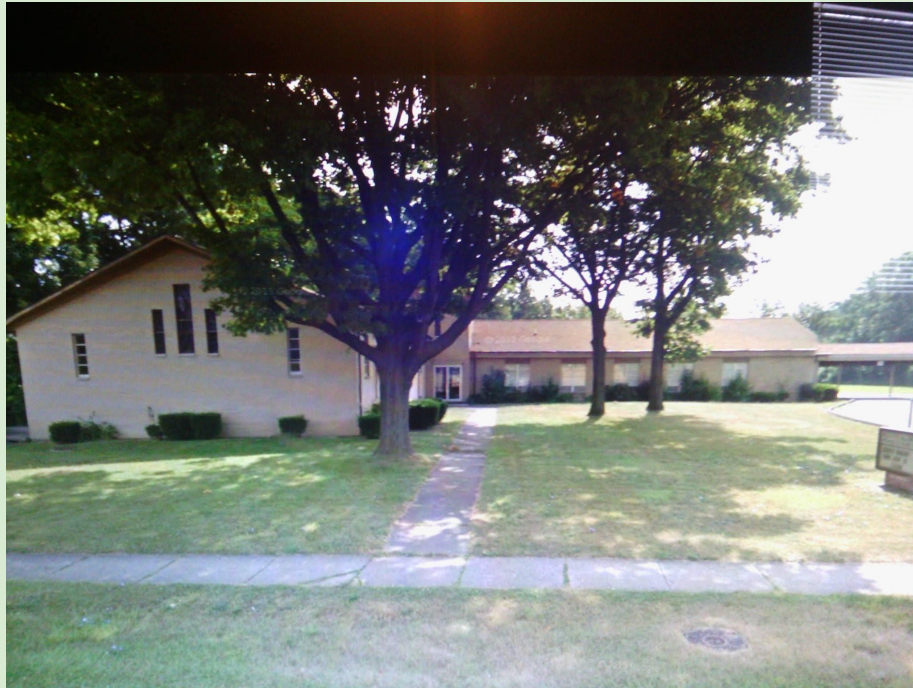
Home to Olympic Heroes



And Everyday Heroes



Home to Deep Faith



MARTEZ S. WARREN MINISTRIES
PRESENTS

FROM THE HOOD 2 THE PULPIT

CONFERENCE 2015

"I'M BETTER NOW!!!"
(1 JOHN 4:4-5)

AUGUST 12TH-15TH

WORSHIP SERVICE @ 7PM NIGHTLY

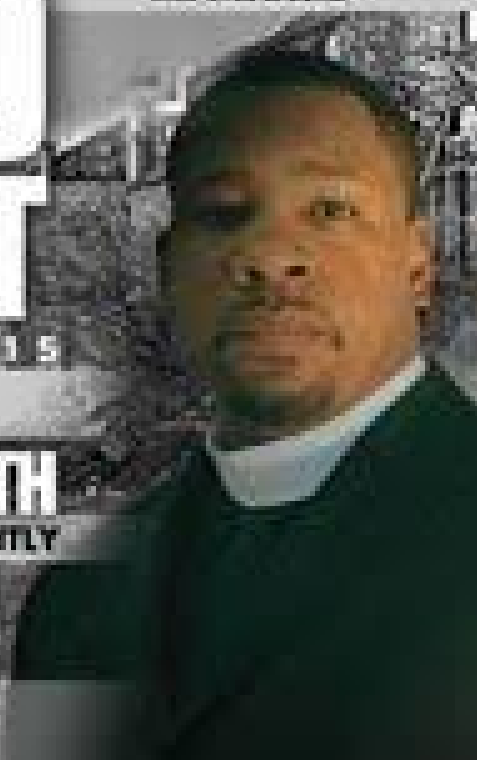
WEDNESDAY AUG. 12TH

PASTOR MARTEZ WARREN (HEAD SPEAKER)
LECTURER PASTOR FRANK WOODS

THURSDAY AUG. 13TH

PASTOR SHAWN JAYNE (HEAD SPEAKER)
LECTURER PASTOR JIMMY BROWN

"This conference is designed to assist those who are seeking the next move after salvation, and it's also to encourage those who may feel they've gone too far to turn their lives around."



Home to Never Ending Hope



And Yet....

“Homicide rate spikes as Flint named third most-violent city in nation” – 9/15/15



Blight is everywhere







“According to the U.S. Census, 40.1 percent of the city's population is living in poverty. That makes Flint the second most poverty-stricken city in the nation for its size, just behind Youngstown, Ohio.” 9/17/15







All the major grocery stores left...



... and many were left with this



AND THEN....





FLINT WATER PLANT

FLINT

WATER CRISIS

TIME

The Poisoning Of An American City



Toxic water. Sick kids.
And the incompetent
leaders who betrayed Flint.

By Anne Henderson













The intertwined wicked problems confronting Flint

- poverty
- disinvestment
- violence
- blighted neighborhoods
- poor grocery store choices (food desert)
- few viable entrepreneurial options
- youth with few job skills and no educational credentials

That Context Changed Everything...

Can we create a local economic system that builds the wealth and prosperity for everyone and responds to the context of Flint?

North Flint Aquaponics & Healthy Food Initiative

Makerspaces: Supporting an Entrepreneurial System (2013)

Benton, Dempsey, Mullins, Shelley, City of East Lansing

plus

Afterhouse I, II, III (2013, 2014, 2015)

Mankouche, Murray, Sach, Schulte, Sturt, & Williams

Plus

Framework of building neighborhood wealth, not gentrification, as proposed by The Democracy Collaborative and adapted from Cities Building Community Wealth.

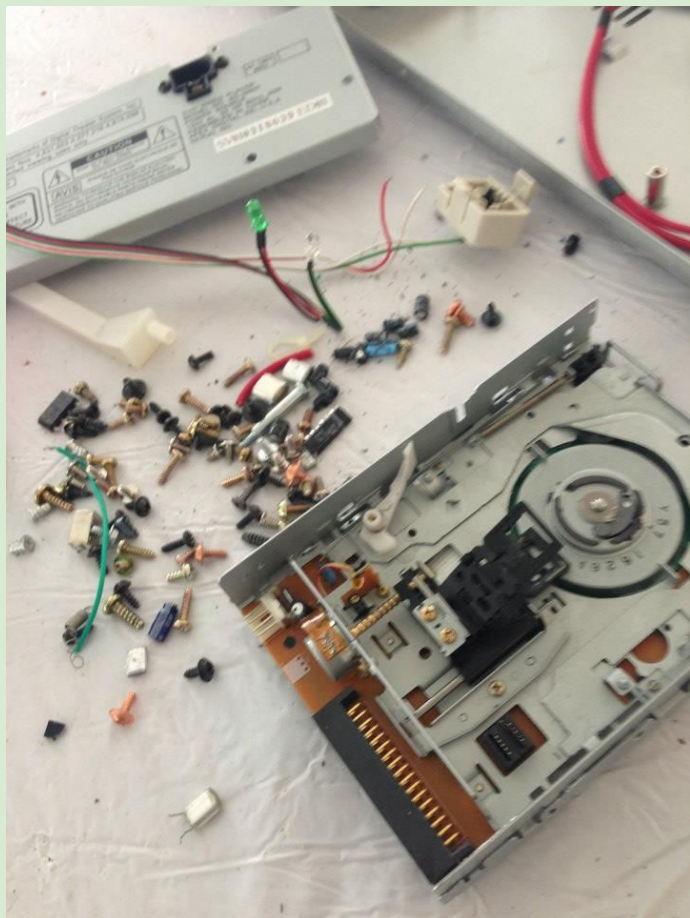
Plus

The Need for Lead Mitigating Foods

What are Makerspaces?

Benton, Dempsey, Mullins, Shelley, City of East Lansing - 2013

- Makerspaces are places **where like-minded persons gather to work** on personal projects, share tools and expertise as well as learn from each other (Tweney, March 29, 2009).
- “Learning environments rich with possibilities, Makerspaces serve as **gathering points** where communities of new and experienced makers connect to work on real and personally meaningful projects, informed by helpful mentors and expertise, using new technologies and traditional tools.” (Maker Media, Spring 2013:1)



What is an afterhouse?

Mankouche, Murray, Sach, Schulte, Sturt, & Williams



Community wealth building framework

- It has multiple drivers that work together to create a system that delivers the outcome sought: an inclusive, sustainable community economy where all can prosper—particularly those normally excluded.
- This system can be defined as having seven key drivers.

1. Place
2. Ownership
3. Multipliers
4. Collaboration
5. Inclusion
6. Workforce
7. System

Lead Mitigating Foods

- Foods that contain calcium:

- Milk
- Yogurt
- Cheese
- Leafy Green Vegetables- spinach, kale, collard greens, and swiss chard

- Vitamin C (helps the body absorb iron):

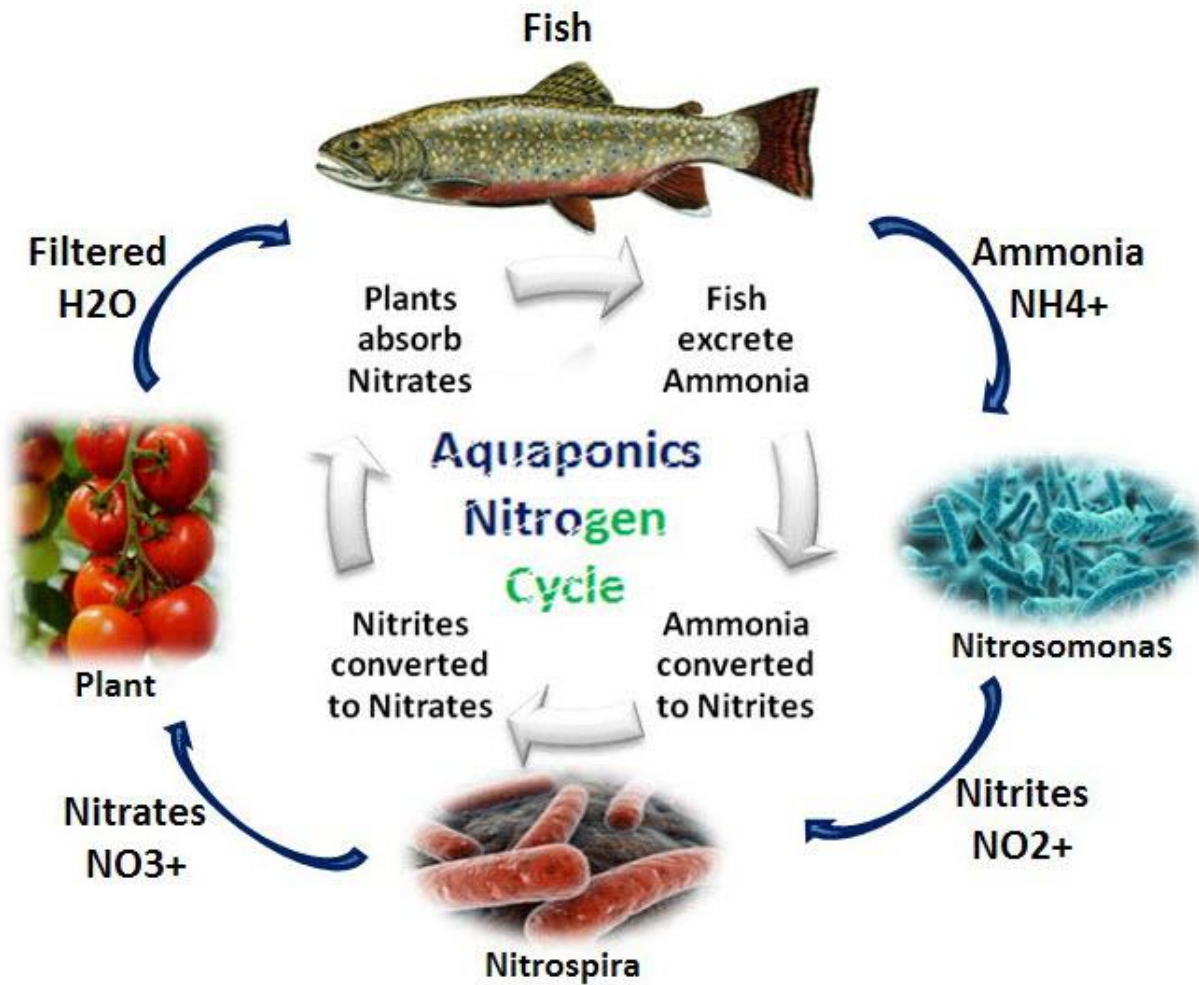
- Oranges
- Grapefruit
- Tomatoes
- Green Peppers
- Juices- Grapefruit and Tomato

- Iron-rich foods:

- Lean red meats
- Fish
- Chicken
- Iron-fortified cereals
- Dried fruits- ex. Raisins and prunes

North Flint Aquaponics & Healthy Food Initiative

What is Aquaponics?
Why Aquaponics?





North Flint Aquaponics & Healthy Food Initiative

- Will create **work and opportunity which is place-based**, is supported by the purchasing power of anchor institutions (ultimately grocery co-ops in north Flint)
- Is built on **local or cooperative ownership**
- Is **broadly collaborative** (not just between city government and the private sector)
- **Opens up economic opportunity to underserved groups**, reaches out to those with employment barriers, and supports our community rather than extracting profits from it
- **Develops family assets** such as social networks, specialized and broad skill sets, and a home within a neighborhood with social fabric and bonding

15 Partners

- Breidenstein Builders (Private Business)
- West Pulaski Street Block Club (Residents)
- Building Neighborhood Capacity
Neighborhood Advisory Committee
(Residents)
- Black Men for Social Change (Residents)
- WOW Outreach (Community-based
Non-profit)
- Metro Community Development
(Non-profit)
- Habitat for Humanity (Non-profit)
- Community Foundation of Greater Flint -
Flint Food System Initiative (Philanthropy)
- North Flint Reinvestment Corporation
(Non-profit)
- Red Ink (Non-profit)
- Flint Soup (Community Organization)
- MSU Center for Community & Economic
Development (Public Higher Ed)
- Mott Community College (Public Higher Ed)
- MSU Extension (Public Higher Ed)
- Kettering University Student Association for
Global Engineering (students)

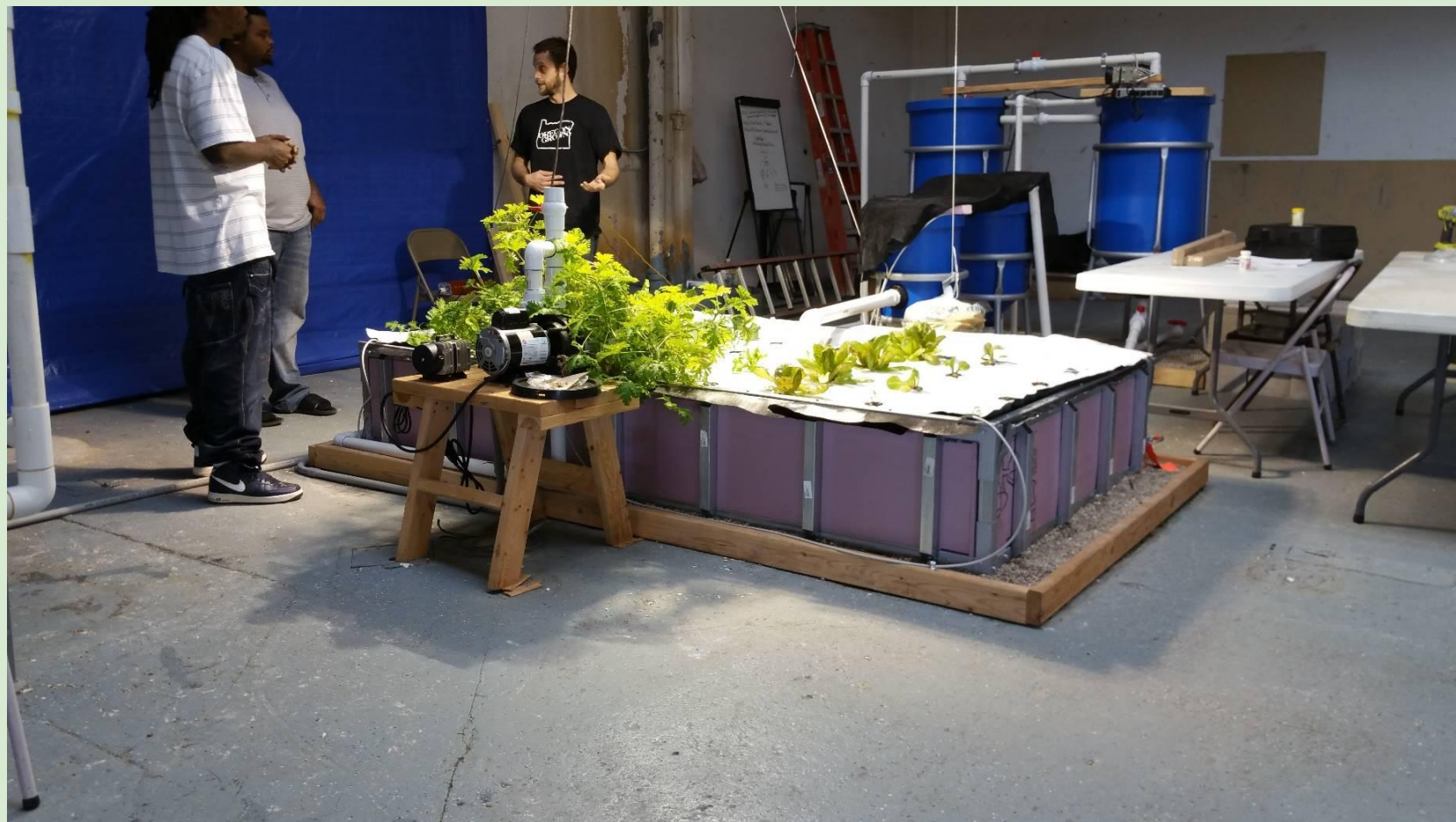
Three Main Projects

- Aquaponics Learning and Distribution Center
- Neighborhood Aqua House
- North Flint Food and Aquaponics Co-op

Aquaponics Learning and Distribution Center

(a Metro Community Development project)

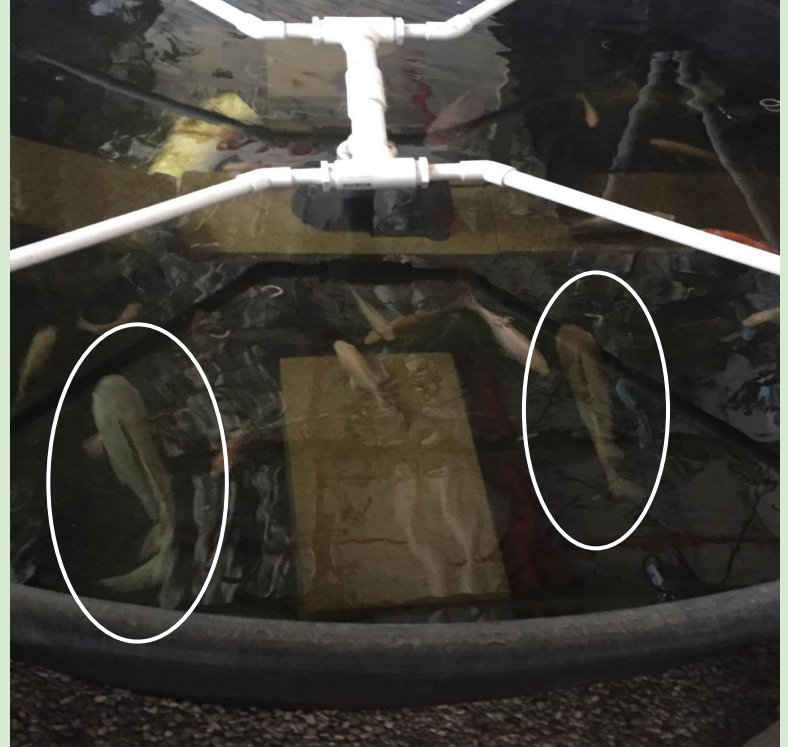
- A grassroots entrepreneurial structure and process which will allow those with barriers to employment by learning how to grow and bundle a package of aquaponics products.
 - youth ages 18-24 who are disengaged/dropped out of school
 - Ex-offenders
 - north end residents in general



Plant system



Fish System



West Pulaski Aqua-House

(A West Pulaski Block Club Project)

- Aqua-House: semi-subterranean passive solar greenhouse that utilizes the basement system of an abandoned home to build an aquaponics system.
- The structure integrates high volume to surface shapes and thermal insulating materials
 - maximizing winter exposure to the sun and minimizing over-exposure to summer sun.
- The structure incorporates thermal mass storage design and convective loop cooling/ventilation
 - limit/eliminate dependence on fossil fuels for heating and cooling.
- Energy considerations in the design can minimize required investment and maintenance costs to create a more sustainable design
- It is owned by the neighborhood





North Flint Food and Aquaponics Co-op

(North Flint Reinvestment Corporation project)

- We believe that a resident/worker-owned cooperative grocery and aquaponics network will empower north-Flint residents and help build a stronger community by **keeping resources and decisions in their control**.
- Decisions are made democratically: one member gets one share gets one vote.
- A food co-op can be created to **provide food that is healthy and reasonably priced** for those who live below poverty and/or live in food deserts.
- **Many communities in our nation have benefitted from business co-ops**, including those that are highly impoverished post-industrial cities, including Philadelphia, PA, Cleveland, OH, and Richmond, CA.
- As collaborators we will work to develop a strong, resident/owner-led food co-op which is served by an urban aquaponics food supply.



North Flint Food and Aquaponics Co-op Site



Aquaponics Learning and Distribution Center



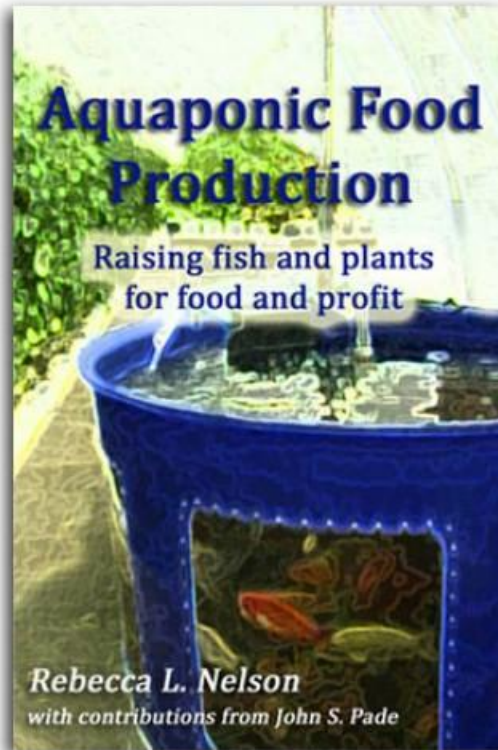
Current Results

Makerspace: Up and Operating

Aquaponics Learning and Distribution Center



1st Learning Group Engaged



West Pulaski Aqua House

- Zoning
- Land Bank
- Business Plan (co-op model)
- Operating Plan and Budget
- Deconstruction/Construction Budget
- Resident Engagement & Support
- Funding Prospectus
- Resource Development Plan & Grant Writing



North Flint Food and Aquaponics Co-op



NORTH FLINT FOOD & AQUAPONICS COOPERATIVE

JOIN US
FEB. 8TH, 2016, 6 PM
AT
EAGLES NEST ACADEMY
5005 CLOVERLAWN DR.
FLINT, MI 48504

THIS WILL BE A PLANNING SESSION ON
THE START OF A GROCERY STORE



JOIN US...
**COMMUNITY FOOD INVESTMENT
ORGANIZING MEETING**
THURSDAY, APRIL 28TH, 5:30PM
**EAGLES NEST ACADEMY
AUDITORIUM
5005 CLOVERLAWN DR.
FLINT, MI 48504**

Grocery Store



HOSTED BY NORTH FLINT REINVESTMENT CORPORATION
WWW.NORTHFLINTCORP.COM 810.965.1514

North Flint Food and Aquaponics Co-op

April – June

Flint & Genesee Chamber of Commerce connects market feasibility study

Results: Neighborhood can sustain a 22,000 square foot store

North Flint Food and Aquaponics Co-op

- Business Plan
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